City of Medford

DEPARTMENT OF PUBLIC WORKS

PAUL GERE
Commissioner

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April 30, 2004

Ref: 08776.00

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

Re: NPDES Phase II Permit Year 1 - Annual Report 2004
Medford, Massachusetts

Dear Sir or Madam:

The City of Medford, Massachusetts is submitting 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. Vanasse Hangen Brustlin, Inc. has assisted the City of Medford Public Works Department in the preparation of this report.

Medford is an urban City, approximately five miles northwest of Boston, with a population of close to 55,000 residents. Various industrial and commercial uses occur within the City. The City's priorities for stormwater management include the elimination of geese droppings at Wright's Pond, the reduction of dog pet waste citywide and reduction of litter in high traffic areas, particularly around City Hall and the taxi stand in Medford Square. Medford's Five-Year Plan includes a focus on these priority areas. Permit Year 1 includes specific activities focusing on these priorities as identified in the attached report.

The major water bodies in the City include the Mystic River, the Upper and Lower Mystic Lakes, which border Medford to the west, Wright's Pond, Brooks Pond, the Malden River, South Reservoir and Bellevue Pond. There are minimal wetlands in Medford, as the entire city is an urbanized area. The majority of the stormwater that enters the municipal storm drain system discharges to the Mystic River, with some discharges to the Malden River.

The Mystic River, which runs through Medford, is listed as a Category 5 Water – "Waters Requiring a TMDL" in the Massachusetts Year 2002 Integrated List of Waters, prepared by the Commonwealth of Massachusetts Executive Office of Environmental Affairs.

The Mystic River (7138150), segment identification MA71-02-2002, from the outlet at the Lower Mystic Lake in Arlington/Medford to the Amelia Earhart Dam in Somerville/Everett was found to contain metals, nutrients and pathogens.

Also listed as a Category 5 water is the Malden River (7138200), segment identification MA71-05_2002, from the headwaters in Malden to the confluence with the Mystic River was found to have organic enrichment/low dissolved oxygen, pathogens, oil and grease, taste, odor and color, suspended solids and objectionable non-pollutant deposits. The Malden River borders Medford to the southeast and receives some discharges from Medford-owned outfalls.

While the overall 5-Year Stormwater Management Plan prepared by the City of Medford addresses these pollutants of concern, the results of efforts already completed towards educating municipal employees and citizens are becoming evident. Awareness of proper animal waste control and illicit dumping at the municipal employee level is high with increased awareness being provided to the residents and businesses.

The City is pleased with the progress in the implementation of Year 1 Stormwater Management Practices and looks forward to greater progress in following years.

Very truly yours,

for Paul Gere

Mr. Paul Gere
Commissioner of Public Works, City of Medford

CC: Bethany Eisenberg, VHB
Massachusetts DEP- Division of Watershed Management -
627 Main Street
Worcester MA 01608

Municipality/Organization: City of Medford

EPA NPDES Permit Number: MA041049

MaDEP Transmittal Number: W- 035578

2004 MAY -3 P 11:51

Annual Report Number & Reporting Period: No. 1: March 03-March 04

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Paul Gere

Title: Commissioner of Public Works

Telephone #: 781-393-2476

Email: pgere@medford.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: Kim Lowry for Paul Gere

Printed Name: Paul Gere

Title: Commissioner of Public Works

Date: 4/30/04

Part II. Self-Assessment – City Of Medford NPDES Compliance

The City of Medford has achieved compliance with the Best Management Practices (BMPs) chosen to comply with the requirements of the NPDES Phase II Permit as presented in the Notice of Intent Submittal, March 2003.

Medford has met the measurable goals provided, and met the timeframes for all but three items indicated in the following section (Part III) and Table II – A below. No BMPs were eliminated from the submitted plan. Two of the measurable goals with extended time frames deal with new fines and/or new procedures or presentations. The extended time frames were for determining fines or preparing presentations. The extended time frames were required because additional meetings and discussions are necessary to determine the best path for the final binding decisions to be made or presentation to be prepared.

Only one maintenance BMP had a change in measurable goals. This was the catch basin cleaning goal of twice per year. The catch basins have been cleaned once this year and collection in catch basins do not indicate that a second cleaning is required. The City has determined through this self assessment that it is not currently deemed necessary to clean every single catch basin City-wide twice per year. If there are areas identified with excessive accumulation in following years a second cleaning will be proposed for such areas. It is proposed to evaluate the cleaning requirements via inspections and the data on quantities collected in order to determine the required cleaning schedule based on need.

Those BMPs that have revisions are presented in Table II-A below in addition to their identification in Part II, the Summary of BMPs.

Table II – A – Revisions to Specific Measures for Permit Year 1

BMP ID #	BMP Description	Revision	Reason for Revision	Planned Activities Permit Year 2
1E	Arbor Day Speech at Public School	A tree was planted at a local school on Arbor Day, but the event was not expanded to discuss stormwater	Working on a tree/stormwater integrated talk to be completed for introduction in schools	Complete the tree/stormwater integrated talk for the Arbor Day Celebration in October.
1O	Publicize Fines for littering, illegal dumping and failure to pick up pet waste in Newspaper	Fines will be published in paper when determined in Permit Year 2 instead of 1	Fines have not been established yet, additional discussion on City enforcement procedure and recommendations for fines have not been finalized yet. Additional meetings with officials are required before public notification can be made. This information relies heavily on the development of the new Ordinances which is currently under way.	Finalize the structure for fines and who will enforce fines followed by Publishing in Paper.
6B	Regular Catch Basin Cleaning twice per year	Catch basins were cleaned one time in Permit Year 1. Additional information will be sent at a later date.	Catch basin cleaning was performed in the spring, and accumulations did not indicate that a second cleaning is warranted. The amount of material collected is shown on the attachment. It is proposed to continue cleaning once per year and evaluate what areas accumulate more sediment and may warrant twice per year cleaning	Evaluate catch basin accumulation data and determine if cleaning more than once per year is required in particular areas.

BMPs implemented for Year 1 of the Permit were appropriate for the City's needs and the few with extended time frames are necessary to ensure the best implementation of the BMP.

In terms of priority, the City has been focused on the outfall mapping and inspections with priority areas being those suspected of stormwater illicit discharges. The City of Medford has been cooperating with the MADEP to work towards eliminating illicit discharges to storm drains for over 4 years. MADEP issued a Notice of Noncompliance on January 21,2000.

A total of 51 outfalls were identified during the summer of 1999. After identifying and cataloguing the City owned storm drain outfalls, four were found to contain fecal coliform counts higher than the allowable limit. In 2003, the City was asked to monitor an additional outfall that was previously thought to belong to the MDC.

Based on the requirements for compliance, in September 2003, the City of Medford re-sampled the outfalls identified to possibly contain illicit discharges (except MDC outfall). Two of those outfalls had readings that fell below the limits as set by the MADEP. An additional round of sampling should be completed in about a month (including the MDC outfall – staff availability & weather dependent) to verify the results of those samples.

The City of Medford is just beginning the process of electronic data collection (GIS, GPS),however, it may take some time before all staff is trained and the data is collected to identify all the outfall catchment areas in the City. Mapping of drainage areas for two of the problem discharges was begun by VHB and the City hopes to complete electronic data collection in those areas this year.
The majority of stormwater discharges in the City are to the Mystic and Malden Rivers which are both listed on the States 303(d) list as currently impacted in Category 5 (requiring a TMDL).

The educational materials and newspaper articles prepared in this first year focused on public awareness of stormwater pollutants, especially those that cause impairment to these water bodies such as pet waste, geese droppings, and homeowners and municipal management activities. The focus was on implementing practices to limit the source of these pollutants and prevent stormwater contamination. The City has increased public awareness with Newspaper Articles, greater distribution of recycling pamphlets and the development of a Stormwater Pollution Prevention pamphlet. The articles, pamphlets and information provided to the public are attached.

The Municipal management practices are detailed in the Stormwater Pollution Prevention Plans (SWPPPs) prepared for the Municipal Garage and Cemetery and submitted to the DEP and EPA in March of 2003. The City has been aggressive in implementing the SWPPPs and BMPS under their jurisdiction.

The City has made great progress toward development of the three separate ordinances required under the Permit. The City contracted Vanasse Hangen & Brustlin to assist in the implementation of the Stormwater Management Plan and the development of the ordinances. The City has already reviewed existing regulations, and developed a composite ordinance for each based on language and guidelines provided by the EPA and the Center for Watershed Protection, as well as from municipalities and utility districts throughout the United States.

As stated in the March 2003 Notice of Intent submittal, according to information found at the U.S. Fish and Wildlife website, no endangered or threatened species, or critical habitat are located within the City of Medford limits. When all outfalls have been located in subsequent years, a letter will be sent to the U.S. Fish and Wildlife Service for confirmation.

Additionally, according to the listing on the National Register of Historic Places website, there are numerous historic properties listed or eligible in Medford. Because the outfalls within the city have not been definitively located with the GPS equipment recently purchased, the information is still listed as pending as per the Notice of Intent for this permit. Once all the location have been identified, a letter will be sent to the Massachusetts Historical Commission to verify that stormwater discharge related activities will not result in an adverse effect on any archeological resources of historic properties of National Significance.

In terms of recharge, in highly urbanized areas such as Medford, recharge is generally not feasible. Small lots, underground utilities and potential impacts to basements and neighboring properties often prohibit this practice. Additionally, the City is not dependent on groundwater for its drinking water supply or to support extensive wetland systems. The City is at the end of the Mystic River watershed and is close to the Rivers that it discharges and base flow to these rivers is not dependent on recharge in this area. However, the proposed Post Construction Ordinance being developed in the City will address recharge potential and promote good practices where feasible.

The City has been successful in educating municipal employees and engaging every department in the implementation of the Stormwater Management Plan as submitted. The level of understanding regarding stormwater pollution prevention amongst all departments, from Police to the City Tree Warden, is outstanding when compared to the awareness and pollution prevention efforts implemented by the City only one year ago. Tremendous strides have been made towards stormwater pollution prevention in this first permit year. The City has determined that the BMPs and schedule presented in the following tables achieve compliance with the NPDES permit and are appropriate for its needs.

City of Medford, Massachusetts
Phase II Annual Report

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 1	Planned Activities Permit Year 2
1A	Recycling/household hazardous waste information on website.	DPW	Update website throughout year.	Website was updated to include dates for the 2004 calendar year.	Continue to update website with event dates.
1B	Recycling/household hazardous waste information on pamphlet in DPW Office.	DPW	Make pamphlet available daily in the DPW Office.	Pamphlet is available in the DPW Office.	Continue to display pamphlet in DPW Office.
1C	Recycling/household hazardous waste information on pamphlet to be mailed.	DPW	Mail pamphlet to 75% of residents.	Pamphlet was mailed to residents.	Mail pamphlet for the 2005 calendar year.
1E	Arbor Day Talks at Medford School	DPW/Tree Warden	One talk will be given to one elementary school.	The Medford Tree Warden planted a tree at a local school.	Medford Tree Warden will speak either at the Arbor Day celebration or at a local school.
Revised			Talk will be given in October 2004 at Arbor Day or at a local school.		
1F	"No Dumping Allowed" Signs	DPW/Parks Department	Existing signs in parks.	Existing signs were maintained.	Existing signs will be maintained.
1G	"No Dogs or Animals Allowed" Signs	DPW/Parks Department	Existing signs in parks.	Existing signs were maintained.	Existing signs will be maintained.
1K	Geese Dropping Article in Newspaper	DPW/Environmental Agent	Place one article in the paper.	One article was placed in the Medford Transcript. See attached and displayed and discussed at Public Hearing on January 28, 2004	N/A
1L	Pet Waste Article in Newspaper	DPW/Environmental Agent	Place one article in the paper.	One article was placed in the Medford Transcript on January 15, 2004. See attached. Also displayed at the public Hearing on January 28, 2004	One article will be placed in the paper in Year 2.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) Permit Year 1	Planned Activities Permit Year 2
1O	Publicize Fines for littering, illegal dumping and failure to pick up pet waste in Newspaper	DPW	Publish fines in paper once.	Discussed how to structure fines and who will enforce.	Determine what the final fines will be and structure for enforcement. When finalized will be published in the paper
Revised	*Fines have not yet been determined.*	Stormwater Advisory Committee	Publish fines in paper when established.		
1Q	Assess stormwater information at existing City Events.	DPW	Assess one existing City event for opportunities to include stormwater information.	The City evaluated existing events for opportunities to display stormwater information and decided on Arbor Day.	Provide materials at Arbor Day Festival in October 2004.

1a. Additions – Not Applicable

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) Permit Year 1	Planned Activities Permit Year 2
2A	Oil-Based Paint Collection at DPW Yard	DPW/Recycling	DPW to accept Latex/oil-based paint from residents at DPW Yard once a month between May and October.	Residents were able to bring latex and oil-based paint to the DPW Yard.	DPW will continue to collect these materials at the DPW Yard.
2B	Hazardous Waste Drop-off in Lexington.	DPW/Recycling	Advertise the hazardous waste drop-off in Lexington in mailer and daily in DPW office as a pamphlet.	Advertised this service in the recycling/HHW pamphlet. Medford relies on the Town of Lexington to collect these materials at the Minuteman Hazardous Household Products Facility.	Continue to advertise this service.
Revised					

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) Permit Year 1	Planned Activities Permit Year 2
2C	Curbside recycling.	DPW/Recycling	DPW to pick up recyclables once every two weeks year-round.	The DPW picked up recyclables every other week for Year 1.	Continue to provide this service.
2D	Mercury Exchange	DPW/Recycling/Board of Health	DPW to accept mercury at the DPW Yard once/month May-October.	Residents were allowed to drop off mercury products at the DPW Yard on specified days.	Continue to provide this service.
2E	Nickel-Cadmium Recycling	DPW/Recycling	DPW to accept rechargeable nickel-cadmium batteries in the DPW office.	Residents were allowed to drop off batteries at the DPW office daily during regular office hours.	Continue to provide this service.
2F	Leaf and yard waste collection	DPW/Recycling	DPW to collect leaf and yard waste every other week curbside from May to November.	DPW collected leaf and yard waste every other week. See attached.	Continue to provide this service.
2G	Mystic River Cleanup	Friends of the Mystic River Watershed Association/DPW	DPW to collect trash volunteers pick up at the Mystic River Clean up Day.	DPW collected and disposed of trash picked up by volunteers at the Mystic River Clean up Day held in October of 2003.	Continue to provide this service.
2H	Public Meetings/Notification	DPW	Hold one public meeting to present stormwater program progress.	DPW held one public meeting on January 28, 2004.	Hold a public meeting in Year 2.
2I	Stormwater Contact to receive and address public complaints or concerns	DPW	Establish a Stormwater Contact	The Energy and Environment Department was determined to be the Stormwater Contact, this was posted on Town Website	Expand publicity regarding stormwater contact (paper, etc.)

2a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) Permit Year 1	Planned Activities Permit Year 2

	Assisted Storm Drain Stenciling Effort	DPW/Environmental Agent	Provide stenciling materials and assistance	Provided storm drain stenciling materials and assistance to Eagle Scouts. See attached.	

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) Permit Year 1	Planned Activities Permit Year 2
3C	Expand storm sewer map to include all outfalls.	DPW/Engineering	Expand existing map to include all outfalls by the end of Year 2.	City has purchased GPS equipment, and has training in new equipment scheduled. Medford expects to start locating outfalls with GPS in Summer 2004.	Locate and map remainder of outfalls.
3D	Illicit Discharge Ordinance	DPW/Engineering/ Building/Law	Review existing ordinances, review proposed samples, and document what has been reviewed.	Medford has held three meetings to discuss proposed ordinances, and is currently reviewing a draft ordinance prepared for the City using sample ordinances recommended by the EPA and Center for Watershed Protection.	Prepare draft ordinance for Medford.
3E	Detection and Elimination Plan	DPW/Engineering	Determine priority areas; visually screen outfalls during dry weather (Years 1 and 2)	The City concentrated efforts on outfalls previously thought to have illicit discharges and resampled those.	Determine additional priority areas and visually screen outfalls.
3F	Illicit Discharge Education for Public	DPW/Engineering	Included in Measure 1	Included In Measure 1	
3G	Illicit Discharge Education for Municipal Employees	DPW	Included in Measure 6	Included In Measure 6	

3a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) Permit Year 1	Planned Activities Permit Year 2
	Hired outside consultant to help prepare ordinance.	DPW/Engineering		Contracted Vanasse Hangen Brusltin, Inc. to assist in Ordinance Drafting and Plan Implementation	

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) Permit Year 1	Planned Activities Permit Year 2
4A	Erosion and Sediment Control Ordinance "Construction Ordinance"	DPW/Engineering/ Building/Law	Review existing ordinances, review proposed samples, and document what has been reviewed.	Medford has held three meetings to discuss proposed ordinances, and is currently reviewing a draft ordinance prepared for the City using sample ordinances recommended by the EPA and Center for Watershed Protection.	Prepare draft ordinance for Medford.
4B	Erosion and Sediment Control BMPs/ Requirements	DPW/Engineering/ Building/Law	Review current procedures and brainstorm proposed.	Medford has reviewed existing procedures through the Erosion and Sediment Control Ordinance preparation, and has begun discussing proposed requirements.	Prepare draft BMP requirements to be referenced or incorporated into the draft Construction Ordinance.
4C	Construction Site Plan Review Procedures	DPW/Engineering/ Building/Law	Continue to follow existing procedures; Review current procedures and brainstorm proposed.	Medford has reviewed existing procedures through the Erosion and Sediment Control Ordinance preparation process, and has begun discussing proposed requirements.	Prepare draft Construction Site Plan Review Procedure to be included or referenced in draft Construction Ordinance.
4D	Construction Site Inspection and Enforcement Procedures	DPW/Engineering/ Building/Law	Continue to follow existing procedures; Review current procedures and brainstorm proposed.	Medford has reviewed existing procedures through the Erosion and Sediment Control Ordinance preparation process, and has begun discussing proposed requirements.	Prepare draft Site Inspection and Enforcement Procedure to included or referenced in draft Construction Ordinance.
4E	Stormwater Contact to receive and address public complaints or concerns	DPW	Establish and Advertise Contact Information.	Stormwater contact was determined to be City Environment and Energy Department Head. Name and department is provided on City website and to project proponents.	Expand publicity regarding stormwater contact (paper, etc.)
	Minimum BMPs to Consider and thresholds	Stormwater Advisory Committee	Brainstorm BMPs and thresholds	Discussed thresholds for Erosion and Sediment Controls and Post-Development requirements, as well as BMPs during ordinance development meetings.	Finalize City's decision on thresholds and minimum BMP requirements and include information in draft ordinances.

4a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) Permit Year 1	Planned Activities Permit Year 2
	Hired outside consultant to help prepare ordinance.	DPW/Engineering		Contracted Vanasse Hangen Brusltin, Inc. to assist in the Drafting of the Construction Ordinance. VHB assisted in the organization and preparation of materials to begin the Drafts.	

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 1	Planned Activities Permit Year 2
5A	Encouragement of "Better Site Design"	DPW/Engineering/ Building/Law	Formal document on better site design by the end of Year 5	Began discussing current better site design practices and evaluated more material for expanding practices.	Expand material City offers relative to better site design. Discuss incorporating information into site plan review process.
5B	Post-Construction Runoff Ordinance	DPW/Engineering/ Building/Law	Review existing ordinances, review proposed samples, and document what has been reviewed.	Medford has held three meetings to discuss proposed ordinances, and is currently reviewing a draft ordinance prepared for the City using sample ordinances recommended by the EPA and Center for Watershed Protection.	Prepare draft ordinance for Medford.
5C	Choose Structural and Non-Structural BMPs	DPW/Engineering	Review current BMPs and brainstorm proposed.	Medford has reviewed existing BMPs through the Post-Construction Runoff Control Ordinance preparation, and has begun drafting proposed requirements.	Prepare draft to include in draft ordinance.
5D	Procedures for Long-Term Operation and Maintenance (O&M) Plans	DPW/Engineering	Review current BMPs and brainstorm proposed.	Medford has reviewed existing BMPs through the Post-Construction Runoff Control Ordinance preparation, and has begun drafting proposed requirements.	Prepare draft to include in draft ordinance.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) Permit Year 1	Planned Activities Permit Year 2
5E	Procedures for Implementation of Structural BMPs	DPW/Engineering	Review current BMPs and brainstorm proposed.	Medford has reviewed existing BMPs through the Post-Construction Runoff Control Ordinance preparation, and has begun drafting proposed requirements.	Prepare draft to include in draft ordinance.

5a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 1	Planned Activities – Permit Year 2
	Hire outside consultant to help prepare ordinance.	DPW/Engineering		Contracted Vanasse Hangen Brusltin, Inc.	

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 1	Planned Activities Permit Year 2
6A	Regular Street sweeping	DPW/Highway	Sweep main Streets year-round; Sweep all streets and municipal lots twice per year.	DPW swept all streets twice in Year 1, and swept main streets throughout the year. See attached.	Continue existing schedule.
6B	Regular Catch Basin Cleaning	DPW/Highway	Clean catch basins twice per year.	Catch basins were cleaned once this Year 1. Once per year in areas of low sediment accumulation. Additional information will be sent at a later date.	Assess the need for catch basin cleaning more than once per year.
Revised			Clean catch basins once per Year. Assess based on two years of cleaning data where twice per is warranted.		
6C	SPCC Plan	DPW/Highway	Implement SPCC Plan at DPW Yard	SPCC Plan implemented at DPW yard.	Continue to follow procedures in SPCC Plan.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) Permit Year 1	Planned Activities Permit Year 2
6D	Employee Training	DPW/Engineering	Continue existing training; determine necessary personnel and topics; schedule training	Began preparing new training course.	Complete new stormwater training course.
6E	Municipal O&M	DPW/Highway/ Parks/ Engineering	Assess existing facilities, BMPs, etc; brainstorm new BMPs	The City has begun to assess existing operations.	Continue to implement stormwater management BMPs.
6F	SWPPP for Municipal Yard	DPW/Highway	Implement SWPPP at DPW yard.	SWPPP implemented at DPW yard.	Continue to follow procedures in SWPPP.
6G	SWPPP for Oak Grove Cemetery	DPW/Cemetery Division	Implement SWPPP at Oak Grove Cemetery.	SWPPP implemented at Oak Grove Cemetery.	Continue to follow procedures in SWPPP.

6a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) Permit Year 1	Planned Activities Permit Year 2
	SWPPP for Municipal Activities	DPW /Highway		Implemented the stormwater pollution prevention plan (SWPPP) practices developed for Municipal Yard and Oak Grove Cemetery citywide, where applicable.	Continue implementing good practices City Wide

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) – Not Applicable

The Mystic River and Malden River are in Category 5, requiring TMDL but with none approved to Date

8. BMPs General

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 1	Planned Activities – Permit Year 2
	Monitoring	DPW	Evaluation of program compliance	Records were kept of activities conducted for program compliance. Submission of Annual Report	Continue monitoring.
	Annual Report	DPW	Submit Annual Report to EPA	Submitted Annual Report	Submit Annual Report.
	Annual Public Meeting	DPW	Hold One Public Meeting	DPW held a public meeting on January 28, 2004	Hold one public meeting.
	Recordkeeping	DPW	Keep records of activities conducted for program compliance for 5 years.	Records were kept of activities conducted for program compliance.	Continue recordkeeping.

Part IV. Summary of Information Collected and Analyzed

The City of Medford keeps records of operation and maintenance activities, such as catch basin cleaning and street sweeping. A summary of these records are attached. Public education materials distributed or displayed within Year 1 are also attached, and include an article on pet waste and an article on geese waste. A shortened version of the attached geese article was published in the Medford Transcript in January 2004. The City collected over 1700 tons of street sweepings between February and March 2004, which included a mix of debris, leaves and litter. The City collected 6,686 tons of leaves in the fall of 2003. Leaf-collection and disposal information is attached.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Stormwater management position created/staffed	(y/n)	No
Annual program budget/expenditures	($)	Not known at this time.

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	Not Known
Stormwater management committee established	(y/n)	Yes
Stream teams established or supported	(# or y/n)	Yes
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	Yes – Mystic River
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	8
▪ community participation	(%)	Not known
▪ material collected	(tons or gal)	Not known
School curricula implemented	(y/n)	No

Legal/Regulatory

	In Place before Phase II	Under Review	Drafted	Adopted
Regulatory Mechanism Status (indicate with "**X**")				
▪ Illicit Discharge Detection & Elimination		X		
▪ Erosion & Sediment Control		X		
▪ Post-Development Stormwater Management		X		
Accompanying Regulation Status (indicate with "**X**")				
▪ Illicit Discharge Detection & Elimination		X		
▪ Erosion & Sediment Control		X		
▪ Post-Development Stormwater Management		X		

Mapping and Illicit Discharges

Outfall mapping complete	(%)	
Estimated or actual number of outfalls	(#)	51
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 %)	
Fines collected	(# and $)	
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
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	2
Total number of structures cleaned	(#)	
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)	1
Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	2
Qty. of sand/debris collected by sweeping	(lbs. or tons)	1700+ tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	
Cost of sweepings disposal	($)	
Vacuum street sweepers purchased/leased	(#)	N/A
Vacuum street sweepers specified in contracts	(y/n)	N/A

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)	No
Manual control spreaders used	(y/n)	No
Automatic or Zero-velocity spreaders used	(y/n)	No
Estimated net reduction in typical year salt application	(lbs. or %)	No
Salt pile(s) covered in storage shed(s)	(y/n)	
Storage shed(s) in design or under construction	(y/n)	

Attachments

- Leaf Collection Data
- Public Education Information

■ Leaf Collection Data

City of Medford
Leaf Collection Data
November 2003

Date	Total Yards-Leaves Composted	Total Yards-Leaves Dumped	Hauled off by Contractor	Comments
3-Nov	64	150		WET
4-Nov	64	102		WET
5-Nov	96	126		WET
6-Nov	96	114		WET
7-Nov	176	162		WET
10-Nov	256	198		
12-Nov to 13-Nov	368	716		
14-Nov	0	722		Mulcher Down
17-Nov	0	810		Mulcher Down
18-Nov	0	486		Mulcher Down
19-Nov	0	450		Mulcher Down
21-Nov	0	0	1530	
TOTALS	**1120**	**4036**	**1530**	**6686**

■ Public Education Information

Medford Transcript, Thurs. Jan 15th 2004

Waste in storm drains

If you're a dog owner, you know that dogs can be fun, playful and energetic — you also know that they can make a mess. Yes, your best friend and companion can leave you with quite an unpleasant task — cleaning up after them on those brisk autumn walks.

You might be asking yourself "Why do I have to scoop up after Fluffy? It will degrade or wash away?" Not so, pet waste left on the sidewalk, the street, the lawn or placed in a catch basin washes into local water bodies, either directly or through storm drains. In Medford that means directly into the Mystic River.

Contrary to what some people think, water that goes down the storm drain does not enter a sewer treatment plant. With every rainfall, anything left in the storm drain goes out to the river.

Nutrients in pet waste can cause algae and weed growth in lakes and rivers and ponds. Water may become cloudy and green and unattractive for boating, swimming or fishing.

As waste decays in water it uses up the oxygen in the water threatening aquatic life and also releasing ammonia. Low oxygen levels combined with ammonia in warmer temperatures can cause fish kills.

The city of Medford will soon be enforcing fines for not picking up after your dogs. Look for future articles discussing this issue as well as other common causes of pollution.

To learn more about Medford's Stormwater Management Program, attend a public meeting on Jan. 28, beginning at 7:30 p.m. in the Council Chambers or contact the Energy & Environment Office at 781-393-2137.

www.medfordtranscript.com NOV 6, 2003

PHOTO BY LISA GUERRIERO

Matt Laskey, left, of Troop #416 oversaw a stenciling project to qualify as an Eagle Scout while fellow Eagle Scout Paul Reilly helped spread the word about dumping.

Eagle Scout project helps Mystic

The scouts of Troop #416 are saving the Mystic River, one storm drain at a time.

When Medford resident Matt Laskey had to devise a project to earn his Eagle Scout status, the 17-year-old chose to lead the troop in stenciling warnings next to the city's storm drains.

Unbeknownst to many residents, the drains lead directly into the Mystic, not into the sewer. Car fluids, trash and other harmful substances pollute the river.

Armed with spraypaint and stencils, the troop spent the last weekends of October etching hundreds of warnings throughout various neighborhoods in the city.

Laskey's father, Fred, works for the Massachusetts Water Resource Authority, so the Medford High School senior is well aware of the impact on the river. He had the idea for the drains after seeing similar stencils in Charlestown.

"My family has always helped with the Mystic clean up," Laskey said. "This is just another step, to get people to know all the fluids and trash go right into the river."

— Lisa Guerriero

Mea

Please Don't Feed the Ducks or the Geese

Prepared for Medford Department of Public Works by Vanasse Hangen Brustlin, Inc.
January 2004

Residents in the city of Medford will soon be seeing signs at public access waterbodies urging them to refrain from feeding Geese or Ducks. The signs are the first step in a citywide campaign focused on improving water quality. Feeding ducks or geese may be viewed as a pleasant outside activity that is kind to the visiting waterfowl. However, it is in fact detrimental to the birds, it degrades water quality and it contributes to solid waste problems on beaches and grassed areas near waterbodies in the form of geese droppings. Feeding encourages the birds to become permanent residents and the increases in populations and feces can create human health threats. According to the U.S. Department of Agriculture, Canadian geese can weigh from 6 to 12 pounds and produce up to one pound of droppings per day.

Problems with Canadian geese result when they become year-round residents. This situation is a result of habitat changes caused by human activity that prevent them from migrating. The changes include the presence of nicely cropped grasses and open spaces adjacent to waterbodies, the feeding of the geese by people, and the higher frequency of non-freezing waterbodies in urbanized or developed areas. Goose waste deposited in the water causes nutrient loading and excessive algal growth. According to an article in the Illinois Environmental Protection Agency's Lake Notes Newsletter, "if you have 20 resident geese on your lake, that is the same as dumping a 100-pound bag of fertilizer with a "10" phosphorus number into the lake each year!" Wandering geese may also become traffic hazards near busy roadways.

In urban and suburban areas where predators are lacking and food is plentiful, geese populations will continue to increase each year. A single female may produce 2-3 young per year and can potentially produce more than 50 young over her lifetime. The problems with waste, overgrazed grass areas and erosion, as well as the physical presence of the large birds become striking when populations grow.

The Illinois EPA provides three recommendations for discouraging permanent geese populations:

1. Don't FEED the GEESE
2. Modify the shoreline vegetation with higher shrubs and avoid large grassy areas contiguous with the waterbody
3. Allow the lake to freeze over in winter if possible

Ducks, like geese may also have their migratory pattern interrupted and become permanent residents dependent on human feeding. Not only can an increase in duck populations discourage the presence of some other bird species reducing natural diversity, the bacteria in duck feces is a health concern in waterways and on beaches. Further, uneaten food left in parks and waterbodies may increase the population of rodents such as rats. So please, DO NOT FEED THE DUCKS OR THE GEESE.

For more information contact:
Kim Lundgren, City of Medford Energy & Environment Office 781-393-2137

Stormwater Pollution Prevention

The stormwater and melted snow that runs off of the roadway in your neighborhood is eventually discharged to Mystic River or other water resource area. If certain contaminants come in contact with stormwater runoff from your neighborhood, these resources areas may become polluted. Your individual actions can help protect these areas.

What you can do to protect Water Resources in Medford:

- Do not place anything in the storm drain. Only stormwater should enter the catch basins.
- Eliminate or minimize fertilizer use.
- If you use fertilizer, choose slow release types with little or no nitrogen.
- Avoid leave leaf litter. Collect leaves for composting or proper disposal.
- Direct your rooftop runoff over vegetation or into a dry well to promote infiltration.
- Do not allow pet waste to collect on streets/sidewalks or enter the storm drains.
- Pick up all pet waste and either compost, bury, or dispose with sanitary waste.
- Use a car wash or wash cars so runoff goes on to the lawn, not the street, and minimize soap.
- Do not clean driveways by hosing dirt into the street. Collect sweepings for disposal.
- Keep you neighborhood litter free.
- Eliminate the use of pesticides.
- Limit the use of sand and salt on roadways and remove sand promptly when weather permits.
- Don't feed the ducks or geese.

Prepared for Medford Department of Public Works by Vanasse Hangen Brustlin, Inc., January 2004
For additional information Contact: Kim Lundgren, City of Medford Energy & Environment Office 781-393-2137