(037)

Municipality/Organization: **Pittsfield, Massachusetts**

EPA NPDES Permit Number: **MA041018**

MaDEP Transmittal Number: **W035321**

Annual Report Number & Reporting Period: **No. 2: March 2004-March 2005**

NPDES PHASE II Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Matt Billetter | Title: City Engineer

Telephone #: (413) 499-9327 | Email: mbilletter@pittsfieldch.com

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: Bruce Collingwood

Printed Name: Bruce Collingwood

Title: Commissioner of Public Works

Date: 4/28/05

Part II. Self-Assessment

The City made significant progress this year especially in the specific area of developing a GIS and has begun the process of Zoning Ordinance review and recodification.

Attended two Phase II seminar / workshops over this reporting period which have been helpful in understanding what Pittsfield's next step priorities should be, namely the creation / modification of city ordinance and development of GIS. More monetary and personnel resources would certainly help, but we are moving in the right direction.

Worth noting: the city hired a contractor to remove trash from the Housatonic River adjacent to our closed landfill where trash was discovered in the embankment and river on the river side of the sheet piling. The city and DEP continue to monitor the area and will take appropriate action as necessary.

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 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
PEO1	Delineate critical habitats and ecosystems in the community.	Engineering / Matt Billetter	Implement GIS technology to create data layer mapping.	Received feedback from Massachusetts Natural Heritage & Endangered Species Program – Division of Fisheries & Wildlife with regard to location of outfalls in sensitive areas (see attached).	Critical / sensitive areas will be incorporated as a GIS layer. This information will be used when planning maintenance or improvement activities.
PEO2	Disseminate storm water educational brochures at household hazardous waste collection days.	CET and DPW&U / Bruce Collingwood	Collaborate with CET and HVA to make storm water related educational materials available to hand out beginning with the household hazardous waste collection days scheduled for April and May 2003. Thereafter at each proposed household hazardous waste and computer & monitor collection event through 2008.	Educational materials were disseminated at the May 15, 2004 collection event.	Educational brochures will again be distributed at the May 14, 2005 household hazardous waste collection.

PEO3	Utility bill inserts	CET and DPW&U / Bruce Collingwood	Collaborate with CET and HVA to create and disseminate educational brochures with utility bills twice per year beginning April 2003 and continuing until April 2008. The brochures will address different subjects such as the basics of hydrology; what a storm drain is; danger of and alternatives to pesticides, fertilizers, insecticides and herbicides; hotline phone number to report suspected illegal dumping or illicit discharge; date, time, location and materials that will be accepted at household hazardous waste collection events. Budget $3500 per year for educational materials beginning fiscal year 2004, through fiscal year 2008.	This BMP was not implemented during this reporting period mainly because the person at CET that developed the inserts left their employ.	We will be meeting with CET shortly to re-establish this BMP and discuss what issues to focus on.
PEO4	Media	Engineering / Matt Billetter	Schedule roundtable with CET and HVA on the Mayor's radio and television programs within the next six months; investigate the possibility of securing a periodic time slot dedicated to environmental awareness and storm water topics.	CET presented programs on local TV (PCTV).	Meet with CET and HVA to brainstorm other possible media outreach.
PEO5	Walk-in / website outreach	Engineering / Matt Billetter	Continue to make educational materials available to the public in this office and other offices in City Hall. Add information and links to the City's website in the next six months.	Various environmental education materials are posted and available in brochure format at City Hall.	The City's website continues to be reformatted. We plan to work with our MIS department to include a storm water section containing our NOI, annual reports and links to CET, HVA, DEP and EPA.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
PIP1	Public review of this Notice of Intent	Engineering / Matt Billetter	Solicit review and commentary from the citizens of Pittsfield, CET, HVA and BRPC within the next six months. Incorporate such feedback into the City's storm water management plan, as warranted, within the next year.	No feedback received.	Share draft ordinance with Ordinances & Rules Committee, City Council, Conservation Commission, Community Development Board, City Solicitor and Building Inspector for their review and feedback.
PIP2	Illicit discharge / illegal dumping hotline	Unknown at this time.	Revise City code to establish severe penalties and punishment for illegal dumping. Assess the willingness and ability of City, County and State law enforcement officials to impose penalties and punishment for illegal dumping. Establish and advertise a hotline number within the next two years.	None.	Review current ordinance, draft proposed modifications.
PIP3	Volunteer monitoring	HVA	Conduct annual survey to determine the number of new volunteers that join HVA's existing program as a result of public education and outreach.	The Stream Team sampled various outfalls and plan to add some new outfalls to the itinerary. 2004 results have not been compiled yet. The city provided a letter of support for HVA grant application (see attached). Grant funding was awarded	Write letters of support for HVA's grant applications. Continue to work with HVA to eliminate illicit discharges detected through this program.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
IDDE 1	Identifying illicit connections	DPW&U / Bruce Collingwood	Revised: Continue working with the Housatonic Valley Association (HVA) to resolve illicit discharge problems. HVA conducts water quality testing near our storm drain outfalls and contacts us when an illicit discharge is detected. The Water Division then investigates the storm drain at points of access, working up gradient from the outfall until the problem is isolated. This partnership has already yielded corrective results thanks to the devotion of the HVA volunteer monitors and the hard work of the Water Division. Generate plan for dry weather inspection, camera survey, smoke testing, and/or dye testing of storm drains.	Applied for and received approval for SRF loan (please see attached excerpts of the application). SRF loan is subject to borrowing authorization by City.	Draft ordinance and request review and feedback from Ordinances & Rules Committee, City Council, Conservation Commission, Community Development Board, City Solicitor and Building Inspector. Investigate grant funding possibilities for IDDE survey and mapping which would be more desirable than SRF.

IDDE 2	Illicit discharge / illegal dumping hotline	DPW&U / Bruce Collingwood	Revise City code to establish severe penalties and punishment for illegal dumping. Assess the willingness and ability of City, County and State law enforcement officials to impose penalties and punishment for illegal dumping. Establish and advertise a hotline number within the next two years.	None.	Review current ordinance, draft proposed modifications.
IDDE 3	Illegal Dumping	DPW&U / Bruce Collingwood	Revise City code to establish severe penalties and punishment for illegal dumping. Assess the willingness and ability of City, County and State law enforcement officials to impose penalties and punishment for illegal dumping.	None.	This can be combined with illicit discharges. There are already littering and illegal dumping regulations. Review current ordinance, draft proposed modifications.
IDDE 4	Stormdrain Mapping	Engineering / Matt Billetter	Verify accuracy of storm drain drawings and modify as necessary, upgrade to GIS over five year timeline.	The city hired AGI to develop GIS. To date, base mapping is complete and utility layers are currently being constructed. The city has purchased most of the required software and hardware and has appropriated funds to purchase remaining items, including GPS. We received grant funding to purchase a scanner / plotter to support our GIS.	GIS, with parcel map, topo, water, sewer and storm drain layers is expected to be operational by next winter. Our contract with AGI includes training.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
C1	Revised: Require erosion & sediment control plan for all construction sites disturbing less than one acre, which are not in wetland resource areas.	Engineering / Matt Billetter	Collaborate with the Conservation Commission over the next year to establish requirements and review process.	Revised our subdivision requirements (see attached).	Revise our permit application and permit language for single lot developments, form A, demolitions and other small projects not governed by subdivision requirements.
C2	Revised: Require site plan and signed covenant for waste management and vehicle maintenance for all construction sites disturbing less than one acre which are not in wetland resource areas.	Engineering / Matt Billetter	Collaborate with the Conservation Commission over the next year to establish requirements and review process. Generate covenant within the next year, revise City code to support enforcement of covenant.	Revised our subdivision requirements (see attached).	Revise our permit application and permit language for single lot developments, form A, demolitions and other small projects not governed by subdivision requirements.
C3	Revised: Require escrow account from developer for all construction projects.	DPW&U / Bruce Collingwood	Revise City code and/or subdivision regulations to require an escrow account from the developer to be used by the City to employ the services of an independent, qualified construction inspector selected solely by the City. This account will be required in addition to a performance bond.	Revised our subdivision requirements (see attached).	Include as part of zoning ordinance recodification.

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 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
PC1	Structural	Engineering / Matt Billetter	Inventory and document all existing structural storm water management facilities within the city, evaluate their current condition, identify the parties responsible for maintenance and any existing maintenance schedules (typically part of the articles of incorporation), request schedule if none exists, request written documentation of maintenance performed to date and annually thereafter. Review and revise as necessary the City's construction specifications and standards, city code, zoning ordinances and subdivision regulations.	Revised our subdivision requirements (see attached).	Continue to develop. Revise / amend construction standards and specifications. Create inventory list of privately owned structural storm water management facilities within the City. Identify on GIS mapping.
PC2	Nonstructural	Engineering / Matt Billetter	Establish criteria for site planning that requires incorporation of non-structural storm water management measures (trees, shrubs, flowers, etc.) where applicable.	None.	Continue to develop. Meet with Community Development to discuss. Revise / amend construction standards and specifications.

PC3	Ordinance	DPW&U / Bruce Collingwood and City Council	Review and revise as necessary the City's construction specifications and standards, city code, zoning ordinances and subdivision regulations to clearly define storm water management requirements, policies and practices.	The city has hired Blatman, Bobrowski & Mead, LLC to conduct zoning ordinance review and recodification. The city engineer sits on the committee working with our consultant and will be addressing storm water issues as they apply to zoning ordinance.	Retain consultant to review and revise subdivision regulations and city code as funding allows.

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 2** (Reliance on non-municipal partners indicated, if any)	**Planned Activities – Permit Year 3**
PPGH 1	Continue used motor oil, oil filter and antifreeze recycling.	Highway / Tom Foody		Continue same.	Continue same.
PPGH 2	Responsible pest control	Highway / Tom Foody, Water & Sewer/ Dave Santolin Wastewater / Tom Landry Parks / Jim McGrath Buildings / Ernie Fortini	Although the City of Pittsfield uses little to no chemical pesticides at this time, we will be working with CET to create an Integrated Pest Management (IPM) plan for the City that minimizes use of Tier 1 chemicals to the MEP.	Idle for now as it was determined that the City currently uses little to no pesticides, herbicides and fertilizers.	None.

PPGH 3	Vehicle washing	Highway / Tom Foody, Water & Sewer/ Dave Santolin Wastewater / Tom Landry Parks / Jim McGrath Buildings / Ernie Fortini	Revised: Establish and implement a policy, beginning Summer 2003, for washing City vehicles only on grassed areas, areas that drain to the sanitary sewer via an oil / water separator or in an area where wash water is contained and pumped to the sanitary sewer.	None.	Write official policy. Include School, Fire, Police, other departments? Check to see if we are implementing. If not, re- educate Department Heads and staff.
PPGH 4	Research alternatives to road salts and effective application rates	Engineering / Matt Billetter Highway / Tom Foody	Research effective alternatives to conventional road salts that are more environmentally friendly and techniques of effective lower salt application rates. Research road salt application rates of other communities in Berkshire County and the northeast region. Perform active experimentation on designated sections of roadway and document results, starting winter 2003/2004. Create a map identifying sensitive areas where little or no salt shall be applied (bridges, culverts, wetlands, etc.); to be completed and distributed within the next year.	None.	Review "Manual of Practice for an Effective Anti-Icing Program" and additional research. Involve the Highway Superintendent and Commissioner.
PPGH 5	Household hazardous waste collection events(HHWCE)	CET and DPW&U / Bruce Collingwood	Collaborate with CET to organize one HHWCE for each spring, summer and fall in the City of Pittsfield.	A HHWCE was held on May 15, 2004. There were 261 participants. A computer and monitor collection was held on November 6, 2004.	Next HHWCE is May 14, 2005.

PPGH 6	Street & parking lot sweeping	Highway / Tom Foody	Revised: Sweep streets before flushing water mains, consider vacuum sweepers	Streets & parking lots were swept.	Streets & parking lots will be swept. Revise contract schedule so that sweeping occurs prior to water main flushing, consider requiring vacuum sweepers. Review EPA & DEP guidance and regulation. Modify disposal methods if necessary.
PPGH 7	Storm drain system cleaning	Water & Sewer/ Dave Santolin	Revised: Clean each catch basin once annually. Inspect each outfall once annually and clean accordingly.	City's Water, Sewer & Drain Department actively cleans catch basins; City also contracts this work. Received order of conditions from DEP to perform outfall and drainage swale maintenance for locations not within Estimated Habitat Areas (DEP File Number 263-794).	Proceed with outfall and drainage swale maintenance. Review EPA & DEP guidance and regulation. Modify disposal methods if necessary.
PPGH 8	Proper snow disposal	Highway / Tom Foody	Develop policy and train Highway Department personnel starting this winter.	None.	Write official policy for Mayor's endorsement. Train staff.

Commonwealth of Massachusetts

Division of Fisheries & Wildlife

MassWildlife

Wayne F. MacCallum, *Director*

August 12, 2004

Matt Billetter
Department of Public Works & Utilities
City Hall
70 Allen Street
Pittsfield, MA 01201

Re: Stormwater Outfalls
Pittsfield, MA
NHESP File: 03-12952

Dear Mr. Billetter,

Thank you for contacting the Natural Heritage and Endangered Species Program (NHESP) of the MA Division of Fisheries & Wildlife for information regarding state-protected rare species in the vicinity of the above referenced site. We have reviewed the site and would like to offer the following comments.

The proposed work occurs within or in the vicinity of Estimated Habitats 2023, 2020, 2018, 145, 2024, 4052, 159, and 1036 as indicated in the 11th Edition of the Massachusetts Natural Heritage Atlas. Additionally, there are rare species records from Onota Lake and Pontoosuc Lake.

We recommend that you use Estimated and Priority Habitat maps to determine which outfalls might discharge to rare species habitats. Once you identify these outfalls, then implement water quality mitigation measures as appropriate based on species sensitivity to water quality degradation using the list below. For example, the Triangle Floater mussel is highly sensitive to changes in water quality versus Spotted Turtles, which are less sensitive. Therefore, habitat for freshwater mussels that receive outfall discharge should be prioritized for outfall improvements.

Our database indicates that the following protected rare species occur within Estimated Habitat 2023:

Scientific name	**Common Name**	**Taxonomic Group**	**State Status**
Ambystoma jeffersonianum	Jefferson Salamander	Amphibian	Special Concern

The following protected rare species occurs within Estimated Habitat 2020:

Scientific name	**Common Name**	**Taxonomic Group**	**State Status**
Gyrinophilus porphyriticus	Spring Salamander	Amphibian	Special Concern

Division of Fisheries and Wildlife
Field Headquarters, One Rabbit Hill Road, Westborough, MA 01581 (508) 792-7270 Fax (508) 792-7275
An Agency of the Department of Fisheries, Wildlife & Environmental Law Enforcement

The following protected rare species is among those that occur within Estimated Habitat 2018:

Scientific name	Common Name	Taxonomic Group	State Status
Gyrinophilus porphyriticus	Spring Salamander	Amphibian	Special Concern

The following protected rare species occur within Estimated Habitat 145:

Scientific name	Common Name	Taxonomic Group	State Status
Rallus elegans	King Rail	Bird	Threatened
Botaurus lentiginosus	American Bittern	Bird	Endangered
Podilymbus podiceps	Pied-Billed Grebe	Bird	Endangered
Gallinula chloropus	Common Moorhen	Bird	Special Concern

The following protected rare species occur within Estimated Habitat 2024:

Scientific name	Common Name	Taxonomic Group	State Status
Botaurus lentiginosus	American Bittern	Bird	Endangered
Clemmys insculpta	Wood Turtle	Reptile	Special Concern

The following protected rare species occur within Estimated Habitat 4052:

Scientific name	Common Name	Taxonomic Group	State Status
Clemmys insculpta	Wood Turtle	Reptile	Special Concern

The following protected rare species occur within Estimated Habitat 159:

Scientific name	Common Name	Taxonomic Group	State Status
Clemmys insculpta	Wood Turtle	Reptile	Special Concern
Gallinula chloropus	Common Moorhen	Bird	Special Concern
Botaurus lentiginosus	American Bittern	Bird	Endangered
Alasmidonta undulata	Triangle Floater	Mussel	Special Concern
Pieris oleracea	Eastern Veined White	Butterfly	Threatened
Elymus trachycaulus	Hairy Wild Rye	Plant	Endangered
Sagittaria cuneata	Wapato	Plant	Threatened
Ranunculus pensylvanicus	Bristly Buttercup	Plant	Threatened
Acer nigrum	Black Maple	Plant	Special Concern
Malaxis branchypoda	White Adder's-Mouth	Plant	Endangered
Veronicastrum virginicum	Culver's Root	Plant	Threatened

The following protected rare species occur within Estimated Habitat 1036:

Scientific name	Common Name	Taxonomic Group	State Status
Notropis bifrenatus	Bridle Shiner	Fish	Special Concern
Botaurus lentiginosus	American Bittern	Bird	Endangered
Clemmys insculpta	Wood Turtle	Reptile	Special Concern
Gallinula chloropus	Common Moorhen	Bird	Special Concern
Eriophorum gracile	Slender Cottongrass	Plant	Endangered

The following protected rare species occur within Onota Lake:

Scientific name	Common Name	Taxonomic Group	State Status
Notropis bifrenatus	Bridle Shiner	Fish	Special Concern
Potamogeton ogdenii	Ogden's Pondweed	Plant	Endangered
Myriophyllum verticillatum	Comb Water-Milfoil	Plant	Endangered

The following protected rare species occurs within Pontoosuc Lake:

Scientific name	Common Name	Taxonomic Group	State Status
Clemmys insculpta	Wood Turtle	Reptile	Special Concern

These species are protected under the Massachusetts Endangered Species Act (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.00). State-listed wildlife are also protected under the state's Wetlands Protection Act (M.G.L. c. 131, s. 40) and its implementing regulations (310 CMR 10.37 and 10.59). Fact sheets for these species can be found on our website http://www.state.ma.us/dfwele/dfw/nhesp/nhfact.htm.

Vernal Pools 34, 2891, 1387, and 1386 are among those located within the Estimated Habitats listed above. Please contact the Pittsfield Conservation Commission for a complete list of pools.

This evaluation is based on the most recent information available in the Natural Heritage database, which is constantly being expanded and updated through ongoing research and inventory. Should your site plans change, or new rare species information become available, this evaluation may be reconsidered. If you have any questions regarding this review, please call Nancy Putnam, Endangered Species Project Analyst, at ext. 306.

Sincerely,

Thomas W. French

Thomas W. French, Ph.D.
Assistant Director

CITY OF PITTSFIELD

DEPARTMENT OF PUBLIC WORKS & UTILITIES, CITY HALL, 70 ALLEN STREET, PITTSFIELD, MA 01201 413-499-9330

July 9, 2004

Dennis Regan
Berkshire Program Director
Housatonic Valley Association
1383 Pleasant St
South Lee, MA 01260

Dear Mr. Regan,

The Pittsfield Department of Pubic Works & Utilities endorses the Housatonic Valley Association's environmental project targeting the Housatonic River in Pittsfield. The Housatonic Valley Association is an integral partner with the City of Pittsfield in our collective efforts to protect and heal an immeasurably important resource, to provide outreach and education to the people of Pittsfield and to develop and implement our Phase II NPDES MS4 storm water management program. We have worked with the HVA in the past to remediate pollution impacts identified by your dedicated staff and volunteers and look forward to continuing these efforts to improve the Housatonic River. The HVA's schoolroom education and catch basin labeling program is top notch and highly regarded by local, state and federal environmental agencies and organizations as well as fellow non-profit environmental groups.

The Department of Public Utilities operates and maintains the water, storm water and sewer systems of the City, including the treatment plants, and administers the City's trash and recyclable collection contract and the contract with the EACO/Pittsfield resource recovery plant. The Water Division operates the City's two water filtration plants located at the Cleveland and Ashley reservoirs. This division also repairs water breaks, performs the annual hydrant flushing of the water distribution system, cleans catch basins and storm water outfalls, provides 24-hour-a-day emergency response to clear sewer blockages, and investigates dirty water and other drinking water complaints. The Wastewater Division operates the City wastewater treatment plant, which also treats wastewaters from the towns of Dalton, Hinsdale, and sections of Lenox and Lanesborough.

The Conservation Commission is a seven-member group of city volunteers from the City that reviews and issues permits for any work proposed to be performed within the 100 year floodplain in the City, in or within 100 ft. of a wetland, or within 200 ft. of any river or its tributary. To provide day-to-day assistance to permit applicants, the City employs a full-time Conservation Agent under the Department of Pubic Works & Utilities.

Having worked with you in the past, I know that the Stream Team shoreline surveys and water quality testing results that you present are extremely helpful in identifying areas in need of remediation. For example, HVA's identification of unhealthy levels of *E. coli* helped us locate a failed section of sewer and connecting pipes. The City of Pittsfield does not have the resources to do this alone and relies on the HVA to help identify and eliminate illicit discharges.

In partnership with HVA, the city of Pittsfield will continue to strive for the goal of obtaining a healthy Housatonic River.

Sincerely,

Matt Billetter, P.E.

City Engineer

2005 Clean Water State Revolving Fund Planning Project
Phase II Stormwater Management Plan
City of Pittsfield
Project Narrative

The City of Pittsfield seeks loan assistance from the 2005 Clean Water State Revolving Fund for Planning Projects to develop Pittsfield's NPDES Phase II Storm Water Management Plan, including the development of an Illicit Discharge Detection and Elimination Program.

Section A – Project Summary

The City of Pittsfield, population 45,800, has been identified by the US EPA as meeting the criteria to be defined as Small Municipal Separate Storm Sewer System operators (small MS4s). Therefore Pittsfield is required to comply with the EPA's National Pollution Discharge Elimination System (NPDES) Phase II Stormwater Regulations.**(18)**

The City of Pittsfield must comply with the EPA's NPDES Storm Water Phase II Rule, including implementation of measurable goals for six Minimum Control Measures.

1. Public Education and Outreach on Stormwater Impacts
2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Storm Water Runoff Control
5. Post-Construction Storm Water Management in Development and Redevelopment
6. Pollution Prevention/Good Housekeeping for Municipal Operations

The City of Pittsfield is located in the Housatonic River Watershed. The Housatonic River Watershed Action Plan's goals include "ensure the remediation and restoration of the Housatonic River... and work to improve water quality and to mitigate accelerated eutrophication of lakes and streams." The Action Plan further identifies stormwater runoff from residential land uses as a major contributor to advanced eutrophication of watershed lakes and ponds. Proposed actions include "assist each community in determining the options that best facilitate improving water quality. This may include GIS services, review of current by-laws, review of land-use practices in the municipality, and recommendations for stormwater best management practices." The report, *Stormwater Assessment in the Hoosic and Housatonic Watersheds*, presents a series of recommendations to correct stormwater problems in the watershed. (June 2000) These recommendations will be supported through Pittsfield's proposed Phase II Stormwater Management Plan. **(1)(44)**

Stormwater does not recognize political boundaries, thus activities and programs contributing to water quality improvement within a specific municipality support the overall goals of water quality improvement throughout a watershed. Also, the process and utilization of data collected as part of developing a Phase II stormwater management plan and using that data to identify and prioritize appropriate Best Management Practices (BMPs) is transferable to other MS4 communities within that watershed.

The proposed scope of work was developed using the recommendations found within the *Illicit Discharge Detection and Elimination Manual, A Handbook for Municipalities*, prepared by the New England Interstate Water Pollution Control Commission, January 2003.

Tasks include

- development of a storm sewer system map
- development of a local ordinance prohibiting illicit discharges into the separate storm sewer system

- development and implementation of a plan to detect and address illicit discharges, including illegal dumping, into the system
- development of an education program informing public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste

These tasks address measurable goals for all six of the Minimum Control Measures. **(45)**

These activities will respond to and provide information for a number of current and approaching problems within the City of Pittsfield. These problems include:

- Illicit and illegal discharges adversely affect the quality of the receiving waters. The extent of these discharges within the City of Pittsfield is largely unknown.
- Incomplete inventories of storm water systems prevent the City of Pittsfield from providing the necessary oversight and maintenance to maintain appropriate standards of water quality.
- The absence or inadequacy of local ordinances prohibiting non-storm water discharges to the extent allowable, subverts local enforcement procedures.
- The practices of many homeowners, businesses, and municipal operations inadvertently affect water quality.
- The absence of municipal training and operations programs to reduce storm water pollution reduces the effectiveness of local and state stormwater management initiatives.

(1)

Milestones

1. Completed map and inventory of stormwater systems and outfalls
2. Map and listing of potential illicit discharges
3. Completed report containing recommendations to follow-up on dry weather flows.
4. Public meeting regarding Pittsfield's IDDE Program; preparation of copy ready brochures and handouts for distribution by the City
5. Development of draft by-laws related to stormwater discharges and Best Management Practices (BMPs)
6. Report containing recommendations for implementation of BMPs and removal of illicit discharges

Sections B and C Public Health and Environmental Criteria

The following Pittsfield waterbodies are listed in proposed *Massachusetts Year 2004 Integrated List of Waters* in Category 5 (303d). These waters are classified as impaired or threatened for one or more uses and require a TMDL.

East Branch Housatonic River – Crane Paper Company, outlet Center Pond, Dalton confluence with Housatonic River, Pittsfield – cause unknown, unknown toxicity, priority organics, pathogens

Housatonic River – confluence of southwest branch Housatonic River and west branch Housatonic River, Pittsfield to Woods Pond, Lee/Lenox – priority organics, pathogens, turbidity

Pontoosuc Lake – Lanesborough, Pittsfield – metals, exotic species

Southwest branch Housatonic River – headwaters, outlet Richmond Pond to confluence west branch Housatonic River, Pittsfield – cause unknown, siltation, other habitat alterations

West branch Housatonic River – headwaters, outlet Pontoosuc Lake to confluence southwest branch Housatonic River (forming headwaters Housatonic River), Pittsfield – priority organics, siltation, other habitat alterations, pathogens

(25)(26)(27)(29)

Discharges from MS4s often include wastes and wastewater from non-stormwater sources. EPA reports that a 1987 Sacramento, California study found that almost half of the water discharged from a local MS4 was not directly attributed to precipitation runoff. The study found that a significant portion of these dry weather flows were from illicit and/or illegal discharges and connections to the storm sewer system. EPA states that these untreated discharges contribute high levels of pollutants including heavy metals, toxics, oils, grease, solvents, nutrients, viruses, and bacteria to receiving waterbodies high enough to significantly degrade receiving water quality and threaten aquatic, wildlife, and human health.

Pittsfield's Stormwater Management Plan includes locating priority areas and conducting dry-weather outfall and manhole surveys to look for non-stormwater flows.**(1)(2)**

Other sources of water quality degradation include polluted stormwater runoff from urban/suburban areas and construction sites. According to EPA the top causes of water quality impairment from polluted stormwater include siltation, nutrients, bacteria, metals, and oxygen depleting substances.**(25)**

The Massachusetts Small MS4 Storm Water Management Program requires that all MS4s which discharge to public drinking water supply protection areas (Zones A and B) incorporate drinking water protection in their stormwater management plans. **(11)(30)(34)**

Section D Project Evaluation

The primary goal of Pittsfield's Stormwater Management Plan, developed in accordance with EPA's Phase II MS4 program requirements, is to reduce the discharge of pollutants to the maximum extent practicable, protect water quality, and satisfy the appropriate Phase II water quality requirements of the Clean Water Act, which are expected to result in significant reductions of pollutants discharged into receiving waterbodies. In support of this primary goal the following contributory goals have been identified: **(43)**

- Develop a thorough and detailed knowledge of Pittsfield's separate storm sewer system through the process of inventorying the local storm sewer system, locating outfalls, structures and other appurtenances,
- Detect, eliminate and/or correct illicit or illegal discharges,
- Establish the appropriate by-laws to provide regulatory support for improved stormwater management,
- Develop technical recommendations for site specific BMPs,

- Provide education in the forms of community outreach and education and municipal employee training, and
- To mitigate the negative impact of stormwater discharges on the quality of receiving waters.

Section E Program and Implementation Criteria

Pittsfield's *Phase II NPDES Municipal Separate Storm Sewer System Notice of Intent* further details the status of Pittsfield's compliance with NPDES Phase II and includes recommendations, including the development of proposed Illicit Discharge Detection and Elimination Program. **(44)**

The implementation of Pittsfield's Stormwater Management Plan, including Pittsfield's Illicit Discharge Detection and Elimination Program will result in the removal or correction of illicit/illegal discharges. System inspections and mapping will improve knowledge and operation of local storm sewer infrastructure resulting in improved maintenance by the Pittsfield Department of Public Works, and enhanced decision making capacity by local permitting and regulatory boards. This approach to NPDES Phase II Storm Water compliance targets the shared goals of the Housatonic River Watershed member communities and results in a regional recognition of shared resources. **(46)**

Section F. Threshold Criteria

Pittsfield's Stormwater Management Plan will not duplicate existing treatment or disposal capacity already available.

Pittsfield's Stormwater Management Plan will not have any negative impacts to water quality, water quantity, or public health.

City of Pittsfield, Massachusetts

2005 Clean Water State Revolving Fund Planning Project
Phase II Storm Water Management Plan
Scope of Services

TASK/OBJECTIVE # 1: Stormwater/Sanitary Sewer System Mapping Accuracy Improvement

Mapping of the City that is already underway in a GIS format will be enhanced by providing a more accurate base map and filling in gaps where information on the system does not exist. This approach will provide the City with a more comprehensive picture of the system and will offer an overview of the stormwater system in general, outfall locations, and identified potential illicit discharges. The mapping will enhance planning capabilities by providing opportunities to overlay BMPs and/or corrective measures in areas requiring mitigation.

Color aerial photography and aerial triangulation will be used to develop detailed planimetric mapping at a scale of 1"=40' with 2 foot contour intervals. The aerial photography, in concert with horizontal and vertical control points, will allow a more accurate and complete mapping of the storm sewer system.

Physical examination of existing storm water management systems will be conducted as part of the Illicit Discharge Detection and Elimination (IDDE) program, and this data will be transferred to GIS format using field based computers with GIS based application software. The examination will include particular focus on detection of illicit and/or illegal discharges into storm water conveyances will be of special concern. The GIS mapping developed will be used as an integral tool in locating outfalls in the field and also in determining potential sources of identified illicit and/or illegal connections.

DELIVERABLES

- Color aerial photography
- Detailed base mapping at scale of 1"=40'; 2 foot contour intervals
- Storm sewer mapping developed from utility feature collection and supplemented by field-collected data. Inventory of stormwater system and outfalls. Mapping of sanitary sewer system.
- Parcel layer accuracy enhancement
- Field based application, 2 Table PC's with ESRI based software licenses
- Four ArcGIS licenses
- Web based data viewing application
- Desktop web based upstream and downstream tracing application
- 1 year technical support
- Training

ESTIMATED COST: $690,800

City of Pittsfield, Massachusetts

2005 Clean Water State Revolving Fund Planning Project
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TASK/OBJECTIVE # 2: Illicit Discharge Detection and Elimination Program

The development of an IDDE Program will include a review of existing data, field work, identification of potential sources of illicit discharges, developing a plan to follow up on identified sources of dry weather flows, an IDDE public outreach program, preparation of stormwater related ordinances or regulations, and procedures for the removal of illicit discharges identified during field work.

Review Existing Data - A review of existing MassGIS, USGS, city mapping, drainage and outfall plans, water quality data, aerial infrared and thermal photography, and other data will be reviewed to identify locations of drainage systems and outfalls within the regulated areas.

Field Work - Field work will be conducted to identify and/or verify the locations of Stormwater outfalls. GPS Survey Equipment will be used to accurately locate stormwater outfalls not located via aerial photography. Field inspections will obtain physical data, condition assessment data, and maintenance requirements. Additionally, digital photos will be obtained. The information obtained will be included in a database to allow for integration with the GIS system. The key component of the field survey is to identify potential illicit connections to the storm drain system.

Review of Stormwater System Map for Identifying Potential Sources of Illicit Discharges - During field survey efforts, a Stormwater System Map for Regulated Areas will be prepared. The information obtained during field survey and mapping, in conjunction with existing information, will provide a preliminary indication of the potential sources of illicit discharges.

Develop Plan to Follow-up on noted dry weather flows - Recommendations for further follow-up to investigate sources of dry weather flows and the estimated costs will be developed. A summary of identified illicit discharges, the specific tasks for recommended follow-up, and estimated implementation costs will be determined. [To pinpoint illicit discharges, additional manhole and up the pipe storm drain inspections will be conducted. Dye testing, video inspection, and smoke testing are other methods that can be used. The scope and budget of this work will be determined once potential illicit discharges are identified.]

Develop Public Outreach Program related to IDDE - Educational Materials targeting the specific illicit discharges identified during the field survey will be prepared. Recommendations for distribution will be developed. These materials are typically developed to be suitable as a mailer insert with water bills, public meeting handouts, or as brochures available at the library, city hall, or other suitable location.

Develop Illicit Discharge and BMP Ordinances - A review of sewer use regulations, subdivision regulations, Board of Health, and Conservation Commission regulations, will be conducted. Recommended new regulations or by-laws or recommended revisions to existing regulations or by-laws will be developed. The recommended regulations will be stand alone for stormwater systems, but can be tailored to include BMPs, LID, and Post Construction Stormwater Management ordinances, by-laws, or regulations within the municipality. At the time of implementation of the ordinances for illicit discharge elimination, implementation of BMPs [best management practices] or LID [low impact development] regulations can be promulgated.

City of Pittsfield, Massachusetts

2005 Clean Water State Revolving Fund Planning Project
Phase II Storm Water Management Plan
Scope of Services

TASK/OBJECTIVE # 2: Illicit Discharge Detection and Elimination Program (continued)

DELIVERABLES

- Mapping and listing of potential illicit discharges.
- Report containing recommendation to follow-up on dry weather flows.
- Hold Public Meeting regarding IDDE.
- Prepare Copy Ready Brochures and Handouts for distribution by the City.
- Draft ordinances related to Stormwater discharges and BMPs.
- Report containing recommendations for implementation of BMPs and removal of illicit discharges.

ESTIMATED COST: $215,300

TASK/OBJECTIVE # 3: Administrative Costs

On behalf of the city and in accordance with DEP requirements, prepare reports, reimbursement requests/payment vouchers forms, and attend monthly progress meetings necessary for administration of the Phase II Stormwater Management Plan and SRF Funding.

DELIVERABLES:

- Quarterly Reports.
- Reimbursement requests.
- Progress Meeting Minutes.

ESTIMATED COST: $16,750.00

CITY OF PITTSFIELD

DEPARTMENT OF PUBLIC WORKS & UTILITIES, CITY HALL, 70 ALLEN STREET, PITTSFIELD, MA 01201 413-499-9330

DATE: July 29, 2004

FROM: Bruce Collingwood, Commissioner of Public Works and Utilities

TO: Sarah Stern Crowell, Planner

SUBJECT: Requirements for Subdivision Street Acceptance

For your information and use: All new site development and road construction shall conform to the Pittsfield Subdivision Regulations and the following, if such streets and utilities are to be accepted by the City:

The developer shall establish an escrow account in the City of Pittsfield's name in the amount of 10% of the engineer's construction cost estimate. This account is in addition to the performance guarantee and will be used by the City to employ the services of an independent, qualified construction inspection and testing firm to ensure compliance with the following requirements. Any remaining balance in the account will be released upon satisfactory completion and acceptance of the project.

Sites disturbing one (1) acre or more must obtain an NPDES permit from the EPA before commencing with any site work; copy of the permit shall be submitted to this office.
Sites within a wetland resource and/or buffer zone areas must obtain appropriate permission from the Conservation Commission before commencing with any site work; provide this office with a copy of the Order of Conditions.
Sites disturbing less than one (1) acre which are not in a wetland resource area must submit a construction phase **Erosion and Sediment Control Plan** and a **Post Construction Stormwater Management Plan** to this office for review by and subject to the approval of the Commissioner.

Developer and contractor shall sign a covenant with the City of Pittsfield assuring proper waste management and vehicle maintenance. Construction sites *will be* inspected for compliance with approved **Erosion and Sediment Control Plan,** proper waste management and vehicle maintenance (i.e. equipment *will be* inspected for leaks).

HIGHWAY

1. Standard MHD Steel Beam Guardrail-Type SS with steel posts and terminal sections (buried ends are no longer acceptable) shall be provided at all stream crossings and other locations where the fall-off within the street right of way from the traveled way is greater than five (5) feet. The requirements set within the AASHTO-"Roadside Design Guide" will be the general reference for guardrail installation.

2. Street lights shall be installed as part of the street construction process and operating prior to street acceptance by the City. Interim electrical costs shall be paid by the developer. Developer shall provide a street lighting plan for the City to review and approve.

3. City standard "STOP" signs shall be installed at every intersection of a minor street with a major street.

4. City standard street name signs shall be installed at each street intersection.

5. Street curbing shall be granite or bituminous concrete, six (6) inch rise-Type 2 or Cape Cod Berm.

6. Sidewalks shall be concrete and provided on both sides of the street. Sidewalk thickness shall be four (4) inches, six (6) inches at driveways, 4000 psi strength concrete with air-entrained content of 7.0% +/-, placed on eight (8) inches, nine (9) inches at driveways of compacted gravel (MHD Type B). Control joints shall be placed every five linear feet. **Sidewalk and wheel chair ramp construction must comply with Massachusetts Architectural Access Board (MAAB), ADA and MassHighway regulations and standards.**

7. Within fifty (50) feet of an intersection, the approach grade should be between two and three percent for safe vehicle stacking and proper drainage.

8. Horizontal curves shall be designed with due consideration for super elevation requirements.

9. All sag and crest vertical curves shall conform to the "Recommended Guidelines for Sub-Division Streets" prepared by the Institute of Transportation Engineers. A design speed of 30 MPH is recommended.

10. Pavement structure (i.e., gravel and/or stone sub base, bituminous concrete base, bituminous concrete top course (binder and riding surface)) shall be determined by a proper design process including evaluation of sub-grade for drainage characteristics and bearing capacity, estimated traffic volume and loading. Minimum pavement thickness shall not be less than 3" of binder and 1 ½" of riding surface. Materials and construction practices shall comply with MassHighway specifications ("Standard Specifications for Highways and Bridges", most current edition).

    Generally, residential sub-division streets shall include the following:

    a. Thirty (30) foot pavement width: three (3) inch binder course, and 1 ½ inch top course per MHD specifications.
    b. Twelve (12) inch gravel borrow base (Type B) – compacted to 95% of the maximum dry density of the material (ASTM D1557 – Modified Proctor).

UTILITIES

1. All catch basins located on a curb line shall have curb inlet headers to permit their functioning if the grates become clogged.

2. Cascade-type grates shall be used on all street drainage structures where the road grade is greater than eight (8) percent. All other grates shall be waffle style with two (2) inch square openings. All castings shall be made in the United States of America.

3. Ownership and maintenance responsibilities of storm water detention and/or retention basins shall be clearly indicated and the responsible **party** shall be clearly identified on incorporation documents or other legally binding instrument; such document(s) to be reviewed by the Commissioner and subject to his approval.

4. All water mains shall have five and one half (5.5) feet minimum cover. Fire hydrants shall have breakaway flanges approximately four (4) inches above the finish grade. Fire hydrant branches shall have a six (6) feet minimum cover.

5. Water main blow-offs to daylight shall be provided at all low points in the water system. Fire hydrants or air release valves shall be provided at all high points in the system for air relief.

6. Fire hydrants shall be City standard Waterous Pacer 100 with 16 inch upper barrel.

7. Construction details for fire hydrant branches, sewer and drain manholes, catch basins and other utility structures shall be included on plans and be subject to DPW/DPU review and approval.

8. All cross-country sewer, water or drain reaches shall be made accessible for maintenance purposes by provision of a twelve (12) foot wide gravel access road.

9. The Contractor shall provide the DPW Engineering Division with two (2) sets of sewer and water stub location ties, sewer service connection ties, water service connection and curb stop ties, gate valve and manhole ties. Minimum of three (3) ties (measurements) to permanent structures.

10. The Contractor or Engineer shall provide DPW Engineering Division with digital (Autocad) and hard copy as-builts.

All construction requirements shall conform to City of Pittsfield code, regulation, ordinance and standards, the Massachusetts Highway Department's "Standard Specifications for Highways and Bridges" - current edition and supplemental updates, MUTCD - current edition and supplemental updates, MAAB, ADA, all applicable AWWA standards, all applicable local, state and federal law.

Commissioner

Collingwood, Bruce

From: jamiec [jamiec@cetonline.org]
Sent: Monday, May 17, 2004 10:27 AM
To: Collingwood, Bruce
Subject: May 15th collection

Hi Bruce:

Thanks for helping out on Saturday. Here are the numbers from the collection.

261 participants
30 thermometers exchanged

1/2 households-180	$5,040.00
Full households-68	$3,264.00
Set-up Fee	$ 850.00
Total-	$9,154.00

Let me know if you have any questions.

Regards,
James

--
James Cahillane
Waste Management Specialist
Center for Ecological Technology (CET)
112 Elm St.
Pittsfield, MA 01201
Tel - 413-445-4556
Fax - 413-443-8123
jamiec@cetonline.org
http://www.cetonline.org
http://www.MaterialsExchange.org

LETTER OF TRANSMITTAL

CITY OF PITTSFIELD
CITY HALL, 70 ALLEN STREET
PITTSFIELD, MASSACHUSETTS 01201

DEPARTMENT OF PUBLIC WORKS & UTILITIES
TELEPHONE: (413) 499-9330
FAX: (413) 499-9803

ENGINEERING DIVISION
TELEPHONE: (413) 499-9327
FAX: (413) 499-9803

TO: USEPA DATE: 4/28/05

SUBJECT:

WE ARE SENDING YOU:
- ☑ ATTACHED
- ☐ UNDER SEPARATE COVER VIA _____

COPIES	DATE	NO.	DESCRIPTION
1	4/28/05		NPDES Phase II Small MS4 General Permit
			Annual Report (#2)

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REMARKS:

COPY TO: Mass. DEP

SIGNED:

DATE: 4/28/05