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Municipality/Organization: Town of Andover

EPA NPDES Permit Number: MAR041178

MaDEP Transmittal Number: W- 041021

Annual Report Number
& Reporting Period: No. 1: May 1, 2003-April 30, 2004

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Reginald Stapczynski Title: Town Manager

Telephone #: (978)623-8350 Email:

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: Reginald S. Stapczynski

Printed Name: Reginald Stapczynski

Title: Town Manager

Date: 4/29/04

Part II. Self-Assessment

The Town of Andover has completed the required self-assessment of the annual compliance review for the Phase II Stormwater Program. In accordance with the NPDES Phase II Stormwater requirements, the following topics were evaluated for the completion of the Annual Report:

1. Compliance with the Phase II Permit Conditions
2. Appropriateness of the Selected BMPs
3. Progress Towards Achieving the Program's Measurable Goals
4. Results of Any Information that has been Collected and Analyzed
5. Activities for the Next Reporting Cycle
6. Changes in Identified BMPs or Measurable Goals

The Town has determined that our municipality is in compliance with all permit conditions except the following:

Part I.B.2(g) The Town of Andover's permit eligibility with regard to properties listed on the National Register of Historic Places was pending at the time of the NOI submission. The Town will evaluate all historic places for any adverse effects from their MS4s and verify compliance with requirements of the National Historic Preservation Act in coordination with illicit discharge detection activities occurring over the next three years.

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 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 2
1A	Develop Stormwater Section of Town Website	Department of Public Works/Engineering Dept., Water Dept, and Town Website Manager(s)	Measure number of hits over permit term.	Nearly all of the information required for the stormwater section on the Town's webpage has been developed, including fact sheets, a power point presentation and consumer tips.	Add stormwater section to Town website. Measure hits annually.
Revised					
1B	Distribute Brochures and Fact Sheets to Businesses and Residents	Department of Public Works/Engineering Dept., and Water Dept.	Number of articles and copies of materials.	• The Town mailed 10,300 copies of the 2003 Drinking Water Quality Report containing stormwater facts to residents and businesses. 400 additional copies were distributed in public buildings. • An educational brochure, "Healthy Lawns and Landscapes" was mailed to all residents along with a survey form by the Water/Health Department.	Same as Year 1 and send a press release to all local papers annually regarding the mailings and the importance of stormwater management at each home.
Revised					
1C	Submit Advertisements/Articles on Stormwater Protection for Local Newspaper	Department of Public Works/Engineering Dept., and Water Dept.	Clippings of articles and advertisements printed in local newspaper.	Although not scheduled for this permit year, residents were informed of upcoming activities on public education and outreach on February 26, 2004 in "The Townsman". A request for public involvement at a water forum was also posted on the same day.	Inform residents of upcoming activities under the participation and involvement program. Use information from brochures and fact sheets for articles and direct the public to the stormwater section of the Town website.
Revised					

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 1 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 2
2A	Establish a Pesticide Reduction Task Force (PRTF)	Committee of Town Staff, League of Women Voters, and Residents	Copies of mailers, meeting minutes, list of attendees.	• PRTF has already been established • Sent out mailers to residents and local landscaping businesses, inviting them to attend the meetings. • A Town Committee with representation from Town Departments, League of Women Voters, and residents was formed.	• Send out mailers to residents and local landscaping businesses, inviting them to attend the meetings.
Revised					
2B	Establish a Stormwater Telephone Hotline	Department of Public Works/Engineering Dept, Water Dept., and Town Website Manager(s)	Record number of phone calls to hotline, copies of articles.	NOI specified to begin this BMP in Permit Year 2. Currently the Town takes telephone calls pertaining to stormwater and responds to them.	• Establish a new telephone hotline number for stormwater issues. • Advertise the number and include a descriptive pamphlet about illicit discharges in utility bills. • Provide a section on the Town's stormwater website discussing how people can use the hotline. • Record telephone calls and response results in a log.
Revised					

2C	Establish Classroom Education/Field Trip Program	Department of Public Works/Engineering Dept. Water Dept., and Education Department	Field Trip Curriculum, # of field trips organized each year.	The NOI specified to begin this BMP in Permit Year 2, however it was started in Year 1 with the following: • Classroom presentations were given to third grade students. • 165 3rd grade students were given a tour of the Water Treatment Plant and taught about the hydrologic cycle, watershed protection, stormwater discharges, water conservation, and the water distribution system. • A Watershed Protection Poster Contest was conducted in 5 elementary schools. Over 200 entries were received.	• Hold annual field trips for science classes to visit the Town's water treatment plant. • Incorporate stormwater information into annual field trips.
Revised					
2D	Install Storm Drain Markers or Stencils	Department of Public Works/Engineering Dept, Water Dept., and Volunteers	50 % of storm drains marked by year 5 with door hangers placed in associated neighborhoods.	A total of 285 storm drain markers were installed as part of an Eagle Scout Project.	• Continue marking storm drains in the highest priority watersheds.
Revised					
2E	Work With Watershed Organizations to Incorporate Stormwater Information into Their Programs	Department of Public Works/Engineering Dept, Water Dept., and Conservation Commission	Document quarterly meeting topics.	• Although not planned for permit year 1, a representative of the Town participated in developing a 5 year action plan for the local watershed groups and attended monthly watershed group meetings. These meetings resulted in several action projects to improve water quality through stormwater protection. • The Town of Andover also wrote letters of support to fund surface water projects.	The Town plans to continue its work with the local watershed groups in Permit Year 2.
Revised					

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 1 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 2
3A	Develop Primary Town Storm Drain System Map	Department of Public Works/Engineering Dept., Consultant	90% of system mapped on GIS.	90% of the drainage system has been mapped using existing plans.	No further activity is required for this task.
Revised					
3B	Complete Storm Drain System Map	Department of Public Works/Engineering Dept., Consultant	All outfalls mapped by year 4. Copy of storm drain map.	• Located and verified storm system outfalls. • Located and field verified unknown drainage areas. • Added outfall information to existing GIS base map. • The location of approximately 200 outfalls have been entered into the GIS drainage map using GPS.	Continue verifying the location of the drainage system as mapped under 3A and incorporate changes as needed.
Revised					
3C	Develop Illicit Discharge Prohibition Ordinance	Planning Board, Board of Health, and Selectmen	Obtain authorization to control inputs to the municipal drainage system. Bylaw at Town meeting by year 3.	• The Town has received model bylaws from a consultant for review and modification. • The Town has been revising the Subdivision Rules and Regulations for several years. A stormwater management section will be included. These revisions will be completed in Permit Year 2 followed by the bylaws. • A Groundwater Protection Overlay District Bylaw was voted on at the 2003 Annual Town Meeting.	Present revisions to the Planning Board for adoption.
Revised					

3D	Develop Illicit Discharge Detection and Elimination Plan and Implement Activities	Department of Public Works/Engineering Dept., Water Dept., Board of Health, and Consultant	All outfalls examined by year 4. Sources traced and results documented within one year of discovery.	• An illicit discharge detection plan has been developed. • A fecal coliform sampling program was developed for Pinnacle Brook. • Although not scheduled for this permit year, several suspected illicit discharge outfalls have been sampled. • A group of twelve citizen environmental experts was formed to study the existing illicit discharges to the Town's public drinking water supply. • Several sewer connections were removed from the storm drain system and connected to the sanitary sewer system.	• Conduct outfall inspections to illicit discharges in priority subwatersheds. • Seek sources of illicit discharges one by one and work towards elimination.
Revised					
3E	Incorporate Information on Illicit Discharges into Public Education and Outreach Topics	Department of Public Works/Engineering Dept., Water Dept., and Board of Health	Copies of materials.	• A water forum was held addressing watershed protection issues, including stormwater topics. Literature on illicit discharges was made available. • Public hearings and staff reviews were held by the Board of Health to adopt Mercury Thermostat Disposal Regulations.	Continue incorporating information on illicit discharge into public education and outreach topics.
Revised					
3F	Setup and Advertise a Hotline for Illicit Discharges	Department of Public Works/Engineering Dept., and Board of Health	Log of complaints and actions taken.	The NOI specified to begin this BMP in Permit Year 2.	• Identify department to receive calls. • Advertise who to call to report dumping or other inappropriate inputs to the MS4. • Develop a protocol for addressing complaints. • Keep records of complaints and actions taken.
Revised					

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 1 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 2
4A	Develop Erosion Control Bylaw	Planning Board and Selectmen	Bylaw at Town meeting by year 3.	• The Town has received model bylaws from a consultant for review and modification. • The Town has been revising the Subdivision Rules and Regulations for several years. A stormwater management section will be included.	Present revisions to the Planning Board for adoption.
Revised					
4B	Establish a Procedure for the Receipt of Information Submitted by the Public	Planning Board and Department of Public Works/Engineering Dept.	Record number of phone calls, copies of articles.	Although not planned for Year 1, the Town has started the process of identifying which departments will receive information or calls.	• Advertise who to call to report erosion or runoff concerns at construction sites in town. • Develop a protocol for addressing inquires or complaints. • Keep records of complaints and actions taken.
Revised					

4C Revised	Develop Guidance for Erosion Controls & Conduct Inspections	Planning Board, Department of Public Works/Engineering Dept., Conservation Commission, and Consultant	Inspection checklist and documented inspections.	Guidance outlining specific erosion control requirements desired by Andover has not been completed yet however the following steps have been taken towards the completion of this task: • The Town requires that an applicant submit a description of the measures that will be taken to control erosion and sediment on site. No specific erosion controls have been identified by the Town and are recommended on a site-specific basis. • Meetings have been conducted with the Planning Department and Town Counsel to draft revisions to the Subdivision Rules and Regulations including a section on Erosion and Sediment Requirements. • The Department of Development and Planning has implemented a requirement for deeded Non-disturbance Zone 25 feet(50 feet in Fish Brook/ Haggets Pond Watershed) for sites regulated under the Massachusetts Wetland Protection Act. Although not required until Permit Year 2, the Town already has inspection procedures in place for sites regulated under the Massachusetts Wetland Protection Act. The Order of Conditions for sites regulated under the Massachusetts Wetland Protection Act are required to have weekly inspections verifying compliance with all conditions including sediment controls.	• Develop an inspection checklist. • Develop guidance outlining specific erosion control requirements desired by Andover. • Set up a tracking program. • Conduct inspections of erosion controls.

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 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 2
5A	Develop BMP Bylaws	Planning Board	Bylaw at Town meeting by year 3.	• Town planners reviewed model bylaws. • The Town has been revising the Subdivision Rules and Regulations for several years. A stormwater management section will be included.	• Present revisions to the Planning Board for adoption.
Revised					
5B	Develop and Implement Inspection Program	Planning Board, Department of Public Works/Engineering Dept., Conservation Commission, Selectmen and Consultant	Copies of maintenance reports received annually, plus records of inspections completed and results.	The NOI specified to begin this BMP in Permit Year 2. • The Town has received recommendations from a consultant on O&M requirements and an inspection program.	• Identify specific O&M requirements desired by Andover and reference in the new bylaw. • Identify the department(s) who will perform inspections. • Require operation and maintenance plan of developers. • Set up permit program and maintenance tracking program that requires annual submittal of maintenance report by owner.
Revised					
5C	Develop BMP Design Standards	Planning Board, Department of Public Works/Engineering Dept., Conservation Commission, and Consultant	Copy of draft bylaws.	Consultant has provided Andover with some design standards that supplement the MA Stormwater Management Policy. These are currently under review by Andover.	• Incorporate into design standards bylaw/regulations by reference.
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 1 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 2
6A	Sweep Streets in Town	Department of Public Works/Highway Division	Priority plan of sweeping based on water quality impact.	All streets are swept in Town at least annually. The downtown area was swept twice per week except during the winter.	Same as Year 1.
Revised					
6B	Clean Catch Basins	Department of Public Works/Highway Division and Consultant	Records of cleaning, inspections and maintenance.	• Problem areas were identified where cleanings are needed more than once per year. • 1264 catch basins cleaned.	• Continue to clean all catch basins in Town at least once every two years. • Modify cleaning frequency based on inspection and maintenance plan.
Revised					
6C	Develop and Implement an Inspection and Maintenance Plan	Department of Public Works/Highway Division	Written policy. Records of inspections and maintenance.	No written policy was completed in Permit Year 1, however, as the Engineering Staff finds maintenance problems during outfall inspections they are reported to the Highway Department.	• Develop a written inspection/maintenance schedule for structural BMPs throughout Town. • Perform inspection and maintenance, modifying frequency as necessary • Develop an in-house policy for disposing of maintenance generated wastes.
Revised					
6D	Berm Sand/Salt Pile and Evaluate Options for Protection	Department of Public Works/Highway Division	Records of modifications, including photographs.	• New chemical shed has been constructed and all salt/sand is stored indoors.	• No further action is needed to protect the sand/salt pile to prevent runoff into storm drains.
Revised					

6E	Store Paving Tools and Equipment Indoors	Department of Public Works/Highway Division	Designated indoor storage area. Record of Memo.	• Two indoor storage areas were designated for paving tools and equipment. • All paving tools and equipment are stored indoors. • A memo was sent to all Highway Department employees discussing the indoor storage practices for paving tools and equipment.	• Continue to store all paving tools and equipment indoors.
Revised					
6F	Rinse Marking Paint Buckets to the Sanitary Sewer System and Store Buckets Indoors	Department of Public Works/Highway Division	Designated indoor storage area. Record of Memo.	• All marking paint buckets are rinsed to the sanitary sewer system. • All buckets with residues are stored indoors. • A memo was sent to all Highway Department employees discussing the rinsing and indoor storage practices for marking paint buckets.	• Continue to rinse all marking paint buckets to the sanitary sewer system. • Continue to store buckets with residues indoors.
Revised					
6G	Implement BMPs to Reduce Sediments Entering the Drainage System	Department of Public Works/Highway Division	Records of sweeping and inspection records.	• The paved roadway at the DPW Yard is swept on a more frequent basis. • Catch basins are inspected and cleaned on a more regular basis, or as needed.	• Continue to sweep the paved roadway at the DPW Yard on a more frequent basis. • Continue to inspect and clean catch basins on a more regular basis, or as needed. • Evaluate additional BMPs to prevent sediment migration from the unpaved portion of the DPW Yard.
Revised					
6H	Bring Floor Drain System at the Water/Sewer Building into Compliance	Department of Public Works/Engineering Dept.	As-built sketches.	Disconnected the floor drain from the storm drain system and reconnected to an oil/water separator and the sanitary sewer system.	No further action is required during the permit term.
Revised					

6I	Bring Floor Drain System at the Vehicle Maintenance Building into Compliance	Department of Public Works/Engineering Dept.	As-built sketches.	Disconnected floor drain from the storm drain system and reconnected to an oil/water separator and the sanitary sewer system.	No further action is required during the permit term.
Revised					
6J	Wash Vehicles in Accordance with DEP Regulations	Department of Public Works/Highway Division	Record of Memo.	• Prohibited outdoor vehicle washing. • Wash vehicles indoors to floor drains, oil/water separator and the sanitary sewer system. • Sent a memo to employees discussing the appropriate vehicle rinsing practices at the site.	Same as Year 1.
Revised					
6K	Implement Stormwater BMPs at the Fueling Station	Plant and Facilities Dept. and Consultant	Repair Records. Better housekeeping for small spills. As-built sketches or plans. Record of memo.	• The pump and piping were inspected and no leaks were found. • Installed a spill kit and disposal container at the fueling station. • Sent a memo to employees discussing the appropriate housekeeping practices at the fueling station.	• Clean up any future leaks promptly and dispose of wastes properly. • Evaluate a covering or other BMPs to reduce stormwater contact with fueling area.
Revised					
6L	Develop an Inspection and Maintenance Program for the Liquid Calcium Chloride (CaCl) ASTs.	Department of Public Works/Highway Division	Inspection and Maintenance Plan. As-built sketches or action taken. Record of memo.	The NOI specified to begin this BMP in Permit Year 2, however, inspections are made daily and maintenance needs are directed to the Plant and Facilities Department.	• Develop an in-house plan for addressing inspections and maintenance issues. Include procedures for handling significant leaks and spills. Also designate a responsible individual for inspections. • Evaluate containment options for the CaCl ASTs to contain leaks and large releases. • Send a memo to employees discussing the inspection and maintenance plan for the CaCl ASTs.
Revised					

6M	Implement BMPs at the Ledge Road Landfill	Department of Public Works	Complete landfill cap.	• The Town has contracted a consulting firm to design a landfill cap and obtain the necessary approvals from the MA DEP. • The stockpiles are being incorporated into the current landfill capping design.	• Continue on with landfill capping process.
Revised					
6N	Provide Additional Slope Stabilization at the Snow Dump and Storage Location	Department of Public Works/Engineering Dept. and Highway Division	As-built sketches or plans and photos.	• Although not required in Permit Year 1 the Town has evaluated BMP options for additional slope stabilization. • The Town has had additional swales constructed; the site regraded; rip rap placed on slopes and at base; and aprons were placed on top of appropriate areas.	No additional work is needed on this BMP. BMP has been completed.
Revised					
6O	Ensure Compliance for Floor Drains and Vehicle Washing Activities at the West Fire Station	Plant and Facilities Dept. and Fire Dept.	Sketches or inspection memos. Record of memo.	• The existing floor drains located in the vehicle bays and the boiler room are connected to an oil/water separator which used to outlet to a dry well. The separator was intercepted and connected to the sanitary sewer system. • Prohibited outdoor vehicle washing and wash vehicles indoors. • Complied with DEP policy for outdoor vehicle rinsing. • A memo was sent to employees discussing the permissible vehicle washing activities at the site.	Continue to prohibit outdoor vehicle washing and wash vehicles indoors.
Revised					

6P	Ensure Compliance for Floor Drains and Vehicle Washing Activities at the Ballardvale Fire Station	Plant and Facilities Dept. and Fire Dept.	Sketches or inspection memos. Record of memo.	• An oil/water separator was added and the pipe was connected to the sanitary sewer system. • Prohibited outdoor vehicle washing and wash vehicles indoors. • A memo was sent to employees discussing the permissible vehicle washing activities at the site.	Continue to prohibit outdoor vehicle washing and wash vehicles indoors.
Revised					
6Q	Wash Vehicles at the Approved Vehicle Wash Area at the Police Station (Public Safety Building)	Plant and Facilities Dept. and Police Dept.	Record of memo.	• Prohibited outdoor vehicle washing and wash all vehicles indoors at the approved vehicle wash area. • A memo was sent to all Town Departments that use the Public Safety Building discussing the permissible vehicle washing activities at the site.	Continue to wash all vehicles indoors at approved vehicle wash areas.
Revised			New sink for rinsing and verbal instructions to employees.		
6R	Prohibit Vehicle Washing at the Cemetery Buildings	Plant and Facilities Dept. and Fire Dept.	Record of memo.	• Prohibited vehicle washing at the site and evaluated/designated other Town locations for washing of Fire Department vehicles currently occupying the Cemetery Building. • A memo was sent to employees discussing the new vehicle washing location.	Continue washing vehicles at approved sites.
Revised					
6S	Rinse Marking Paint Buckets to the Sanitary Sewer System at the Park Shop	Plant and Facilities Dept. and School Dept.	Record of memo.	• A sink that is connected to the sanitary sewer system was provided to wash all marking paint buckets. • Employees were verbally told the proper rinsing practices for marking paint buckets.	Continue rinsing all marking paint buckets to the sanitary sewer system.
Revised					

6T	Ensure Compliance with SPCC Plans for the West, Shawsheen, and Bancroft Elementary Schools	Plant and Facilities Dept. and School Dept.	Record of inspections and activities in accordance with the plan.	Inspect facilities in accordance with the SPCC Plans.	Same as Year 1.
Revised					
6U	Use IPM Program for Application of Pesticides in Town	Plant and Facilities Dept.	Copy of "Chapter 85 of the Acts of 2000".	Continued Integrated Pest Management (IPM) Program for application of pesticides (herbicides and insecticides) and fertilizers on Town-owned lands. Abided by the rules contained in Commonwealth of Massachusetts Chapter 85 of the Acts of 2000 (an act protecting children and families from harmful pesticides).	Same as Year 1.
Revised					
6V	Use Licensed Applicators for Fertilizers and Pesticides in Town	Plant and Facilities Dept	Record quantities of fertilizers and pesticides purchased annually.	Continued to use licensed applicators to apply fertilizers and pesticides in Town.	Same as Year 1.
Revised					
6W	Store Road Salt Under Cover and Clean Loading Area	Department of Public Works/Highway Division	Minimize stormwater contact with salt.	Stored all road salt materials under cover at the DPW Facilities Plant and Yard and cleaned loading area as needed.	Same as Year 1.
Revised					
6X	Use Low Salt Applications at Designated Areas	Department of Public Works/Highway Division	Use less salt within the Haggets Pond watershed, as demonstrated with application rate.	Used low salt applications in the Haggetts Pond watershed for water supply protection.	Same as Year 1.
Revised					

6Y	Ensure Proper Waste Disposal in Town for Hazardous and Special Wastes	Department of Public Works and Consultant	Document quantity of wastes collected annually.	• Bi-annual household hazardous waste collection events were held. • Encouraged residents to bring household mercury- containing thermometers and thermostats to the Water Treatment Plant or the Board of Health. • Held collection events at the West Middle School for cathode ray tubes (CRTs), batteries, and electronic equipment. • Allowed residents to take waste motor oil to the North Andover DPW Garage on the first and third Saturday of each month. • Advertised events with mailers and emphasize the need to collect wastes to avoid improper disposal and the resulting pollution.	Same as Year 1.
Revised					
6Z	Ensure Compliance for Snow Disposal in Town	Department of Public Works/Highway Division	Utilize designated snow disposal location.	Continued existing practices for snow disposal activities in Town to ensure surface water quality protection.	Same as Year 1.
Revised					
6AA	Conduct Town Employee Stormwater Training	Town Manager, Department of Public Works, Plant and Facilities Dept., Police and Fire Dept. and Consultant	Attendance sheet and copy of program.	Not planned for Year 1.	• Identify program coordinator. • Evaluate the need for stormwater training for all Town departments based on current and potential pollution prevention roles. • Prepare or contract curriculum/course materials. • Tie elementary school SPCC training into the stormwater pollution prevention training curriculum.
Revised					

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 1 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 2
7A	Develop a Water Quality Strategy for 303d Waters	Town Engineer & Consultant	Summary of pollution prevention efforts, future needs, and responsible parties. Copy of surface water quality strategic plan.	Not planned for Year 1.	Not planned for Year 2.
Revised					
7B	Implement BMPs from Water Quality Strategy	Town Engineer, Consultant, & Town Departments (to be determined)	Photographs, logs, and BMP descriptions for completed efforts and water quality improvements.	Not planned for Year 1.	Not planned for Year 2.
Revised					

7b. WLA Assessment

A TMDL was completed for the entire Shawsheen River Basin for pathogens only. The following waterbodies were included in this TMDL and are listed on the 303d list as impaired due to pathogens:

1) Unnamed Tributary (8349105)- Also known as Pinnacle Brook- from a small wetland east of Route 93, Andover to the confluence with Meadow Brook in Tewksbury.
2) Unnamed Tributary (8349030)- Also known as Fosters Brook- from the outlet of Fosters Pond through River Street Pond to the confluence with the Shawsheen River at Lowell Junction Pond in Andover.
3) Rogers Brook from the Outlet of first unnamed pond to the confluence with the Shawsheen River in Andover.
4) Shawsheen River from the confluence with Spring Brook in Bedford to Central Street in Andover.
5) Shawsheen River from Central Street to the confluence with the Merrimack River in Lawrence.

The TMDL Report set a WLA for fecal coliform standard of 200 organisms/100 ml per outfall. The report also points out that outfalls from Roger's Brook will need a 89.5% reduction in coliform to reach the standard of 200 organisms/100ml at each outfall. To meet these standards the Report suggests the following measures, many of which are already included in Andover's Stormwater Management Plan:

1) Implement an illegal connection identification and removal program.
2) Collect additional monitoring data to isolate coliform sources.
3) Implement more intensive "good housekeeping" practices.
4) Asses water quality in response to implementation activities.

Part IV. Summary of Information Collected and Analyzed

Locations and physical descriptions of over 200 outfalls have been gathered during Permit Year 1. Copies of all educational materials and memos distributed have been kept on file. Meeting memos and phone logs have also been kept on file.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Stormwater management position created/staffed	(y/n)	**n**
Annual program budget/expenditures	($)	**107,000**

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	**95%**
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	(#)	**2**
▪ community participation	(%)	
▪ material collected	(tons or gal)	
School curricula implemented	(y/n)	**Yes**

Legal/Regulatory

	In Place Prior to 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	(%)	**90%**
Estimated or actual number of outfalls	(#)	
System-Wide mapping complete	(%)	**90%**
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	**90%**
Outfalls inspected/screened	(# or %)	**200**
Illicit discharges identified	(#)	**3**
Illicit connections removed	(#) (est. gpd)	**3**
% of population on sewer	(%)	**55%**
% of population on septic systems	(%)	**45%**

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)	**Once every 2 years**
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	**Once every 2 years**
Total number of structures cleaned	(#)	**1264**
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	($)	**0**