Municipality/Organization: **Town of Lincoln**

EPA NPDES Permit Number: **MAR041043**

MaDEP Transmittal Number: **W-035460**

Annual Report Number & Reporting Period: **No. 4: May 06 – May 07**

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Timothy Higgins Title: Town Administrator

Telephone #: 781-259-2600 Email: higginst@lincolntown.org

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: Timothy S. Higgins

Title: Town Administrator

Date: 4/30/07

Part II. Self-Assessment

The Town of Lincoln has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions, except for the following provisions:

Part I. C. & D. Elm Brook, that has its headwaters in Lincoln, is a State listed Water Quality Impaired Water and has TMDLs for bacterial pathogens and turbidity. The Town needs to assess the water quality of the outfalls into this system and needs to undertake education of residents within this watershed on proper septic system maintenance. The Conservation Dept. worked with the Minuteman National Historic Park in 2006 to daylight and restore a section of Elm Brook off Sunnyside Road. The Conservation Department also worked with Hanscom Family Housing to improve stormwater management controls on a 190-acres development site that drains to the Shawsheen River.

Part III. Summary of Minimum Control Measures (measures for year 5 not included here)

1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
1-A	Stormwater Flyer for Residents	SuAsCo ConCom		No longer participating with SuAsCo Watershed Group. Results not found.	Continue distributing Lincoln specific flyers.
1-B	Stormwater Lesson Plan	SuAsCo ConCom	Distribute lesson plan to all 5th grade teachers and use in at least one classroom	No participant interest in elective course for 8th graders on regional and local stormwater mapping.	No longer participating with SuAsCo Watershed Group. Results not found.
1-C	Lincoln Specific Stormwater Flyers	ConCom	Distribute at Town Hall and public events.	Lincoln has several brochures relating to stormwater awareness and healthy lawns and landscapes available at Town Hall.	Ongoing availability at Town Hall, DPW, and public events.
1-D	Education via Newspaper Articles	ConCom	Write at least one article per year	Several articles published, open space and recreation survey sent to every household and two open space public forums held with priorities and points relating to water quality, habitat and stormwater in Lincoln.	Continue with Open Space Planning.
1-E	Education via the Internet	ConCom	Provide stormwater information and links on Town website	General NPDES MS4 Information posted on Town Website. Links to other websites including EPA's site now posted.	Continue to upgrade Town Web Site in DPW and Conservation pages.

1a. Additions

1-F	Open Space Plan	ConCom Open Space Committee	State approved Open Space Plan	Draft Open Space Plan prepared and available on Town website.	Distribute Draft Open Space Plan to local and regional boards and organizations for formal review.
1-G	New Homeowner Information Packet	ConCom	Provide property map, habitat description and brochures for each new homeowner.	Distributed packets including Lincoln specific fliers and return postcard to approximately 25 new homeowners.	Continue with packet distribution to new homeowners.

2. Public Involvement and Participation

BMP ID #	**BMP Description**	**Responsible Dept./Person Name**	**Measurable Goal(s)**	**Progress on Goal(s) – Permit Year 4** (Reliance on non-municipal partners indicated, if any)	**Planned Activities – Permit Year 5**
2-A	Stormwater Photo Contest	SuAsCo ConCom		No longer participating with SuAsCo Watershed Group. Results not found.	
2-B	Annual Meeting on NPDES Plan and Report	Town Administrator	Hold Committee meeting each year	NPDES meeting Including Town Planner, Conservation Director, Assistant Town Administrator and Public Works Director.	Continue with annual meeting
2-C	Watershed Group Involvement	ConCom Local Groups	Continue ongoing activities to protect the health of our wetlands & watersheds.	ConCom partnered with Concord for 7th consecutive year on water chestnut removal. ConCom led Bike the Watershed with Riverfest.	Continuing outreach and action by groups including the Lincoln Land Conservation Trust, the Rural Land Foundation, and local rivers groups.
2-D	Involve Lincoln Children's Groups	ConCom	Involve Lincoln Children's Groups in watershed clean-up and other activities.	Worked with 5th grade class to clear invasives near wetland behind schools.	Continue to work with 5th grade class. Assess interest in having school group help re-build wetland overlook and boardwalk behind school.

2a. Additions

2-E	Wetland buffer restoration through invasive species removal	ConCom	Work once per year with community and/or school group to restore wetland habitat.	Worked with Old North Bridge Pony Club to clear invasives from field edges along Weston Road.	Work with LLCT to clear invasives and host Invasives Summit. Work with Garden Club and Highway Department on Roadsides of Lincoln Project and Gateways to Lincoln.

2-F	Open Space Plan	ConCom Open Space Committee	State Approved Plan with 5-year Action Plan	Sent open space and recreation survey to entire 7th grade class. Held 2 public forums.	Maintain participation with open space and watershed planning in schools.
2-G	Elm Brook Stream Restoration	ConCom Minuteman Nat. Historic Park	Stream daylighting with natural stream-bed construction and native plantings	Worked with Minuteman National Historic Park to daylight part of Elm Brook (impaired stream) that connects with the Shawsheen River.	Monitor stream function and plantings.
2-H	Habitat inventory and monitoring	ConCom	Conduct habitat inventories	Began preparing conservation land-management plans.	Conduct site-specific inventories as part of the monitoring program

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
3-A	Illicit Discharge Bylaw	Highway Board of Health	Discussions and review of regulations	Board of Health continues to review and permit all septic system maintenance and construction.	Continue to research bylaws and develop a draft bylaw with input from and outreach to municipal officials, Lincoln residents, developers, and contractors.
3-B	Storm Drain Map	Highway Town Administrator	Field-verify and map storm drains and outfalls	Began using new GPS equipment to computerize storm drain data.	Continue to field-verify and map storm drains and outfalls. Students hired by Public Works may be used to electronically locate drainage features.
3-C	Illicit Discharge Detection and Elimination Plan	Highway	Visually screen outfalls during dry weather.	Priority areas determined to be the Tower Road wellhead protection zones A and B and Flint's Pond and Cambridge Reservoir surface water protection Zones 1 and 2. Household hazardous waste coordinated with the Town of Lexington.	Continue visual monitoring of outfalls in priority areas. Continue with household hazardous waste program.
3-D	Illicit Discharge Education for General Public and Businesses	ConCom Planning	Include illicit discharge education information in fliers.	ConCom brochures distributed on how to reduce lawn and yard pesticide and chemical fertilizer use. Highway installed "Do Not Dump" catch basin castings.	Continue to provide education and outreach regarding illicit discharge and elimination program.

3-E	Illicit Discharge Education for Municipal Employees	Highway Fire Department	Municipal training for Town.	Fire Department continued their training in spill prevention and containment. DPW employees received training on spill prevention and containment.	Continue employee training in illicit discharge detection and elimination.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
4-A	Construction Site Runoff Bylaw	Planning ConCom	Initial Discussions and review of existing and model bylaws	Construction site runoff controlled on sites within 100 feet of wetlands through ConCom permitting.	Develop a draft bylaw with input from and outreach to municipal officials, Lincoln residents, developers, and contractors.
4-B	BMPs for Construction Site Erosion, Sediment, and Waste Controls	Planning ConCom	Stay current with construction-site BMP's	Posted construction site BMP's on Town Website. Posters available in Town Hall and Highway Department.	Require use of BMP's in new bylaw. Incorporate new BMP's as available. Review through existing wetland and site-plan permitting process.
4-C	Construction Site Plan Review Procedures	Planning ConCom	Maintain review and communication between land-use boards	Planning Board and ConCom both currently review construction site plans.	Incorporate requirements for compliance with construction-site BMP's through existing wetland and site-plan permitting process.
4-D	Construction Site Inspection and Enforcement Procedures	Planning ConCom	Inspect and Enforce Construction Site through local boards	Planning and Conservation staff monitor construction sites as does the Building Inspector.	Prepare draft of procedures to be included in the draft construction site runoff bylaw.
4-E	Response to Public Stormwater Hotline	Highway ConCom	Maintain Stormwater Hotline	Conservation Department phone during working hours and Public Safety Dispatcher during other hours.	Maintain "stormwater hotline".

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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
5-A	Post-Construction Site Runoff Bylaw	Planning ConCom	Initial discussions; review current local/state regulations; review proposed samples	Sample bylaws gathered and reviewed for possible use in Lincoln. Reviewed current regulations in place including site plan and subdivision regulations and wetlands regulations.	Develop draft bylaw and involve and educate public, municipal officials, developers, and contractors.
5-B	Choose Structural and Non-structural BMPs	Planning ConCom	Stay current with construction-site BMP's	Continued enforcing current BMPs as shown on 5-year NPDES Stormwater Phase II Compliance Plan.	Require use of BMP's in new bylaw. Review through existing wetland and site-plan permitting process.
5-C	Long-Term BMP Operation and Maintenance Procedures	Planning ConCom	Require Operation and Maintenance Plan Procedures for single-family through Bylaw.	OMPs are required under DEP Stormwater Management Regulations for projects requiring a Stormwater Management Plan. General review provided through existing permitting.	Require OMP for single-family projects in bylaw. Continue to review through existing wetland and site-plan permitting process.
5-D	Structural BMP Implementation Procedures	Planning ConCom	Outline structural BMP requirements in Bylaw	Review structural stormwater management controls through existing permitting process. Where possible require low-impact development strategies and non-structural components.	Outline structural stormwater management controls and BMP's in bylaw. Continue to review through existing wetland and site-plan permitting process.

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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
6-A	Employee Training to Prevent/Reduce Stormwater Pollution	Highway Fire Department	Municipal training for Public Works and Fire Department employees.	Fire Department and Public Works Department continues ongoing spill prevention and cleanup training. Containment booms have been placed in the DPW garage. These booms will be available to be placed around catch basins in the event of a fluid spill.	Continue Fire and Public Works Dept. training to prevent any stormwater pollution.

6-B	Maintenance/Inspection of Storm Sewers and Structural/Non-Structural Controls	Highway	Assess existing controls, maintenance activities, schedules, and long-term inspection procedures	The Town of Lincoln annually cleans approx. 510 catchbasins. Continued assessment of existing maintenance/inspection of storm drainage system.	Continue to develop new and improved activities, schedules, and procedures. Cleaning of a limited amount of storm drains is scheduled.
6-C	Pollutant Source Reduction/Elimination from Municipal Facilities and Activities	Highway	Assess existing facilities, activities, and BMPs and continue additional or improved BMPs	The Public Works Dept. has begun review of a 1971 Town regulation that restricts the snow & ice removal to 10% salt, 90% sand.	• Review of 1971 Town regulation that restricts the snow & ice removal procedures to 10% salt and 90% sand • Public Works Roadside Maintenance Program • Commence Public Works materials handling procedures • Continue roadside sweeping activities • Continue sweeping and maintenance of Public Works Barn
6-D	Waste Disposal Procedures from Storm Sewers and Municipal Facilities/Activities	Highway	Assess existing waste disposal procedures, review MA guidelines, brainstorm improved and new procedures	• Testing on the DPW stockpile has been completed and submitted to DEP under a BUD • Proper disposal methods as approved by DEP on the stockpile will be undertaken	• Catch basin cleanings will no longer be accepted at the Public Works Facility • A comprehensive materials handling program will be developed for the Public Works site.

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

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
Revised					
Revised					

Part IV. Summary of Information Collected and Analyzed

Incorporation of watershed, stream, wetland and other water related layers in GIS database	yes	
GPS identification of storm drains, outfalls and other water-related information	(20%)	
Water quality data	(10%)	Cambridge

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Stormwater management position created/staffed	no	
Annual program budget/expenditures	($0)	

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(80%)	
Stormwater management committee established	(no)	
Stream teams established or supported	supported	
Household Hazardous Waste Collection Days		
▪ days sponsored	(8)	
▪ community participation	(65%+/-)	
▪ material collected	(25 tons)	
School curricula implemented	(yes)	
On-going open space and watershed planning, education and outreach	(yes)	
Habitat, wetland, stream and biological inventory and monitoring	(yes)	

Legal/Regulatory

	In Place Prior to Phase II	Under Review	Drafted	Adopted
Regulatory Mechanism Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination				
▪ Erosion & Sediment Control	**X**			**Wetlands**

▪ Post-Development Stormwater Management	X			**Wetlands/ Site-Plan**
Accompanying Regulation Status (indicate with "**X**")				

Mapping and Illicit Discharges

Outfall mapping complete	(80%)	
Estimated or actual number of outfalls	(200)	
System-wide mapping complete	(80%)	
Mapping method(s)		
▪ Paper/Mylar	(80%)	
▪ CADD	(0%)	
▪ GIS	(80%)	
Outfalls inspected/screened	(20)	
Illicit discharges identified	(1)	Sunnyside Ln.
Illicit connections removed	(0)	
% of population on sewer	(0)	
% of population on septic systems	(100%)	

Construction

Number of construction starts (>1-acre)	(#)	
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(50%)	all w/wetlands
Site inspections completed	(100%)	
Tickets/Stop work orders issued	(# or %)	
Fines collected	(0)	
Complaints/concerns received from public	()	

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(100%)	
Site inspections completed	100%)	
Estimated volume of stormwater recharged	(gpy)	

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(1 time/yr)	
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(1 time/yr)	
Total number of structures cleaned	(510)	
Storm drain cleaned	(500 LF)	
Qty. of screenings/debris removed from storm sewer infrastructure	(0)	
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)	Off site	
Cost of screenings disposal	TBD in 2008	

Average frequency of street sweeping (non-commercial/non-arterial streets)	(1 time/yr)	
Average frequency of street sweeping (commercial/arterial or other critical streets)	(1 time/yr)	
Qty. of sand/debris collected by sweeping	(2,300 tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	Hwy yard	
Cost of sweepings disposal	TBD in 2008	
Vacuum street sweepers purchased/leased	0	
Vacuum street sweepers specified in contracts	No	

Reduction in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	Not used	

▪ Herbicides	Not used	
▪ Pesticides	Not used	
Elimination of chemical pesticides and fertilizers on lawn	All OOC's	Wetlands
Require organic practices on leased conservation lands	initiating	

Anti-/De-Icing products and ratios	% NaCl % $CaCl_2$ % $MgCl_2$ % CMA % Kac % KCl % Sand	
Pre-wetting techniques utilized	(y/n)	
Manual control spreaders used	(y/n)	
Automatic or Zero-velocity spreaders used	(y/n)	
Estimated net reduction in typical year salt application	(lbs. or %)	
Salt pile(s) covered in storage shed(s)	(y/n)	
Storage shed(s) in design or under construction	(y/n)	