Municipality/Organization: Town of Grafton

EPA NPDES Permit Number: MAR04-1119

MassDEP Transmittal Number: (Form BRP WM 08A, 2003, W-035459)

Annual Report Number & Reporting Period: **Year 13** **May 1, 2015 – April 30, 2016**

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2016)

Part I. General Information: ***Transmittal Number W 035459***

Contact Person: Brian Szczurko Title: Assistant Engineer

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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: Doug Willardson

Printed Name: Doug Willardson

Title: Assistant Town Administrator

Date: 4/27/16

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Part II. Self-Assessment

The Town of Grafton has made significant progress towards meeting the requirements of the MS4 permit. In 2009, the Town of Grafton adopted stormwater and illicit discharge bylaws. The Town Conservation Commission (Con Com) and the Department of Public Works (DPW), respectively, have successfully integrated the bylaws (and implementation of the bylaws) into their operations.

Since 2003, the Town of Grafton has completed several significant housekeeping activities to reduce pollution from municipal sources including: connecting the DPW garage to the Town sewer, moving vehicle washing activities indoors, reducing pesticide applications, and controlling fertilizer applications. The roof of the salt storage shed was repaired; currently, the materials are stored under cover. In 2012 the underground fuel storage tank was removed. In 2013, it was replaced with an above ground storage tank that meets the requirements of the Spill Prevention and Control Countermeasure (SPCC) regulations.

The Town has continued the street-sweeping program. During the spring, the Highway Department sweeps the entire town concentrating on industrial/commercial areas first and then moving out to the remaining roadways. The Town performs catch basin cleaning as needed, focusing on infrastructure adjacent to Flint Pond. In areas where road construction is scheduled, the street is swept once prior to construction and once following construction. Material collected as part of the street sweeping plan is disposed of in accordance with the Municipal O&M Plan.

During Year 11, the Town of Grafton continued making strides on its stormwater mapping. The Town hired a subconsultant Tata & Howard to verify existing and map new outfalls and catch basin locations. As of Year 13, all outfalls, catch basins, storm drain manholes, and most of the storm drain piping system have been mapped. The progress made continues to exceed mapping requirements of the current 2003 MS4 Permit. The stormwater infrastructure map is maintained through PeopleGIS and can be updated in real-time through their proprietary software.

The Town has also taken proactive steps to map stormwater infrastructure outside of its current MS4-regulated area. In the upcoming permit years, the Town will maintain the current map and add new structures as needed.

Watershed groups continue to be active in organizing public events including town-wide clean-up days. The DPW supports clean-up activities by providing trash bags and removal services. On April 17, 2016 the Blackstone River Watershed Association scheduled a river clean up activity for the public. On Arbor Day, the Highway Department will, once again, sponsor a planting program involving children's groups. Documentation of public cleanup activities including hazardous waste collection activities is included as an attachment to this report.

During the 2015/2016 permit year, the Town implemented a systematic program to inspect outfalls and identify illicit discharges, and the Town entered into a contract with Tata & Howard to inspect outfalls for dry and wet-weather discharges. During the 2015/2016

permit year, all outfalls were inspected and tested. The test results are included as an attachment to this annual report.

Ideas for funding and managing the illicit discharge detection and elimination (IDDE) program, proposed in 2012/2013, include implementing an application process and fee for accommodating Sump Pump Discharges. The program is still in the developmental phase.

The single outfall to the impaired TMDL waterbody, Flint Pond, was inspected and cleaned in April 2015. No illicit discharges were detected.

In 2015, the standard for replacement catch basin grates was updated to include an engraving to indicate that the catch basin drains to a waterway. In 2015, construction on an upgrade to the municipal wastewater treatment plant was underway. Construction on the plant is anticipated to be completed in 2017.

In 2012, the Town reached out to the Central Massachusetts Regional Stormwater Coalition (CMRSWC) to take advantage of state funding (the 2013 CIC Grant) to support NPDES MS4 compliance activities. During the Fiscal Years 2013, 2014, and 2015 the Town of Grafton was an active participant in the CMRSWC.

In 2015, the Town received a Technical Assistance Grant with the Central Mass Regional Planning Commission (CMRPC) to review the Town bylaws for consistency. The Town hosted a Low Impact Development (LID) workshop with the CMRPC and the Blackstone River Coalition. In 2015, the Town purchased a 5-acre parcel of conservation land (114 Marion Road) adjacent to the Great Meadow Conservation Area.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1A	Stormwater Flyer Residents	DPW & Cons Com	Year 1: distribute flyer to 75% of Town residents.	Flyers continued to be available on a self-service basis at the Town offices. The town website was recently upgraded. Links to documents have been added to the website.	Links on the town website will be maintained.
Revised			Ongoing program, one communication per year. Provide links to materials on the Town website.		
1B	Lesson Plan for 5th Grade	DPW & SuAsCo	Year 2: Develop, distribute, and teach lessons at one or more 5th grade classrooms in the community. Met goal.	A copy of the lesson plan is available at the DPW office. Outreach activities for youth groups included Boy Scouts' participation in town clean up days.	Links on the town website will be maintained.
Revised					
1C	Stormwater Flyer Businesses	DPW & SuAsCo	Year 3: Distribute flyer to 50% of Town businesses.	Flyers continued to be available on a self-service basis at the Town offices. . The town website was recently upgraded. Links to documents have been added to the website.	Links on the town website will be maintained.
Revised			Ongoing program, one communication per year. Provide links to materials on the Town website.		
1D	Stormwater Media Campaign	DPW & SuAsCo	Year 4 requirement Met goal.	Met one-time goal. Materials are currently posted on the town website.	Publish one informational article in the local newspaper when the new permit is issued by the EPA.
Revised					
1E	Stormwater Video	DPW & SuAsCo	Year 5 requirement Met goal.	Met one-time goal. The educational PowerPoint presentation remains on file in the DPW office.	
Revised	*09/05 – Powerpoint Presentation*	DPW & SuAsCo			

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1F	Grafton-Specific Stormwater Flyers	DPW	Year 1, 3: Distribute Grafton-specific brochure along with SuAsCo brochures.	Older flyers continued to be available on a self-service basis at the Town offices. Links to the materials are also available on the Town website.	The town website was recently upgraded. Links to documents have been added to the website.
Revised			Ongoing program, one communication per year. Provide links to materials on the Town website.		
1G	Coordinate with Businesses and Landscapers	DPW	Coordinate education and the use and sale of slow-release fertilizers.	The Town offices contain self-service educational materials for businesses and landscapers who enter the town offices pursuing support or permits. Links to educational materials developed by others are also available on the Town website.	Continue to provide self-service materials at the Town offices. The town website was recently upgraded. Links to documents have been added to the website.
Revised					
1H	Stormwater Flyer for Agriculture	DPW	Year 3: Distribute flyers to agricultural owners/properties	Links to the educational materials are available on the Town website.	The Agricultural Department is currently inactive. The town website was recently upgraded. Links to documents have been added to the website.
Revised			Provide links to educational materials on the Town website.		
1I	Newspaper Articles	DPW	At least 1 article per year.	Links to past articles are posted on the DPW website.	Publish an educational article in the local newspaper by June 1.
Revised					
1J	Stormwater Info on Town Website	DPW	Ongoing Program to distribute educational materials via the web.	The stormwater and illicit discharge bylaws and other assorted educational materials are available on the Town website.	Continue to update and expand the site with current educational materials as they become available.
Revised					
1K	Trees and their use in stormwater management	DPW/Tree Warden	Ongoing Program	Grafton continues to participate in the Tree City program. The program includes purchasing seeds and saplings and recruiting schoolchildren to plant them as part of Arbor Day activities.	Continue to seek funding to continue this program.
Revised					

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
2A	Stormwater Traveling Display	DPW & SuAsCo	Year 1-5: Stormwater display circulates around the community for a minimum of 3 months; Stormwater display is posted at a minimum of 3 different public locations in the community; Stormwater display is also used in future permit years for posting in public places or at stormwater events	Continued to display poster and flyers at the kiosk at the Town Offices.	Continue to display the educational materials at the Town Offices. Present the new materials to the public at the Annual and any Special Town Meetings if/when the new permit is issued.
Revised					
2B	Poster Contest for 5th Graders	DPW & SuAsCo	Year 2: Poster contest held and entries received, judged, and displayed.	One time event. Met goal.	Continue to encourage faculty to present stormwater matters in their lesson plans during the 2016/2017 school year.
Revised					
2C	Photo Contest for High Schoolers	DPW & SuAsCo	Year 3: Photo contest is held and entries are received, judged, and displayed.	One time event. Met goal.	Continue to encourage faculty to present stormwater matters in their lesson plans during the 2016/2017 school year.
Revised					
2D	Stormwater Summit Event	DPW & SuAsCo	Year 4 requirement. Met.	One-time event in 2006. Met goal.	None.
Revised					

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
2E	Stormwater Super Summit Event	DPW & SuAsCo	Year 5 requirement. Met.	One-time event in 2007. Met goal.	None.
Revised					
2F	Annual Stormwater Public Meeting	DPW	Hold public hearing by February every year.	Not held in February 2016 because there were no significant changes in the plan or program.	Present the requirements of the new permit at the Selectmen's meeting once the EPA has finalized the terms of the new permit.
Revised					
2G	Watershed Group Involvement	DPW & Local Groups	Continue ongoing activities of local watershed groups such as cleanup and monitoring.	Several town organizations hold cleanup events in the Spring. The DPW provides trash bags and pickup services.	Continue the program to support activities with various watershed groups. April 17, 2016 Blackstone River Watershed Association (BRWA) hosted a public clean up activity.
Revised					
2H	Involve Local Children's Groups	DPW	Children's groups help distribute or display educational information once per year.	See public outreach item 1K, 2G including Arbor Day, Earth Day, and Tree City activities.	Continue the program for coordinated activities with children's groups.
Revised					
2I	Purchase Land for Conservation	DPW, various Town Agencies	Ongoing Program	In 2015, the Town purchased a 5-acre parcel of conservation land (114 Marion Road) adjacent to the Great Meadow Conservation Area.	Continue purchasing Chapter 61A land as properties and funds are available.
Revised					

2a. Additions

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
3A	Illicit Discharge Bylaw	DPW	Develop/Implement Bylaw. Met Goal.	Article 37 adopted May 2009.	Continue to implement bylaw.
Revised					
3B	Storm Sewer Map	DPW	Map 100% of Outfalls in Urbanized Areas by Permit Year 5	Outfall and infrastructure mapping complete. Mapping is in a GIS-compatible format.	Calculate number of outfalls discharging to waterbodies listed in the original permit application. Initiate consultation with U.S. Fish and Wildlife to determine if the outfalls impact endangered species. Initiate consultation with the National Register of Historic Places to determine if the outfalls impact archaeological resources or Historic Properties of National Significance.
Revised					
3C	Detection & Elimination Plan	DPW	Year 1: Determine priority areas and discuss plan. Year 1-5: Visually screen 20% of outfalls. Year 4-5: Trace sources of illicit discharges (50% each year). Year 4-5: Remove all sources of illicit discharges (50% each year)	During normal operations, suspect observations are recorded and kept by the DPW. To date, one illicit discharge has been identified. In 2014, contracted with Tata & Howard to perform outfall monitoring and illicit discharge detection. Contract includes provisions for wet and dry-weather sampling.	Using equipment acquired through partnership with the CMRSWC, identify connections to stormwater infrastructure during the next cleaning cycle and test for possible illicit connections. Work with contractor to conduct program activities.
Revised					
3D	Education for Public & Businesses	DPW	Year 1, 3: Include illicit discharge education in the community business and Grafton-specific flyers.	Flyers continued to be available on a self-service basis at the Town offices. Links to IDDE fact-sheet materials are available on the Town website.	Continue to provide IDDE fact sheet on the Town website.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
Revised			Provide links to materials on Town website.		
3E	Education for Municipal Employees	DPW	Year 2-5: Include illicit discharge education.	All current DPW employees are trained to identify illicit discharges.	Continue to train new staff as necessary.
Revised					
Revised					

3a. Additions

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
4A	Construction Site Runoff Bylaw	DPW, Planning, & Con Com	Develop & Implement Bylaw. Goal Met.	Article 36, adopted May 2009.	Continue to implement bylaw.
Revised					
4B	Erosion, Sediment, & Waste Controls	DPW, Planning, & Con Com	Develop & Implement Bylaw	Article 36, adopted May 2009. Refers to MassDEP Stormwater Management Standards and Guidance Documents.	Continue to implement bylaw.
Revised					
4C	Site Plan Review Procedures	DPW, Planning, & Con Com	Develop & Implement Bylaw	Article 36, adopted May 2009. Refers to MassDEP Stormwater Management Standards and Guidance Documents.	Continue to implement bylaw. Projects are currently reviewed for compliance with local and state bylaws and regulations.
Revised					
4D	Site Inspection & Enforcement	DPW, Planning, & Con Com	Develop & Implement Bylaw	Approximately 100 site inspections annually. Approximately 2 sites cited with enforcement actions.	Continue to implement bylaw.
Revised					
4E	Stormwater Hotline	DPW, Planning, & Con Com	Receipt of complaints at DPW	Residents call town emergency services, the Highway Department, and the DPW. Reports are referred to the DPW. Hundreds of calls are received and responded to annually.	Continue the program.
Revised					
Revised					

4a. Additions

5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
5A	Post-Construction Site Runoff Bylaw	DPW, Planning, & Con Com	Develop & Implement Bylaw	Article 36, adopted May 2009.	Continue to implement bylaw.
Revised					
5B	Structural & Non-Structural BMPs	DPW, Planning, & Con Com	Develop & Implement Bylaw	Article 36, adopted May 2009. Refers to MassDEP Stormwater Management Standards and Guidance Documents for BMP list. The DPW reviews plans prior to construction and then reviews the as-built condition before a project is accepted. Before a project is accepted, the DPW inspects sites to verify that the stormwater facilities function as designed.	Continue to enforce compliance with stormwater BMP requirements for projects in the Town.
Revised					
5C	Long-Term O&M	DPW, Planning, & Con Com	Develop & Implement Bylaw	Article 36, adopted May 2009. Refers to MassDEP Stormwater Management Standards and Guidance Documents.	Continue to implement bylaw.
Revised					
5D	Structural BMP Implementation Procedures	DPW, Planning, & Con Com	Develop & Implement Bylaw	Article 36, adopted May 2009. Refers to MassDEP Stormwater Management Standards and Guidance Documents.	Continue to implement bylaw.
Revised					

5a. Additions

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6A	Municipal Employee Training	DPW	Develop a comprehensive Municipal Operations and Maintenance Plan to include training protocols.	All DPW staff is currently trained in stormwater management.	Train new staff as needed.
Revised					
6B	Maintenance & Inspection Procedures	DPW	Develop a comprehensive Municipal Operations and Maintenance Plan to include activities, schedules and procedures.	Annual programs are in place to clean catch basins and sweep streets. The streets are swept in the spring and fall. Catch basins are cleaned at least once per year starting in the spring. Known problem areas are addressed more often. Records for these activities are kept with the Highway Superintendent.	Continue with the program.
Revised					
blank					

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6C	Municipal Pollutant Source Reduction	DPW	Develop a comprehensive Municipal Operations and Maintenance Plan to include BMPs to reduce municipal pollution sources	In 2003, Grafton hired a consultant to assess the Municipal Operations in the Town with respect to Stormwater. The assessment recommended: - Connecting the DPW garage to the sewer. This task was accomplished in 2010. - Performing vehicle washing indoors. As of 2010, this is routine procedure. - BMPs for the sand/salt piles. The storage shed was rehabilitated; the materials are now completely covered. - The underground fuel storage tank was removed in 2012. The above ground storage tank will be constructed in 2013. - Assess pesticide and fertilizer operations. As of 2012, pesticide applications were limited to treatment of catch basin sump water. Fertilizer applications (where necessary) are limited to lawful mixes of organic applied at a rate of 3 pounds per 1000 SF. Note that all major tasks had been completed as of April 2013.	Continue to encouraging "Do not Dump" catch basin castings and drain covers. As of 2015, replacement grates are engraved with "Drains to Waterway" or similar language.
Revised					
6D	Waste Disposal Procedures	DPW	Develop a comprehensive Municipal Operations and Maintenance Plan to include BMPs to reduce municipal pollution sources	Materials are collected and properly disposed of by a licensed 3rd party.	Continue with the program.
Revised					

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) *<<if applicable>>* -

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
7A	Residential and Commercial Education	DPW	Provide links to materials on the Town website.	Met goal, refer to items 1A, 1C.	Expand educational materials on Town website as they become available.
Revised					
7B	Outfall Inspection and Testing	DPW		Outfalls inspected in accordance with the municipal schedule and cleaned as-needed. The one municipal outfall identified at Flint Pond was inspected and contributing structures were cleaned out in April 2015 100% of all outfalls were inspected in 2015. Wet and dry weather sampling was conducted. Test results are attached to this annual report.	Continue to monitor the outfall to Flint Pond and the contributing infrastructure.
Revised					
7C	Illicit Discharge Elimination	DPW		No illicit discharges identified. Began discussions with Town agencies to fund this program. Ideas for funding include applications and fees for Sump Pump Discharge hookups.	Continue to monitor the outfall to Flint Pond outfall and the contributing infrastructure. Continue reviewing methods to fund and implement this program.
Revised					
7D	Municipal Operations Prioritized	DPW		Street sweeping and catch basin cleaning activities conducted according to municipal schedule. The schedule is kept at the Highway Superintendent's Office.	Continue ongoing maintenance activities.
Revised					
Revised					
Revised					

7b. WLA Assessment

The TMDL for Flint Pond indicates that the pond is impaired for turbidity as a result of excess phosphorus loading. The TMDL indicates that stormwater contributions of phosphorus must be reduced by 52 % to meet the waste load allocation (WLA) of the TMDL.

Regular street sweeping and catch basin cleaning provide a reduction in phosphorus loading. In 2015 neither fertilizers nor pesticides were applied in any buffer to a resource area.

Part IV. Summary of Information Collected and Analyzed

In 2015, 100% of the outfalls were sampled and tested during dry and wet weather conditions. Test results are attached to this annual report.

Part V. Program Outputs & Accomplishments (OPTIONAL)
(Since beginning of permit coverage unless specified otherwise by a **, which indicates response is for period covering May 1, 2015 through April 30, 2016)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	No
Annual program budget/expenditures **	($)	$40,000+/-
Total program expenditures since beginning of permit coverage	($)	$206,000+/-
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		General Fund

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	50%
Stormwater management committee established	(y/n)	No
Stream teams established or supported	(# or y/n)	No
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	Yes
Shoreline cleaned since beginning of permit coverage	(mi.)	1.25 (annually)
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	4
▪ community participation **	(# or %)	10%
▪ material collected **	(tons or gal)	10 Tons (est.)
School curricula implemented	(y/n)	Bookmarks for children available

Legal/Regulatory

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	Adopted
Regulatory Mechanism Status (indicate with "**X**")					
▪ Illicit Discharge Detection & Elimination					X
▪ Erosion & Sediment Control					X
▪ Post-Development Stormwater Management					X
Accompanying Regulation Status (indicate with "**X**")					
▪ Illicit Discharge Detection & Elimination					X
▪ Erosion & Sediment Control					X
▪ Post-Development Stormwater Management					X

Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	100%
Estimated or actual number of outfalls	(#)	300
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	100%
Mapping method(s)		
▪ Paper/Mylar	(%)	0%
▪ CADD	(%)	15%
▪ GIS	(%)	100%
Outfalls inspected/screened **	(# or %)	100%
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	100%
Illicit discharges identified **	(#)	3 (accidental)
Illicit discharges identified (Since beginning of permit coverage)	(#)	5
Illicit connections removed **	(#); and (est. gpd)	0
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	0
% of population on sewer	(%)	61%
% of population on septic systems	(%)	39%

Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	25+/-
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100%
Site inspections completed **	(# or %)	>100
Tickets/Stop work orders issued **	(# or %)	2+/-
Fines collected **	(# and $)	0
Complaints/concerns received from public **	(#)	100's

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	100%
Site inspections (for proper BMP installation & operation) completed **	(# or %)	100+/-
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	Yes
Low-impact development (LID) practices permitted and encouraged	(y/n)	Yes

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	1/yr
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	1-2/yr
Qty of structures cleaned **	(#)	2400+/-
Qty. of storm drain cleaned **	(%, LF or mi.)	250 LF
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	200 Tons
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	($)	see hourly rate
• Hourly or per basin contract rate **	($/hr or $ per basin)	~ $25/hr
• Disposal cost**	($)	~ $9/ton ~ 200 tons every 2 or 3 years.
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	1
• Vacuum truck(s) owned/leased	(#)	0
• Vacuum trucks specified in contracts	(y/n)	No
• % Structures cleaned with clam shells **	(%)	100%
• % Structures cleaned with vactor **	(%)	0%

	(Preferred Units)	Response -
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	1/yr
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	1-2/yr
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	700 Tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	($)	see hourly rate
• Hourly or lane mile contract rate **	($/hr. or ln mi.)	~$25/hr
• Disposal cost**	($)	0
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	1
• Vacuum street sweepers owned/leased	(#)	0
• Vacuum street sweepers specified in contracts	(y/n)	No
• % Roads swept with rotary brush sweepers **	%	100%
• % Roads swept with vacuum sweepers **	%	0%

Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	70%
▪ Herbicides	(lbs. or %)	N/A
▪ Pesticides	(lbs. or %)	90%
Integrated Pest Management (IPM) Practices Implemented	(y/n)	No

	(Preferred Units)	Response -
Average Ratio of Anti-/De-Icing products used ** (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% NaCl % $CaCl_2$ % $MgCl_2$ % CMA % Kac % KCl % Sand	80% 20%
Pre-wetting techniques utilized **	(y/n or %)	Yes
Manual control spreaders used **	(y/n or %)	No
Zero-velocity spreaders used **	(y/n or %)	No
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	0% change
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln mi. or %)	No sand used
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100%
Storage shed(s) in design or under construction	(y/n or #)	Construction complete

100% of salt/chemical pile(s) covered in storage shed(s) by May 2013	(y/n)	Yes

Water Supply Protection

Storm water outfalls to public water supplies eliminated or relocated	# or y/n	None
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	None
• Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n	1

Town of Grafton
NPDES Phase 2
Small MS4 General Permit
Annual Report
Year 13 (2016)

Attachments

1. Report from the Central Massachusetts Regional Stormwater Commission (CMRSWC)
2. Raftelis Workshop Slides – Financing Permit Compliance and Attendance Sheet
3. Outfall Inspections and Reports
4. Documentation of Public Cleanup Activities
5. Stormwater Map (Tata & Howard, May 2014)

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Town of Grafton
NPDES Phase 2
Small MS4 General Permit
Annual Report
Year 13 (2016)

Attachment 1

Report from the Central Massachusetts Regional Stormwater Commission (CMRSWC)

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Central Massachusetts Regional Stormwater Coalition
FY2014/2015 Summary of Activities
Year 13: April 1, 2015 – March 31, 2016

In Year 13, the Town of GRAFTON continued to be an active participant in the Central Massachusetts Regional Stormwater Coalition (the Coalition). The Coalition's work in Year 13 (which overlaps municipal fiscal years 2014 and 2015) was funded entirely by contributions of approximately $4,000 from each of the 28 participating Towns, including GRAFTON.

Overview of the Coalition
The FY2014/2015 Coalition included 28 towns: Auburn, Boylston, Charlton, Dudley, Grafton, Hardwick, Holden, Hopkinton, Leicester, Millbury, Northborough, Northbridge, Oxford, Palmer, Paxton, Rutland, Shrewsbury, Southbridge, Spencer, Sterling, Sturbridge, Upton, Uxbridge, Ware, Webster, West Boylston, Westborough, and Wilbraham. The Coalition was officially formed in FY2012 with 13 members, expanding to 30 in FY2013. The FY2016 Coalition will be comprised of 31 towns with the recent additions of Framingham, Lunenburg, and Marlborough.

The Year 13 work of the Coalition focused on implementation and preparation.

- The preparation aspects included work to both understand the technical components of the pending (at the time) Massachusetts MS4 Permit as well as how they will continue to afford the new Permit.
    - The group hosted a September 3, 2015 workshop by Keith Readling of Raftelis Financial Consultants, who has assisted more communities develop a stream of dedicated funding for stormwater management than anyone else. The objective was not to force the concept of a "stormwater utility", but to get community leaders thinking of stormwater funding as an enterprise, similar to how many already manage sanitary sewer funds. The GRAFTON Conservation Agent attended the workshop.

    - The Coalition continues work on a Stormwater Program cost assessment for member towns, with most already being delivered. This task looks at what the community is actually spending on stormwater management, including staff labor (across many departments and positions), operations and maintenance, equipment costs (rental and depreciation), and third party vendors and consultants.

On April 15, 2015, a meeting of all member communities was held in Charlton, MA to develop a potential scope for FY2016 and determine how the group would be funded and administered going forward.

An update for all member communities was also presented at a meeting on September 3, 2015 prior to the stormwater funding workshop.

Coalition members themselves continue to be responsible for putting to use the tools developed by the Coalition.

The Coalition's Partnerships in Central Massachusetts
The Coalition continues to be actively engaged with many water quality agencies and organizations and is committed to sharing the knowledge it has developed for the benefit of other communities. These efforts are discussed in following sections as they relate to the following organizations:

- Massachusetts Department of Environmental Protection (MassDEP)
- United States Environmental Protection Agency (USEPA)
- Other Massachusetts Stormwater Coalitions
- New England Water Environment Association (NEWEA)
- Massachusetts Municipal Association (MMA)

Additional organizations and entities are mentioned elsewhere throughout this Annual Report, reflecting the wide network of knowledge and experience that the Coalition has tapped into.

Massachusetts Department of Environmental Protection (MassDEP)
The Coalition continued its partnership with the MassDEP in FY2014/2015, most recently announcing the receipt of a $50,000 Stormwater Technical Assistance grant from the department. This grant will be used to develop training elements and outreach tools that target new or expanded elements in the new permit, and that can be used by communities across the Commonwealth.

MassDEP staff continue to attend CMRSWC Steering Committee events and make themselves available for technical assistance. The Coalition appreciates the ongoing dedication of MassDEP to work with our members so closely and collaboratively.

In FY2016, the CMRSWC hopes to develop another Interactive Qualifying Project (IQP) with students from the Worcester Polytechnic Institute (WPI). One potential concept for a FY2016 project is to work with MassDEP stormwater and solid waste staff to develop a streamlined method to determine appropriate beneficial reuse of street sweepings and/or grit from catch basin cleaning activities, thereby turning a material that can be costly to dispose into a source of revenue to our members.

United States Environmental Protection Agency
The Coalition continued collaboration with technical assistance staff in USEPA Region 1, with the goal of benefiting from knowledge and experience of the agency's staff and from its network. We appreciate the support of these agency staff, and believe this positive communication resulted in some modifications to the new MA MS4 permit (released on April 4, 2016) that make it more reasonable while still benefiting and protecting water quality.

Other Massachusetts Stormwater Coalitions
The Coalition continues to coordinate with "sister" groups with a similar stormwater focus. These include:

- The Merrimack Valley Stormwater Collaborative (coordinated by the Merrimack Valley Regional Planning Commission);
- The Neponset Stormwater Partnership (coordinated by the Metropolitan Area Planning Council and the Neponset River Watershed Association);
- The Northern Middlesex Stormwater Collaborative (coordinated by the Northern Middlesex Council of Governments);
- The Connecticut River Stormwater Committee (through the Pioneer Valley Planning Commission); and

- The Southeastern Massachusetts Stormwater Collaborative (coordinated by the Southeastern Regional Services Group)

Many members of these groups were invited to attend the September 2015 stormwater funding workshop, and the facilitators of these different collaboratives have made the effort to inform the other groups of events they're hosting.

Importantly, these separate regional groups met twice in Year 13- on June 23, 2015 and September 17, 2015- to compare notes on activities in progress and share ideas on future collaborations. This statewide partnership will be expanding in Year 14.

Massachusetts Municipal Association (MMA)
Members of the Coalition have been active in the MMA for years, including Robin Craver, Town Administrator for Charlton, MA and an active Coalition leader, who is the Chair of MMA's Policy Committee on Energy and the Environment. This Committee formulates policy related to stormwater, water quality, water supply, wetlands, coastal areas, and other related environmental issues and represents a way for the Coalition to learn from (and share) ideas around the Commonwealth.

Tasks Included in this Annual Report
In the following sections, descriptions of the technical tasks and resources performed by the CMRSWC in Year 13 have been separated into sections that mirror the six Minimum Control Measures (MCM's) in the 2003 Massachusetts Small MS4 Permit.

One of the more innovative tools developed by the Coalition- one that spans across multiple MCM's- is the integrated online mapping and inspection database, hosted by PeopleGIS. The database is cloud-based, and can be accessed by all 28 member communities through a desktop or tablet computer.

In Year 13, we observed that Coalition members expanded use of this resource, primarily by beginning the process of mapping linear infrastructure (like pipes and culverts) and doing more catch basin inspections using the tools. Both of these tasks are key to preparing to increase mapping and to perform the catchment evaluation process included in the 2016 MA MS4 Permit.

As noted in last year's report, this platform does not fit into just one of the MCM's. It aids communities with public education and outreach (MCM 1), as surveying is a highly-visible activity that will generate questions, and is an engaging demonstration to school groups. The integrated mapping and inspection database documents evidence of potential illicit discharges or the absence thereof (MCM 3), aids construction site stormwater control (MCM 4) by allowing for evaluation of how much sediment is contained in a sump, and makes good housekeeping (MCM 6) easier by collecting data on how often catch basins are cleaned. Other tasks and tools of the project connect to the integrated mapping and inspection database, which was designed to serve the needs of the Coalition communities well beyond the 2003 Massachusetts Small MS4 Permit. Each of the online forms is fluid- they will continue to be revised, as needed, to meet the goals of the Coalition members and future Massachusetts MS4 Permit requirements.

Minimum Control Measure 1: Public Education and Outreach

Year 13 activities included routine meetings of the Coalition's Steering Committee.

In Year 13, the Coalition purchased copies of the "Water Blues, Green Solutions" documentary (http://waterblues.org/about) for each member town, on DVD.

An exciting tool for public education continues to be the Coalition's Twitter account, @MAStormH2O. As of the date of this report, the Coalition's account has 96 followers, including other stormwater coalitions around the country. Information tweeted (or retweeted) by the Coalition in Year 13 addressed such water quality topics and issues as:

- Stormwater infrastructure funding
- Nutrient credits and trading
- Sharing public service announcements (PSA's) developed by our member communities and partners
- Impact of leaking sanitary sewers on stormwater and water quality
- Low Impact Development (LID) workshops and training courses held by partners in or near our member communities

Many of our member communities and regional agencies follow @MAStormH2O and retweet our information, greatly expanding the audience reached by the message. We anticipate using this tool in the future to quantify the size of the audience reached by each message, and evaluating the success of the message.

In Year 13, the Coalition expanded its efforts to educate the public and other communities about its work. This includes the following presentations and events, listed in chronological order:

- On May 12, 2015, Robin Craver (Charlton, MA) presented at the 6th Annual Water Resources Strategies Symposium, hosted by the Massachusetts Coalition for Water Resources Stewardship, sharing information on stormwater program costs and ways to create regional efficiencies.
- On May 15, 2015, a Coalition consultant did a presentation to the New England Interstate Water Pollution Control Commission (NEIWPCC) at its Board meeting in Bolton, MA.
- On June 26, 2015, Robin Craver (Charlton, MA) and a Coalition consultant did a presentation to the Central Massachusetts Regional Planning Commission at its Summer Legislative Breakfast, in Worcester, MA.
- On July 13, 2015, a Coalition consultant did a presentation to the National Association of Clean Water Agencies at its Summer Conference in Providence, Rhode Island.
- On November 18, 2015, Robin Craver (Charlton, MA) and a Coalition consultant did a presentation at the "*Community Stormwater Solutions*" conference, hosted at Worcester Polytechnic Institute by the Massachusetts Watershed Coalition.

Several Coalition members chose to use some of their "one-on-one" to expand their efforts on this MCM. Updates will be provided in future Annual Reports.

In Year 13, GRAFTON continued to utilize water quality monitoring kits from the World Water Monitoring Challenge program (www.worldwatermonitoringday.org), purchased by the Coalition in Year 10. These kits "build public awareness and involvement in protecting water resources around the world by engaging

citizens to conduct basic monitoring of their local water bodies". Several communities used this in Year 13 to work with teachers in their local school department or district to do outreach to elementary and middle-school aged students. The kits continue to be stored in Spencer and Shrewsbury for distribution to the Coalition members.

GRAFTON continued to utilize the two Enviroscape models focused on non-point source pollution education (http://www.enviroscapes.com/nonpoint-source.html). One model was purchased by the Coalition in Year 10 and the second was purchased in Year 13 with a grant from NEWEA. These tools are hands-on, visual trainers to demonstrate the importance of good housekeeping and low-impact development for pollution prevention, with the objective of maintaining water quality in our communities. These tools are shared with our statewide partners, upon request.

The Coalition continued to expand its educational website, www.CentralMAStormwater.org, focused on providing information about the project to a number of audiences, including the general public, educators, and kids.

Minimum Control Measure 3: Illicit Discharge, Detection and Elimination

Several Coalition members chose to use some of their "one-on-one" time to expand their efforts on this MCM. Updates will be provided in future Annual Reports.

In Year 13, GRAFTON continued to utilize the two Leica surveying devices (purchased by the Coalition in Year 10) that can be used to map new structures with very high accuracy, using connection to a military-grade Real Time Kinematic (RTK) satellite network. The Leica and tablets can be used to directly access the online mapping and inspection system: the Leica is the most valuable for mapping outfalls, catch basins, pipe, drain manholes, BMPs, and other components of the MS4, while the tablet computers will be most valuable for ongoing inspection of the structures. These two activities serve as the foundation of IDDE. The Leica units rotate between the 28 Coalition communities on a schedule, with formal handoff between Towns documented.

Minimum Control Measure 4: Construction Site Stormwater Runoff Control

Several Coalition members chose to use some of their "one-on-one" time to expand their efforts on this MCM. Updates will be provided in future Annual Reports.

Minimum Control Measure 5: Post-Construction Stormwater Management in New Development and Redevelopment

Several Coalition members chose to use some of their "one-on-one" time to expand their efforts on this MCM. Updates will be provided in future Annual Reports.

Minimum Control Measure 6: Pollution Prevention and Good Housekeeping in Municipal Operations

Several Coalition members chose to use some of their "one-on-one" time to expand their efforts on this MCM. Updates will be provided in future Annual Reports.

In Year 13, GRAFTON continued to utilize the Stormwater Pollution Prevention Plan (SWPPP) template in the form of a word processing document. This document was developed in Year 10 and addresses elements common to all SWPPPs, including storage of materials, site inspection practices, water sampling, training, spill prevention and cleanup, Standard Operating Procedures for a number of activities, and other sections. The SWPPP template covers many types of municipal properties. This includes highway department garages and public works yards- where salt is stored and vehicle maintenance or storage is

completed- as well as parks, golf courses, and cemeteries, where fertilizers and pesticides may be applied and lawn mowing activities may result in small spills. The SWPPP template includes built-in instructions to make it as simple as possible for each community to develop a SWPPP for a property, simply by deleting text that doesn't apply.

In Year 13, GRAFTON continued to utilize the 15 Standard Operating Procedures (SOP's) developed by the Coalition in Year 10, and intended to provide guidance on activities required or encouraged by the 2003 Massachusetts Small MS4 Permit. These SOPs addressed such diverse activities or needs as outfall inspection (both dry weather and wet weather), catch basin cleaning, erosion and sedimentation control, oil/water separator maintenance, use and storage of pesticides and fertilizers, and many more. The group developed standard forms and methodologies for these procedures, many of which were incorporated into the Integrated Online Mapping and Inspection System, described in following paragraphs.

Coalition Activities in Year 14 (April 1, 2016 – March 31, 2017)

The following are some, but not all, of the work presently underway by the Coalition in Year 14:

- *Administration*. The long-term goal of the Coalition has always been to be self-sustaining, and this was made a reality in Year 13. The Coalition's Steering Committee drafted a bylaw in Year 13 that will govern how the group makes future decisions. The group will add three new communities in Year 14, continuing to be fully self-funded. The Coalition's leadership is committed to keeping the momentum developed in recent years, and sharing the resources for the improvement of water quality in New England.

- *Funding*. The Coalition maintains a strong network of partners, and will continue to evaluate funding sources that become available, including competitive USEPA grants dedicated to MS4 communities as well as 319 and 604(b) grants appropriate for community-wide water quality projects.

- *Public Outreach and Education*. We are implementing development of training and outreach tools, made possible through a $50,000 MassDEP Stormwater Technical Assistance grant. We are also considering developing of Coalition-specific outreach materials using FY2016 funding. Finally, the Coalition plans to increase its use of Twitter as a measurable outreach tool.

- *IDDE*. The Coalition is developing competitive pricing for its members that wish to use Environmental Canine Services to perform IDDE screening-level assessments. The catchment delineation tool initially developed during the WPI IQP Fall 2013 project will be revised, modified, finalized, and distributed for use by Coalition towns. The Request for Proposals (RFP) developed in Year 10 (for a third-party firm to perform many of the field or inspection services defined in the 15 SOP's, including outfall inspection (dry weather and/or wet weather), water quality monitoring, catch basin inspection, and other related tasks) will be re-evaluated in Year 14 to match the 2016 MA MS4 Permit. Improving the knowledge of IDDE components by many town departments will likely be a substantial component of FY2016 work.

- *Good Housekeeping*. The Coalition may coordinate an on-site demonstration of calibrating deicing equipment at a member community's highway facility. This active demonstration will provide a real-life example of the benchmarking process developed in Year 10 and encourage members to calibrate their own equipment, with a goal of reducing pounds of chloride per lane mile. The

Coalition is in the initial phases of developing an IQP project with Worcester Polytechnic Institute and MassDEP to develop a pilot project for beneficial reuse of catch basin cleaning materials.

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Town of Grafton
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Attachment 2

Raftelis Workshop Slides – Financing Permit Compliance and Attendance Sheet -

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RAFTELIS
FINANCIAL CONSULTANTS, INC.

WORKSHOP
Key Topics in Funding Local Government Stormwater Management Programs

Keith Readling, PE

Vice President and Director of Stormwater Management Consulting

Raftelis Financial Consultants

Introductions

- Readling and other hosts/facilitators
- Attendees
  - mostly or entirely a manager
  - mostly or entirely a technical service provider
  - mostly or entirely a regulator
  - consultant or other

Agenda

- Stormwater program planning
- Stormwater costs and funding
- Stormwater ratemaking
- Data, systems, processes to support a fee
- Legal and policy issues
- Communications
- Facilitated breakouts during / after lunch

Answers Sought

- What is it?
- How much will it cost?
- Where will we get the money?
- How will we administer?
- What do we need to be sure about?
- How do we talk about it?

Details

- Breaks planned at about 10:40am (15 minutes) and 12 noon (10 minutes)
  - Stormwater program planning
  - Stormwater costs and funding
  - Stormwater ratemaking
  - Data, systems, processes to support a fee
  - Legal and policy issues
  - Communications
  - Facilitated breakouts during / after lunch
- Communications session will include a handout and a chance to develop an individualized communications plan framework

Details

- Please ask questions as they arise (*really good* questions may be deferred to breakouts)
- Facilitated breakout sessions during lunch:
  - Communications (Aubrey & Matt)
  - Financial planning (Dave)
  - Program planning, costs, rates (Keith)
  - Data, systems, processes (Jennifer)

Examples We Will Use

- Tega Cay, SC
- Mt Lebanon, PA
- Peoria, AZ
- Upper Falls, NC (5)
- NEORSD, OH (63)
- Adams County, CO
- Mooresville, NC
- St Louis, MO
- Morristown, TN
- New Orleans, LA
- Kernersville, NC
- Baltimore, MD
- Beaufort County, SC (5)

1. Fleshing Out the Stormwater Program and Services

- Program planning, known issues
- Integrating regulatory compliance into the plan
- Integrating broader community issues and initiatives into the plan
- Prioritizing

Program Planning and Known Issues

- Operation and maintenance
- Capital
- Staffing
- Data
- Equipment
- Compliance

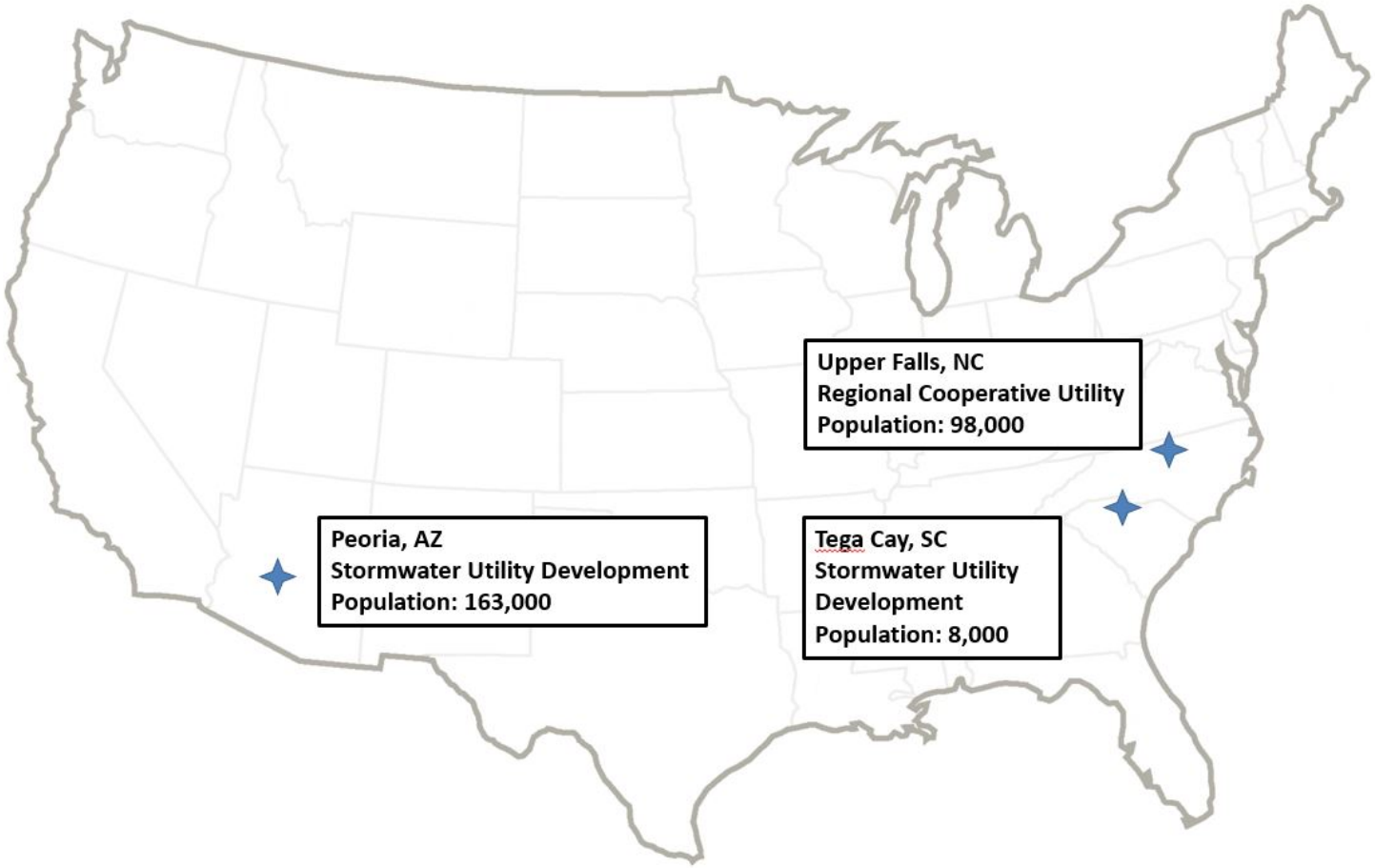
Regulatory Compliance Integration and Relationship to Other Issues

- Timing of the ramp up
- How the six MCMs vary in cost and complexity
- Relationships to other issues and policies
- Drivers for change – opportunity

Setting Priorities

- What do the citizens want?
- How long will it take us to accomplish things?
- How do we balance the need to act with the lack of data?
- Can we accomplish any broader goals if we are thoughtful?

Program Planning Examples



2. Program Costs and Funding Approaches

- Estimating future service delivery costs
- Estimating capital costs
- Cost causation and allocability models
- Taxes, fees, fees-in-lieu, hybrids for funding

Estimating Future Service Delivery Costs

- Inflation can vary a lot depending on the economic cycle
- Unmet O&M needs from newly taken infrastructure or pent up need may be substantial, and BMP O&M may be guesswork
- It is harder to spend money than most citizens would think

Estimating Capital Costs

- Capital need may be vague at best due to a lack of data
- Some high visibility improvements may be required even if they have to be fast tracked
- Debt vs. PAYGO matters a lot (more later on this)

Cost Causation and Allocability

- What makes our costs increase?
- How do ratepayers place a demand on our organization for service?
- Can I tie these demands to things I can measure?
- How do I balance technical excellence with simplicity and data maintenance cost? (more during later sessions on this)

Program Cost & Funding Examples

3. Stormwater Ratemaking

- Pricing objectives
- Fixed and variable charges, various independent variables and their advisability in ratemaking
- The enormous implications of debt financing
- Credits, discounts, caps, collection rates

Pricing Objectives

- Do we want to encourage or discourage any particular behaviors or patterns?
- How do we fall out on the fairness vs. simplicity of rates scale?
- Do we need to hold the line for any particular amount of time or plan for frequent smaller increases?

Fixed and Variable Charges

- Account or parcel
- Impervious area
- Gross area
- Other variables
- Simplified charges for some classes

Debt Financing for Capital

- Why and when?
- Why and when not?
- How to model and discuss?
- How does this debt relate to other debts in my jurisdiction?

Credits, Discounts, Caps, Etc.

- What and why?
- How to model the revenue impacts
- Defensibility
- Collection rates and their relationship to billing approaches (more during a later session)

Ratemaking Examples

4. Data, Systems, and Processes to Support Fee Funding

- Brief overview of the mechanics of billing for stormwater
- Data maintenance needs and tools
- Customer service needs and tools
- Costs associated with fee funding

The Mechanics of Billing

- Three main ways, one of which is not too good
- Pros and cons
  - Simplicity
  - Collection rates
  - Ratepayer treatment
- Frequently no choice is really reasonable but to use what you have

Data Maintenance Needs / Tools

- Depending on rate structure and policy choices that are made:
  - Detect changes to inputs
  - Update data to cause a bill to be updated
  - Communicate between parcel world and account world – often the most difficult data process

Customer Service Needs / Tools

- Observation: consumer expectations for service have increased
- Customers may need to see “proof”
- Customer service workload variability and choices that can be made to even it out to some extent

New or Changed Costs Associated with Fee Funding

- Fee computation, ratemaking, billing, collections, database maintenance, customer service all cost more than for a tax increase
- KR Guess: Delta is 2% if a big program; 5% or more if a small program. Shared savings are possible.

Data Management Examples

5. Legal and Policy Issues

- Consult counsel early and as needed
- You will likely need a new or amended rate ordinance
- “Data facts” should guide the ordinance; do not allow it to be written without regard to what the data will give you

Legal and Policy Issues

- Start clean
- Typical challenges and responses
  - Tax not fee
  - Authority
  - Arbitrary and capricious

6. Communications and the Public Process

- The normal flow of logic about stormwater needs and money
- Tools and approaches for working with the community
- Approaches for working with elected officials
- Individual framework development exercise

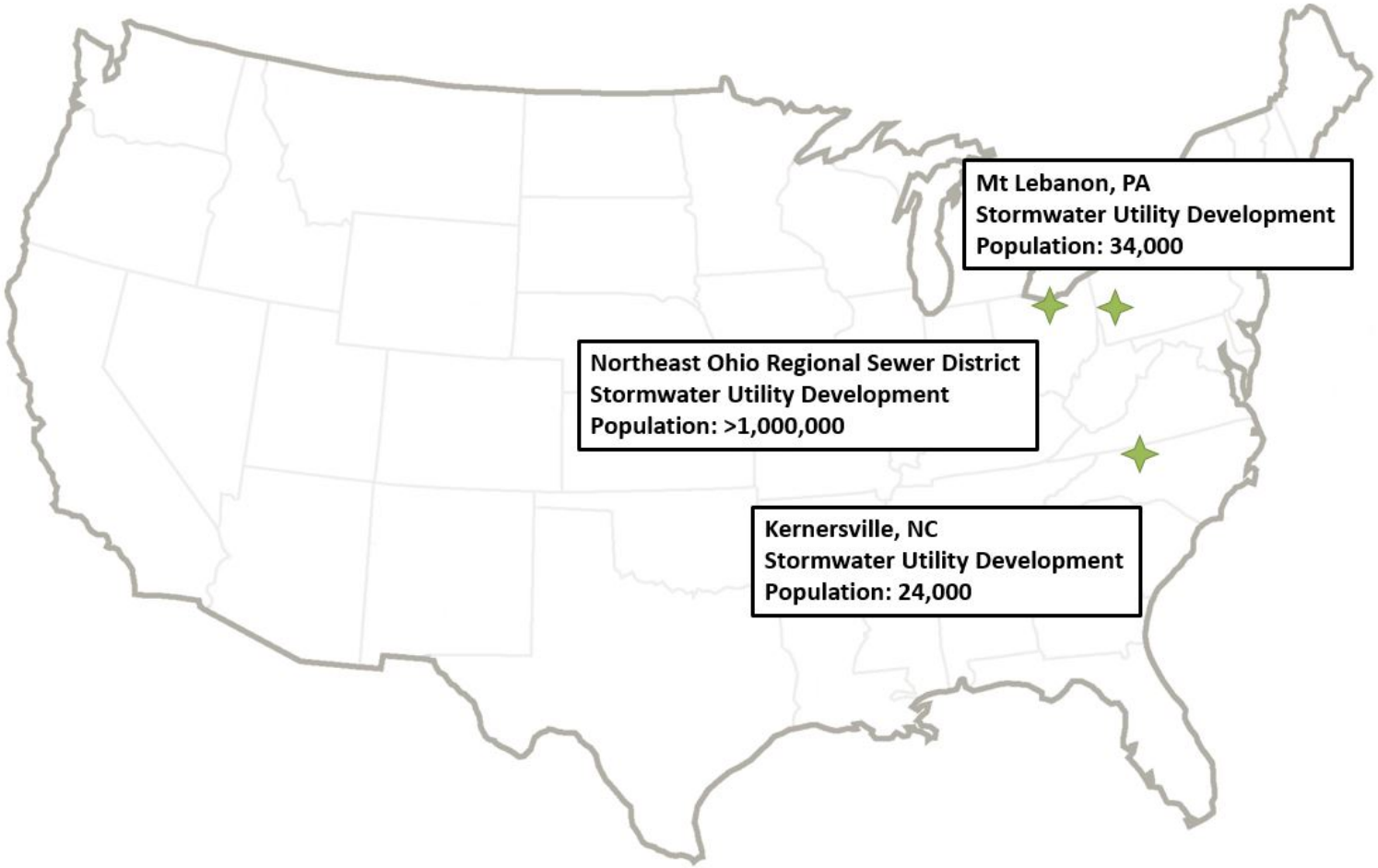
The Logic Flow

- Business for long time; early and main focus safety and real property; streets focused; new kid is water quality; aging infrastructure; never funded like other utilities or infrastructure; quality of life issue; everyone part of problem; everyone part of solution; did not get this way overnight; won't get better overnight; money

Working With the Leadership

- Help leaders govern well
- What is important? Growth, preservation, quality of life, jobs, etc. How to match the program to the important things
- What's the timing of decisions and the process?
- How to think about fees vs. taxes

Communication and Outreach Examples



Exercise – Develop a Communications Plan Framework

Breakout Groups

- Communications (Aubrey & Matt)
- Financial planning (Dave)
- Program planning, costs, rates (Keith)
- Data, systems, processes (Jennifer)

Breakout Groups

- 30 minutes to discuss your subject, take notes, nominate a speaker and develop answers to a few questions
- Four brief reports of <4 minutes each, then a bit of discussion if time allows
  - Communications (Aubrey & Matt)
  - Financial planning (Dave)
  - Program planning, costs, rates (Keith)
  - Data, systems, processes (Jennifer)

Contact

Keith Readling, PE

Raftelis Financial Consultants

919.780.9151

kreadling@raftelis.com

Funding Your Stormwater Program

September 3, 2015

MassDEP Central Regional Office | 8 New Bond Street | Worcester, MA

Hosted by the Central Massachusetts Regional Stormwater Coalition

CMRSWC

Name	Town	Title	Signature	
Central Massachusetts Regional Stormwater Coalition				
				Status for FY2016?
Robin Craver	Charlton	Town Admin.		IN
Tony Maressa	Fitchburg	Stormwater Engineer	☆ different page	IN OUT UNDECIDED
Maria Mast	Grafton	Conservation Agent		IN
John Woodsmall	Holden	Director, DPW		IN
John Westerling	Hopkinton	Director, DPW		IN
Mike Knox	Leicester	Stormwater Committee		IN
Robert McNeil	Millbury	Director, DPW		IN
Fred Litchfield	Northborough	Town Engineer		IN OUT UNDECIDED
Dan Nason	Northborough	Director, DPW		IN OUT UNDECIDED
Jim Shuris	Northbridge	Director, DPW		IN
Ted Kozak	Northbridge	Town Manager	☆ attended	IN
Andrew Golas	Palmer	Executive Assistant		IN OUT UNDECIDED
Carol Riches	Paxton	Town Administrator	☆ attended	IN
Mike Putnam	Paxton	DPW Superintendent		IN
Mia McDonald	Paxton	Technical Assistance		IN
Brad Stone	Shrewsbury	Engineer/ Conservation Agent		IN

Town of Grafton
NPDES Phase 2
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Attachment 3

Outfall Inspections and Reports -

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Grafton, MA

Dry Weather Outfall Inspections

In date range:
01/01/2015- 12/31/2015

Date	Outfall ID	Inspector	Maintenance Needed	Comments
06/25/2015	OF-176-GRAFTON	AJR		20% sediment
06/25/2015	OF-154-GRAFTON	AJR		A few leaves inside outfall
06/25/2015	OF-103-GRAFTON	AJR		
06/25/2015	OF-177-GRAFTON	AJR		Wet, no flow
06/25/2015	OF-175-GRAFTON	AJR		Sand at the base of the outlet
06/25/2015	OF-103-GRAFTON	AJR		Outfall submerged
06/25/2015	OF-103-GRAFTON	AJR		
06/26/2015	OF-144-GRAFTON	AJR		
06/26/2015	OF-159-GRAFTON	AJR		
06/26/2015	OF-78-GRAFTON	AJR		
06/26/2015	OF-164-GRAFTON	AJR		Some sediment at the base, and leaves on top of sediment
06/26/2015	OF-160-GRAFTON	AJR		
06/29/2015	OF-81-GRAFTON	AJR		
06/29/2015	OF-71-GRAFTON	AJR		
06/29/2015	OF-70-GRAFTON	AJR		
06/29/2015	OF-73-GRAFTON	AJR		
06/29/2015	OF-72-GRAFTON	AJR		Partially submerged in water
06/29/2015	OF-76-GRAFTON	AJR		There was a smell of feces.
06/29/2015	OF-287-GRAFTON	AJR		

Total Inspections:19

Grafton, MA

Dry Weather Outfall Inspections

In date range:
01/01/2015- 12/31/2015

Date	Outfall ID	Inspector	Maintenance Needed	Comments
06/29/2015	OF-290-GRAFTON	AJR		
06/29/2015	OF-107-GRAFTON	AJR		
06/29/2015	OF-80-GRAFTON	AJR		Partially under water. About 3 in. is submerged
06/30/2015	OF-42-GRAFTON	AJR		Small amount of sediment at base of outfall
06/30/2015	OF-43-GRAFTON	AJR		
06/30/2015	OF-288-GRAFTON	AJR		
06/30/2015	OF-291-GRAFTON	AJR		
06/30/2015	OF-23-GRAFTON	AJR		
07/06/2015	OF-105-GRAFTON	AJR		
07/06/2015	OF-26-GRAFTON	AJR		
07/06/2015	OF-101-GRAFTON	AJR		
07/06/2015	OF-83-GRAFTON	AJR		Some rocks around the base of the outfall
07/06/2015	OF-104-GRAFTON	AJR		
07/06/2015	OF-27-GRAFTON	AJR		
07/23/2015	OF-102-GRAFTON	AJR		
07/23/2015	OF-121-GRAFTON	AJR		
07/23/2015	OF-120-GRAFTON	AJR		
07/23/2015	OF-125-GRAFTON	AJR		
07/23/2015	OF-106-GRAFTON	AJR		

Total Inspections:19

Grafton, MA

Dry Weather Outfall Inspections

In date range:
01/01/2015- 12/31/2015

Date	Outfall ID	Inspector	Maintenance Needed	Comments
07/23/2015	OF-29-GRAFTON	AJR		Some leaves around base of outfall
07/23/2015	OF-97-GRAFTON	AJR		
07/24/2015	OF-40-GRAFTON	AJR		
07/27/2015	OF-7-Grafton	AJR		
07/27/2015	OF-8-Grafton	AJR		Causes sinkhole in the yard where the pipe has rusted
07/28/2015	OF-153-GRAFTON	AJR		
07/28/2015	OF-75-GRAFTON	AJR		
07/28/2015	OF-77-GRAFTON	AJR		Ammonia: 0
07/28/2015	OF-123-GRAFTON	AJR		Ammonia: 0.25 ppm
07/28/2015	OF-156-GRAFTON	AJR		Odor of manure
07/28/2015	OF-99-GRAFTON	AJR		Ammonia: 0.25 ppm
07/31/2015	OF-15-GRAFTON	AJR		
07/31/2015	OF-16-GRAFTON	AJR		
07/31/2015	OF-235-GRAFTON	AJR		
07/31/2015	OF-178-GRAFTON	AJR		
08/03/2015	OF-31-Grafton	AJR		
08/03/2015	OF-20-GRAFTON	AJR		
08/05/2015	OF-245-GRAFTON	AJR		
08/05/2015	OF-206-GRAFTON	AJR		

Total Inspections:19

Grafton, MA

Dry Weather Outfall Inspections

In date range:
01/01/2015- 12/31/2015

Date	Outfall ID	Inspector	Maintenance Needed	Comments
08/05/2015	OF-205-GRAFTON	AJR		
08/05/2015	OF-236-GRAFTON	AJR		
08/05/2015	OF-21-GRAFTON	AJR		
08/06/2015	OF-129-GRAFTON	AJR		
08/06/2015	OF-212-GRAFTON	AJR		
08/06/2015	OF-216-GRAFTON	AJR		
08/10/2015	OF-12-Grafton	AJR		
08/10/2015	OF-13-GRAFTON	AJR		
08/10/2015	OF-265-GRAFTON	AJR		
08/10/2015	OF-6-Grafton	AJR		
08/10/2015	OF-266-GRAFTON	AJR		
08/10/2015	OF-5-Grafton	AJR		
08/12/2015	OF-259-GRAFTON	AJR		
08/12/2015	OF-260-GRAFTON	AJR		
08/13/2015	OF-30-GRAFTON	AJR		
08/13/2015	OF-4-Grafton	AJR		
08/13/2015	OF-1-GRAFTON	AJR		
08/13/2015	OF-2-Grafton	AJR		
08/13/2015	OF-217-GRAFTON	AJR		

Total Inspections:19

Grafton, MA

Dry Weather Outfall Inspections

In date range:
01/01/2015- 12/31/2015

Date	Outfall ID	Inspector	Maintenance Needed	Comments
08/13/2015	OF-172-GRAFTON	AJR		
08/13/2015	OF-34-Grafton	AJR		
08/13/2015	OF-119-GRAFTON	AJR		
08/13/2015	OF-33-GRAFTON	AJR		
08/14/2015	OF-60-GRAFTON	AJR		
08/14/2015	OF-171-GRAFTON	AJR		
08/14/2015	OF-18-GRAFTON	AJR		
08/14/2015	OF-199-GRAFTON	AJR		
08/14/2015	OF-271-GRAFTON	AJR		
08/14/2015	OF-273-GRAFTON	AJR		
08/14/2015	OF-274-GRAFTON	AJR		
08/14/2015	OF-275-GRAFTON	AJR		
08/14/2015	OF-62-GRAFTON	AJR		
08/14/2015	OF-64-GRAFTON	AJR		
08/14/2015	OF-61-GRAFTON	AJR		
08/17/2015	OF-149-GRAFTON	AJR		
08/17/2015	OF-150-GRAFTON	AJR		
08/17/2015	OF-141-GRAFTON	AJR		
08/17/2015	OF-142-GRAFTON	AJR		

Total Inspections:19

Grafton, MA

Dry Weather Outfall Inspections

In date range:
01/01/2015- 12/31/2015

Date	Outfall ID	Inspector	Maintenance Needed	Comments
08/17/2015	OF-140-GRAFTON	AJR		
08/17/2015	OF-134-GRAFTON	AJR		
08/17/2015	OF-139-GRAFTON	AJR		
08/17/2015	OF-66-GRAFTON	AJR		
08/17/2015	OF-147-GRAFTON	AJR		
08/17/2015	OF-146-GRAFTON	AJR		
08/17/2015	OF-3-GRAFTON	AJR		
08/17/2015	OF-151-GRAFTON	AJR		
08/18/2015	OF-11-GRAFTON	AJR		
08/18/2015	OF-221-GRAFTON	AJR		
08/18/2015	OF-225-GRAFTON	AJR		
08/18/2015	OF-292-GRAFTON	AJR		
08/18/2015	OF-220-GRAFTON	AJR		
08/18/2015	OF-276-GRAFTON	AJR		
08/18/2015	OF-277-GRAFTON	AJR		
08/18/2015	OF-10-GRAFTON	AJR		
08/18/2015	OF-278-GRAFTON	AJR		
08/18/2015	OF-9-Grafton	AJR		
08/18/2015	OF-279-GRAFTON	AJR		

Total Inspections:19

Grafton, MA

Dry Weather Outfall Inspections

In date range:
01/01/2015- 12/31/2015

Date	Outfall ID	Inspector	Maintenance Needed	Comments
08/18/2015	OF-280-GRAFTON	AJR		
08/18/2015	OF-281-GRAFTON	AJR		
08/18/2015	OF-282-GRAFTON	AJR		Trash and debris covered the area, very difficult to find outfall.
08/18/2015	OF-283-GRAFTON	AJR		
08/18/2015	OF-270-GRAFTON	AJR		
08/18/2015	OF-224-GRAFTON	AJR		Ammonia: 0.25 ppm
08/19/2015	OF-249-GRAFTON	AJR		
08/19/2015	OF-248-GRAFTON	AJR		
08/19/2015	OF-179-GRAFTON	AJR		
08/19/2015	OF-195-GRAFTON	AJR		
08/19/2015	OF-194-GRAFTON	AJR		
08/19/2015	OF-201-GRAFTON	AJR		
08/19/2015	OF-203-GRAFTON	AJR		
08/19/2015	OF-215-GRAFTON	AJR		
08/19/2015	OF-196-GRAFTON	AJR		
08/19/2015	OF-197-GRAFTON	AJR		
08/19/2015	OF-247-GRAFTON	AJR		
08/20/2015	OF-57-GRAFTON	AJR		
08/20/2015	OF-111-GRAFTON	AJR		Ammonia: 0.25 ppm

Total Inspections:19

Grafton, MA

Dry Weather Outfall Inspections

In date range:
01/01/2015- 12/31/2015

Date	Outfall ID	Inspector	Maintenance Needed	Comments
08/20/2015	OF-55-GRAFTON	AJR		
08/20/2015	OF-251-GRAFTON	AJR		
08/20/2015	OF-116-GRAFTON	AJR		
08/20/2015	OF-252-GRAFTON	AJR		
08/20/2015	OF-253-GRAFTON	AJR		
08/20/2015	OF-254-GRAFTON	AJR		
08/20/2015	OF-113-GRAFTON	AJR		
08/20/2015	OF-117-GRAFTON	AJR		
08/20/2015	OF-112-GRAFTON	AJR		
08/24/2015	OF-132-GRAFTON	MER		
08/24/2015	OF-95-GRAFTON	MER		
08/24/2015	OF-91-GRAFTON	MER		
08/24/2015	OF-237-GRAFTON	MER		
08/24/2015	OF-90-GRAFTON	MER		
08/24/2015	OF-56-GRAFTON	MER		
08/24/2015	OF-35-GRAFTON	MER		Excessive vegetation made it nearly impossible to find and
08/24/2015	OF-193-GRAFTON	MER		
08/24/2015	OF-58-GRAFTON	MER		
08/24/2015	OF-114-GRAFTON	MER		

Total Inspections:19

Grafton, MA

Dry Weather Outfall Inspections

In date range:
01/01/2015- 12/31/2015

Date	Outfall ID	Inspector	Maintenance Needed	Comments
08/24/2015	OF-89-GRAFTON	MER		
08/24/2015	OF-238-GRAFTON	MER		
08/24/2015	OF-239-GRAFTON	MER		
08/24/2015	OF-131-GRAFTON	MER		
08/25/2015	OF-186-GRAFTON	MER		A little rusty on the flare at the end
08/25/2015	OF-188-GRAFTON	MER		
08/25/2015	OF-185-GRAFTON	MER		
08/25/2015	OF-183-GRAFTON	MER		Rusted and cracking a little bit
08/25/2015	OF-181-GRAFTON	MER		
08/25/2015	OF-67-GRAFTON	MER		
08/25/2015	OF-268-GRAFTON	MER		Rusting
08/25/2015	OF-94-GRAFTON	MER		
08/25/2015	OF-93-GRAFTON	MER		
08/26/2015	OF-240-GRAFTON	MER		Excessive vegetation
11/04/2015	OF-36-GRAFTON	MER		
11/04/2015	OF-37-GRAFTON	MER		Excessive vegetation made it impossible to locate during the
11/04/2015	OF-39-GRAFTON	MER		Excessive vegetation made this outfall impossible to locate in
11/04/2015	OF-46-GRAFTON	MER		
11/04/2015	OF-49-GRAFTON	MER		

Total Inspections:19

Grafton, MA

Dry Weather Outfall Inspections

In date range:
01/01/2015- 12/31/2015

Date	Outfall ID	Inspector	Maintenance Needed	Comments
11/04/2015	OF-47-GRAFTON	MER		
11/04/2015	OF-48-GRAFTON	MER		
11/04/2015	OF-41-GRAFTON	MER		Poor drainage
11/04/2015	OF-84-GRAFTON	MER		
11/04/2015	OF-85-GRAFTON	MER		
11/04/2015	OF-86-GRAFTON	MER		Excessive vegetation
11/04/2015	OF-87-GRAFTON	MER		Excessive vegetation
11/04/2015	OF-82-GRAFTON	MER		Partially submerged into the ground
11/04/2015	OF-22-GRAFTON	MER		Very rusted, half submerged, with a lot of standing water in
11/04/2015	OF-28-Grafton	MER		
11/05/2015	OF-32-GRAFTON	MER		Excessive vegetation
11/05/2015	OF-24-Grafton	MER		Very rusted and practically submerged in the muck/water
11/05/2015	OF-25-Grafton	MER		Very rusted and covered in moss
11/05/2015	OF-234-GRAFTON	MER		Filled with leaves and vines growing around it
11/05/2015	OF-233-GRAFTON	MER		Plants growing around and inside of the outfall
11/05/2015	OF-230-GRAFTON	MER		Completely submerged in muck and mud
11/05/2015	OF-232-GRAFTON	MER		Completely submerged in mud and muck, covered in plant
11/06/2015	OF-126-GRAFTON	MER		
11/06/2015	OF-122-GRAFTON	MER		Half covered by earth, and was unable to uncover other half.

Total Inspections:19

Grafton, MA

Dry Weather Outfall Inspections

In date range:
01/01/2015- 12/31/2015

Date	Outfall ID	Inspector	Maintenance Needed	Comments
11/06/2015	OF-174-GRAFTON	MER		Neighbors complained it does not drain properly and creates
11/06/2015	OF-293-GRAFTON	MER		Outfall to the right in the picture has begun to crumble and
11/06/2015	OF-127-GRAFTON	MER		Excessive vegetation
11/06/2015	OF-207-GRAFTON	MER		
11/09/2015	OF-100-GRAFTON	MER		Ammonia: 0
11/10/2015	OF-14-Grafton	MER		Very rusted
11/10/2015	OF-229-GRAFTON	MER		Ammonia: 0
11/10/2015	OF-44-GRAFTON	MER		Excessive vegetation
11/10/2015	OF-45-GRAFTON	MER		
11/10/2015	OF-226-GRAFTON	MER		Rusting
11/10/2015	OF-227-GRAFTON	MER		Excessive vegetation. It is barely visible in the photo
11/10/2015	OF-242-GRAFTON	MER		
11/10/2015	OF-243-GRAFTON	MER		
11/10/2015	OF-244-GRAFTON	MER		Pipes weren't connected to each other, see photo
11/10/2015	OF-202-GRAFTON	MER		Outfall pipes seemed to be disconnected
11/10/2015	OF-152-GRAFTON	MER		Almost completely underground, see photo
11/10/2015	OF-155-GRAFTON	MER		Excessive vegetation
11/10/2015	OF-158-GRAFTON	MER		
11/10/2015	OF-294-GRAFTON	MER		Excessive vegetation

Total Inspections:19

Grafton, MA

Dry Weather Outfall Inspections

In date range:
01/01/2015- 12/31/2015

Date	Outfall ID	Inspector	Maintenance Needed	Comments
11/10/2015	OF-161-GRAFTON	MER		
11/11/2015	OF-79-GRAFTON	MER		
11/11/2015	OF-166-GRAFTON	MER		Covered by plants and earth
11/11/2015	OF-165-GRAFTON	MER		Completely covered by plants, and earth
11/11/2015	OF-200-GRAFTON	MER		
11/11/2015	OF-74-GRAFTON	MER		
11/13/2015	OF-187-GRAFTON	MER		
11/13/2015	OF-261-GRAFTON	MER		Extremely dense brush/vegetation made it impossible to get
11/13/2015	OF-263-GRAFTON	MER		Excessive vegetation
11/13/2015	OF-264-GRAFTON	MER		Excessive vegetation
11/13/2015	OF-262-GRAFTON	MER		Excessive vegetation
11/13/2015	OF-133-GRAFTON	MER		
11/13/2015	OF-296-GRAFTON	MER		Grass had begun to grow through a crack in the swale, see
11/13/2015	OF-256-GRAFTON	MER		Excessive vegetation
11/13/2015	OF-88-GRAFTON	MER		
11/13/2015	OF-92-GRAFTON	MER		
11/13/2015	OF-189-GRAFTON	MER		Water was backed up and created a small pond shown in the
11/13/2015	OF-54-GRAFTON	MER		It was hard to determine where in the woods this pipe let out
11/13/2015	OF-115-GRAFTON	MER		Excessive vegetation

Total Inspections:19

Grafton, MA

Dry Weather Outfall Inspections

In date range:
01/01/2015- 12/31/2015

Date	Outfall ID	Inspector	Maintenance Needed	Comments
11/13/2015	OF-173-GRAFTON	MER		
11/13/2015	OF-68-GRAFTON	MER		Partially submerged in muck/mud, see photo
11/13/2015	OF-65-GRAFTON	MER		Excessive vegetation and sediment. Partially submerged in
11/13/2015	OF-63-GRAFTON	MER		
11/13/2015	OF-137-GRAFTON	MER		Excessive vegetation
11/13/2015	OF-148-GRAFTON	MER		
11/13/2015	OF-267-GRAFTON	MER		Very rusted, partially submerged in water
11/13/2015	OF-145-GRAFTON	MER		
11/13/2015	OF-182-GRAFTON	MER		Excessive vegetation and sediment
11/13/2015	OF-180-GRAFTON	MER		Mostly underground, also please note the pool drain pipe.
11/13/2015	OF-184-GRAFTON	MER		
11/16/2015	OF-20-Grafton	MER		
11/16/2015	OF-198-GRAFTON	MER		
11/16/2015	OF-169-GRAFTON	MER		Excessive vegetation made it hard to find outfall, see photo
11/16/2015	OF-170-GRAFTON	MER		Excessive vegetation
11/16/2015	OF-168-GRAFTON	MER		
11/16/2015	OF-19-Grafton	MER		
11/16/2015	OF-258-GRAFTON	MER		
11/16/2015	OF-190-GRAFTON	MER		Rusting, and excessive vegeation

Total Inspections:19

Grafton, MA

Dry Weather Outfall Inspections

In date range:
01/01/2015- 12/31/2015

Date	Outfall ID	Inspector	Maintenance Needed	Comments
11/16/2015	OF-218-GRAFTON	MER		Excessive vegetation
11/16/2015	OF-219-GRAFTON	MER		
11/16/2015	OF-272-GRAFTON	MER		Rusting
11/16/2015	OF-297-GRAFTON	MER		Rusting
11/16/2015	OF-285-GRAFTON	MER		Excessive vegetation
11/16/2015	OF-286-GRAFTON	MER		
11/16/2015	OF-284-GRAFTON	MER		
11/16/2015	OF-241-GRAFTON	MER		
11/16/2015	OF-17-Grafton	MER		Excessive vegetation made it impossible to get closer, poor
11/20/2015	OF-255-GRAFTON	MER		Very rusted, partially submerged
11/20/2015	OF-211-GRAFTON	MER		
11/20/2015	OF-191-GRAFTON	MER		Large tree growing directly in front of it, see photo.
11/20/2015	OF-53-GRAFTON	MER		
11/20/2015	OF-250-GRAFTON	MER		
11/20/2015	OF-214-GRAFTON	MER		Excessive vegetation
11/20/2015	OF-50-GRAFTON	MER		Almost completely submerged underground, see photo
11/20/2015	OF-17-GRAFTON	MER		Water is backed up and not draining well, excessive
11/20/2015	OF-143-GRAFTON	MER		The opening is a little broken
11/20/2015	OF-135-GRAFTON	MER		

Total Inspections:19

Grafton, MA

Dry Weather Outfall Inspections

In date range:
01/01/2015- 12/31/2015

Date	Outfall ID	Inspector	Maintenance Needed	Comments
11/20/2015	OF-136-GRAFTON	MER		
11/20/2015	OF-109-GRAFTON	MER		Hard to fully inspect due to running stream below it
11/20/2015	OF-110-GRAFTON	MER		Opening partially blocked by rocks, see photo
11/20/2015	OF-108-GRAFTON	MER		Partially submerged, excessive vegetation
11/20/2015	OF-257-GRAFTON	MER		Excessive vegetation
11/20/2015	OF-269-GRAFTON	MER		
11/20/2015	OF-298-GRAFTON	MER		
11/20/2015	OF-210-GRAFTON	MER		
11/25/2015	OF-128-GRAFTON	MER		
11/25/2015	OF-118-GRAFTON	MER		
11/25/2015	OF-295-GRAFTON	MER		Unable to determine accurate diameter due to vegetation and
11/25/2015	OF-19-GRAFTON	MER		Homeowner has the opening covered because the pond is
11/25/2015	OF-52-GRAFTON	MER		Unable to locate actual opening of outfall, could only locate
11/25/2015	OF-124-GRAFTON	MER		Excessive vegetation surrounding the opening, see photo
11/25/2015	OF-213-GRAFTON	MER		Large leaf and brush piles cover the area. Hard to tell if this is

Total Inspections:15

Grafton, MA

Storm Water Outfall Inventory

Total Outfalls: 333

Outfall ID	Material	Condition	Outfall Owner	Comments
OF-12-GRAFTON	Other	Fair	Town	6" metal pipe into a 8" corrugated plastic pipe that travels
OF-36-Grafton				
OF-17-GRAFTON	Corrugated Metal	Poor	Town	Water is backed up and not draining well
OF-8-GRAFTON	Corrugated Metal	Poor	Town	
OF-22-GRAFTON	Ductile Iron	Poor	Town	Very rusted, half submerged, with a lot of standing water in front
OF-19-GRAFTON	Concrete	Good	Town	
OF-7-GRAFTON	Concrete	Good	Town	
OF-37-GRAFTON	Concrete	Fair	Town	
OF-35-GRAFTON	Concrete	Good	Town	
OF-36-GRAFTON	Concrete	Good	Town	
OF-24-GRAFTON	Other	Poor	Town	Very rusted inside and covered in moss on the outside. The
OF-25-GRAFTON	Ductile Iron	Poor	Town	
OF-29-GRAFTON	Concrete	Good	Town	
OF-18-GRAFTON	Concrete	Good	Town	
OF-16-GRAFTON	Corrugated Metal	Good	Town	
OF-15-GRAFTON	Corrugated Metal	Good	Town	Submerged in about 12 in. of water.
OF-20-GRAFTON	Corrugated Metal	Good	Town	
OF-13-GRAFTON	Concrete	Good	Town	
OF-21-GRAFTON	Concrete	Good	Town	
OF-11-GRAFTON	Concrete	Good	Town	

Grafton, MA

Storm Water Outfall Inventory

Total Outfalls: 333

Outfall ID	Material	Condition	Outfall Owner	Comments
OF-5-GRAFTON	Corrugated Metal	Good	Town	
OF-49-GRAFTON	Other	Good	Town	
OF-4-GRAFTON	Concrete	Good	Town	
OF-1-GRAFTON	Concrete	Good	Town	
OF-56-GRAFTON	Concrete	Good	Town	
OF-50-GRAFTON	Other	Good	Town	
OF-53-GRAFTON	Concrete	Good	Town	
OF-46-GRAFTON	Concrete	Good	Town	
OF-67-GRAFTON	PVC	Good	Town	
OF-58-GRAFTON	Concrete	Good	Town	Causes sink hole in the grass at the bottom of the hill
OF-73-GRAFTON	Corrugated Metal	Good	Town	
OF-42-GRAFTON	Concrete	Good	Town	
OF-43-GRAFTON	Concrete	Good	Town	6 in of water is at base of outfall
OF-40-GRAFTON	Concrete	Good	Town	
OF-39-GRAFTON	Concrete	Good	Town	
OF-2-GRAFTON	Concrete	Good	Town	
OF-18-Grafton	Concrete	Good	Town	
OF-199-GRAFTON	Concrete	Good	Town	
OF-271-GRAFTON	Corrugated Metal	Fair	Town	
OF-273-GRAFTON	Concrete	Poor	Town	Majority of outfall is submerged under ground. About 8 in. into the

Grafton, MA

Storm Water Outfall Inventory

Total Outfalls: 333

Outfall ID	Material	Condition	Outfall Owner	Comments
OF-274-GRAFTON	Concrete	Good	Town	
OF-96-GRAFTON			Town	Unable to locate, most likely under leaf pile. See photo
OF-109-GRAFTON	Concrete	Good	Town	OF 109 is sticking out of the side of the culvert to the right up
OF-110-GRAFTON	PVC	Good	Town	Opening is partially blocked by rocks
OF-108-GRAFTON	Corrugated Metal	Poor	Town	Opening is half buried
OF-82-GRAFTON	Concrete	Fair	Town	Partially submerged into the ground
OF-95-GRAFTON	Corrugated Metal	Good	Town	
OF-91-GRAFTON	Corrugated Metal	Good	Town	
OF-89-GRAFTON	Concrete	Fair	Town	
OF-90-GRAFTON	Concrete	Good	Town	
OF-93-GRAFTON	Concrete	Good	Town	
OF-76-GRAFTON	Corrugated Metal	Good	Town	
OF-107-GRAFTON	Concrete	Good	Town	
OF-101-GRAFTON	Concrete	Good	Town	
OF-83-GRAFTON	Concrete	Good	Town	
OF-104-GRAFTON	Other	Good	Town	Under a bridge. Couldn't get too close to measure, around 6-8 in
OF-127-GRAFTON	Concrete	Fair	Town	
OF-100-GRAFTON	Corrugated Metal	Poor	Town	
OF-124-GRAFTON	Concrete	Fair	Town	Behind the pricker bushes (excessive vegetation), in the middle
OF-128-GRAFTON	Concrete	Crumbling	Town	Please ignore the 1st picture

Grafton, MA

Storm Water Outfall Inventory

Total Outfalls: 333

Outfall ID	Material	Condition	Outfall Owner	Comments
OF-132-GRAFTON	Corrugated Metal	Good	Town	
OF-118-GRAFTON	Concrete	Good	Town	
OF-114-GRAFTON	Other	Good	Town	
OF-38-GRAFTON	Concrete	Fair	Town	
OF-143-GRAFTON	Other	Fair	Town	
OF-135-GRAFTON	PVC	Good	Town	Top pipe shown in the center of the picture.
OF-136-GRAFTON	PVC	Good	Town	The photo has a sun glare but the outfall is below and to the right
OF-174-GRAFTON	Concrete	Good	Town	
OF-126-GRAFTON	Concrete	Fair	Town	
OF-131-GRAFTON	Concrete	Fair	Town	
OF-125-GRAFTON	Concrete	Good	Town	Submerged under water. Hard to get diameter, roughly 6-8in
OF-129-GRAFTON	Concrete	Good	Town	
OF-119-GRAFTON	Concrete	Good	Town	About 5 in. submerged in water.
OF-122-GRAFTON	Concrete	Poor	Town	Half covered by earth, and was unable to uncover other half.
OF-45-GRAFTON	Concrete	Fair	Town	
OF-188-GRAFTON	Corrugated Metal	Fair	Town	
OF-185-GRAFTON	Other	Good	Town	
OF-186-GRAFTON	Corrugated Metal	Fair	Town	
OF-152-GRAFTON	Concrete	Good	Town	
OF-155-GRAFTON	Concrete	Good	Town	

Grafton, MA

Storm Water Outfall Inventory

Total Outfalls: 333

Outfall ID	Material	Condition	Outfall Owner	Comments
OF-183-GRAFTON	Corrugated Metal	Fair	Town	
OF-181-GRAFTON	Concrete	Fair	Town	
OF-158-GRAFTON	Concrete	Good	Town	
OF-175-GRAFTON	Other	Good	Town	
OF-177-GRAFTON	Other	Good	Town	
OF-154-GRAFTON	Concrete	Good	Town	
OF-157-GRAFTON	Other	Good	Town	
OF-160-GRAFTON	Concrete	Good	Town	
OF-164-GRAFTON	Concrete	Good	Town	Leaves around the exit of outfall. Between 1-2 in. in height
OF-178-GRAFTON	Corrugated Metal	Fair	Town	
OF-52-GRAFTON	Other	Poor	Town	Could only see the path that the water has carved into the mud,
OF-213-GRAFTON	Other	Fair	Town	Believed to be stone and underneath these leaves/branches,
OF-207-GRAFTON	Concrete	Fair	Town	
OF-44-GRAFTON	Concrete	Fair	Town	
OF-226-GRAFTON	Corrugated Metal	Fair	Town	
OF-204-GRAFTON		Good	Town	Unable to locate, most likely underneath leaf pile
OF-51-GRAFTON			Town	Unable to locate. Was too close to the electric fence, and covered
OF-31-GRAFTON			Town	Unable to locate. Drain manhole is not located where indicated
OF-69-GRAFTON			Town	Unable to locate. Neighbor who used to work for the DPW said
OF-208-GRAFTON	Corrugated Metal	Fair	Town	

Grafton, MA

Storm Water Outfall Inventory

Total Outfalls: 333

Outfall ID	Material	Condition	Outfall Owner	Comments
OF-231-GRAFTON			Town	Unable to locate. Most likely submerged in mud/muck, because
OF-193-GRAFTON	Concrete	Good	Town	
OF-214-GRAFTON	Concrete	Poor	Town	
OF-210-GRAFTON	Concrete	Fair	Town	Outfall 210 is located within this culvert. The poor picture quality
OF-211-GRAFTON	Concrete	Fair	Town	Outfall 211 is located within this culvert. Poor picture quality is
OF-191-GRAFTON	Ductile Iron	Good	Town	
OF-227-GRAFTON	Other	Fair	Town	
OF-206-GRAFTON	Concrete	Good	Town	
OF-228-GRAFTON			Town	Unable to locate, most likely under leaf pile near the cliff edge,
OF-237-GRAFTON	Concrete	Good	Town	Please see second photo.
OF-240-GRAFTON	Corrugated Metal	Fair	Town	
OF-244-GRAFTON	Concrete	Poor	Town	
OF-250-GRAFTON	Corrugated Metal	Fair	Town	
OF-255-GRAFTON	Corrugated Metal	Good	Town	
OF-257-GRAFTON	Concrete	Fair	Town	The outfall in the photo is in the middle, behind the manhole, in
OF-234-GRAFTON	Concrete	Fair	Town	
OF-232-GRAFTON	Concrete	Poor	Town	Completely submerged in mud and muck, covered in plant
OF-239-GRAFTON	PVC	Good	Town	
OF-236-GRAFTON	Concrete	Good	Town	Excessive Sediment.
OF-238-GRAFTON	Concrete	Good	Town	

Grafton, MA

Storm Water Outfall Inventory

Total Outfalls: 333

Outfall ID	Material	Condition	Outfall Owner	Comments
OF-233-GRAFTON	Concrete	Fair	Town	
OF-230-GRAFTON	Concrete	Poor	Town	Completely submerged in muck and plants, and covered in moss
OF-268-GRAFTON	Corrugated Metal	Good	Town	Please see second photo, towards the back, the smaller, rusted,
OF-202-GRAFTON	Concrete	Fair	Town	
OF-289-GRAFTON			Town	Unable to locate because it is behind a factory, tall fence, and
OF-294-GRAFTON	Concrete	Good	Town	
OF-137-GRAFTON	Concrete	Good	Town	Both OF 137 and OF 138 are shown in this picture
OF-187-GRAFTON	Corrugated Metal	Fair	Town	
OF-261-GRAFTON	Concrete	Good	Town	Extremely dense brush/vegetation made it impossible to get any
OF-264-GRAFTON	Concrete	Good	Town	See top left of photo. Brush/vegetation was too dense to get
OF-262-GRAFTON	Concrete	Fair	Town	See top right of photo. Brush/vegetation was too dense to get
OF-293-GRAFTON	Concrete	Crumbling	Town	Outfall to the right in the picture has begun to crumble and the top
OF-269-GRAFTON	Corrugated Metal	Good	Town	
OF-295-GRAFTON	Concrete		Town	Outfall is located within the catch basin. There were a lot of
OF-3-Grafton	Concrete	Fair	Town	
OF-290-GRAFTON	Concrete	Good	Town	
OF-291-GRAFTON	Concrete	Good	Town	
OF-2-Grafton	Concrete	Good	Town	
OF-266-GRAFTON	Concrete	Good	Town	
OF-265-GRAFTON	Concrete	Good	Town	

Grafton, MA

Storm Water Outfall Inventory

Total Outfalls: 333

Outfall ID	Material	Condition	Outfall Owner	Comments
OF-30-Grafton	Concrete	Fair	Town	
OF-26-Grafton	Concrete	Fair	Town	
OF-28-Grafton	Concrete	Fair	Town	
OF-22-Grafton	PVC	Good	Town	
OF-14-Grafton	Corrugated Metal	Fair	Town	
OF-159-GRAFTON	Other	Good	Town	Top photo is both outfalls 159 and 160 together
OF-33-Grafton	Concrete	Fair	Town	
OF-32-Grafton	Concrete	Fair	Town	
OF-176-GRAFTON	Other	Good	Town	
OF-103-GRAFTON	Ductile Iron	Good	Town	Outfall submerged inspection information taken at upstream
OF-144-GRAFTON	PVC	Good	Town	
OF-78-GRAFTON	Clay Tile	Good	Town	
OF-81-GRAFTON	PVC	Good	Town	
OF-29-Grafton	Concrete	Good	Town	Excessive Vegetation
OF-27-Grafton	Concrete	Good	Town	Submerged about 3 in.
OF-15-Grafton	Concrete	Good	Town	Excessive Sediment
OF-13-Grafton	Concrete	Good	Town	Submerged about 6 in.
OF-31-Grafton	Concrete	Good	Town	Excessive Vegetation
OF-12-Grafton	Concrete	Good	Town	
OF-24-Grafton	Ductile Iron	Good	Town	

Grafton, MA

Storm Water Outfall Inventory

Total Outfalls: 333

Outfall ID	Material	Condition	Outfall Owner	Comments
OF-10-GRAFTON	Other	Good	Town	
OF-80-GRAFTON	Concrete	Good	Town	
OF-70-GRAFTON	Other	Good	Town	
OF-72-GRAFTON	Concrete	Good	Town	Roughly 5in of outfall was submerged in water
OF-287-GRAFTON	Concrete	Good	Town	
OF-288-GRAFTON	Corrugated Metal	Good	Town	
OF-23-GRAFTON	Concrete	Good	Town	
OF-26-GRAFTON	Concrete	Fair	Town	Roughly 2 in of outfall was filled with rocks, leaves, sediment
OF-27-GRAFTON	Concrete	Fair	Town	Roughly 4 in of outfall is buried in leaves and rocks
OF-105-GRAFTON	Concrete	Good	Town	
OF-106-GRAFTON	Concrete	Fair	Town	Excessive sediment, hard to tell what the diameter of outfall is.
OF-120-GRAFTON	Concrete	Good	Town	
OF-121-GRAFTON	Corrugated Metal	Good	Town	Submerged in ground by 1 in
OF-34-Grafton	Concrete	Good	Town	
OF-4-Grafton	Concrete	Good	Town	
OF-5-Grafton	Concrete	Good	Town	
OF-7-Grafton	Other	Good	Town	
OF-8-Grafton	Other	Good	Town	
OF-99-GRAFTON	Corrugated Metal	Good	Town	
OF-123-GRAFTON	Concrete	Good	Town	

Grafton, MA

Storm Water Outfall Inventory

Total Outfalls: 333

Outfall ID	Material	Condition	Outfall Owner	Comments
OF-3-GRAFTON	Concrete	Good	Town	About 7 in. submerged in the ground
OF-172-GRAFTON	Corrugated Metal	Good	Town	
OF-217-GRAFTON	Concrete	Good	Town	
OF-71-GRAFTON	Concrete	Fair	Town	Roughly 6 in. ofor outfall is submerged in sediment
OF-77-GRAFTON	Corrugated Metal	Good	Town	
OF-75-GRAFTON	Corrugated Metal	Good	Town	
OF-153-GRAFTON	Concrete	Good	Town	
OF-156-GRAFTON	Concrete	Good	Town	Outfall is under bars (see picture)
OF-243-GRAFTON	Corrugated Metal	Good	Town	
OF-216-GRAFTON	Concrete	Good	Town	
OF-235-GRAFTON	Concrete	Good	Town	Excessive Sediment
OF-25-Grafton	Concrete	Good	Town	Submerged about 3 in. into the ground.
OF-245-GRAFTON	Corrugated Metal	Good	Town	Submerged 6 in.
OF-205-GRAFTON	Concrete	Good	Town	
OF-212-GRAFTON	Corrugated Metal	Good	Town	Submerged in about 4 in. of water.
OF-6-GRAFTON	Corrugated Metal	Fair	Town	
OF-229-GRAFTON	Corrugated Metal	Poor	Town	Rusting around edges
OF-14-GRAFTON	Corrugated Metal	Poor	Town	
OF-9-GRAFTON	Corrugated Metal	Fair	Town	
OF-162-GRAFTON			Town	Unable to locate. Was informed by homeowner that the outfall

Grafton, MA

Storm Water Outfall Inventory

Total Outfalls: 333

Outfall ID	Material	Condition	Outfall Owner	Comments
OF-163-GRAFTON			Town	Unable to locate. Was informed by homeowner that the outfall
OF-161-GRAFTON	Concrete	Good	Town	
OF-259-GRAFTON	Concrete	Good	Town	
OF-32-GRAFTON	Concrete	Good	Town	OF 32 is the one on the right
OF-33-GRAFTON	Concrete	Good	Town	OF 33 is the one on the left
OF-34-GRAFTON	Concrete	Good	Town	About 3 in. submerged into the ground.
OF-242-GRAFTON	Concrete	Good	Town	
OF-165-GRAFTON	Concrete	Fair	Town	Completely covered by plants, and earth
OF-166-GRAFTON	Concrete	Fair	Town	Covered by plants and earth
OF-260-GRAFTON	Concrete	Good	Town	
OF-30-GRAFTON	Concrete	Good	Town	
OF-171-GRAFTON	Corrugated Metal	Good	Town	
OF-62-GRAFTON	Concrete	Good	Town	
OF-64-GRAFTON	Concrete	Good	Town	
OF-60-GRAFTON	Corrugated Metal	Fair	Town	
OF-61-GRAFTON	Corrugated Metal	Fair	Town	
OF-151-GRAFTON	Corrugated Metal	Good	Town	
OF-146-GRAFTON	Corrugated Metal	Good	Town	
OF-147-GRAFTON	Corrugated Metal	Good	Town	
OF-79-GRAFTON	Ductile Iron	Fair	Town	

Grafton, MA

Storm Water Outfall Inventory

Total Outfalls: 333

Outfall ID	Material	Condition	Outfall Owner	Comments
OF-150-GRAFTON	Concrete	Good	Town	
OF-138-GRAFTON	Concrete	Good	Town	Both OF 137 and OF 138 are shown in this picture
OF-275-GRAFTON	Ductile Iron	Fair	Town	Shows 2 outfalls side by side, but only 1 listed on the map. Both
OF-142-GRAFTON	Corrugated Metal	Good	Town	
OF-140-GRAFTON	Concrete	Good	Town	
OF-134-GRAFTON	Concrete	Good	Town	
OF-59-GRAFTON			Town	Unable to locate. Potentially redirected into the brook across the
OF-141-GRAFTON	Corrugated Metal	Good	Town	Please see the darker shadow to the right of the culvert. Couldn't
OF-133-GRAFTON	Concrete	Fair	Town	
OF-148-GRAFTON	PVC	Good	Town	
OF-182-GRAFTON	Concrete	Fair	Town	
OF-184-GRAFTON	Other	Good	Town	
OF-149-GRAFTON	PVC	Good	Town	Please disregard first photo
OF-145-GRAFTON	Other	Good	Town	
OF-139-GRAFTON	Other	Good	Town	
OF-66-GRAFTON	Concrete	Good	Town	
OF-221-GRAFTON	Concrete	Good	Town	Two other outfalls are shown, but not listed. Both are Corrugated
OF-225-GRAFTON	Concrete	Good	Town	
OF-74-GRAFTON	Ductile Iron	Good	Town	
OF-224-GRAFTON	Concrete	Good	Town	Flow is present

Grafton, MA

Storm Water Outfall Inventory

Total Outfalls: 333

Outfall ID	Material	Condition	Outfall Owner	Comments
OF-220-GRAFTON	Concrete	Good	Town	
OF-200-GRAFTON	Ductile Iron	Fair	Town	
OF-276-GRAFTON	Corrugated Metal	Good	Town	
OF-277-GRAFTON	Concrete	Good	Town	
OF-292-GRAFTON	Corrugated Metal	Fair	Town	Outfall is crushed around rim, and is rusty. In front of outfall, there
OF-11-Grafton	Concrete	Good	Town	
OF-10-Grafton	Concrete	Good	Town	
OF-168-GRAFTON	Other	Fair	Town	
OF-278-GRAFTON	Concrete	Good	Town	
OF-167-GRAFTON			Town	Unable to locate. May have been redirected into the existing drain
OF-9-Grafton	Concrete	Poor	Town	Top crumbled in and blocked.
OF-279-GRAFTON	Concrete	Good	Town	
OF-280-GRAFTON	Concrete	Good	Town	
OF-281-GRAFTON	Ductile Iron	Good	Town	
OF-170-GRAFTON	Other	Good	Town	
OF-173-GRAFTON	Corrugated Metal	Good	Town	
OF-198-GRAFTON	Corrugated Metal	Good	Town	
OF-218-GRAFTON	Concrete	Good	Town	
OF-219-GRAFTON	Concrete	Good	Town	
OF-16-Grafton	Concrete	Good	Town	Bad photo quality, vegetation was too thick to get closer.

Grafton, MA

Storm Water Outfall Inventory

Total Outfalls: 333

Outfall ID	Material	Condition	Outfall Owner	Comments
OF-169-GRAFTON	Other	Fair	Town	
OF-196-GRAFTON	Corrugated Metal	Good	Town	
OF-282-GRAFTON	Other	Fair	Town	Covered in debris and stacks of trash. Picture shows general
OF-270-GRAFTON	Corrugated Metal	Good	Town	
OF-197-GRAFTON	Corrugated Metal	Good	Town	
OF-195-GRAFTON	Corrugated Metal	Good	Town	
OF-194-GRAFTON	Ductile Iron	Good	Town	
OF-215-GRAFTON	Concrete	Good	Town	
OF-203-GRAFTON	Concrete	Good	Town	
OF-201-GRAFTON	Concrete	Good	Town	Submerged about 6 in. into the ground.
OF-248-GRAFTON	Ductile Iron	Good	Town	Mud around rim of outfall.
OF-247-GRAFTON	Concrete	Good	Town	
OF-249-GRAFTON	Corrugated Metal	Poor	Town	Badly damaged
OF-179-GRAFTON	Corrugated Metal	Good	Town	Covered in leaves
OF-251-GRAFTON	Corrugated Metal	Good	Town	
OF-252-GRAFTON	Corrugated Metal	Good	Town	
OF-21-Grafton	Other	Good	Town	See darker spot to the right of the photo. Vegetation was too
OF-253-GRAFTON	Concrete	Good	Town	
OF-254-GRAFTON	Corrugated Metal	Good	Town	
OF-117-GRAFTON	Concrete	Good	Town	

Grafton, MA

Storm Water Outfall Inventory

Total Outfalls: 333

Outfall ID	Material	Condition	Outfall Owner	Comments
OF-111-GRAFTON	Concrete	Good	Town	
OF-180-GRAFTON	Concrete	Fair	Town	Mostly underground, also please note the pool drain pipe. Printed
OF-263-GRAFTON	Concrete	Fair	Town	
OF-256-GRAFTON	Concrete	Fair	Town	Very covered in brush, only one edge was exposed.
OF-92-GRAFTON	Corrugated Metal	Good	Town	
OF-88-GRAFTON	Concrete	Good	Town	
OF-283-GRAFTON	Concrete	Good	Town	
OF-112-GRAFTON	Concrete	Good	Town	
OF-57-GRAFTON	Corrugated Metal	Good	Town	
OF-55-GRAFTON	Corrugated Metal	Good	Town	
OF-116-GRAFTON	Corrugated Metal	Good	Town	
OF-113-GRAFTON	Concrete	Good	Town	
OF-94-GRAFTON	Concrete	Good	Town	
OF-47-GRAFTON	Concrete	Good	Town	
OF-48-GRAFTON	Concrete	Fair	Town	
OF-41-GRAFTON	Concrete	Good	Town	Please see second photo.
OF-87-GRAFTON	Concrete	Good	Town	
OF-84-GRAFTON	Concrete	Good	Town	
OF-86-GRAFTON	Concrete	Fair	Town	
OF-85-GRAFTON	Concrete	Fair	Town	

Grafton, MA

Storm Water Outfall Inventory

Total Outfalls: 333

Outfall ID	Material	Condition	Outfall Owner	Comments
OF-28-GRAFTON	Other	Fair	Town	Large rocks in front of the opening may be blocking flow
OF-258-GRAFTON	Concrete	Fair	Town	
OF-20-Grafton	Other	Good	Town	See darker spot to the left in the photo. Vegetation was too dense
OF-17-Grafton	Concrete	Good	Town	Bad photo quality, vegetation was too thick to get closer.
OF-23-Grafton	Concrete	Good	Town	
OF-19-Grafton	Concrete	Good	Town	
OF-68-GRAFTON	Concrete	Good	Town	
OF-65-GRAFTON	Concrete	Fair	Town	
OF-63-GRAFTON	Concrete	Fair	Town	
OF-35-Grafton	Other	Good	Town	Please ignore the photo that is posted. This is of outfall 191.
OF-298-GRAFTON	Other	Good	Town	Please see second photo
OF-246-GRAFTON	Other	Crumbling	Town	Is rusted through and practically completely underground.
OF-130-GRAFTON			Town	Unable to locate. Might be located in a field of pricker bushes that
OF-286-GRAFTON	Ductile Iron	Good	Town	
OF-190-GRAFTON	Corrugated Metal	Good	Town	
OF-192-GRAFTON	Other	Good	Town	Brush/vegetation was too dense to get closer. This picture may
OF-272-GRAFTON	Other	Poor	Town	
OF-297-GRAFTON	Other	Poor	Town	
OF-284-GRAFTON	Other	Good	Town	Please use fifth picture, see the dark shape in the middle closer
OF-97-GRAFTON	Other	Good	Town	

Grafton, MA

Storm Water Outfall Inventory

Total Outfalls: 333

Outfall ID	Material	Condition	Outfall Owner	Comments
OF-189-GRAFTON	Concrete	Poor	Town	Water was backed up and created a small pond shown in the
OF-285-GRAFTON	Concrete	Good	Town	
OF-223-GRAFTON			Town	Unable to locate, brush/vegetation was too dense
OF-222-GRAFTON		Good	Town	Unable to locate, brush/vegetation was too dense
OF-209-GRAFTON			Town	Unable to locate, most likely underwater within the pond
OF-98-GRAFTON			Town	Unable to locate, most likely underneath a fallen tree
OF-115-GRAFTON	Concrete	Good	Town	
OF-267-GRAFTON	Corrugated Metal	Fair	Town	Please use second photo and ignore the first photo it is a picture
OF-241-GRAFTON	Other	Fair	Town	
OF-102-GRAFTON	Other	Good	Town	
OF-6-Grafton	Other	Good	Town	2 outfalls located here (see picture) both are the same
OF-54-GRAFTON	Other	Fair	Town	It was hard to determine where in the woods this pipe let out due
OF-296-GRAFTON	Other	Fair	Town	

Town of Grafton
NPDES Phase 2
Small MS4 General Permit
Annual Report
Year 13 (2016)

Attachment 4

Documentation of Public Cleanup Activities -

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From: maggie.plasse@thebrwa.org
Date: Apr 18, 2016 16:55
Subject: [Town of Grafton MA] Cleanup in your town on April 17
To: DPW <DPW@GRAFTON-MA.GOV>
Cc:

Hello Department of Public Works and Engineering,

Message:

The Blackstone River Watershed Association conducted a cleanup in your town on April 17. Would the DPW please pick up the collected trash? The locations and materials are as follows:
Hovey Dam, off Rt. 122 (3 trash bags)
Elmwood St. by RR tracks (22 trash bags & 1 tire)
Pleasant St. bridge over Blackstone River by power lines (3 trash bags)
Riverview Park by dirt parking lot (3 trash bags)
Lake Ripple spillway, boat launch area (2 trash bags)
Ekblaw Landing parking area (1 trash bag)
Axtell Brook by BP gas station/Pepperoni Express (5 trash bags)

Thank you very much.
Maggie Plasse
Blackstone River Watershed Association

http://www.thegraftonnews.com/event/styrofoam-recycling-2/

Styrofoam Recycling

April 16 @ 8:30 am - 12:30 pm

$1 - $4

Event Navigation

-

Styrofoam Recycling: The Congregational Church of Grafton, at 30 Grafton Common, is hosting a Styrofoam recycling collection in the church parking lot on Saturday, April 16 from 8:30 a.m. to 12:30 p.m. The fee is $1 per bag; $4 a car. Accepting Styrofoam cups, food trays with the PS recycling symbol, take-out containers with the PS symbol, and Styrofoam packing and packing blocks. Also, bag up your packing peanuts (in a ziplock or closed bag), and bubble wrap.

http://www.thegraftonnews.com/event/grafton-lions-club-shredding-electronics-recycling-day/

Grafton Lions Club Shredding & Electronics Recycling Day

April 16 @ 9:00 am - 12:00 pm

Event Navigation

-

Bring your copy paper sized box(es) to be shredded for a $5 donation per box. You can feel good about disposing of paper materials safely and conveniently while recycling and preserving the environment, and supporting Lions charities. Help us reach our goal of processing ten tons of paper!

ELECTRONICS

We will also be offering shredding and recycling of electronics for the same $5 donation. We will accept Computer hard drives, smart phones and tablets for shredding. Computer Towers, LED , or LCD monitors, keyboards, mice, all wire and cords, routers, any circuit boards will be recycled.**(CRT TV's or monitors, printers, scanners or copiers WILL NOT BE ACCEPTED)**

68 Brigham Hill Rd. Grafton, MA 01519
Saturday – April 16 – 9AM to Noon
http://www.graftonlionsclub.org/shredding-day.html

http://www.thegraftonnews.com/?s=hazardous+waste

Hazardous Household Waste Collection Day

By Richard Price on June 6, 2015

Drop off your hazardous household waste on Saturday, June 27 from 9 a.m. to noon at the Grafton Wastewater Plant, 9 Depot Street, South Grafton. Clean out your garage and basement of old aerosol cans, fertilizers, oil based paint, engine oil and many other items. For more information on what will be accepted and not [...]

River cleanup, April 17

By Grafton News (http://www.thegraftonnews.com/author/graftonnews/) on March 24, 2016 · No Comment (http://www.thegraftonnews.com/river-cleanup-april-17/#respond)

Print This Post

(http://www.facebook.com/sharer.php?u=http://www.thegraftonnews.com/river-cleanup-april-17/&t=River cleanup, April 17)

(http://twitter.com/home?status=River cleanup, April 17 => http://www.thegraftonnews.com/river-cleanup-april-17/)

(https://plus.google.com/share?url=http://www.thegraftonnews.com/river-cleanup-april-17/)

(http://www.linkedin.com/shareArticle?mini=true&url=http://www.thegraftonnews.com/river-cleanup-april-17/&title=River cleanup, April 17&summary=&source=The Grafton News)

(mailto:?mailto:?subject=The%20Grafton%20News%20%3A%20River%20cleanup%2C%20April%2017&body=I%20recommend%20this%20page%3A%20River%20cleanup%2C%20April%2017.%0AYou%20can%20read%20it%20on%3A%20http%3A%2F%2Fwww.thegraftonnews.com%2Friver-cleanup-april-17%2F)

(http://www.thegraftonnews.com/wp-content/uploads/2016/03/cleanup.jpg)
In celebration of Earth Day, the Blackstone River Watershed Association (BRWA) is sponsoring its annual river cleanup on Sunday, April 17 from 1 – 3 p.m.

The BRWA plans to work with volunteers in, and along, waterways in Grafton, Auburn, Millbury, Upton, Sutton, Northbridge, Uxbridge, Douglas, Hopedale, Mendon, Millville, and Blackstone. Have fun outdoors while protecting your local water resources. You can make a difference by volunteering just a few hours of your time. This project also meets community service requirements for many organizations.

After the cleanup, volunteers will meet at River Bend Farm Visitor Center on Oak Street in Uxbridge at 3 p.m. for pizza and drinks.

Alternatives Unlimited, Inc. will be sponsoring it's annual Clean and Green Fair from 2:30- 4 p.m. at the visitor center with environmental demonstrations and activities for children. Events will be held rain or shine.

For more information and to let the association know of a local site that needs cleaning, or to register for the cleanup, contact the BRWA at 508-278-5200 or events@thebrwa.org.

Attachment 5 -

Stormwater Map (Tata & Howard, May 2014)

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Stormwater Map
Grafton, Massachusetts

TATA & HOWARD

Approximate Scale: 1" = 1,200'
May 2014

N

Legend

- Outfalls
- Drainage Manholes
- Catch Basins

Stormwater Pipes

- Unknown
- 4-Inch
- 6-Inch
- 8-Inch
- 10-Inch
- 12-Inch
- 15-Inch
- 18-Inch
- 20-Inch
- 24-Inch
- 30-Inch
- 36-Inch
- 40-Inch
- 48-Inch
- 60-Inch

SHREWSBURY
WESTBOROUGH
WORCESTER
MILLBURY
GRAFTON
UPTON
SUTTON
NORTHBRIDGE

Lake Quinsigamond
Assabet River Reservoir
Flint Pond [N.B.]
Flint Pond
Middle Pond
Pratts Pond
Hovey Pond
Hayes Pond
Lake Ripple
Fisherville Pond
Silver Lake
Little Wildwood
Rockdale Pond
Riverdale Pond
Woodbury Pond
Gravel Pond

MILLENIUM DRIVE
PINE STREET
WESTBORO ROAD
UNNAMED ROAD
JUMBO'S PATH
DISCOVERY DRIVE
YORKSHIRE LANE
CORNFIELD ROAD
WILLARD STREET
GLEN STREET
GERSHOM DRIVE
WHITNEY STREET
ROBIN DRIVE
ADAMS ROAD
WESSON ROAD
MAGNOLIA LANE
VILLAGE LANE
INDIAN PATH ROAD
INSTITUTE ROAD
AMPLE RIDGE LANE
OLD SAWMILL RIDGE CIRCLE
GREANY DRIVE
TRACY ANN DRIVE
CREEPER HILL ROAD
SHREWSBURY STREET
ELM STREET
SOUTH STREET
NORTH MAIN STREET
HIGH STREET
EAST STREET
SECOND STREET
MILL STREET
BRIDGE STREET
WATERVILLE STREET
LAKE VIEW DRIVE
OVERHILL ROAD
JORDAN TERRACE
ROCLYN ROAD
MAPLEWOOD DRIVE
FAIRLAWN STREET
TALLTOP STREET
OLD MYSTREET
AMHERST ROAD
WILLIAMS ROAD
JAY STREET
KAY STREET
ARBOR ROAD
FALMOUTH DRIVE
HIGHLAND ROAD
BEDFORD DRIVE
WORCESTER STREET
MEADOW LANE
WHEELER ROAD
NORTH BRIGHAM HILL ROAD
BRIGHAM HILL ROAD
ROSE LANE
POTTER HILL ROAD
CROSBY STREET
MILLBURY STREET
COLD SPRING DRIVE
SNOW ROAD
COUNTRY SIDE ROAD
FRANKIE LANE
CARROLL AVENUE
CARROLL ROAD BRANCH
NORTH STREET
DORIS DRIVE
VINCENT STREET
JANET CIRCLE
BERNARD ROAD
OLIVER HILL
ASHER ROAD
CARROLL ROAD
OAK STREET
SAGE HILL ROAD
CHURCH STREET
RODNICK STREET
HUDSON AVENUE
CHESTNUT STREET
WOODSIDE DRIVE
WESTVIEW STREET
CRESCENT STREET
HIGEON HILL DRIVE
MEADOW BROOK ROAD
OLD STATE HIGHWAY
SOUTH STREET
SIBLEY STREET
OLD WESTBORO ROAD
ESTABROOK STREET
PUTNAM LANE
FAY MOUNTAIN ROAD
GEORGE HILL ROAD
STOWE ROAD
SOAPHILL ROAD
OLD UPTON ROAD
BROWNS ROAD
KELTH HILL ROAD
STRATTON ROAD
HEIDI LANE
MAGILL DRIVE
FLINT TRAIL
ALEX CLAY
ELMWOOD STREET
MAIN STREET
CANAL STREET
KRUM AVENUE
MAYO COURT
ESEK'S CIRCLE
SPRING HILL DRIVE
MESSIER STREET
HOLLAND HILL ROAD
SAMPSON STREET
FERRY STREET
ENGLISH ROW
ORCHARD STREET
CROSS STREET
ARCADIA STREET
BELMONT STREET
RIVER AVENUE
DEPOT STREET
SOUTHWICK COURT
SO TOLLETTE STREET
FITZPATRICK ROAD
LOTTIE DRIVE
BLANCHARD ROAD
PATRICIA DRIVE
DANIELLE DRIVE
ALENA DRIVE
BRIAN CIRCLE
BARBARA JEAN STREET
CHRISTOPHER DRIVE
COLD SPRING CIRCLE
PLEASANT STREET
CHERYL DRIVE
SUNRISE AVENUE
SPANISH RIVER ROAD
TRINITY AVENUE
PARK AVENUE
PARK TERRACE
ASPEN WAY
PROVIDENCE ROAD
MILFORD ROAD
NIPMUC ROAD
BUTTERCUP LANE
TULIP CIRCLE
DAFFODIL COURT
BUTTERCUP LANE
ENGLOW WAY
LELAND STREET
LIPTON STREET
MORONEY ROAD