Municipality/Organization: **Town of Winchester, MA**

EPA NPDES Permit Number:

MaDEP Transmittal Number: **W- 040467**

Annual Report Number & Reporting Period: **No. 4: March 2006-March 2007**

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Edward Grant Title: Director of Public Works

Telephone #: 781-721-7100 Email: egrant@winchester.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:

Printed Name: Melvin Kleckner

Title: Town Manager

Date: 4/23/07

Part II. Self-Assessment

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

(1) BMP 4-1: Sediment and Erosion Control Plan for construction projects
The original schedule called for the Town to include a requirement for sediment and erosion control plans for all construction sites greater than one-acre in the Engineering Department's Construction Standards. However, upon further review, it was decided that this regulation more appropriately belongs in the Town's Subdivision Rules and Regulations. The Planning Board is currently undertaking a review of these regulations and anticipates having a revised set of regulations ready for adoption during summer 2007.

In August 2006, the Town of Winchester received a letter from USEPA regarding the "Progress and Compliance Status" of the Town's Stormwater Management Program (SWMP). Specifically, the letter required the Town to address the following issues: (1) Certification of Eligibility – Endangered Species Act (ESA) and National Heritage Preservation Act (NHPA), (2) Discharges into Water Quality Impaired Waters, (3) Discharges into Waters with Approved Total Maximum Daily Load Allocations, (4) Stressed Basins, and (5) Measurable Goals. The Town's response to these items is provided below:

(1) Certification of Eligibility – Endangered Species Act (ESA) and National Historic Preservation Act (NHPA)
As stated in Section B.5 and B.6 of the Town's "NPDES Stormwater General Permit Notice of Intent for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)", the Town of Winchester meets the eligibility criteria for "listed species", critical habitat, and protection of historic properties. No modifications to the Town's SWMP are required.

(2) Discharges into Water Quality Impaired Waters
According to the MADEP's "Final Massachusetts Year 2004 Integrated List of Waters" available at www.mass.gov/dep/water/resources/tmdls.htm, the Aberjona River is listed as "Category 5 – Waters requiring a TMDL" for its entire 9.2-mile length for the following pollutants: metals, unionized ammonia, nutrients, organic enrichment/Low DO, pathogens, and other habitat alternations. The water quality impairments experienced in the Aberjona River basin are a function of many factors, including impaired stormwater quality and extreme low-flow conditions, particularly in the summer months. Many of the BMPs adopted by the Town of Winchester as part of the SWMP, as well as those implemented after the adoption of the SWMP, will result in improvements to Town's MS4 discharges and increases in groundwater recharge, which will in turn improve low-flow conditions. A summary of these BMPs and their anticipated benefits is provided below. It should be noted that the Town of Winchester is over 98% sewered and has no combined sewer overflows (CSOs), so pollutant loading from these sources is considered negligible.

- **BMPs 1-1 through 1-4 and 1-7** aim to educate the public on what stormwater runoff is and measures that they can adopt in the home or the business community to prevent stormwater pollution, particularly in terms of nutrient loading and bacteria from pet waste.
- Under **BMP 1-5**, the Town installed signs to prohibit people from feeding waterfowl in the vicinity of several key waterbodies. This in turn will decrease waterfowl populations in these areas, therefore reducing their potential as a source of nutrient and bacteria loading.
- **BMPs 3-1 through 3-7** call for the Town to implement several measures aimed at identifying and removing illicit connections, which are often a source of bacteria, nutrients, metals, and other pollutants.
- **BMPs 4-1, 4-5, and 5-1** require the Town to implement measures to require and inspect erosion and sediment controls on new and redevelopment projects, thus reducing sediment loading to the Town's MS4 from construction projects. This will in turn result in decreased loading of metals, nutrients, bacteria and other pollutants, which are often associated with sediment particles.
- **BMPs 4-3, 5-1, 5-2, and 5-3** require new and redevelopment projects to implement a variety of post-development measures aimed at improving stormwater quality.
- **BMPs 6-1, 6-3, 6-4, 6-5, 6-6, 6-9, and 6-10** call for improved municipal operations aimed at cleaning the Town's stormwater management system, sweeping streets, and improving the Town's salting, sanding and landscape maintenance practices. These measures will in turn reduce pollutant loads into and out of the Town's MS4s.
- **BMPs 5-1, 5-5, and 6-12 through 6-14** call for a variety of measures aimed at increasing groundwater recharge and, therefore, baseflow conditions in the Aberjona River. These measures will in turn help to improve water quality conditions in the River that are particularly associated with low-flow conditions, such as low dissolved oxygen levels.

(3) Discharges into Waters with Approved Total Maximum Daily Load Allocations

The Town of Winchester has reviewed the current listing of draft and approved TMDL's in Massachusetts available at www.mass.gov/dep/water/resources/tmdls.htm. According to the information provided on the website, a draft pathogen TMDL has been produced for the Boston Harbor and North Coastal watersheds. The Aberjona River, which flows through the center of Winchester, is included in the Mystic River subbasin of the Boston Harbor watershed. Although this TMDL has not been formally adopted, it should be noted that the draft does not call for specific waste load allocations (WLAs) from the respective municipalities in the watershed. Table 5-1 of the report provides a summary of potential sources of bacteria in pathogen impaired segments of the Boston Harbor watershed. The potential sources of bacteria listed for the Aberjona River include "illicit sewer connections" and "wildfowl". BMP's 1-5 and 3-1 through 3-7 of the Town's SWMP are designed to address both of these issues.

(4) Stressed Basins

The Massachusetts Water Resources Commissions 2001 report entitled "Stressed Basins in Massachusetts" identified the Aberjona River as a "high stress" basin. The report defined "high" stress basins as those where "net outflow equals or exceeds estimated natural August median flow". To address the low-flow concerns in the Abejrona River basin, the Town of Winchester has adopted a variety of measures aimed at increasing groundwater recharge; several of these are in addition to the BMPs outlined in the Town's original SWMP. A summary of these items is provided below:

- **BMP 5-1** requires the Town of Winchester to adopt Standards 2, 3, 4 and 7 of the Massachusetts Stormwater Management Policy to the entire Town. Standard 3 requires that "Loss of annual recharge to groundwater should be minimized through the use of infiltration measures to the maximum extent practicable. The annual recharge from the post-development site should approximate the annual recharge from the pre-development or existing site conditions based on soil type."
- Under the newly added **BMP 5-5**, the Town of Winchester developed a draft regulation that requires a no-post development runoff volume increase for new or re-development projects through the use of infiltration.
- As stated in **BMP 6-12**, the Town of Winchester completed two municipal drainage improvement projects during Permit Year 4 that incorporated provisions for the infiltration of stormwater runoff, with appropriate pretreatment, to increase groundwater recharge.
- Under the newly implemented **BMP 6-13**, the Town of Winchester has initiated a Rain Barrel Program whereby residents may purchase rain barrels for a significantly discounted rate over retail value. The Town has teamed up with The New England Rain Barrel Company, an approved DEP vendor, for implementation of this program.
- As stated in **BMP 6-14**, the Winchester Board of Selectmen recently adopted the following policy related to increased infiltration on municipal lands and in municipal projects:
    - The Town of Winchester commits to include provisions for the infiltration of rooftop runoff in all new municipal building projects or rehabilitation projects, as soil and groundwater conditions allow;
    - The Town of Winchester commits to include provisions for the infiltration of impervious surfaces, such as parking lots, in all municipal building projects, municipal parking lot projects, and recreation area improvements, as soil and groundwater conditions allow; and
    - The Town of Winchester commits to include provisions for the infiltration of stormwater runoff in all capitally-funded drainage improvement projects undertaken by the Town, as soil and groundwater conditions allow.

(5) Measurable Goals

The Town of Winchester has reviewed the measurable goals identified in its SWMP and finds that they are "measurable" and appropriate.

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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
1-1	Include an article/brochure about stormwater in the Consumer Confidence Report (CCR)	DPW	Article/brochure distributed annually to all residents and businesses	An educational write-up on stormwater management was included in Winchester's portion of the CCR distributed by the MWRA.	Article or educational material will be included in the CCR for Permit Year 5.
Revised	*Or other appropriate delivery method*				
1-2	Send information about proper disposal of lawn waste to landscape contractors in Winchester	DPW	Flyers delivered to landscape contractors	Flyers were mailed in April 2006.	Flyer will be posted on Town's website.
Revised	*Flyer will also be posted on the DPW's website*				
1-3	Staff a table a with information about stormwater at Town Day each year	DPW	Table staffed each year; number of brochures handed out	Staffed booth at Town Day held on June 3, 2006.	Prepare educational material and staff table at Town Day to be held June 2, 2007.
1-4	Offer to give a stormwater education presentation to all classes of a middle school grade.	DPW	Middle school principal contacted; presentation given if principal approves	Met with middle school principal and middle school science coordinator to discuss the development of a stormwater education program for middle school students. All parties agreed that they would develop a program to be implemented during Fall 2008. This program will build upon the educational presentation already given annually by Meg Tabacsko of the MWRA.	Implement stormwater educational program for middle school students in concert with existing public education presentation by MWRA.

1-5	Install and maintain "Do not feed the waterfowl" signs at popular feeding areas	DPW	Number of signs installed, number of signs inspected	Signs were inspected twice during Permit Year 4 (installation was completed during Permit Year 1)	Inspect signs twice during Permit Year 5.
1-6	Annual update of the Stormwater Management Plan at a televised Selectman's meeting	DPW	Annual update of the SWMP at a televised Selectman's meeting	Update on various drainage-related topics presented bi-annually at Board of Selectman's meeting. The Town's Phase II Stormwater requirements discussed at public meetings for the Town's proposed flood mitigation program and at the public hearing on the revised sewer and stormdrain regulations.	Discuss status of SMP at Board of Selectman's meeting during Year 5.

1a. Additions

1-7	Public education material on proper dog waste disposal	Board of Health	Material distributed to all residents obtaining dog licenses	The Board of Health prepared and distributed an educational flyer regarding proper disposal of dog wastes to all residents obtaining dog licenses from the Town.	Continue distribution of flyer when selling dog licenses.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
2-1	Comply with state public notification guidelines at MGL Chapter 39 Section 23B	DPW	Continue to follow	Continue to comply	Continue to comply
2-2	Give prize to a water or environment-themed artwork in the Middle School Art Fair	DPW	Student participation	Winchester students participated in the MWRA-sponsored "Water Conservation Poster Contest"	Continue participation in poster contest
Revised	*This BMP is accomplished through participation in MWRA's Water Conservation Poster Contest*				
2-3	Provide in-kind assistance to river and pond clean-ups	DPW	Letters sent to local groups offering clean-up assistance	DPW participated in clean-ups as requested by local groups, including an annual clean-up run by the local Boy Scout troops.	Participate in clean-ups as requested by local groups.
Revised			*Instead of advertising this service through letters, the Town has posted this service on its Website*		

2a. Additions

	None.				

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
3-1	Conduct dry weather outfall screening	DPW	Percent of outfalls screened	Prepared RFP for dry weather screening program.	Award contract and conduct dry-weather screening during late summer 2007. This program will re-screen stormwater outfalls identified and screened in 2002.
3-2	Map stormwater outfalls and receiving waters	DPW	Map created	Map created during Permit Year 1. Updates performed as needed.	Update map as needed.
3-3	Map the stormwater collection system in a GIS	DPW	GIS of stormwater system created	None required. Map completed during Permit Year 3.	Update map as needed.
3-4	Develop and implement a plan to identify and remove non-stormwater discharges to the MS4.	DPW	Number of illicit connections found and removed	No action scheduled. One illicit connection was identified as a result of dry-weather screening. This connection was removed during Fall 2002.	Remove additional illicit connections as identified.
3-5	Develop a Water and Sewer Regulation to allow Town inspectors into a building to check for illicit connections to the stormdrain.	Town Engineer and Town Attorney	Draft regulation developed and presented to the Board of Selectman	Regulation adopted by the Board of Selectmen on April 23, 2007 as part of the revised "Rules and Regulations Regarding the Use of Public Sewers and Stormdrains in the Town of Winchester, Massachusetts".	Implement adopted regulation.
3-6	Develop a Water and Sewer Regulation to make it illegal to improperly connect a sanitary sewer to the stormdrain system and to dump pollutants into them.	Town Attorney	Draft regulation developed and presented to the Board of Selectman	Regulation adopted by the Board of Selectmen on April 9, 2007 as part of the revised "Rules and Regulations Regarding the Use of Public Sewers and Stormdrains in the Town of Winchester, Massachusetts".	Implement adopted regulation.

3-7	Develop a Water and Sewer Regulation to require inspection of new construction for correct connection to the sanitary sewer	Town Attorney	Draft regulation developed and presented to the Board of Selectman	Regulation adopted by the Board of Selectmen on April 9, 2007 as part of the revised "Rules and Regulations Regarding the Use of Public Sewers and Stormdrains in the Town of Winchester, Massachusetts".	Implement adopted regulation.

3a. Additions

	None.				

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
4-1	Require Erosion and Sediment Control Plan (ESCP) for construction sites greater than one-acre in area	Town Engineer	Requirement of an ESCP included in the Engineering Department Construction Standards	All subdivisions reviewed by the Engineering Department were required to provide an ESCP, regardless of size. The Planning Board is currently undertaking a comprehensive review of its subdivision rules and regulations. The requirement for an ESCP will be included in the draft of the revised document, expected in summer 2007.	Complete development of revised subdivision regulations, which will require an ESCP for sites of any size.
Revised	*The Planning Board is currently undertaking a review of its subdivision rules and regulations. The ESCP requirement will be included in the revised regulations.*				
4-2	Require a waste management plan at construction sites larger than one-acre	Town Engineer	Waste management plan for each construction site larger than one-acre	All subdivisions approved during Permit Year 4 disturbed less than one-acre of land.	Continue to require waste management plans on sites that disturb more than one acre.
4-3	Continue to review site plans for stormwater impacts	Town Engineer	Percent of site plans reviewed for stormwater impacts	All projects subject to site plan review or subdivision approval were reviewed for stormwater impacts by the Engineering Department.	Continue to review proposed development projects for stormwater impacts.
4-4	Hold a public hearing for each new construction project that disturbs more than one acre of land	Planning Board	Public hearing held for each construction project	Public hearings were held for all definitive subdivision plans and special permit/site plan review projects filed with the Town, regardless of size.	Continue to hold public hearings
4-5	Inspect and enforce erosion and sediment controls.	Town Inspector	Number of inspections conducted.	All major construction projects were inspected for adequate erosion and sediment controls.	Continue to conduct inspections.

4a. Additions

	None.				

5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
5-1	Develop a draft Water and Sewer Regulation to apply Standards 2, 3, 4, and 7 of the Massachusetts Stormwater Policy to the entire Town. Present the regulation to the Board of Selectman.	Town Attorney	Draft regulation developed and presented to the Board of Selectman.	Regulation adopted by the Board of Selectmen on April 9, 2007 as part of the revised "Rules and Regulations Regarding the Use of Public Sewers and Stormdrains in the Town of Winchester, Massachusetts".	Implement adopted regulation.
5-2	Specify a stormwater BMP manual to be used for consistent design and performance standards.	Engineering Department	BMP manual selected	No activity scheduled. During Permit Year 1, the Town selected "Stormwater Management, Volume Two: Stormwater Technical Handbook", dated March 1997 and published by MADEP	None.
5-3	Develop a draft Water and Sewer Regulation that ensures long-term maintenance of structural BMPs	Town Attorney	Draft regulation developed and presented to Board of Selectman.	Regulation adopted by the Board of Selectmen on April 9, 2007 as part of the revised "Rules and Regulations Regarding the Use of Public Sewers and Stormdrains in the Town of Winchester, Massachusetts".	Implement adopted regulation.
5-4	Continue to allow conservation restrictions on private land.	Planning Board and Conservation Commission	Policy already developed; number acres protected per year	Continued to allow conservation restrictions	Continue to allow conservation restrictions

5a. Additions

5-5	Runoff Volume Control Standard	Engineering Dept	Draft regulation developed and presented to the Board of Selectmen	Regulation adopted by the Board of Selectmen on April 9, 2007 as part of the revised "Rules and Regulations Regarding the Use of Public Sewers and Stormdrains in the Town of Winchester, Massachusetts".	Implement adopted regulation.

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
6-1	Continue employee training program	DPW	Number/percent of DPW employees who receive stormwater training each year	Continued stormwater training program. Typical training included proper jetting of stormdrains and proper orientation of catchbasin cleaning equipment	Continue stormwater training program
6-2	Identify sensitive receptors (such as wetlands, beaches, etc.) within the Town	DPW	List of sensitive receptors developed, staff notified	No action scheduled. List developed and staff notified in Permit Year 1.	Continue notification of employees regarding the list of sensitive receptors.
6-3	Conduct street and parking lot sweeping	DPW	All streets swept in spring; all streets swept at least one other time per year; municipally-owned parking lots swept in spring	Swept streets and parking lots in accordance with revised permit requirements.	Continue to sweep streets and parking lots at least once per year
Revised	*This BMP is being modified to take account of budgetary constraints*		*Streets will be swept a second time per year on an as-needed basis*		
6-4	Calibrate salt spreaders and monitor industry "smart salting" standards	DPW	Amount of deicers used.	Calibrated spreaders for winter season. Monitored salting standards during winter 2006 to 2007.	Continue best management practices during winter 2007 to 2008
6-5	Clean all catchbasins at least once every five years and clean drain pipes as necessary	DPW	Number of catchbasins cleaned annually	Cleaned 20% or more of the Town's catchbasins during Permit Year 4.	Continue catchbasin cleaning program with goal of cleaning all basins within a 5-year period.
6-6	Train staff in the proper application of herbicides, pesticides, and fertilizers	DPW	Training conducted; amount of herbicides/fertilizers used	Completed annual training. All staff associated with such chemical applications are licensed.	Continue staff training and licensing

6-7	Hold Annual Household Hazardous Waste Drop-off Day	Board of Health	At least one household hazardous waste drop-off day held per year	Held Hazardous Waste Drop-off Day on May 13, 2006.	Annual Hazardous Waste Drop-off Day scheduled for May 12, 2007.
6-8	Continue proper snow removal	DPW	Continue existing practices.	Disposed of snow properly	Dispose of snow properly
6-9	Develop and implement a plan for catchbasin and street sweeping residual disposal	DPW	Plan developed; training held	The Town developed and implemented a disposal plan for all residual materials collected as a result of catchbasin cleaning and street sweeping activities. Materials are temporarily stockpiled in the DPW yard and then transported by a private contractor to an approved landfill for disposal. Thermostats, thermometers, and other mercury products are also collected at the Town Transfer Station.	Continue disposal program and reevaluate as appropriate.
6-10	Evaluate the Town Yard and Transfer Station for stormwater good housekeeping practices	DPW	Assessment conducted twice per year	Continued implementation of recommendations and conducted bi-annual inspections	Continue implementation of recommendations and conduct bi-annual inspections
Revised	*The Town conducted an assessment of these two properties and will follow-up the assessment with twice-yearly inspections*				

6a. Additions

6-11	Free mercury thermometer replacement	Board of Health	Number of thermometers replaced	The Board of Health has a partnership with a waste management company to replace old mercury thermometers turned in by residents with new thermometers for free. The goal of this program is to remove mercury from the waste stream.	Continue replacement program as allowed by financial resources.

6-12	Municipal Infiltration Projects	DPW, Engineering Dept.	Use of infiltration systems with appropriate site conditions and pretreatment	The Town completed two municipal drainage improvement projects during 2006 that included the installation of infiltration systems (with adequate pretreatment).	Consider use of infiltration projects in other Town drainage improvement projects based on site constraints and financial viability.
6-13	Residential Rain Barrel Program	Engineering Dept.	Number of Rain Barrels Sold	The Town has initiated a program designed sell rain barrels to residents at a discounted rate over retail value. The Town is working with the New England Rain Barrel Company (NERBC) in administering this program.	All orders must be placed with NERBC by June 6, 2007. Residents will be able to pick up their orders at the Town Transfer Station on June 14, 2007. A portion of Permit Year 5 will also be dedicated to setting up the program for 2008.
6-14	Infiltration Policy for Municipal Projects	Board of Selectmen	Adoption of new policy	In February 2007, the Board of Selectmen endorsed a policy committing to the inclusion of infiltration provisions in municipal building projects and capitally-funded drainage improvement projects, where possible.	Implementation of adopted policy.