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September 27, 2006

United States Environmental Protection Agency
Water Technical Unit
P.O. Box 8127
Boston, Massachusetts 02114

Subject: NPDES Phase II Small MS4 General Permit (MAR021074)
Annual Report
Belmont, Massachusetts

To Whom It May Concern:

In accordance with the provisions of the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s), please find enclosed the 2005 Annual Report summarizing the status of Belmont's Stormwater Management Program. As required by the NPDES General Permit, a copy of this report has also been submitted to the Massachusetts Department of Environmental Protection, the co-permitting authority for the state of Massachusetts.

Please do not hesitate to contact me with any questions or comments regarding this submission.

Very truly yours,

FAY, SPOFFORD & THORNDIKE, LLC.
By

Dianne E. Velardocchia

Dianne E. Velardocchia, PE
Senior Engineer

Enclosures: NPDES PII Small MS4 General Permit
Annual Report

Cc: Peter Castanino (for municipal dist.)
Director of Public Works
Belmont, MA

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Municipality/Organization: Belmont, MA

EPA NPDES Permit Number: MAR021074

MaDEP Transmittal Number: W-041153

Annual Report Number & Reporting Period: **No. 3: March 05-March 06**

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Peter Castanino Title: Director of Public Works

Telephone #: (617) 993-2680 Email: pcastanino@town.belmont.ma.us

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: Thomas G. Younger

Printed Name: Thomas G. Younger

Title: Town Administrator

Date: 10/12/06

Part II. Self-Assessment

The Town of Belmont 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 II.F – Annual Report provided after May 1, 2006

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 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
1-1	***Develop Stormwater Web Page on Town Web Site***	Belmont Office of Community Development, Belmont Department of Public Works, Belmont Webmaster	1.Develop a Stormwater Web Page linked to the home page of the Town's web site. Post information on stormwater related issues and programs. 2. Update web page on a regular basis	The Town developed the Stormwater Web Page in Year 1 and, as activities related to stormwater occurred, information was added to the web page.	During Year 4, the Stormwater Web Page will be revised to be more user-friendly. In addition to adding stormwater-related activities within Town, web links are being added to state and federal stormwater resources. It is the Town's goal to make this web page the central stormwater resource for its residents.
Revised					
1-2	***Post Information on Town Hall Bulletin Boards***	Belmont Office of Community Development, Belmont Department of Public Works, Belmont Webmaster	1. Track the publications & information posted on Bulletin Board's each year 2. Post electronic versions on Belmont Stormwater Web Page	The Town has posted information on the Bulletin Boards relative to the review and approval of the SWMP.	Informational material relative to stormwater related issues and activities will be posted throughout the year.
Revised					
1-3	***Distribute Educational Flyers with Community Newsletter***	Belmont Office of Community Development, Belmont Department of Public Works, Belmont Webmaster	1.Track the number of flyers distributed each year 2. Post electronic versions of flyers on Belmont Stormwater Web Page	Due to staffing limitations, no flyers were sent out during Year 3.	A flyer will be sent out with the Town's municipal light electric bill during Year 4.
Revised			The Town has discontinued the community newsletter. Therefore, the educational flyer will be distributed with the municipal light electric bill.		

1a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
1-4	***Provide Stormwater Information at "Meet Belmont"***	Belmont Office of Community Development, Belmont Department of Public Works	1. Provide stormwater information at the annual "Meet Belmont" event for newcomers and current residents.	At the Meet Belmont event, held in August 2005, the DPW and Office of Community Development provided stormwater-related information.	The DPW and Office of Community Development will participate in the "Meet Belmont" event, scheduled for August 2006, and will provide stormwater-related information.
Revised					
1-5	***Provide Stormwater Information at Environmental Fair***	Belmont Office of Community Development, Belmont Department of Public Works	1. Provide stormwater information to residents at the Environmental Fair.	In Fall 2005, the DPW and Office and Community Development participated in an Environmental Fair sponsored by Sustainable Belmont. Information regarding recycling and stormwater was provided.	The Environmental Fair will not be held in Year 4, so no activities are planned.
Revised					

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
2-1	***Public Review of Town's Stormwater Management Program***	Belmont Board of Selectmen, Belmont Office of Community, Development Belmont Department of Public Works, Belmont Webmaster	1. Obtain public input on draft SWMP 2. Finalize SWMP and make the final SWMP accessible to the public on the Town's website.	No additional activities were planned for Year 3.	No additional activities are planned for Year 4.
Revised					
2-2	***A-B-C Stormwater Flooding Board to Address Issues in the Little River and Alewife Brook Areas***	Belmont Board of Selectmen, Belmont Webmaster	1. Execute the Environmental Joint Powers Agreement 2. A-B-C Stormwater Flooding Board to meet throughout the permit term 3. Information and Status of Board's activities to be reported on Town Web Site	A representative from the Town is part of the Board and provided reports of meetings and activities to the Town's Board of Selectmen. The Joint Powers Agreement was executed. The A-B-C Board prepared a report, which was linked to the Town's Stormwater Web Page.	A representative from the Town will continue to be part of the Board and provide a report of meetings and activities.
Revised					
2-3	***Sponsor Storm Drain Stenciling Program***	Belmont Department of Public Works, Belmont Conservation Commission	1. Identify areas for storm drain stenciling 2. Track number of storm drains stenciled 3. Track number of volunteers involved in stenciling activity 4. Summarize the condition of the inlets based on information from volunteers 5. Publicize storm drain stenciling event(s) on web site, on Town Hall Bulletin Boards and via a press release to local newspaper	No activities were planned for Year 3.	No activities are planned for Year 4.
Revised					

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
2-4	***Conduct Attitude Surveys***	Belmont Office of Community Development	1. Develop Survey. 2. Send a press release explaining the stormwater awareness survey to the local newspapers. 3. Track the number of completed surveys. 4. Compile surveys in order to gauge any change in attitude/behavior regarding stormwater issues.	Due to staffing limitations the survey was not conducted during the Summer of 2005.	A survey will be developed and conducted during Year 4.
Revised					

2a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
2-5	***Conduct Lawn Care/Landscaping Survey in Spy Pond Watershed***	Belmont Office of Community Development	1. Develop and distribute survey. 2. Send a press release explaining the lawn care/landscaping survey to local newspapers. 3. Track the number of completed surveys. 4. Compile surveys to develop future educational outreach materials.	Under a 319 Federal Grant, this survey was done jointly with Arlington. The survey was sent out to 165 households in the Spy Pond Watershed.	No activities are planned for Year 4.
Revised					

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
3-1	***Outfall Location Map***	Belmont Department of Public Works Belmont Office of Community Development	1. Develop a schedule for outfall verification and outfall identification activities. 2. Perform and track the outfall verification and outfall identification activities as scheduled.	The Town developed a schedule for verification and identification of outfall locations and began field verification during Year 3.	The Town will continue field verification during permit Year 4.
Revised					
3-2	***Develop and Adopt a Stormwater By-Law***	Belmont Board of Selectmen Belmont Town Counsel Belmont Department of Public Works Belmont Office of Community Development	1. Draft the Stormwater By-Law. 2. Adopt Stormwater By-Law 3. Post Stormwater By-Law on Town's Stormwater Web Site	The Town began research on a stormwater by-law by reviewing those for other communities.	The Town will draft a stormwater by-law and present it to the Selectmen for review in preparation for presentation at Town Meeting in Year 5.
Revised					
3-3	***Implement an Illicit Discharge Detection and Elimination Plan***	Belmont Department of Public Works Belmont Office of Community Development	1. Track and prioritize new potential problem areas. 2. Track the number of illicit connections found. 3. Track the number of illicit connections eliminated. 4. Verify the elimination of illicit connections.	Construction on a contract to rehabilitate sewers to address the highest priority areas was completed in Year 3. Phase 2 of the program commenced by cleaning and performing TV inspection of areas previously identified through sampling and possible illicit connections.	Phase 2 of the program will continue with the design and rehabilitation of sewers to remove illicit connections.
Revised					
3-4	***Conduct Infiltration/Inflow Removal from Sanitary Sewer System***	Belmont Office of Community Development	1. Implement construction contract to remove private inflow. 2. Track results of private inflow removal. 3. Post information on I/I Private Inflow Removal project on Stormwater Web Page and in Town Newsletter.	The Private Inflow Source Removal Contract. Construction activities were completed in Fall 2005.	As part of closeout activities inflow removal rates will be verified. The project should be completed by August 2006.
Revised					

3a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
3-5	***Development and Modeling of Sanitary and Drainage System GIS Database***	Belmont Office of Community Development	1. Locate all sanitary and drainage system structures (including outfalls) using GPS. 2. Incorporate record information into GIS database. 3. Perform modeling of sanitary and drainage systems. 4. Prepare Technical Memorandum prioritizing areas for future study and rehabilitation.	Mapping and modeling of sanitary and drainage system commenced in Year 3.	Mapping and modeling of sanitary and drainage system will be completed in Year 4.
Revised					
3-6	***Evaluation of sanitary and drainage systems in areas proposed under pavement management program***	Belmont Office of Community Development	1. Clean and TV inspect approximately 17,000 LF of sanitary and drainage systems within roadways proposed for reconstruction under Town's pavement management program. 2. Evaluate and identify portions of system that need rehabilitation or replacement. 3. Implement recommendations in conjunction with pavement management program in these areas.	Cleaning and TV inspection for these systems were done concurrently with the cleaning and inspection activities for BMP 3-3.	A Preliminary Design Report for BMPs 3-3 and 3-6 was completed at the beginning of Year 4. Sewer and drain rehabilitation and replacement activities will be done under the same contract as the construction activities for BMP 3-3 in Year 4.
Revised					
3-7	***Evaluation of Illicit Sewer Connections to Storm Drains in Wellington Brook Watershed***	Belmont Office of Community Development	1. Sample storm drain outfalls in the Wellington Brook watershed. 2. Clean and TV inspect drainage systems in areas where illicit sewer connections are identified. 3. Eliminate the illicit connections. 4. Verify the elimination of illicit connections.	No activities were planned for Year 3.	Storm drain outfalls in the Wellington Brook watershed will be sampled to identify drainage systems that have illicit connections in Year 4. As part of this task the locations of the outfalls will be verified (BMP 3-1).
Revised					

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
4-1	***Construction Site Inspection and Enforcement***	Belmont Building Division	1. Develop Site Inspection Form consistent with requirements of Stormwater By-Law 2. Perform and track inspections. 3. Track enforcement actions resulting from inspections.	No activities were planned for Year 3.	No activities are planned for Year 4.
Revised					

4a. Additions

No additions to report at this time.

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 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
5-1	***Update Site Plan Review Process***	Belmont Board of Selectmen Belmont Planning Board Belmont Office of Community Development	1. Review Draft Stormwater By-Law to determine what, if any Site Plan Review procedures should be modified or added. 2. If necessary, adopt revisions to Zoning By-Law. 3. If changes adopted, post Zoning By-Law revisions on Town's Web Site.	No activities were planned for Year 3.	No activities are planned for Year 4.
Revised					

5a. Additions

No additions to report at this time.

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 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
6-1	***Training Program for Belmont DPW Staff***	Belmont Department of Public Works	1. Continue to provide annual training sessions of all DPW personnel involved with the site operations to ensure compliance with the SPCC Plan. 2. Train all new DPW employees in accordance with the training program requirements. 3. Track employee participation in training and keep all records in a central location with the DPW Administration throughout the permit term.	Annual training was completed.	Annual training will be provided.
Revised					
6-2	***Catch Basin Cleaning Program***	Belmont Department of Public Works	1. Clean all catch basins on an annual basis 2. Document annual cleaning activities and keep all records in a central location with the DPW Administration throughout the permit term.	Annual cleaning of all catch basins was completed.	Annual cleaning of all catch basins will occur.
Revised					
6-3	***Street Sweeping Program***	Belmont Department of Public Works	1. Perform street sweeping of all municipal and private roadways in Town at least 3 times/year. 2. Perform one of the street sweepings in the spring to remove winter debris. 3. Track street sweeping activities and keep records in a central location with the DPW Administration throughout the permit term.	Street sweeping of all streets occurred twice during Year 3. The business district was swept twice weekly from April to November.	Street sweeping of all streets will occur twice during Year 4. The business district will be swept twice weekly from April to November.
Revised					

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
6-4	***Vehicle & Equipment Maintenance and Cleaning Policy***	Belmont Department of Public Works	1. Conduct weekly routine visual inspections and comprehensive written inspections on a quarterly basis. Utilize inspection sheets and document inspections in accordance with the SPCC Plan. 2. Inspection records should be kept in a central location with the DPW Administration throughout the permit term.	The Town continued to implement inspections and procedures in accordance with the Spill Prevention Control and Countermeasure Plan throughout Year 3.	The Town will continue to implement inspections and procedures in accordance with the Spill Prevention Control and Countermeasure Plan throughout Year 4.
Revised					
6-5	***Landscaping and Lawn Care***	Belmont Department of Public Works	1. Continue to train DPW employees in "green landscaping" techniques. Document and keep records of employee training in a central location with the DPW Administration throughout the permit term	The Town continued to train employees in "green landscaping" techniques and implement their existing landscaping and lawn care practices throughout Year 3.	The Town will continue to train employees in "green landscaping" techniques and to implement existing landscaping and lawn care practices throughout Year 4.
Revised					
6-6	***Road Salt Application and Storage***	Belmont Department of Public Works	1. Perform routine inspections of salt storage site to determine if salt pile is covered. Document inspections and keep records in a central location with the DPW Administration throughout the permit term.	The Town conducted routine inspections of the salt storage and salt pile area.	The Town will continue to conduct routine inspections of the salt storage and salt pile area.
Revised					
6-7	***Hazardous Material Storage***	Belmont Department of Public Works	1. Continue to conduct and document routine inspections of the areas containing oil in accordance with to the Spill Prevention Control and Countermeasure Plan. Keep records of inspections in a central location with the DPW Administration throughout the permit term.	The Town conducted and documented routine inspections in accordance with the Spill Prevention Control and Countermeasure Plan.	The Town will continue to conduct and document routine inspections in accordance with the Spill Prevention Control and Countermeasure Plan during Year 4.
Revised					

6a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
6-8	***Construct Structural BMP's in area tributary to Spy Pond***	Belmont Office of Community Development	1. Construct some deep sump catch basins and baffle tanks near Spy Pond.	No activities were planned in Year 3.	As part of a 319 Federal Grant, Arlington and Belmont will jointly install 11 leaching catch basins and 4 baffle manholes along the southern side of Spy Pond.
Revised					
6-9	***Workshops on landscaping and non-point source pollution***	Belmont Office of Community Development	1. Conduct workshops	No additional activities were planned in Year 3.	No additional activities are planned in Year 4.
Revised					

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

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
Revised					

7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

N/A – No sampling or data collection included as part of SWMP.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Stormwater management position created/staffed	(y/n)	
Annual program budget/expenditures	($)	

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	
Stormwater management committee established	(y/n)	
Stream teams established or supported	(# or y/n)	
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	
▪ community participation	(%)	
▪ material collected	(tons or gal)	
School curricula implemented	(y/n)	

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				
▪ Post-Development Stormwater Management				
Accompanying Regulation Status (indicate with "**X**")				
▪ Illicit Discharge Detection & Elimination				
▪ Erosion & Sediment Control				
▪ Post-Development Stormwater Management				

Mapping and Illicit Discharges

Outfall mapping complete	(%)	
Estimated or actual number of outfalls	(#)	
System-Wide mapping complete	(%)	
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	
Outfalls inspected/screened	(# or %)	
Illicit discharges identified	(#)	
Illicit connections removed	(#) (est. gpd)	
% of population on sewer	(%)	
% of population on septic systems	(%)	

Construction

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

Post-Development Stormwater Management

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

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	1/year
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	1/year
Total number of structures cleaned	(#)	Approx. 1900
Storm drain cleaned	(LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		
Cost of screenings disposal	($)	

Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	2/year
Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	2/year
Qty. of sand/debris collected by sweeping	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	
Cost of sweepings disposal	($)	
Vacuum street sweepers purchased/leased	(#)	
Vacuum street sweepers specified in contracts	(y/n)	

Reduction in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	
▪ Herbicides	(lbs. or %)	
▪ Pesticides	(lbs. or %)	

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)	