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April 30, 2008

Vanasse Hangen Brustlin, Inc.

Ref: 10513.00

Ms. Thelma Murphy
United States Environmental Protection Agency, Region I
11 Congress Street, Suite 1100
Boston, MA 02109

Re: **City of Springfield NPDES Phase II Annual Report**
2007/2008 - Permit Year 5

Dear Ms. Murphy,

On behalf of the City of Springfield, Vanasse Hangen Brustlin, Inc. (VHB) is pleased to submit the enclosed NPDES Small MS4 General Permit Annual Report to the Environmental Protection Agency (EPA) Region 1, with a copy to the Massachusetts Department of Environmental Protection (DEP).

Springfield is the third-largest city in Massachusetts, with a population of more than 150,000 residents. As discussed in previous reports, the City has faced ongoing financial limitations that have resulted in employee turnover and reduced City services. The City's financial situation has improved since the Finance Control Board was formed in July 2004, but the ability to hire new staff and implement new municipal programs has been slow to improve.

Many of the goals set forth in the City's MS4 General Permit were explicitly contingent on budget and staff. Therefore, as the budget has remained severely limited, many of the Permit's goals have not been met. However, the City of Springfield is committed to improving stormwater management along with all of its essential services however possible.

The City continues to take steps forward as staffing and funding allow. Established pollution-control measures remain in effect and are improving with every year. Public education efforts have improved substantially through both the City's membership in the Connecticut River Stormwater Committee and through specific efforts sponsored by the Mayor. Street sweeping and catch basin cleaning have been restored to regular schedules. The City will continue to pursue the goals in the MS4 General Permit in 2008 and will give the incomplete goals the highest priority as staff and funding become available. As this is the final year of the original MS4 General Permit, Springfield will also strive to comply with any new goals set for future years under the renewed permit.

Noteworthy accomplishments in this report include the following:

- Earth Day cleanup collected 170 tons of trash, 4.7 tons of recyclable metals, and 4 tons of electronics.
- Eight new dog waste signs were posted in City parks.
- New drafts of City zoning ordinances (including the updated site review process) will be available in May.

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- Approximately 6 acres were acquired around Loon Pond, which is a TMDL target area. Additional improvements were made at Loon Pond, including the removal of a septic tank and the installation of a grit chamber upstream of an outfall.
- Treetop Park, Marshall Roy Park, and Myrtle Street Park were renovated. Improvements included athletic facilities, playground equipment, fencing, and other site improvements.
- A total of 541 new trees were planted throughout the city.
- All new catch basins were built with four-foot deep sumps, including 53 replacements installed during the permit year.
- Annual system maintenance included:
    - Repairing 113 catch basins; and
    - Cleaning 2,260 catch basins, removing 533 tons of debris.
- Annual refuse collection included:
    - Promoting six waste collection days, serving approximately 1,000 cars;
    - Landfilling 325 tons of bulk materials;
    - Recycling 4,203 tons through curbside recycling;
    - Composting 8,034 tons of yard waste; and
    - Collecting 420 tons of waste from litter barrels.
- Annual street cleaning included:
    - Collecting 1,182 tons of debris in first round (April—July); and
    - Collecting 808 tons of debris during August-November sweeping.

Please feel free to contact me at 617-924-1770 or Jim Roberts of the Springfield DPW at 413-787-6210 if you have any questions regarding this submittal.

Very truly yours,

VANASSE HANGEN BRUSTLIN, INC.

Drew Shelton
Environmental Scientist

cc: Massachusetts Department of Environmental Protection
File

P
5/1/08

Municipality/Organization: City of Springfield

EPA NPDES Permit Number:

MaDEP Transmittal Number: W- 040908

Annual Report Number & Reporting Period: **No. 5: March 07-March 08**

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Allan Chwalek, P.E. Title: Director, Public Works

Telephone #: 413-787-6224 Email: N/A

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:

Printed Name: Allan Chwalek, P.E.

Title: Director, Public Works

Date: April 30, 2008

Part II. Self-Assessment:

The City of Springfield has completed the required self assessment and has determined that the municipality is in compliance with permit conditions where budget allows. Many planned improvements have not been possible due to lack of budget and staff. However, the intent of most of the goals has been accomplished wherever possible through alternative means.

Progress has been made on the bylaws/ordinances, with new drafts being developed for the City by an outside consultant. While the drafts are not yet ready for public comment, they represent a concrete step towards meeting the remaining permit goals.

Items not completely fulfilled include the following:

BMP ID #	BMP Description	Measurable Goal(s)	Obstacle Encountered
1-1b	Catch Basin Markers	One set of markers to be placed per year	No markers placed due to lack of staff and funds. Markers are being purchased, and placement will begin in 2008.
1-1c	Stormwater Video	Show video on public access channel once per year.	Stormwater video not yet purchased
1-4c	Geese Wastes Signs	-Assess need for signage -Install one per year	No additional progress due to fiscal constraints.
1-4d	Stormwater Kiosks	Place kiosks at key locations at a number of water bodies with information on water quality and pollution prevention.	Kiosk installation planned pending funding.
2-1a	Catch Basin Markers	One set of markers to be placed per year	No markers placed due to lack of staff and funds. Markers are being purchased, and placement will begin in 2008.
2-1c	Vegetative Cover Data Collection	Establish volunteer program to monitor ground cover at critical locations	Formal ground cover assessment delayed due to lack of funding. Numerous other City and volunteer efforts underway.
3-2b	Illicit Discharge Ordinance Development — Develop Draft Ordinance	Draft new wording. Educate public, officials, and the private sector.	Draft ordinance has been developed based on template from MA DEP and is undergoing further revision.
3-2c	Illicit Discharge Ordinance Development — Draft Available For Comment	Float new ordinance for one-year comment period. Continue education.	Delayed pending completion of item 3-2b.
3-2d	Illicit Discharge Ordinance Development — Passage Process	Attempt to pass ordinance, continue comment period and educate more if necessary.	Delayed pending completion of items 3-2b and 3-2c.

4-2b	Erosion and Sediment Control Ordinance — Develop Draft Ordinance	Draft new wording. Educate public, officials, and the private sector.	Draft ordinance has been developed based on template from MA DEP and is undergoing further revision.
4-2c	Erosion and Sediment Control Ordinance — Draft Available For Comment	Float new ordinance for one-year comment period. Continue education.	Delayed pending completion of item 4-2b.
4-2d	Erosion and Sediment Control Ordinance — Passage Process	Attempt to pass ordinance, continue comment period and educate more if necessary.	Delayed pending completion of items 4-2b and 4-2c.
5-2b	Evaluate for Changes and Improvements	Assess existing procedures and make improvements to process.	Personnel departures and budget constraints did not allow addressing of this goal.
5-3a	New Bylaw For Post-Construction Runoff — Evaluate Existing Site Plan Process	Assess need for new bylaw/ordinance regarding maintenance of BMPs.	Sample ordinances have been reviewed. Site plan review process is under revision, which could affect post-construction requirements. Site plan review committee to be established after Citywide revision of review process is complete.
5-3b	New Bylaw For Post-Construction Runoff — Develop Draft Guidelines	Draft new wording. Educate public, officials, and the private sector.	Draft ordinance has been developed based on template from MA DEP and is undergoing further revision. Further action pending finalization of updated site plan review process as noted in item 5-3a.
5-3c	New Bylaw For Post-Construction Runoff — Draft Available For Comment	Float new bylaw for one-year comment period. Continue education.	Delayed pending completion of items 5-3a and 5-3b.
5-3d	New Bylaw For Post-Construction Runoff — Passage Process	Attempt to pass bylaw, continue comment period and educate more if necessary.	Delayed pending completion of items 5-3a, 5-3b, and 5-3c.
6-1c	TMDL Targeted Sweeping Areas	Loon Pond, Long Pond, and Mona Lake areas will receive additional sweeping	Municipal budget did not allow for enhancement of sweeping program. Areas swept twice as part of regular City sweeping.
6-3	Employee Education	Develop training on spill prevention, recycling, hazardous waste storage, site maintenance, and illicit discharges. Perform training annually, and provide training materials to Parks Dept., School Dept., Police Dept., and Fire Dept..	No training sessions conducted due to lack of staffing and oversight. Training program will resume in 2008.

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 5	Planned Activities – Future Permit
1-1a	Watershed Maps and Door Hangers with Stormwater Pollution Prevention Tips	Dept. of Public Works, Planning Dept.	Continue to make watershed maps and door hangers available at the DPW	1) Watershed maps distributed at DPW and Planning Dept. for public use. 2) Door hangers distributed via membership in the Connecticut River Stormwater Committee and the Think Blue campaign.	Continue to make watershed maps available for public use.
Revised					
1-1b	Catch Basin Markers	Dept. of Public Works, Planning Dept.	One set of markers to be placed per year	No markers placed due to lack of staff and funds. Markers are being purchased, and placement will begin in 2008.	Purchase and place catch basin markers.
Revised					
1-1c	Stormwater Video	Dept. of Public Works, Planning Dept.	Show video on public access channel once per year.	Stormwater video not yet purchased or broadcast.	1) Purchase stormwater video. 2) Run video on Public Access channel in accordance with requirements.
Revised					
1-2	Promote Waste Disposal Programs	Dept. of Public Works	Publicize waste disposal and recycling programs through flyers in DPW lobby.	1) Continued to promote special collection days through publications and flyers. 2) DPW Solid Waste Division Recycling Coordinator promoted recycling and conservation at events throughout the year.	1) Continue current efforts for advance notification of Special Waste Collection Days. 2) Continue having Recycling Coordinator attend civic functions promoting recycling.
Revised					
1-3a	Stormwater Matters Talk	Dept. of Public Works, Planning Dept.	Presentation on stormwater will be given once per year at public event or meeting	Green City Forum was originally scheduled for fall 2007 but was postponed to April 4th, 2008. Forum proceeded as planned and included discussion on stormwater.	Schedule stormwater matters talk with neighborhood councils. Provide update on past year's efforts, identify new volunteers, and establish schedule of tasks to be accomplished.
Revised					

1-3b	ECOS Springfield Event	Dept. of Public Works, Conservation Commission	Assess possibility of establishing stormwater event if resources allow	Combined Earth Day/Keep Springfield Beautiful event on April 28, 2007 included stormwater materials, tree planting, and trash cleanup. Earth Day cleanup collected 170 tons of trash, 4.7 tons of recyclable metals, and 4 tons of electronics.	Continue stormwater and clean-up components of these events
Revised					
1-4a	No Dumping Signs	Dept. of Public Works	Place "No Dumping" signs as needed.	1) Neighborhood councils were encouraged to report illegal dumping activities 2) "No Dumping" signage replaced when reported missing or vandalized; eight signs installed in 2007-2008. 3) Police Dept. monitored target areas for dumping 4) Litter barrels throughout City collected 420 tons of waste.	1) Continue established efforts. 2) If funding allows, order and install additional "No Dumping" signs and increase monitoring in areas most frequented for dumping.
Revised					
1-4b	Dog Waste Signs	Dept. of Public Works, Parks Dept., Planning Dept.	Assess need for signage. Install one new park sign per year if funding allows.	1) Continued public awareness efforts for dog waste, including posters in DPW. 2) Maintained existing park dog waste collection systems.	1) Continue public awareness efforts on the effects of dog waste. 2) Assess need for additional dog waste collection stations within city parks. 3) Install additional signs as needed. 4) City will consider new signs when planning any work in parks.
Revised					
1-4c	Geese Wastes Signs	Dept. of Public Works, Parks Dept., Planning Dept., Conservation Commission	Assess need for signage. Install one new park sign per year if funding allows.	No additional progress due to fiscal constraints.	1) Address any signage needs if funding allows. 2) Geese waste information would be included in kiosk (1-4d). Kiosk installation planned pending funding. 3) City will consider new signs when planning any work in parks.
Revised					
1-4d	Stormwater Kiosks	Dept. of Public Works, Planning Dept.	Place kiosks at key locations at a number of water bodies with information on water quality and pollution prevention.	Funding did not allow for installation. Sign at Riverfront Park addresses water quality and is in good repair.	Kiosk installation planned pending funding.
Revised					

1-5a	Press Releases	Dept. of Public Works, Planning Dept.	Distribute at least one educational press release on BMPs per year.	Television and radio spots provided through membership in Connecticut River Stormwater Committee.	Continue press releases and advertisements, and promote any progress on BMPs listed above for 2008.
Revised					
1-5b	Stormwater Display	Dept. of Public Works, Conservation Commission, Planning Dept.	Establish a stormwater display at DPW one month per year.	1) Continued display of stormwater education materials in lobby of DPW 2) Continued participation with Pioneer Valley Planning Commission (PVPC) and Connecticut River Stormwater Committee, which develop stormwater education programs.	1) Continue display effort. 2) Refine and improve display as funding allows. 3) Continue participation with PVPC and Connecticut River Stormwater Committee in developing stormwater education programs.
Revised					
1-5c	Educate Local Business	Dept. of Public Works, Conservation Commission, Planning Dept.	Assess stormwater educational opportunities with Business and Industries.	1) Conservation Commission held pre-design meetings to educate developers on the importance and cost-effectiveness of proper stormwater maintenance 2) Engaged in public education via newspaper articles, radio ads, and television ads produced by the Connecticut River Stormwater Committee.	1) Con Comm to continue holding pre-design meetings with development project proponents. 2) Continue to educate the public through multiple media.
Revised					
1-5d	Display Materials	Dept. of Public Works, Planning Dept.	Assess existing City events for opportunities to display stormwater materials.	1) No new events identified. 2) Stormwater educational material display continued in lobby of DPW (see 1-5b).	1) Continue display effort. 2) Refine and improve display as funding allows.
Revised					

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 5	Planned Activities – Future Permit
2-1a	Catch Basin Markers	Dept. of Public Works, Planning Dept.	One set of markers to be placed per year.	No markers placed due to lack of staff and funds. Markers are being purchased, and placement will begin in 2008.	Purchase and place catch basin markers.
Revised					
2-1b	Water Quality Monitoring	Planning Dept.	Coordinate volunteer water quality monitoring program.	1) Volunteer monitoring conducted on Loon Pond by the Springfield Expeditionary Learning School from April through June 2007. 2) Monitoring is performed at all swimming locations by the Board of Health.	Continue volunteer relationship with Springfield schools or identify new volunteer opportunities.
Revised					
2-1c	Vegetative Cover Data Collection	Planning Dept., Parks Dept.	Establish volunteer program to monitor ground cover at critical locations.	1) GIS/GPS technology used to manage tree planting and staffing, 2) Formal ground cover assessment delayed due to lack of funding. 3) Volunteer flower organizations at Five Mile and Loon Pond have reported on species variety. 4) Groundwork Springfield, a volunteer urban improvement group, is working to improve urban environments throughout the City through landscaping and site improvements.	Coordinate with volunteer organizations, and perform ground cover assessment as staffing and funding allows.
Revised					
2-1d	Earth Day clean-up	Museum Assoc., Dept. of Public Works, Planning Dept.	Plan and conduct Earth Day events.	Combined Earth Day/Keep Springfield Beautiful event on April 28, 2007 included stormwater materials, tree planting, and trash cleanup. Earth Day cleanup collected 170 tons of trash, 4.7 tons of recyclable metals, and 4 tons of electronics.	Continue stormwater and clean-up components of these events
Revised					
2-2	Stormwater Management Plan Public Participation	Dept. of Public Works	DPW will make stormwater plan available to public.	"2003 Summary Report on Water Quality for Springfield's Lakes and Ponds" available to public.	Provide update information on 2003 Summary Report to public as it is developed.
Revised					

2-3a	Household Hazardous Waste Collection	Dept. of Public Works	Hold Haz. Collection Day for residents to drop off materials for disposal.	1) Advertised collection day through newspaper and flyer distribution. 2) Held six collection events to limit possibility of illegal dumping of hazardous material. Approximately 1,000 cars came to drop off hazardous materials for the six events combined.	Continue to advertise and hold Hazardous Material Collection Event for households Citywide.
Revised					
2-3b	Bulk Item Collection	Dept. of Public Works	Residents can call to schedule Bulk Material Collection Day of up to 5 items.	Bulk Collection Program on-going with residents able to call to schedule pickups. 325 tons bulk material landfilled.	Continue to make program available to residents if funding allows.
Revised					
2-3c	Curbside Collection	Dept. of Public Works	Residential recycling is to be picked-up every other week year round. Recycling is required per Springfield ordinance.	Recycling Collection Program on-going. 4,203 tons recycled.	Continue to make program available to residents.
Revised					
2-3d	Rechargeable Battery Recycling	Dept. of Public Works	Maintain residential drop-off of rechargeable batteries at DPW.	Collection program on-going.	Continue to make program available to residents.
Revised					
2-3e	Leaf and Yard Waste Collection	Dept. of Public Works	Maintain current leaf and brush collection program. Compost material is made available to residents.	Collection and composting program on-going at DPW yard and landfill. Residents can also drop off brush waste directly at the landfill. 8,034 tons of yard waste composted.	Continue to make program available to residents.
Revised					

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 5	Planned Activities – Future Permit
3-1a	Sewer Book Maintained	Dept. of Public Works	Maintain existing drainage system map.	1) Existing infrastructure (sewer and drainage) book is updated annually. 2) Developers are aware that the City plans to require AutoCAD files of design plans, but these files are not yet required	1) Continue update on sewer and drainage system book as new system are constructed/upgraded. 2) Require all new developers to provide AutoCAD files of design plans to aid in update.
Revised					
3-1b	Sewer GIS Available	Dept. of Public Works, Water & Sewer Commission	GIS mapping of infrastructure.	1) On-going establishment/update of GIS system with new/replacement infrastructure. 2) Work towards final establishment of GIS mapping as funding permits 3) Adding user-friendly GIS queries to make data more useful, such as for coordinating trash and recycling reoutes.	1) Continue update of GIS system as systems are constructed or upgraded. 2) Require all new developers to provide AutoCAD files of design plans to aid in update.
Revised					
3-2a	Illicit Discharge Ordinance Development — Evaluate Existing Illicit Discharge Ordinances	Dept. of Public Works, Planning Dept., Water & Sewer Commission	Review current City ordinance. Obtain and review ordinances from other communities.	Sample ordinances reviewed.	Task completed.
Revised					
3-2b	Illicit Discharge Ordinance Development — Develop Draft Ordinance	Dept. of Public Works, Planning Dept., Water & Sewer Commission	Draft new wording. Educate public, officials, and the private sector.	Draft ordinance has been developed based on template from MA DEP and is undergoing further revision.	Select appropriate strategy for Springfield implementation and complete draft ordinance.
Revised					
3-2c	Illicit Discharge Ordinance Development — Draft Available For Comment	Dept. of Public Works, Planning Dept., Water & Sewer Commission	Float new ordinance for one-year comment period. Continue education.	Delayed pending completion of item 3-2b.	Float new ordinance for comment when 3-2b is completed.
Revised					

3-2d	Illicit Discharge Ordinance Development — Passage Process	Dept. of Public Works, Planning Dept., Water & Sewer Commission	Attempt to pass ordinance, continue comment period and educate more if necessary.	Delayed pending completion of items 3-2b and 3-2c.	Attempt to pass new ordinance when 3-2b and 3-2c are completed.
Revised					
3-3a	Determine Priority Areas	Dept. of Public Works, Water & Sewer Commission	Determine priority areas. Inspect outlets at two water bodies per year.	Outlets checked as necessary. Eighteen (18) specific outlets inspected by DPW.	1) Establish priorities for 2008 as finances allow. 2) Establish and coordinate volunteer inspection programs as finances allow.
Revised					
3-3b	Inspections	Dept. of Public Works	Visually screen outfalls.	Inspections continued — eighteen (18) outfalls inspected.	Establish inspection criteria and program for implementation.
Revised					
3-3c	Investigation	Dept. of Public Works	Trace the source of illicit discharges.	Formal investigation program in place. Illicit discharge located on Page Blvd., which will require further investigation in order to ensure the problem is corrected in full.	Continue program.
Revised					
3-3d	Correct any problems found	Dept. of Public Works, Water & Sewer Commission	Remove source of illicit discharges.	Inspections identified five (5) locations that required excavation and repair of storm drainage system. Drainage channel cleared of blockage off Senator Street. Repairs at Page Blvd. will begin in 2008/2009.	Continue program of inspection, investigation, and correction.
Revised					

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 5	Planned Activities – Future Permit
4-1	Wetland Protection	Conservation Commission	Review existing regulations which require compliance with stormwater policy within wetland buffer.	1) On-going pre-construction review of new projects for permit issuance and compliance with wetland and SWM performance standards. 2) City construction site plan requirements are available on the web.	On-going review of new projects.
Revised					
4-2a	Erosion and Sediment Control Ordinance — Evaluate Existing Plans	Conservation Commission, Law Dept., Dept. of Public Works, Planning Dept.	Review sample regulations for other communities. Initiate discussions for ordinance establishment	Sample ordinances reviewed.	Task completed.
Revised					
4-2b	Erosion and Sediment Control Ordinance — Develop Draft Ordinance	Conservation Commission, Law Dept., Dept. of Public Works, Planning Dept.	Draft new wording. Educate public, officials, and the private sector.	Draft ordinance has been developed based on template from MA DEP and is undergoing further revision.	Select appropriate strategy for Springfield implementation and complete draft ordinance.
Revised					
4-2c	Erosion and Sediment Control Ordinance — Draft Available For Comment	Conservation Commission, Law Dept., Dept. of Public Works, Planning Dept.	Float new ordinance for one-year comment period. Continue education.	Delayed pending completion of item 4-2b.	Float new ordinance for comment when 4-2b is completed.
Revised					
4-2d	Erosion and Sediment Control Ordinance — Passage Process	Conservation Commission, Law Dept., Dept. of Public Works, Planning Dept.	Attempt to pass ordinance, continue comment period and educate more if necessary.	Delayed pending completion of items 4-2b and 4-2c.	Attempt to pass new ordinance when 4-2b and 4-2c are completed.
Revised					

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 5	Planned Activities – Future Permit
5-1	Wetland Protection	Conservation Commission, Dept. of Public Works	Review existing regulations which require compliance with stormwater policy within wetland buffer.	Ongoing pre-construction review of new projects for permit issuance and compliance with wetland and SWM performance standards.	Continue discussion of Interdepartmental Site Plan Review Committee.
Revised					
5-2a	Site Plan Review Process	Conservation Commission, Dept. of Public Works, Planning Dept	Require TSS removal for groundwater recharge. Attenuate peak flows.	1) Continued requiring infiltration and TSS removal for new developments. 2) SWMS maintenance plan for non-wetland sites in ongoing development. 3) New public draft of zoning ordinances will be available in May 2008 (funded by $90,000 grant noted in previous permit years). Zoning ordinance controls site plan reviews.	1) Continue enforcing design requirements. 2) Establish SWMS maintenance plan for non-wetland sites. 3) Complete development of BMP implementation database. 4) Continue zoning ordinance revision process.
Revised					
5-2b	Evaluate for Changes and Improvements	Conservation Commission, Dept. of Public Works, Planning Dept.	Assess existing procedures and make improvements to process.	New public draft of zoning ordinances will be available in May 2008 (funded by $90,000 grant noted in previous permit years).	Continue zoning ordinance revision process.
Revised					
5-3a	New Bylaw For Post-Construction Runoff — Evaluate Existing Site Plan Process	Conservation Commission, Dept. of Public Works, Planning Dept.	Assess need for new bylaw/ordinance regarding maintenance of BMPs.	1) Site plan review committee to be established after citywide revision of review process is complete. 2) Sample ordinances reviewed for use in developing draft for Springfield.	Continue discussion of Interdepartmental Site Plan Review Committee.
Revised					

5-3b	New Bylaw For Post-Construction Runoff — Develop Draft Guidelines	Conservation Commission, Dept. of Public Works, Planning Dept.	Draft new wording. Educate public, officials, and the private sector.	Draft ordinance has been developed based on template from MA DEP and is undergoing further revision. Further action pending finalization of updated site plan review process.	Select appropriate strategy for Springfield and create draft ordinance.
Revised					
5-3c	New Bylaw For Post-Construction Runoff — Draft Available For Comment	Conservation Commission, Dept. of Public Works, Planning Dept.	Float new bylaw for one-year comment period. Continue education.	Delayed pending completion of items 5-3a and 5-3b.	Float new ordinance for comment when 5-3a and 5-3b are completed.
Revised					
5-3d	New Bylaw For Post-Construction Runoff — Passage Process	Conservation Commission, Dept. of Public Works, Planning Dept.	Attempt to pass bylaw, continue comment period and educate more if necessary.	Delayed pending completion of items 5-3a, 5-3b, and 5-3c.	Attempt to pass new ordinance when 5-3a, 5-3b, and 5-3c are completed.
Revised					

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 5	Planned Activities – Future Permit
6-1a	Street Sweeping — Winter Cleanup	Dept. of Public Works	Sweep streets a minimum of once per year.	1) Seasonal operation for calendar year 2007 began in April. First round for arterial and residential routes completed by the end of July. 2) 1,182 tons of debris collected during first round.	Continue with established practices.
Revised					
6-1b	Street Sweeping — Ongoing	Dept. of Public Works	Re-establish normal sweeping program of 6-times per year as funding allows	1) Seasonal operation from July to November covered the entire city, with arterial streets swept three times. 2) 808 tons of debris collected in second round.	Continue established schedule and increased sweeping frequency as funding allows.
Revised					
6-1c	TMDL Targeted Sweeping Areas	Dept. of Public Works	Loon Pond, Long Pond, and Mona Lake areas will receive additional sweeping	Municipal budget did not allow for enhancement of sweeping program. Areas swept twice as part of regular sweeping program.	Implement enhanced sweeping program in 2008 if budget allows.
Revised					
6-1d	Catch Basin Cleaning	Dept. of Public Works	Re-establish catch basin cleaning program as budget allow.	2,360 basins cleaned, removing 533 tons of debris from the system.	Continue cleaning schedule as needed and as budget allows.
Revised					
6-1e	Tree Planting	Dept. of Public Works, Parks Dept.	Replace ailing trees and plant new trees in public areas.	1) Groundwork Springfield, a volunteer urban improvement group, is working to improve urban environments throughout the City through landscaping and site improvements. 2) Total of 541 trees planted — 50 through private engineering contractors, 491 through Parks Dept.	Continue tree planting program.
Revised					
6-1f	Assess Drainage System in TMDL Areas	Dept. of Public Works	Assess condition of catch basins and outfalls at Long Pond, Loon Pond, and Mona Lake, and consider possible improvements.	Various improvements were made at Loon Pond, including the installation of a grit chamber upstream of outfall, removal of a septic tank from bathhouse, and upgrades to the parking lot.	Consider further improvements to drainage systems at Long Pond, Loon Pond, and Mona Lake as feasible.
Revised					

6-2a	Existing Practices	Dept. of Public Works	Continue existing housekeeping practices to minimize stormwater pollution.	Practices continued. Examples include: - Recycling and reduction of hazardous materials - Covered sand storage (new cover to be purchased). - Salt storage within salt shed - Maintenance of drainage system BMPs - Spill prevention and cleanup procedures	Continue existing practices.
Revised					
6-2b	Leaf Disposal	Dept. of Public Works, Parks Dept., School Dept.,	Leaf disposal by on-site composting.	1) Composting program on-going at DPW yard and landfill. Residents can also drop off yard waste directly at the landfill. 2) Parks Dept. continued on-site leaf/debris composting and leaf mulching to reduce waste.	Continue to make program available to residents.
Revised					
6-2c	Litter Reduction	Dept. of Public Works, Conservation Commission	Reduce litter by installing "No Dumping" signs, make public waste containers available.	1) Neighborhood councils encouraged to report illegal dumping activities 2) "No Dumping" signage replaced when reported missing or vandalized; eight signs installed in 2007-2008. 3) Police Dept. monitored target areas for dumping. 4) Litter barrels throughout City collected 420 tons of waste. 5) Utilized Clean City reporting forms to report, document, and monitor illegal dumping sites	1) Install more signs as funding allows. 2) Continue enforcement efforts.
Revised					
6-2d	Roadway Improvements	Dept. of Public Works, Conservation Commission, Parks Dept.	Include stormwater BMPs in any improvement projects in sensitive areas.	Continued existing program, including 4-foot sumps in catch basins and requiring infiltration from new subdivisions prior to discharge into city systems.	Continue existing program.
Revised					

6-3	Employee Education	Dept. of Public Works	Develop training on spill prevention, recycling, hazardous waste storage, site maintenance, and illicit discharges. Perform training annually, and provide training materials to Parks Dept., School Dept., Police Dept., and Fire Dept..	No training sessions conducted in permit year.	Conduct a training session on stormwater protection for DPW staff.
Revised					
6-4a	Catch Basin Improvements	Dept. of Public Works	Maintain and upgrade catch basins as needed.	Repairs made to 113 catch basins. Springfield arterial paving program replaced 53 catch basins — all new basins have 4-foot sumps.	On-going program to be maintained.
Revised					
6-4b	Outlet Inspections	Dept. of Public Works	Inspect system outfalls of sewers and CSOs.	Outlets inspected as part of survey efforts. U.S. Waters inspects and monitors City combined sewer overflows (CSOs) on regular basis. Eighteen (18) specific outlets inspected by DPW.	On-going program to be maintained.
Revised					
6-4c	Design and Construction of BMPs	Dept. of Public Works, Water & Sewer Commission, Conservation Commission, Parks Dept.	Control sediment and improve detention areas at Briarwood and Middlesex outfalls	1) Saint James Ave. outfall area has been topographically surveyed and submitted for design of improvements. 2) Briarwood improvement construction completed with funding from Water & Sewer Commission.	Complete St. James Ave. design and put construction program to bid in 2008-2009 if budget and timing allow.
Revised					
6-4d	Conservation Land Improvements	Dept. of Public Works, Water & Sewer Commission, Conservation Commission	Gather data for possible improvements to drainage or pollution prevention on conservation land.	1) No improvements were made to conservation land. 2) ATV enforcement program (to reduce harmful use of ATVs) pending. 3) Trail system for white cedar bog still in design process.	1) Implement ATV enforcement program if funds allow. 2) Identify possible improvements to conservation land and complete as budget allows.
Revised					

6-5a	Acquisition of Open Space	Conservation Commission, Parks Dept.	Acquire open space through grants and donations.	Six acres purchased around Loon Pond with acquisition grant.	Continue to acquire land through donations and grants.
Revised					
6-5b	Park Improvements	Conservation Commission, Parks Dept.	Improve park lands, especially improvements to stormwater collection system and BMPs.	1) Treetop Park: site improvements, new playground. 2) Marshall Roy Park: improvements to ball diamond, parking, playground, irrigation, fencing, and bathhouse. 3) Myrtle St. Park: partial renovation. 4) Groundwork Springfield, a volunteer urban improvement group, is also working to improve urban environments throughout the City through landscaping and site improvements.	Continue improving parks as necessary as budget allows.
Revised					

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA)

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 5	Planned Activities – Future Permit
1-3a	Stormwater Matters Talk	Dept. of Public Works, Planning Dept.	Presentation on stormwater will be given once per year at public event or meeting	Green City Forum was originally scheduled for fall 2007 but was postponed to April 4th, 2008. Forum proceeded as planned and included discussion on stormwater.	Schedule stormwater matters talk with neighborhood councils. Provide update on past year's efforts, identify new volunteers, and establish schedule of tasks to be accomplished.
Revised					
1-5b	Stormwater Display	Dept. of Public Works, Conservation Commission, Planning Dept.	Establish a stormwater display at DPW one month per year.	1) Continued display of stormwater education materials in lobby of DPW 2) Continued participation with Pioneer Valley Planning Commission (PVPC) and Connecticut River Stormwater Committee, which develop stormwater education programs.	1) Continue display effort. 2) Refine and improve display as funding allows. 3) Continue participation with PVPC and Connecticut River Stormwater Committee in developing stormwater education programs.
Revised					
1-5c	Educate Local Business	Dept. of Public Works, Conservation Commission, Planning Dept.	Assess stormwater educational opportunities with Business and Industries.	1) Conservation Commission held pre-design meetings to educate developers on the importance and cost-effectiveness of proper stormwater maintenance 2) Engaged in public education via newspaper articles, radio ads, and television ads produced by the Connecticut River Stormwater Committee.	1) Con Comm to continue holding pre-design meetings with development project proponents. 2) Continue to educate the public through multiple media.
Revised					
1-5d	Display Materials	Dept. of Public Works, Planning Dept.	Assess existing City events for opportunities to display stormwater materials.	1) No new events identified. 2) Stormwater educational material display continued in lobby of DPW (see 1-5b).	1) Continue display effort. 2) Refine and improve display as funding allows.
Revised					

2-3a	Household Hazardous Waste Collection	Dept. of Public Works	Hold Haz. Collection Day for residents to drop off materials for disposal.	1) Advertised collection day through newspaper and flyer distribution. 2) Held six collection events to limit possibility of illegal dumping of hazardous material. Approximately 1,000 cars came to drop off hazardous materials for the six events combined.	Continue to advertise and hold Hazardous Material Collection Event for households' city wide.
Revised					
2-3e	Leaf and Yard Waste Collection	Dept. of Public Works	Maintain current leaf and brush collection program. Compost material is made available to residents.	Collection and composting program on-going at DPW yard and landfill. Residents can also drop off brush waste directly at the landfill. 8,034 tons of yard waste composted.	Continue to make program available to residents.
Revised					
4-1	Wetland Protection	Conservation Commission	Review existing regulations which require compliance with stormwater policy within wetland buffer.	1) On-going pre-construction review of new projects for permit issuance and compliance with wetland and SWM performance standards. 2) City construction site plan requirements are available on the web.	On-going review of new projects.
Revised					
4-2a	Erosion and Sediment Control Ordinance — Evaluate Existing Plans	Conservation Commission, Law Dept., Dept. of Public Works, Planning Dept.	Review sample regulations for other communities. Initiate discussions for ordinance establishment	Sample ordinances reviewed.	Task completed.
Revised					
4-2b	Erosion and Sediment Control Ordinance — Develop Draft Ordinance	Conservation Commission, Law Dept., Dept. of Public Works, Planning Dept.	Draft new wording. Educate public, officials, and the private sector.	Draft ordinance has been developed based on template from MA DEP and is undergoing further revision.	Select appropriate strategy for Springfield implementation and complete draft ordinance.
Revised					
4-2c	Erosion and Sediment Control Ordinance — Draft Available For Comment	Conservation Commission, Law Dept., Dept. of Public Works, Planning Dept.	Float new ordinance for one-year comment period. Continue education.	Delayed pending completion of item 4-2b.	Float new ordinance for comment when 4-2b is completed.
Revised					

4-2d	Erosion and Sediment Control Ordinance — Passage Process	Conservation Commission, Law Dept., Dept. of Public Works, Planning Dept.	Attempt to pass ordinance, continue comment period and educate more if necessary.	Delayed pending completion of items 4-2b and 4-2c.	Attempt to pass new ordinance when 4-2b and 4-2c are completed.
Revised					
5-3a	New Bylaw For Post-Construction Runoff — Evaluate Existing Site Plan Process	Conservation Commission, Dept. of Public Works, Planning Dept.	Assess need for new bylaw/ordinance regarding maintenance of BMPs.	1) Site plan review committee to be established after citywide revision of review process is complete. 2) Sample ordinances reviewed for use in developing draft for Springfield.	Continue discussion of Interdepartmental Site Plan Review Committee.
Revised					
5-3b	New Bylaw For Post-Construction Runoff — Develop Draft Guidelines	Conservation Commission, Dept. of Public Works, Planning Dept.	Draft new wording. Educate public, officials, and the private sector.	Draft ordinance has been developed based on template from MA DEP and is undergoing further revision. Further action pending finalization of updated site plan review process.	Select appropriate strategy for Springfield and create draft ordinance.
Revised					
5-3c	New Bylaw For Post-Construction Runoff — Draft Available For Comment	Conservation Commission, Dept. of Public Works, Planning Dept.	Float new bylaw for one-year comment period. Continue education.	Delayed pending completion of items 5-3a and 5-3b.	Float new ordinance for comment when 5-3a and 5-3b are completed.
Revised					
5-3d	New Bylaw For Post-Construction Runoff — Passage Process	Conservation Commission, Dept. of Public Works, Planning Dept.	Attempt to pass bylaw, continue comment period and educate more if necessary.	Delayed pending completion of items 5-3a, 5-3b, and 5-3c.	Attempt to pass new ordinance when 5-3a, 5-3b, and 5-3c are completed.
Revised					
6-1a	Street Sweeping — Winter Cleanup	Dept. of Public Works	Sweep streets a minimum of once per year.	1) Seasonal operation for calendar year 2007 began in April. First round for arterial and residential routes completed by the end of July. 2) 1,182 tons of debris collected during first round.	Continue with established practices.
Revised					

6-1b	Street Sweeping — Ongoing	Dept. of Public Works	Re-establish normal sweeping program of 6-times per year as funding allows	1) Seasonal operation from July to November covered the entire city, with arterial streets swept three times. 2) 808 tons of debris collected in second round.	Continue established schedule and increased sweeping frequency as funding allows.
Revised					
6-1c	TMDL Targeted Sweeping Areas	Dept. of Public Works	Loon, Long and Mona areas will receive additional sweeping	Municipal budget did not allow for enhancement of sweeping program. Areas swept twice as part of regular sweeping program.	Implement enhanced sweeping program in 2008 if budget allows.
Revised					
6-1f	Assess Drainage System in TMDL Areas	Dept. of Public Works	Assess condition of catch basins and outfalls at Long Pond, Loon Pond, and Mona Lake, and consider possible improvements.	Various improvements at Loon Pond, including the installation of a grit chamber upstream of outfall, removal of a septic tank from bathhouse, and upgrades to the parking lot.	Consider further improvements to drainage systems at Long, Loon, and Mona as feasible.
Revised					
6-2a	Existing Practices	Dept. of Public Works	Continue existing housekeeping practices to minimize stormwater pollution.	Practices continued. Examples include: - Recycling and reduction of hazardous materials - Covered sand storage (new cover to be purchased). - Salt storage within salt shed - Maintenance of drainage system BMPs - Spill prevention and cleanup procedures	Continue existing practices.
Revised					

7b. WLA Assessment

Ongoing stormwater management requirements such as deep sumps in catch basins and infiltration practices for new developments have helped reduce stormwater and contaminant inputs to the priority areas of Loon Pond, Long Pond, and Mona Lake. Seasonal street sweeping has reached its scheduled levels for Springfield in general. Improvements to the drainage system at Loon Pond should improve the pond's overall health.

Increasing street sweeping around Loon Pond, Long Pond, and Mona Lake (as required by item 6-1c) as the City's budgetary constraints ease will be a high priority.

Part IV. Summary of Information Collected and Analyzed

No significant new stormwater-related data was collected in the 2007 permit year. Volunteer efforts are underway from a variety of organizers, including the Springfield Expeditionary School, Groundwork Springfield, and local flower and birdwatching enthusiasts. Additional City staff members are needed to coordinate volunteer efforts and maximize their potential benefits. Progress reports will be solicited from these groups as available.

Progress on Draft Bylaws/Ordinances

- Memorandum from Jim Hannifan
- Municipal Storm Drain System Bylaw
- Stormwater Management and Land Disturbance Bylaw
- Post-Construction Stormwater Management Bylaw

MEMORANDUM

TO: **Al Chwalek and Ed Pikula**

FROM: **Jim Hannifan**

DATE: **November 30, 2007**

SUBJECT: **Draft Ordinances – NPDES Stormwater Discharge Permit**

Background

The Phase II Final Rule of the NPDES (National Pollutant Discharge Elimination System) Stormwater Program administered by the U.S. Environmental Protection Agency (EPA) requires NPDES permit coverage for stormwater discharges from certain regulated "small municipal separate storm sewer systems" (MS4s).

The City of Springfield is presently covered by a "General Permit" pursuant to a Notice of Intent filed by the City in July 2003. Coverage under the current permit expires May 1, 2008.

The Phase II Final Rule also requires the development of a stormwater management program designed to prevent pollutants from being washed by stormwater runoff into the MS4 (or from being dumped directly into the MS4) and then discharged from the MS4 into local waterbodies.

The City of Springfield, as the operator of a regulated small MS4 is required to design a program to:

- Reduce the discharge of pollutants to the "maximum extent practicable" (MEP);
- Protect water quality; and
- Satisfy the appropriate water quality requirements of the Clean Water Act.

Implementation of the MEP standard requires the development and implementation of "best management practices" (BMPs) and the achievement of measurable goals to satisfy each of six minimum control measures. The Phase II Rule defines a small MS4 stormwater management program as comprising the following six elements:

1. Public Education and Outreach;
2. Public Participation/Involvement;

3. Illicit Discharge Detection and Elimination;
4. Construction Site Runoff Control;
5. Post-Construction Runoff Control; and
6. Pollution Prevention/Good Housekeeping

Various City Departments have been working on these minimum measures since 2003.

Under 40 CFR 122.34(b)(3) with respect to Illicit Discharge Detection and Elimination, the City must "To the extent allowable under State, ... or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-stormwater discharges into [the City's] storm sewer system and implement appropriate enforcement procedures and actions".

Under 40 CFR 122.34(b)(4) with respect to Construction site stormwater runoff control the City's program must include the development and implementation of, at a minimum, an ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State or local law.

Under 40 CFR 122.34(b)(5) with respect to Post-Construction Stormwater Management in New Development and Redevelopment, the City must "Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State, ... or local law".

Both the EPA and the Massachusetts Attorney General have published model ordinances addressing illicit discharge, construction site runoff and post-construction stormwater management. Copies of the model ordinances are attached. In addition, numerous cities and towns in the Commonwealth have adopted ordinances and by-laws addressing one or more of these issues.

Existing Ordinances of the City of Springfield do not appear to sufficiently or comprehensively address the required areas. Therefore the first step is for the City to decide the manner in which to address these areas, i.e. through ordinance or some other regulatory manner. Ordinance may be the most effective manner in which to put in place the required controls, enforcement mechanisms and penalties. Once the path is selected then appropriate ordinances or other policies must be drafted, adopted and implemented.

Please let me know if you would like me to proceed to prepare draft ordinances, or if you intend to consider other forms of implementation of the required measures..

Municipal Storm Drain System By-Law

Section 1: Purpose

(a) Increased and contaminated stormwater runoff is a major cause of impairment of water quality and flow in lakes, ponds, streams, rivers, wetlands and groundwater; contamination of drinking water supplies; alteration or destruction of aquatic and wildlife habitat; and flooding.

(b) Regulation of illicit connections and discharges to the municipal storm drain system is necessary for the protection of the [city or town's] water bodies and groundwater, and to safeguard the public health, safety, welfare and the environment.

(c) The objectives of this by-law are:

(1) to prevent pollutants from entering the [city or town';s] municipal separate storm sewer system (MS4);
(2) to prohibit illicit connections and unauthorized discharges to the MS4;
(3) to require the removal of all such illicit connections;
(4) to comply with state and federal statutes and regulations relating to stormwater discharges; and
(5) to establish the legal authority to ensure compliance with the provisions of this by-law through inspection, monitoring, and enforcement.

Section 2: Definitions

(a) For the purposes of this by-law, the following shall mean:

(1) AUTHORIZED ENFORCEMENT AGENCY: The [insert appropriate Town body/dept./board] (hereafter [the Board]), its employees or agents designated to enforce this by-law.
(2) BEST MANAGEMENT PRACTICE (BMP): An activity, procedure, restraint, or structural improvement that helps to reduce the quantity or improve the quality of stormwater runoff.
(3) CLEAN WATER ACT: The Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.) as hereafter amended.
(4) DISCHARGE OF POLLUTANTS: The addition from any source of any pollutant or combination of pollutants into the municipal storm drain system or into the waters of the United States or Commonwealth from any source.
(5) GROUNDWATER: Water beneath the surface of the ground.
(6) ILLICIT CONNECTION: A surface or subsurface drain or conveyance, which allows an illicit discharge into the municipal storm drain system, including without limitation sewage, process wastewater, or wash water and any connections from indoor drains, sinks, or toilets, regardless of whether said connection was previously

allowed, permitted, or approved before the effective date of this by-law [or ordinance]

(7) ILLICIT DISCHARGE: Direct or indirect discharge to the municipal storm drain system that is not composed entirely of stormwater, except as exempted in Section 7. The term does not include a discharge in compliance with an NPDES Storm Water Discharge Permit or a Surface Water Discharge Permit, or resulting from fire fighting activities exempted pursuant to Section 7, subsection 4, of this by-law.

(8) IMPERVIOUS SURFACE: Any material or structure on or above the ground that prevents water infiltrating the underlying soil. Impervious surface includes without limitation roads, paved parking lots, sidewalks, and rooftops.

(9) MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) or MUNICIPAL STORM DRAIN SYSTEM: The system of conveyances designed or used for collecting or conveying stormwater, including any road with a drainage system, street, gutter, curb, inlet, piped storm drain, pumping facility, retention or detention basin, natural or man-made or altered drainage channel, reservoir, and other drainage structure that together comprise the storm drainage system owned or operated by the [town/city of].

(10) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER DISCHARGE PERMIT: A permit issued by United States Environmental Protection Agency or jointly with the State that authorizes the discharge of pollutants to waters of the United States.

(11) NON-STORMWATER DISCHARGE: Discharge to the municipal storm drain system not composed entirely of stormwater.

(12) PERSON: An individual, partnership, association, firm, company, trust, corporation, agency, authority, department or political subdivision of the Commonwealth or the federal government, to the extent permitted by law, and any officer, employee, or agent of such person.

(13) POLLUTANT: Any element or property of sewage, agricultural, industrial or commercial waste, runoff, leachate, heated effluent, or other matter whether originating at a point or nonpoint source, that is or may be introduced into any sewage treatment works or waters of the Commonwealth. Pollutants shall include without limitation:

(A) paints, varnishes, and solvents;
(B) oil and other automotive fluids;
(C) non-hazardous liquid and solid wastes and yard wastes;
(D) refuse, rubbish, garbage, litter, or other discarded or abandoned objects, ordnances, accumulations and floatables;
(E) pesticides, herbicides, and fertilizers;
(F) hazardous materials and wastes; sewage, fecal coliform and pathogens;
(G) dissolved and particulate metals;
(H) animal wastes;
(I) rock, sand, salt, soils;
(J) construction wastes and residues; and
(K) and noxious or offensive matter of any kind.

(14) PROCESS WASTEWATER: Water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any material, intermediate product, finished product, or waste product.
(15) RECHARGE: The process by which groundwater is replenished by precipitation through the percolation of runoff and surface water through the soil.
(16) STORMWATER: Storm water runoff, snow melt runoff, and surface water runoff and drainage.
(17) SURFACE WATER DISCHARGE PERMIT. A permit issued by the Department of Environmental Protection (DEP) pursuant to 314 CMR 3.00 that authorizes the discharge of pollutants to waters of the Commonwealth of Massachusetts.
(18) TOXIC OR HAZARDOUS MATERIAL or WASTE: Any material, which because of its quantity, concentration, chemical, corrosive, flammable, reactive, toxic, infectious or radioactive characteristics, either separately or in combination with any substance or substances, constitutes a present or potential threat to human health, safety, welfare, or to the environment. Toxic or hazardous materials include any synthetic organic chemical, petroleum product, heavy metal, radioactive or infectious waste, acid and alkali, and any substance defined as Toxic or Hazardous under G.L. Ch.21C and Ch.21E, and the regulations at 310 CMR 30.000 and 310 CMR 40.0000.
(19) WATERCOURSE: A natural or man-made channel through which water flows or a stream of water, including a river, brook or underground stream.
(20) WATERS OF THE COMMONWEALTH: All waters within the jurisdiction of the Commonwealth, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, costal waters, and groundwater.
(21) WASTEWATER: Any sanitary waste, sludge, or septic tank or cesspool overflow, and water that during manufacturing, cleaning or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct or waste product.

Section 3: Applicability

(a) This by-law shall apply to flows entering the municipally owned storm drainage system.

Section 4: Authority

(a) This bylaw is adopted under the authority granted by the Home Rule Amendment of the Massachusetts Constitution and the Home Rule Procedures Act, and pursuant to the regulations of the federal Clean Water Act found at 40 CFR 122.34.

Section 5: Responsibility For Administration

(a) [The Board] shall administer, implement and enforce this by-law. Any powers granted to or duties imposed upon [the Board] may be delegated in writing by the [the Board] to employees or agents of [the Board].

Section 6: Regulations

(a) [The Board] may promulgate rules and regulations to effectuate the purposes of this by-Law. Failure by the [the Board] to promulgate such rules and regulations shall not have the effect of suspending or invalidating this by-law.

Section 7: Prohibited Activities

(a) Illicit Discharges. No person shall dump, discharge, cause or allow to be discharged any pollutant or non-stormwater discharge into the municipal separate storm sewer system (MS4), into a watercourse, or into the waters of the Commonwealth.

(b) Illicit Connections. No person shall construct, use, allow, maintain or continue any illicit connection to the municipal storm drain system, regardless of whether the connection was permissible under applicable law, regulation or custom at the time of connection.

(c) Obstruction of Municipal Storm Drain System. No person shall obstruct or interfere with the normal flow of stormwater into or out of the municipal storm drain system without prior written approval from [The Board].

Section 8: Exemptions

(a) Discharge or flow resulting from fire fighting activities. The following non-stormwater discharges or flows are exempt from the prohibition of non-stormwaters provided that the source is not a significant contributor of a pollutant to the municipal storm drain system:
(1) Waterline flushing;
(2) Flow from potable water sources;
(3) Springs;
(4) Natural flow from riparian habitats and wetlands;
(5) Diverted stream flow;
(6) Rising groundwater;
(7) Uncontaminated groundwater infiltration as defined in 40 CFR 35.2005(20), or uncontaminated pumped groundwater;
(8) Water from exterior foundation drains, footing drains (not including active groundwater dewatering systems), crawl space pumps, or air conditioning condensation;
(9) Discharge from landscape irrigation or lawn watering;
(10) Water from individual residential car washing;
(11) Discharge from dechlorinated swimming pool water (less than one ppm chlorine) provided the water is allowed to stand for one week prior to draining and the pool is drained in such a way as not to cause a nuisance;
(12) Discharge from street sweeping;
(13) Dye testing, provided verbal notification is given to the [the Board] prior to the time of the test;
(14) Non-stormwater discharge permitted under an NPDES permit or a Surface Water Discharge Permit, waiver, or waste discharge order administered under the authority of the United States Environmental Protection Agency or the Department of

Environmental Protection, provided that the discharge is in full compliance with the requirements of the permit, waiver, or order and applicable laws and regulations; and

(15) Discharge for which advanced written approval is received from the [the Board] as necessary to protect public health, safety, welfare or the environment.

Section 9: Emergency Suspension Of Storm Drainage System Access

(a) [The Board] may suspend municipal storm drain system access to any person or property without prior written notice when such suspension is necessary to stop an actual or threatened discharge of pollutants that presents imminent risk of harm to the public health, safety, welfare or the environment. In the event any person fails to comply with an emergency suspension order, the Authorized Enforcement Agency may take all reasonable steps to prevent or minimize harm to the public health, safety, welfare or the environment.

Section 10: Notification Of Spills

(a) Notwithstanding other requirements of local, state or federal law, as soon as a person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of or suspects a release of materials at that facility or operation resulting in or which may result in discharge of pollutants to the municipal drainage system or waters of the Commonwealth, the person shall take all necessary steps to ensure containment, and cleanup of the release. In the event of a release of oil or hazardous materials, the person shall immediately notify the municipal fire and police departments and [insert other appropriate departments]. In the event of a release of non-hazardous material, the reporting person shall notify the Authorized Enforcement Agency no later than the next business day. The reporting person shall provide to the Authorized Enforcement Agency written confirmation of all telephone, facsimile or in-person notifications within three business days thereafter. If the discharge of prohibited materials is from a commercial or industrial facility, the facility owner or operator of the facility shall retain on-site a written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three years.

Section 11: Enforcement

(a) [The Board] or an authorized agent of [the Board] shall enforce this by-law, regulations, orders, violation notices, and enforcement orders, and may pursue all civil and criminal remedies for such violations.

(b) Civil Relief. If a person violates the provisions of this by-law, regulations, permit, notice, or order issued thereunder, the [the Board] may seek injunctive relief in a court of competent jurisdiction restraining the person from activities which would create further violations or compelling the person to perform abatement or remediation of the violation.

(c) Orders. [The Board] or an authorized agent of [the Board] may issue a written order to enforce the provisions of this by-law or the regulations thereunder, which may include:

(1) elimination of illicit connections or discharges to the MS4;
(2) performance of monitoring, analyses, and reporting;
(3) that unlawful discharges, practices, or operations shall cease and desist; and
(4) remediation of contamination in connection therewith.

(d) If the enforcing person determines that abatement or remediation of contamination is required, the order shall set forth a deadline by which such abatement or remediation must be completed. Said order shall further advise that, should the violator or property owner fail to abate or perform remediation within the specified deadline, the [city or town] may, at its option, undertake such work, and expenses thereof shall be charged to the violator.

(e) Within thirty (30) days after completing all measures necessary to abate the violation or to perform remediation, the violator and the property owner will be notified of the costs incurred by the [city or town], including administrative costs. The violator or property owner may file a written protest objecting to the amount or basis of costs with [the Board] within thirty (30) days of receipt of the notification of the costs incurred. If the amount due is not received by the expiration of the time in which to file a protest or within thirty (30) days following a decision of [the Board] affirming or reducing the costs, or from a final decision of a court of competent jurisdiction, the costs shall become a special assessment against the property owner and shall constitute a lien on the owner's property for the amount of said costs. Interest shall begin to accrue on any unpaid costs at the statutory rate provided in G.L. Ch. 59, 57 after the thirty-first day at which the costs first become due.

(f) Criminal Penalty. Any person who violates any provision of this by-law, regulation, order or permit issued thereunder, shall be punished by a fine of not more than $ [_____]. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.

(g) Non-Criminal Disposition. As an alternative to criminal prosecution or civil action, the [city or town] may elect to utilize the non-criminal disposition procedure set forth in G.L. Ch. 40, □D and the insert citation town enabling vote/bylaw (if applicable) of the Town of [city or town], in which case the insert title or other authorized agent of the city/town shall be the enforcing person. The penalty for the 1st violation shall be $[___]. The penalty for the 2nd violation shall be $[____]. The penalty for the 3rd and subsequent violations shall be $[_____]. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.

(h) Entry to Perform Duties Under this By-Law. To the extent permitted by state law, or if authorized by the owner or other party in control of the property, [the Board], its agents, officers, and employees may enter upon privately owned property for the purpose of performing their duties under this by-law and regulations and may make or cause to be made such examinations, surveys or sampling as [the Board] deems reasonably necessary.

(i) Appeals. The decisions or orders of [the Board] shall be final. Further relief shall be to a court of competent jurisdiction.

(j) Remedies Not Exclusive The remedies listed in this by-law are not exclusive of any other remedies available under any applicable federal, state or local law.

Section 12: Severability

(a) The provisions of this by-law are hereby declared to be severable. If any provision, paragraph, sentence, or clause, of this by-law or the application thereof to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions or application of this by-law.

Section 13: Transitional Provisions

(a) Residential property owners shall have [_____] days from the effective date of the by-law to comply with its provisions provided good cause is shown for the failure to comply with the by-law during that period.

Stormwater Management And Land Disturbance By-law

Section 1: Purpose

(a) The harmful impacts of soil erosion and sedimentation are:

(1) impairment of water quality and flow in lakes, ponds, streams, rivers, wetlands and groundwater;
(2) contamination of drinking water supplies;
(3) alteration or destruction of aquatic and wildlife habitat;
(4) flooding; and
(5) overloading or clogging of municipal catch basins and storm drainage systems.

(b) The objectives of this bylaw are to:

(1) protect water resources;
(2) require practices that eliminate soil erosion and sedimentation and control the volume and rate of stormwater runoff resulting from land disturbance activities;
(3) promote infiltration and the recharge of groundwater;
(4) ensure that soil erosion and sedimentation control measures and stormwater runoff control practices are incorporated into the site planning and design process and are implemented and maintained;
(5) require practices to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
(6) comply with state and federal statutes and regulations relating to stormwater discharges; and
(7) establish the [city or town's] legal authority to ensure compliance with the provisions of this by-law through inspection, monitoring, and enforcement.

Section 2: Definitions

(a) ABUTTER: The owner(s) of land abutting the activity.

(b) AGRICULTURE: The normal maintenance or improvement of land in agricultural or aquacultural use, as defined by the Massachusetts Wetlands Protection Act and its implementing regulations.

(c) APPLICANT: Any person, individual, partnership, association, firm, company, corporation, trust, authority, agency, department, or political subdivision, of the Commonwealth or the Federal government to the extent permitted by law requesting a soil erosion and sediment control permit for proposed land-disturbance activity.

(d) AUTHORIZED ENFORCEMENT AGENCY: The [appropriate Town body/dept./board, hereafter the Board], its employees or agents designated to enforce this by-law.

(e) CERTiFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC): A certified specialist in soil erosion and sediment control. This certification program, sponsored by the Soil and Water Conservation Society in cooperation with the American Society of Agronomy, provides the public with evidence of professional qualifications.

(f) CONSTRUCTION AND WASTE MATERIALS: Excess or discarded building or site materials, including but not limited to concrete truck washout, chemicals, litter and sanitary waste at a construction site that may adversely impact water quality.

(g) CLEARING: Any activity that removes the vegetative surface cover.

(h) EROSION: The wearing away of the land surface by natural or artificial forces such as wind, water, ice, gravity, or vehicle traffic and the subsequent detachment and transportation of soil particles.

(i) EROSION AND SEDIMENTATION CONTROL PLAN: A document containing narrative, drawings and details developed by a qualified professional engineer (PE) or a Certified Professional in Erosion and Sedimentation Control (CPESC), which includes best management practices, or equivalent measures designed to control surface runoff, erosion and sedimentation during pre-construction and construction related land disturbance activities.

(j) ESTIMATED HABITAT OF RARE WILDLIFE AND CERTIFIED VERNAL POOLS: Habitats delineated for state-protected rare wildlife and certified vernal pools for use with the Wetlands Protection Act Regulations (310 CMR 10.00) and the Forest Cutting Practices Act Regulations (304 CMR 11.00).

(k) LAND-DISTURBING ACTIVITY: Any activity that causes a change in the position or location of soil, sand, rock, gravel, or similar earth material.

(l) MASSACHUSETTS ENDANGERED SPECIES ACT: (G.L. c. 131A) and its implementing regulations at (321 CMR 10.00) which prohibit the "taking" of any rare plant or animal species listed as Endangered, Threatened, or of Special Concern.

(m) MASSACHUSETTS STORMWATER MANAGEMENT POLICY: The Policy issued by the Department of Environmental Protection, and as amended, that coordinates the requirements prescribed by state regulations promulgated under the authority of the Massachusetts Wetlands Protection Act G.L. c. 131 §. 40 and Massachusetts Clean Waters Act G.L. c. 21, §. 23-56. The Policy addresses stormwater impacts through implementation of performance standards to reduce or prevent pollutants from reaching water bodies and control the quantity of runoff from a site.

(n) MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) or municipal storm drain system: The system of conveyances designed or used for collecting or conveying

stormwater, including any road with a drainage system, street, gutter, curb, inlet, piped storm drain, pumping facility, retention or detention basin, natural or man-made or altered drainage channel, reservoir, and other drainage structure that together comprise the storm drainage system owned or operated by the [town/city of _____].

(o) OWNER: A person with a legal or equitable interest in property.

(p) PERSON: An individual, partnership, association, firm, company, trust, corporation, agency, authority, department or political subdivision of the Commonwealth or the federal government, to the extent permitted by law, and any officer, employee, or agent of such person.

(q) PRE-CONSTRUCTION: All activity in preparation for construction.

(r) PRIORITY HABITAT OF RARE SPECIES: Habitats delineated for rare plant and animal populations protected pursuant to the Massachusetts Endangered Species Act and its regulations.

(s) RUNOFF: Rainfall, snowmelt, or irrigation water flowing over the ground surface.

(t) SEDIMENT: Mineral or organic soil material that is transported by wind or water, from its origin to another location; the product of erosion processes.

(u) SEDIMENTATION: The process or act of deposition of sediment.

(v) SITE: Any lot or parcel of land or area of property where land-disturbing activities are, were, or will be performed.

(w) SLOPE: The incline of a ground surface expressed as a ratio of horizontal distance to vertical distance.

(x) SOIL: Any earth, sand, rock, gravel, or similar material.

(y) STABILIZATION: The use, singly or in combination, of mechanical, structural, or vegetative methods, to prevent or retard erosion.

(z) STORMWATER: Storm water runoff, snow melt runoff, and surface water runoff and drainage.

(aa) STRIP: Any activity which removes the vegetative ground surface cover, including tree removal, clearing, grubbing, and storage or removal of topsoil.

(bb) VERNAL POOLS: Temporary bodies of freshwater which provide critical habitat for a number of vertebrate and invertebrate wildlife species.

(cc) WATERCOURSE: A natural or man-man channel through which water flows or a stream of water, including a river, brook, or underground stream.

(dd) WETLAND RESOURCE AREA: Areas specified in the Massachusetts Wetlands Protection Act G.L. c. 131, § 40 and in the (city or town's) wetland bylaw/ordinance.

(ee) WETLANDS: Tidal and non-tidal areas characterized by saturated or nearly saturated soils most of the year that are located between terrestrial (land-based) and aquatic (water-based) environments, including freshwater marshes around ponds and channels (rivers and streams), brackish and salt marshes; common names include marshes, swamps and bogs.

Section 3: Authority

(a) This bylaw is adopted under authority granted by the Home Rule Amendment of the Massachusetts Constitution, the Home Rule statutes, and pursuant to the regulations of the federal Clean Water Act found at 40 CFR 122.34

Section 4: Applicability

(a) This bylaw shall apply to all activities that result in disturbance of one or more acres of land that drains to the municipal separate storm sewer system [insert a reference to maps or Board where this information can be obtained]. Except as authorized by the [insert appropriate board, commission, department or its agent, hereafter known as "The Board"] in a Land Disturbance Permit or as otherwise provided in this bylaw, no person shall perform any activity that results in disturbance of an acre or more of land. Normal maintenance and improvement of land in agricultural or aquacultural use, as defined by the Wetlands Protection Act regulation 310 CMR 10.4, are exempt. In addition, as authorized in the Phase II Small MS4 General Permit for Massachusetts, storm water discharges resulting from the above activities that are subject to jurisdiction under the Wetlands Protection Act and demonstrate compliance with the Massachusetts Storm Water Management Policy as reflected in an Order of Conditions issued by the Conservation Commission are exempt from compliance with this bylaw.

Section 5: Responsibility For Administration

(a) [The Board] shall administer, implement and enforce this bylaw. Any powers granted to or duties imposed upon [the Board] may be delegated in writing by [the Board] to its employees or agents.

(b) Waiver. [The Board] may waive strict compliance with any requirement of this by-law or the rules and regulations promulgated hereunder, where:

(1) such action is allowed by federal, state and local statutes and/or regulations,
(2) is in the public interest, and
(3) is not inconsistent with the purpose and intent of this by-law.

(c) Rules and Regulations. [The Board] may adopt, and periodically amend rules and regulations to effectuate the purposes of this by-law. Failure by [the Board] to promulgate such rules and regulations shall not have the effect of suspending or invalidating this by-law.

Section 6: Permits and Procedure

(a) Application. A completed application for a Land Disturbance Permit shall be filed with [the Board]. A permit must be obtained prior to the commencement of land disturbing activity that may result in the disturbance of an area of one acre or more. The Land Disturbance Permit Application package shall include:

(1) a completed Application Form with original signatures of all owners;
(2) a list of abutters, certified by the Assessors Office;
(3) three (3) copies of the Erosion and Sediment Control Plan as specified in Section VI of this bylaw;
(4) payment of the application and review fees; and,
(5) one (1) copy each of the Application Form and the list of abutters filed with the Town Clerk.

(b) Entry. Filing an application for a permit grants [the Board] or its agent, permission to enter the site to verify the information in the application and to inspect for compliance with permit conditions.

(c) Other Boards. The [the Board] shall notify the Town Clerk of receipt of the application, and shall give one copy of the application package to [each of the other relevant boards. Fill in the Planning Board, the Conservation Commission, or Department of Public Works as appropriate].

(d) Public Hearing. [The Board] shall hold a public hearing within twenty-one (21) days of the receipt of a complete application and shall take final action within twenty-one (21) days from the time of the close of the hearing unless such time is extended by agreement between the applicant and [the Board]. Notice of the public hearing shall be given by publication and posting and by first-class mailings to abutters at least seven (7) days prior to the hearing. [the Board] shall make the application available for inspection by the public during business hours at the [city or town] [specify office]

(e) Information requests. The applicant shall submit all additional information requested by [the Board] to issue a decision on the application.

(f) Action by [the Board]. [The Board] may:

(1) Approve the Land Disturbance Permit Application and issue a permit if it finds that the proposed plan will protect water resources and meets the objectives and requirements of this by-law;

(2) Approve the Land Disturbance Permit Application and issue a permit with conditions, modifications or restrictions that [the Board] determines are required to ensure that the project will protect water resources and meets the objectives and requirements of this by-law;
(3) Disapprove the Land Disturbance Permit Application and deny the permit if it finds that the proposed plan will not protect water resources or fails to meet the objectives and requirements of this by-law.

(g) Failure of [the Board] to take final action. Failure of [the Board] to take final action upon an Application within the time specified above shall be deemed to be approval of said Application. Upon certification by the Town Clerk that the allowed time has passed without [the Board's] action, the Land Disturbance Permit shall be issued by [the Board].

(h) Fee Structure. Each application must be accompanied by the appropriate application fee as established by [the Board]. Applicants shall pay review fees as determined by [the Board] sufficient to cover any expenses connected with the public hearing and review of the Land Disturbance Permit Application before the review process commences. [the Board] is authorized to retain a Registered Professional Engineer or other professional consultant to advise [the Board] on any or all aspects of the Application.

(i) Project Changes. The permittee, or their agent, must notify [the Board] in writing of any change or alteration of a land-disturbing activity authorized in a Land Disturbance Permit before any change or alteration occurs. If [the Board] determines that the change or alteration is significant, based on the design requirements listed in Section 7.B. and accepted construction practices, [the Board] may require that an amended Land Disturbance Permit application be filed and a public hearing held. If any change or alteration from the Land Disturbance Permit occurs during any land disturbing activities, [the Board] may require the installation of interim erosion and sedimentation control measures before approving the change or alteration.

Section 7: Erosion And Sediment Control Plan

(a) The Erosion and Sediment Control Plan shall contain sufficient information to describe the nature and purpose of the proposed development, pertinent conditions of the site and the adjacent areas, and proposed erosion and sedimentation controls. The applicant shall submit such material as is necessary to show that the proposed development will comply with the design requirements listed in Section 7.B. below.

(b) The design requirements of the Erosion and Sediment Control Plan are:

(1) Minimize total area of disturbance;
(2) Sequence activities to minimize simultaneous areas of disturbance;
(3) Minimize peak rate of runoff in accordance with the Massachusetts Stormwater Policy;
(4) Minimize soil erosion and control sedimentation during construction, provided that prevention of erosion is preferred over sedimentation control;

(5) Divert uncontaminated water around disturbed areas;
(6) Maximize groundwater recharge;
(7) Install and maintain all Erosion and Sediment Control measures in accordance with the manufacturers specifications and good engineering practices;
(8) Prevent off-site transport of sediment;
(9) Protect and manage on and off-site material storage areas (overburden and stockpiles of dirt, borrow areas, or other areas used solely by the permitted project are considered a part of the project);
(10) Comply with applicable Federal, State and local laws and regulations including waste disposal, sanitary sewer or septic system regulations, and air quality requirements, including dust control;
(11) Prevent significant alteration of habitats mapped by the Massachusetts Natural Heritage & Endangered Species Program as Endangered, Threatened or Of Special Concern, Estimated Habitats of Rare Wildlife and Certified Vernal Pools, and Priority Habitats of Rare Species from the proposed activities;
(12) Institute interim and permanent stabilization measures, which shall be instituted on a disturbed area as soon as practicable but no more than 14 days after construction activity has temporarily or permanently ceased on that portion of the site;
(13) Properly manage on-site construction and waste materials; and
(14) Prevent off-site vehicle tracking of sediments.

(c) Erosion and Sedimentation Control Plan Content. The Plan shall contain the following information:

(1) Names, addresses, and telephone numbers of the owner, applicant, and person(s) or firm(s) preparing the plan;
(2) Title, date, north arrow, names of abutters, scale, legend, and locus map;
(3) Location and description of natural features including:
  (A) Watercourses and water bodies, wetland resource areas and all floodplain information, including the 100-year flood elevation based upon the most recent Flood Insurance Rate Map, or as calculated by a professional engineer for areas not assessed on these maps;
  (B) Existing vegetation including tree lines, canopy layer, shrub layer, and ground cover, and trees with a caliper twelve (12) inches or larger, noting specimen trees and forest communities; and
  (C) Habitats mapped by the Massachusetts Natural Heritage & Endangered Species Program as Endangered, Threatened or of Special Concern, Estimated Habitats of Rare Wildlife and Certified Vernal Pools, and Priority Habitats of Rare Species within five hundred (500) feet of any construction activity.
(4) Lines of existing abutting streets showing drainage and driveway locations and curb cuts;
(5) Existing soils, volume and nature of imported soil materials;
(6) Topographical features including existing and proposed contours at intervals no greater than two (2) feet with spot elevations provided when needed;

(7) Surveyed property lines showing distances and monument locations, all existing and proposed easements, rights-of-way, and other encumbrances, the size of the entire parcel, and the delineation and number of square feet of the land area to be disturbed;
(8) Drainage patterns and approximate slopes anticipated after major grading activities (Construction Phase Grading Plans);
(9) Location and details of erosion and sediment control measures with a narrative of the construction sequence/phasing of the project, including both operation and maintenance for structural and non-structural measures, interim grading, and material stockpiling areas;
(10) Path and mechanism to divert uncontaminated water around disturbed areas, to the maximum extent practicable;
(11) Location and description of industrial discharges, including stormwater discharges from dedicated asphalt plants and dedicated concrete plants, which are covered by this permit;
(12) Stormwater runoff calculations in accordance with the Department of Environmental Protection's Stormwater Management Policy;
(13) Location and description of and implementation schedule for temporary and permanent seeding, vegetative controls, and other stabilization measures;
(14) A description of construction and waste materials expected to be stored on-site. The Plan shall include a description of controls to reduce pollutants from these materials, including storage practices to minimize exposure of the materials to stormwater, and spill prevention and response;
(15) A description of provisions for phasing the project where one acre of area or greater is to be altered or disturbed;
(16) Plans must be stamped and certified by a qualified Professional Engineer registered in Massachusetts or a Certified Professional in Erosion and Sediment Control; and
(17) Such other information as is required by [the Board].

Section 8: Inspection And Site Supervision

(a) Pre-construction Meeting. Prior to starting clearing, excavation, construction, or land disturbing activity the applicant, the applicant's technical representative, the general contractor or any other person with authority to make changes to the project, shall meet with [The Board], to review the permitted plans and their implementation.

(b) Board Inspection. [The Board] or its designated agent shall make inspections as hereinafter required and shall either approve that portion of the work completed or shall notify the permittee wherein the work fails to comply with the land disturbance permit as approved. The Permit and associated plans for grading, stripping, excavating, and filling work, bearing the signature of approval of [the Board], shall be maintained at the site during the progress of the work. In order to obtain inspections, the permittee shall notify [the Board] at least two (2) working days before each of the following events:

(1) Erosion and sediment control measures are in place and stabilized;
(2) Site Clearing has been substantially completed;
(3) Rough Grading has been substantially completed;

(4) Final Grading has been substantially completed;
(5) Close of the Construction Season; and
(6) Final Landscaping (permanent stabilization) and project final completion.

(c) Permittee Inspections. The permittee or his/her agent shall conduct and document inspections of all control measures) no less than weekly or as specified in the permit, and prior to and following anticipated storm events. The purpose of such inspections will be to determine the overall effectiveness of the control plan, and the need for maintenance or additional control measures. The permittee or his/her agent shall submit monthly reports to [the Board] or designated agent in a format approved by [the Board].

(d) Access Permission. To the extent permitted by state law, or if authorized by the owner or other party in control of the property, [the Board] its agents, officers, and employees may enter upon privately owned property for the purpose of performing their duties under this by-law and may make or cause to be made such examinations, surveys or sampling as [the Board] deems reasonably necessary to determine compliance with the permit.

Section 9: Surety

(a) [The Board] may require the permittee to post before the start of land disturbance activity, a surety bond, irrevocable letter of credit, cash, or other acceptable security. The form of the bond shall be approved by town counsel, and be in an amount deemed sufficient by [the Board] to ensure that the work will be completed in accordance with the permit. If the project is phased, [the Board] may release part of the bond as each phase is completed in compliance with the permit but the bond may not be fully released until [the Board] has received the final report as required by Section 10 and issued a certificate of completion.

Section 10: Final Reports

(a) Upon completion of the work, the permittee shall submit a report (including certified as-built construction plans) from a Professional Engineer (P.E.), surveyor, or Certified Professional in Erosion and Sediment Control (CPESC), certifying that all erosion and sediment control devices, and approved changes and modifications, have been completed in accordance with the conditions of the approved permit. Any discrepancies should be noted in the cover letter.

Section 11: Enforcement

(a) [The Board] or an authorized agent of [the Board] shall enforce this by-law, regulations, orders, violation notices, and enforcement orders, and may pursue all civil and criminal remedies for such violations.

(b) Orders

(1) [The Board] or an authorized agent of the [the Board] may issue a written order to enforce the provisions of this by-law or the regulations thereunder, which may include:
   (A) a requirement to cease and desist from the land-disturbing activity until there is compliance with the bylaw and provisions of the land-disturbance permit;
   (B) maintenance, installation or performance of additional erosion and sediment control measures;
   (C) monitoring, analyses, and reporting
   (D) remediation of erosion and sedimentation resulting directly or indirectly from the land-disturbing activity.

(2) If the enforcing person determines that abatement or remediation of erosion and sedimentation is required, the order shall set forth a deadline by which such abatement or remediation must be completed. Said order shall further advise that, should the violator or property owner fail to abate or perform remediation within the specified deadline, the [city or town] may, at its option, undertake such work, and the property owner shall reimburse the [city or town's] expenses.

(3) Within thirty (30) days after completing all measures necessary to abate the violation or to perform remediation, the violator and the property owner shall be notified of the costs incurred by the [city or town], including administrative costs. The violator or property owner may file a written protest objecting to the amount or basis of costs with [the Board] within thirty (30) days of receipt of the notification of the costs incurred. If the amount due is not received by the expiration of the time in which to file a protest or within thirty (30) days following a decision of [the Board] affirming or reducing the costs, or from a final decision of a court of competent jurisdiction, the costs shall become a special assessment against the property owner and shall constitute a lien on the owner's property for the amount of said costs. Interest shall begin to accrue on any unpaid costs at the statutory rate, as provided in G.L. Ch. 59, § 57, after the thirty-first day following the day on which the costs were due.

(c) Criminal Penalty. Any person who violates any provision of this by-law, regulation, order or permit issued there under, shall be punished by a fine of not more than $[____]. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.

(d) Non-Criminal Disposition. As an alternative to criminal prosecution or civil action, the [city or town] may elect to utilize the non-criminal disposition procedure set forth in G.L. Ch.. 40, □D and [the insert citation town enabling vote/bylaw (if applicable)] of the Town of [_____], in which case [the insert title or other authorized agent] of the [city/town] shall be the enforcing person. The penalty for the 1st violation shall be $[___]. The penalty for the 2nd violation shall be $[____]. The penalty for the 3rd and subsequent violations shall be $[___]. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.

(e) Appeals. The decisions or orders of [the Board] shall be final. Further relief shall be to a court of competent jurisdiction.

(f) Remedies Not Exclusive. The remedies listed in this by-law are not exclusive of any other remedies available under any applicable federal, state or local law.

Section 12: Certificate Of Completion

(a) The issuing authority will issue a letter certifying completion upon receipt and approval of the final reports and/or upon otherwise determining that all work of the permit has been satisfactorily completed in conformance with this bylaw.

Section 13: Severability

(a) If any provision, paragraph, sentence, or clause of this by-law shall be held invalid for any reason, all other provisions shall continue in full force and effect.

Post-Construction Stormwater Management By-Law

Section 1: Purpose

(a) Regulation of discharges to the municipal separate storm sewer system (MS4) is necessary for the protection of the [city or town's] water bodies and groundwater, and to safeguard the public health, safety, welfare and the environment. Increased and contaminated stormwater runoff associated with developed land uses and the accompanying increase in impervious surface are major causes of:

(1) impairment of water quality and flow in lakes, ponds, streams, rivers, wetlands and groundwater;
(2) impairment of water quality and flow in lakes, ponds, streams, rivers, wetlands and groundwater,
(3) contamination of drinking water supplies,
(4) erosion of stream channels;
(5) alteration or destruction of aquatic and wildlife habitat; and
(6) flooding.

(b) Therefore, this bylaw establishes stormwater management standards for the final conditions that result from development and redevelopment projects to minimize adverse impacts offsite and downstream which would be born by abutters, townspeople and the general public.

(c) The objectives of this by-law are:

(1) To require practices to control the flow of stormwater from new and redeveloped sites into the [town/city] storm drainage system in order to prevent flooding and erosion;
(2) To protect groundwater and surface water from degradation;
(3) To promote groundwater recharge;
(4) To prevent pollutants from entering the [city or town's] municipal separate storm sewer system (MS4) and to minimize discharge of pollutants from the MS4;
(5) To ensure adequate long-term operation and maintenance of structural stormwater best management practices so that they work as designed;
(6) To comply with state and federal statutes and regulations relating to stormwater discharges; and
(7) To establish the [city or town's] legal authority to ensure compliance with the provisions of this by-law through inspection, monitoring, and enforcement.

Section 2: Definitions

(a) ALTERATION OF DRAINAGE CHARACTERISTICS: Any activity on an area of land that changes the water quality, force, direction, timing or location of runoff flowing from the area. Such changes include: change from distributed runoff to confined, discrete

discharge, change in the volume of runoff from the area; change in the peak rate of runoff from the area; and change in the recharge to groundwater on the area.

(b) BEST MANAGEMENT PRACTICE (BMP): An activity, procedure, restraint, or structural improvement that helps to reduce the quantity or improve the quality of stormwater runoff.

(c) THE BOARD – Town of _____ [Planning Board, or whatever Dept. the Town decides is appropriate OR its authorized agent(s)].

(d) CLEARING: Any activity that removes the vegetative surface cover.

(e) DEVELOPMENT: The modification of land to accommodate a new use or expansion of use, usually involving construction.

(f) DISTURBANCE OF LAND: Any action that causes a change in the position, location, or arrangement of soil, sand rock, gravel of similar earth material.

(g) GRADING: Changing the level or shape of the ground surface.

(h) GRUBBING: The act of clearing land surface by digging up roots and stumps.

(i) IMPERVIOUS SURFACE: Any material or structure on or above the ground that prevents water infiltrating the underlying soil. Impervious surface includes without limitation roads, paved parking lots, sidewalks, and roof tops.

(j) MASSACHUSETTS STORMWATER MANAGEMENT POLICY: The Policy issued by the Department of Environmental Protection, and as amended, that coordinates the requirements prescribed by state regulations promulgated under the authority of the Massachusetts Wetlands Protection Act G.L. c. 131 § 40 and Massachusetts Clean Waters Act G.L. c. 21, §. 23-56. The Policy addresses stormwater impacts through implementation of performance standards to reduce or prevent pollutants from reaching water bodies and control the quantity of runoff from a site.

(k) MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) or MUNICIPAL STORM DRAIN SYSTEM: The system of conveyances designed or used for collecting or conveying stormwater, including any road with a drainage system, street, gutter, curb, inlet, piped storm drain, pumping facility, retention or detention basin, natural or man-made or altered drainage channel, reservoir, and other drainage structure that together comprise the storm drainage system owned or operated by the [town/city of _____].

(l) OPERATION AND MAINTENANCE PLAN: A plan setting up the functional, financial and organizational mechanisms for the ongoing operation and maintenance of a stormwater management system to insure that it continues to function as designed.

(m) OUTFALL: The point at which stormwater flows out from a point source discernible, confined and discrete conveyance into waters of the Commonwealth.

(n) OUTSTANDING RESOURCE WATERS (ORWs): Waters designated by Massachusetts Department of Environmental Protection as ORWs. These waters have exceptional sociologic, recreational, ecological and/or aesthetic values and are subject to more stringent requirements under both the Massachusetts Water Quality Standards (314 CMR 4.00) and the Massachusetts Stormwater Management Standards. ORWs include vernal pools certified by the Natural Heritage Program of the Massachusetts Department of Fisheries and Wildlife and Environmental Law Enforcement, all Class A designated public water supplies with their bordering vegetated wetlands, and other waters specifically designated.

(o) OWNER: A person with a legal or equitable interest in property.

(p) PERSON: An individual, partnership, association, firm, company, trust, corporation, agency, authority, department or political subdivision of the Commonwealth or the federal government, to the extent permitted by law, and any officer, employee, or agent of such person.

(q) POINT SOURCE: Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, or container from which pollutants are or may be discharged.

(r) REDEVELOPMENT: Development, rehabilitation, expansion, demolition or phased projects that disturb the ground surface or increase the impervious area on previously developed sites.

(s) RUNOFF: Rainfall, snowmelt, or irrigation water flowing over the ground surface.

(t) STORMWATER MANAGEMENT PLAN: A plan required as part of the application for a Stormwater Management Permit. See Section 7.

(u) STORMWATER: Storm water runoff, snow melt runoff, and surface water runoff and drainage.

(v) TSS: Total Suspended Solids.

Section 3: Authority

(a) This bylaw is adopted under authority granted by the Home Rule Amendment of the Massachusetts Constitution, the Home Rule statutes and pursuant to the regulations of the federal Clean Water Act found at 40 CFR 122.34.

Section 4: Applicability

(a) No person may undertake a construction activity, including clearing, grading and excavation that results in a land disturbance that will disturb equal to or greater than one acre of land or will disturb less than one acre of land but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than one acre of land draining to the [name of town] municipal separate storm sewer system without a permit from [the Board]. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity or the original purpose of the site

(b) Exemptions

(1) Normal maintenance and improvement of land in agricultural use as defined by the Wetlands Protection Act regulation 310 CMR 10.04;
(2) Maintenance of existing landscaping, gardens or lawn areas associated with a single family dwelling;
(3) The construction of fencing that will not substantially alter existing terrain or drainage patterns;
(4) Construction of utilities other than drainage (gas, water, electric, telephone, etc.) which will not alter terrain or drainage patterns;
(5) As authorized in the Phase II Small MS4 General Permit for Massachusetts, storm water discharges resulting from the activities identified in Section 4 that are wholly subject to jurisdiction under the Wetlands Protection Act and demonstrate compliance with the Massachusetts Storm Water Management Policy as reflected in an Order of Conditions issued by the Conservation Commission are exempt from compliance with this bylaw.

Section 5; Administration

(a) [The Board], shall administer, implement and enforce this bylaw. Any powers granted to or duties imposed upon [the Board] may be delegated in writing by [the Board] to its employees or agents.

(b) Rules and Regulations. [The Board] may adopt, and periodically amend, rules and regulations relating to the procedures and administration of this Stormwater Management By-law, by majority vote of [the Board], after conducting a public hearing to receive comments on any proposed revisions. Such hearing dates shall be advertised in a newspaper of general local circulation, at least seven (7) days prior to the hearing date.

Section 6: Permits And Procedure

(a) Filing Application. The site owner or his agent shall file with [the Board] hereinafter the Board, three (3) copies of a completed application package for a Stormwater Management Permit (SMP). Permit issuance is required prior to any site altering activity. While the applicant can be a representative, the permittee must be the owner of the site. The SMP Application package shall include:

(1) a completed Application Form with original signatures of all owners;
(2) a list of abutters, certified by the Assessors Office;
(3) three (3) copies of the Stormwater Management Plan and project description as specified in Section 7.A.;
(4) three (3) copies of the Operation and Maintenance Plan as required by Section 8 of this bylaw;
(5) one (1) copy of the application form, the Stormwater Management Plan, the Operation & Maintenance Plan, and the list of abutters filed with the Town Clerk; and
(6) payment of the application and review fees.

(b) Entry. Filing an application for a permit grants [the Board], or its agent, permission to enter the site to verify the information in the application and to inspect for compliance with the resulting permit

(c) Other Boards. The [the Board] shall notify the Town Clerk of receipt of the application, and shall give one copy of the application package to [each of the other relevant boards. Fill in the Planning Board, the Conservation Commission, and/or Department of Public Works as appropriate].

(d) Fee Structure. [The Board] shall obtain with each submission an Application Fee established by [the Board] to cover expenses connected with the public hearing and application review of the Stormwater Management Permit and a technical Review Fee sufficient to cover professional review. [The Board] is authorized to retain a Registered Professional Engineer or other professional consultant to advise [the Board] on any or all aspects of these plans. Applicants must pay review fees before the review process may begin.

(e) Public Hearing. The [the Board] shall hold a public hearing within twenty-one (21) days of the receipt of a complete application and shall take final action within twenty-one (21) days from the close of the hearing unless such time is extended by agreement between the applicant and [insert appropriate board or department]. Notice of the public hearing shall be given by publication in a local paper of general circulation, by posting and by first-class mailings to abutters at least seven (7) days prior to the hearing.]

(f) Actions. [The Board's]'s action, rendered in writing, shall consist of either:

(1) Approval of the Stormwater Management Permit Application based upon determination that the proposed plan meets the Standards in Section 7 and will adequately protect the water resources of the community and is in compliance with the requirements set forth in this by-law;
(2) Approval of the Stormwater Management Permit Application subject to any conditions, modifications or restrictions required by the [the Board] which will ensure that the project meets the Standards in Section 7 and adequately protect water resources, set forth in this by-law;

(3) Disapproval of the Stormwater Management Permit Application based upon a determination that the proposed plan, as submitted, does not meet the Standards in Section 7 or adequately protect water resources, as set forth in this by-law.

(g) Failure of [the Board] to take final action upon an Application within the time specified above shall be deemed to be approval of said Application. Upon certification by the Town Clerk that the allowed time has passed without Board action, [the Board] must issue a Stormwater Management Permit.

(h) Plan Changes. The permittee, must notify [the Board] in writing of any drainage change or alteration in the system authorized in a Stormwater Management Permit before any change or alteration is made. If [the Board] determines that the change or alteration is significant, based on the Stormwater Management Standards in Section 7.B. and accepted construction practices, [the Board] may require that an amended application be filed and a public hearing held.

(i) Project Completion. At completion of the project the permittee shall submit as-built record drawings of all structural stormwater controls and treatment best management practices required for the site. The as-built drawing shall show deviations from the approved plans, if any, and be certified by a Registered Professional Engineer.

Section 7: Stormwater Management Plan

(a) The application for a stormwater management permit shall consist of submittal of a Stormwater Management Plan to the [the Board]. This Stormwater Management Plan shall contain sufficient information for the [the Board] to evaluate the environmental impact, effectiveness, and acceptability of the measures proposed by the applicant for reducing adverse impacts from stormwater. The Plan shall be designed to meet the Massachusetts Stormwater Management Standards as set forth in Part B of this section and DEP Stormwater Management Handbook Volumes I and II. The Stormwater Management Plan shall fully describe the project in drawings, and narrative. It shall include :

(1) A locus map,
(2) The existing zoning, and land use at the site,
(3) The proposed land use,
(4) The location(s) of existing and proposed easements,
(5) The location of existing and proposed utilities,
(6) The site's existing & proposed topography with contours at 2 foot intervals,
(7) The existing site hydrology,
(8) A description & delineation of existing stormwater conveyances, impoundments, and wetlands on or adjacent to the site or into which stormwater flows.
(9) A delineation of 100-year flood plains, if applicable
(10) Estimated seasonal high groundwater elevation (November to April) in areas to be used for stormwater retention, detention, or infiltration.

(11) The existing and proposed vegetation and ground surfaces with runoff coefficient for each,
(12) A drainage area map showing pre and post construction watershed boundaries, drainage area and stormwater flow paths,
(13) A description and drawings of all components of the proposed drainage system including:
  (A) locations, cross sections, and profiles of all brooks, streams, drainage swales and their method of stabilization,
  (B) all measures for the detention, retention or infiltration of water,
  (C) all measures for the protection of water quality,
  (D) the structural details for all components of the proposed drainage systems and stormwater management facilities,
  (E) notes on drawings specifying materials to be used, construction specifications, and typicals, and
  (F) expected hydrology with supporting calculations.
(14) Proposed improvements including location of buildings or other structures, impervious surfaces, and drainage facilities, if applicable,
(15) Timing, schedules, and sequence of development including clearing, stripping, rough grading, construction, final grading, and vegetative stabilization,
(16) A maintenance schedule for the period of construction, and
(17) Any other information requested by the Board.

(b) Standards. Projects shall meet the Standards of the Massachusetts Stormwater Management Policy, which are as follows:

(1) No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or water of the Commonwealth.
(2) Stormwater management systems must be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.
(3) Loss of annual recharge to groundwater should be minimized through the use of infiltration measures to the maximum extent practicable. The annual recharge from the post-development site should approximate the annual recharge rate from the pre-development or existing site conditions, based on soil types.
(4) For new development, stormwater management systems must be designed to remove 80% of the average annual load (post development conditions) of Total Suspended Solids (TSS). It is presumed that this standard is met when:
  (A) Suitable nonstructural practices for source control and pollution prevention and implemented;
  (B) Stormwater management best management practices (BMPs) are sized to capture the prescribed runoff volume; and
  (C) Stormwater management BMPs are maintained as designed.
(5) Stormwater discharges from areas with higher potential pollutant loads require the use of specific stormwater management BMPs (see Stormwater Management Volume I: Stormwater Policy Handbook). The use of infiltration practices without pretreatment is prohibited.

(6) Stormwater discharges to critical areas must utilize certain stormwater management BMPs approved for critical areas (see Stormwater Management Volume I: Stormwater Policy Handbook). Critical areas are Outstanding Resource Waters (ORWs), shellfish beds, swimming beaches, cold water fisheries and recharge areas for public water supplies.
(7) Redevelopment of previously developed sites must meet the Stormwater Management Standards to the maximum extent practicable. However, if it is not practicable to meet all the Standards, new (retrofitted or expanded) stormwater management systems must be designed to improve existing conditions.
(8) Erosion and sediment controls must be implemented to prevent impacts during disturbance and construction activities.
(9) All stormwater management systems must have an operation and maintenance plan to ensure that systems function as designed.
(10) When one or more of the Standards cannot be met, an applicant may demonstrate that an equivalent level of environmental protection will be provided.

(c) Project Changes. The permittee, or their agent, shall notify [the Board] in writing of any change or alteration of a land-disturbing activity authorized in a Stormwater Management Permit before any change or alteration occurs. If [the Board] determines that the change or alteration is significant, based on the design requirements listed in Section _____ and accepted construction practices, [the Board] may require that an amended Stormwater Management Permit application be filed and a public hearing held. If any change or deviation from the Stormwater Management Permit occurs during a project, [the Board] may require the installation of interim measures before approving the change.

Section 8: Operation and Maintenance Plans

(a) An Operation and Maintenance plan (O&M Plan) is required at the time of application for all projects. The maintenance plan shall be designed to ensure compliance with the Permit, this Bylaw and that the Massachusetts Surface Water Quality Standards, 314, CMR 4.00 are met in all seasons and throughout the life of the system. [The Board] shall make the final decision of what maintenance option is appropriate in a given situation. [The Board] will consider natural features, proximity of site to water bodies and wetlands, extent of impervious surfaces, size of the site, the types of stormwater management structures, and potential need for ongoing maintenance activities when making this decision. The Operation and Maintenance Plan shall remain on file with [the Board] and shall be an ongoing requirement. The O&M Plan shall include:

(1) The name(s) of the owner(s) for all components of the system
(2) Maintenance agreements that specify:
  (A) The names and addresses of the person(s) responsible for operation and maintenance
  (B) The person(s) responsible for financing maintenance and emergency repairs.
  (C) A Maintenance Schedule for all drainage structures, including swales and ponds.
  (D) A list of easements with the purpose and location of each.
  (E) The signature(s) of the owner(s).

(b) Stormwater Management Easement(s).

(1) Stormwater management easements shall be provided by the property owner(s) as necessary for:
(A) access for facility inspections and maintenance,
(B) preservation of stormwater runoff conveyance, infiltration, and detention areas and facilities, including flood routes for the 100-year storm event.
(C) direct maintenance access by heavy equipment to structures requiring regular cleanout.
(2) The purpose of each easement shall be specified in the maintenance agreement signed by the property owner.
(3) Stormwater management easements are required for all areas used for off-site stormwater control, unless a waiver is granted by the [The Board].
(4) Easements shall be recorded with the _____County Registry of Deeds prior to issuance of a Certificate of Completion by the [Board].

(c) Changes to Operation and Maintenance Plans

(1) The owner(s) of the stormwater management system must notify [the Board] of changes in ownership or assignment of financial responsibility.
(2) The maintenance schedule in the Maintenance Agreement may be amended to achieve the purposes of this by-law by mutual agreement of [the Board] and the Responsible Parties. Amendments must be in writing and signed by all Responsible Parties. Responsible Parties shall include owner(s), persons with financial responsibility, and persons with operational responsibility.

Section 9: Surety

(a) [The Board] may require the permittee to post before the start of land disturbance or construction activity, a surety bond, irrevocable letter of credit, cash, or other acceptable security. The form of the bond shall be approved by town counsel, and be in an amount deemed sufficient by [the Board] to ensure that the work will be completed in accordance with the permit. If the project is phased, [the Board] may release part of the bond as each phase is completed in compliance with the permit but the bond may not be fully released until the Board has received the final inspection report as required by Section 10 and issued a Certificate of Completion.

Section 10: Inspections

(a) [The Board] shall inspect the project site at the following stages:

(1) Initial Site Inspection: prior to approval of any plan.
(2) Erosion Control Inspection: to ensure erosion control practices are in accord with the filed plan.

(3) Bury Inspection: prior to backfilling of any underground drainage or stormwater conveyance structures.
(4) Final Inspection. After the stormwater management system has been constructed and before the surety has been released, the applicant must submit a record plan detailing the actual stormwater management system as installed. [The Board] shall inspect the system to confirm its "as-built" features. This inspector shall also evaluate the effectiveness of the system in an actual storm. If the inspector finds the system to be adequate he shall so report to [the Board] which will issue a Certificate of Completion.

(b) If the system is found to be inadequate by virtue of physical evidence of operational failure, even though it was built as called for in the Stormwater Management Plan, it shall be corrected by the permittee before the performance guarantee is released. If the permittee fails to act the [town of _____] may use the surety bond to complete the work. Examples of inadequacy shall be limited to: errors in the infiltrative capability, errors in the maximum groundwater elevation, failure to properly define or construct flow paths, or erosive discharges from basins.

Section 11: Waivers

(a) [The Board] may waive strict compliance with any requirement of this by-law or the rules and regulations promulgated hereunder, where:

(1) such action is allowed by federal, state and local statutes and/or regulations,
(2) is in the public interest, and
(3) is not inconsistent with the purpose and intent of this by-law.

(b) Any applicant may submit a written request to be granted such a waiver. Such a request shall be accompanied by an explanation or documentation supporting the waiver request and demonstrating that strict application of the by-law does not further the purposes or objectives of this bylaw.

(c) All waiver requests shall be discussed and voted on at the public hearing for the project.

(d) If in the [the Board's] opinion, additional time or information is required for review of a waiver request, [the Board] may continue a hearing to a date certain announced at the meeting. In the event the applicant objects to a continuance, or fails to provide requested information, the waiver request shall be denied.

Section 12: Certificate Of Completion

(a) [The Board] will issue a letter certifying completion upon receipt and approval of the final inspection reports and/or upon otherwise determining that all work of the permit has been satisfactorily completed in conformance with this bylaw.

Section 13: Enforcement

(a) [The Board] or an authorized agent of [the Board] shall enforce this by-law, regulations, orders, violation notices, and enforcement orders, and may pursue all civil and criminal remedies for such violations.

(b) Orders

(1) [The Board] or an authorized agent of the [the Board] may issue a written order to enforce the provisions of this by-law or the regulations thereunder, which may include requirements to:
(A) cease and desist from construction or land disturbing activity until there is compliance with the by-law and the stormwater management permit;
(B) repair, maintain; or replace the stormwater management system or portions thereof in accordance with the operation and maintenance plan.
(C) perform monitoring, analyses, and reporting;
(D) remediate adverse impact resulting directly or indirectly from malfunction of the stormwater management system.

(2) If the enforcing person determines that abatement or remediation of adverse impacts is required, the order shall set forth a deadline by which such abatement or remediation must be completed. Said order shall further advise that, should the violator or property owner fail to abate or perform remediation within the specified deadline, the [city or town] may, at its option, undertake such work, and the property owner shall reimburse the [city or town's] expenses.

(3) Within thirty (30) days after completing all measures necessary to abate the violation or to perform remediation, the violator and the property owner shall be notified of the costs incurred by the [city or town], including administrative costs. The violator or property owner may file a written protest objecting to the amount or basis of costs with [the Board] within thirty (30) days of receipt of the notification of the costs incurred. If the amount due is not received by the expiration of the time in which to file a protest or within thirty (30) days following a decision of [the Board] affirming or reducing the costs, or from a final decision of a court of competent jurisdiction, the costs shall become a special assessment against the property owner and shall constitute a lien on the owner's property for the amount of said costs. Interest shall begin to accrue on any unpaid costs at the statutory rate provided in G.L. Ch. 59, § 57, after the thirty-first day at which the costs first become due.

(c) Criminal Penalty. Any person who violates any provision of this by-law, or regulation, order or permit issued thereunder, shall be punished by a fine of not more than $_____. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.

D Non-Criminal Disposition. As an alternative to criminal prosecution or civil action, the [city or town] may elect to utilize the non-criminal disposition procedure set forth in G.L. Ch. 40, □D and [the insert citation town enabling vote/bylaw (if applicable)] of the Town of _____, in which case [the insert title or other authorized agent] of the [city/town] shall be the enforcing person. The penalty for the 1st violation shall be $___. The penalty for the 2nd violation shall be $____. The penalty for the 3rd and subsequent violations

shall be $ _____. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.

(d) Appeals. The decisions or orders of [the Board] shall be final. Further relief shall be to a court of competent jurisdiction.

(e) Remedies Not Exclusive. The remedies listed in this by-law are not exclusive of any other remedies available under any applicable federal, state or local law.

Section 14: Severability

(a) If any provision, paragraph, sentence, or clause of this by-law shall be held invalid for any reason, all other provisions shall continue in full force and effect