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**Annual Storm Water Report
For Calendar Year 2008
For
Portsmouth, New Hampshire
EPA NPDES Permit Number: NHR041027**



Submitted: May 1, 2009

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Part I. General Information

Contact Person: Silke Psula Title: Solid Waste Coordinator

Telephone #: 603-766-1454 Email: spsula@cityofportsmouth.com

Certification:

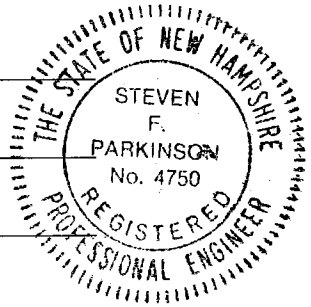
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage 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: Steven F. Parkinson, P.E.

Title: Public Works Director

Date: 4/30/09



Part II. Self Assessment

The City of Portsmouth has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions, with the possible exception of the following provisions:

- Part I. C.
 1. The permittee must determine whether storm water discharges from any part of the MS4 contribute, either directly or indirectly, to a 303(d) listed water body.
 2. The storm water management program must include a section describing how the program will control the discharge of the pollutants of concern and ensure that the discharges will not cause an instream exceedance of the water quality standards. This discussion must specifically identify control measures and BMPs that will collectively control the discharge of the pollutant(s) of concern. Pollutant(s) of concern refer to the pollutant identified as causing the impairment.

- Part I. D.
 1. Determine whether the approved TMDL is for a pollutant likely to be found in storm water discharges from the MS4.

2. Determine whether the TMDL includes a pollutant waste load allocation (WLA), BMP recommendations or other performance requirements for storm water discharges. This storm water WLA may be expressed in the TMDL as a gross allotment for the impaired water body.

The City remains committed to resolving whether these conditions have been met and believes that critical data is needed which would, among other things, help establish whether certain water bodies are in fact impaired and if so for which pollutants.

2008 ANNUAL REPORT
BEST MANAGEMENT PRACTICES OBJECTIVES & STATUS REPORT

1. PUBLIC EDUCATION AND OUTREACH

The Permittee must implement a public education program to distribute educational material to the community. The permittee must provide information concerning the impact of storm water discharges on water bodies. It must address steps and actions the public can take to reduce the pollutants in storm water runoff.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year
<p>1.A. Develop and distribute/post a minimum of 2,000 impressions via print, local TV, local radio or other appropriate media during the life of the permit.</p> <p>DPW</p>	<p>Storm Water information on the web. # of hits.</p>	<p>4,698 visits were registered on the storm water website.</p>	<p>Continue to update storm water website, educate public on City initiatives, regulations and information resources and will find useful.</p>
	<p>Produce education material for distribution. # of pamphlets.</p>	<p>Distribute <i>The Solution to Storm Water Pollution</i> pamphlets at HHW Collection events and other appropriate events. HHW Collection held May '08 & October '08. A total of 609 cars attended the events and received a pamphlet.</p> <p>These pamphlets are also in the reception area of DPW.</p>	<p>Continue to distribute storm water prevention pamphlets at HHW Collection events.</p>
		<p>200 brochures produced by the Water Environment Federation regarding fat-free sewers distributed out of City Hall and by the Health Dept.</p>	
		<p>50 signs posted throughout the City advising dog owners to pick up their pet's waste.</p>	<p>Continue to have signs posted and replace damaged signs due to weather.</p>
		<p>A storm water educational "sound - bite" was included in e-newsletter in June 11, 2008. Distribution list includes 1,500 email addresses.</p>	<p>Continue to include storm water information in newsletter and web.</p>

* Permit issued for 5 years. 2007 was the first year of the 2008 permit requirements no longer apply. The City continues to operate under the provisions of the 2007 permit.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2009*
1.B. Educate local residents participating in local government; groups; organizations. DPW	# of public events storm water issues are presented and # of attendees.	Public Works had a booth at the April 19, 2008 Sustainability Fair, educating on sustainable issues to include stormwater pollution prevention. June 2008 DPW and Water Guardians of NH set up a booth at the Market Square Day event providing demonstrations and other educational information regarding storm water, ground water and recycling. 80,000 people in attendance at the event, including the road race and festival activities.	Continue to make presentations as opportunities present.
		Article in Foster's Daily Democrat August 22, 2008, <i>A better use for used cooking oil, grease - City officials urge residents to recycle.</i> April 17, 2008, DPW gave a public forum presentation attended by an estimate of 75 residents of Portsmouth and City Council members. Topic was with regard to Master Plan Implementation Annual Update, which included a large component explaining storm water, protection of wetlands and zoning issues. This presentation was also video taped and posted on the City's web site.	
	Quarterly reports to City Council regarding "Interim Measures" of the waste water master plan, which includes storm water quality issues.		Continue updates to City Council WRT "Interim Measures"

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2009*
<p>1. C. Educate the general public and public school children about the storm water / sewer system, so that they understand the City water management systems and pollution issues</p> <p>DPW</p>	<p># of presentation and # of attendees.</p>	<p>DPW employee presented at Dondero Elementary School, during Science day (April 24) regarding sustainability, recycling and storm water pollution prevention. 2 presentations given to a total of 35 students.</p> <p>Life Wise/Water Guardian presentation given:</p> <p>Pierce Island Pier 4X (each Wednesday of the month of July and first Wednesday in August) to summer camp students at the Seacoast Y – approximately 150 students attended.</p>	
<p>1.D. Collaborate with public and private entities to maximize efforts of reducing contaminants from Portsmouth waterways.</p> <p>City Hall</p>	<p># of initiatives the City leads, supports, is involved with, or has an employee acting as a representative on a committee ensuring the inclusion/addressing of storm water issues.</p>	<p>Coordinated effort between the City and the Blue Ocean Society to clean litter on Pierce Island. 12X, throughout 2008, volunteers organized and took part in cleaning debris on Pierce Island.</p> <p>Citizens roadside clean-up, April 24, 2008 at Elwyn Rd and Lafayette Rd.</p>	<p>Continue assisting in clean-up activities @ key locations throughout the City.</p>

2. PUBLIC INVOLVEMENT AND PARTICIPATION

The Permittee must provide opportunity for the public to participate in the development, implementation and reviews of storm water management program(s).

BMP / ID	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2009*
<p>2.A. The City will involve stakeholder groups, including local governments, businesses, and citizens in making decisions about storm water management priorities and programs throughout the City.</p>	<p>Annual presentation to City Council on storm water issues. Presentations will be made during official meetings, which are open to public attendance and televised on the gov. TV.</p>	<p>Presentation given December 15, 2008. Staff recommendations given for Stormwater Pollution Prevention.</p>	<p>Incorporate recommendations into State Street CSO project, to include:</p> <ul style="list-style-type: none"> • Tree well bio-retention; • Sand filter treating stormwater events up to ¾" of rain fall for entire project area <p>Determine pollutant load reduction.</p>
<p>City Hall/DPW</p>	<p>Collaborate with public and private entities to increase awareness, as well as improve on design and implementation of storm water treatment issues related to building and site development design and construction throughout the City.</p>	<p>DPW and City Hall staff are trained and familiar with storm water issues. 4 DPW employees and 2 City Hall employees are representatives on the Technical Advisory Committee (TAC). TAC is responsible to review plans and make recommendations to the Planning Board; recommendations include appropriate storm water features. TAC met 12 times in 2008.</p> <p>August 25, 2008 the City in collaboration with Blue Ocean Society for Marine Conservation arranged for a monofilament fishing line recycling bin at Peirce Island boat launch.</p>	<p>TAC to meet once a month and continue to incorporate stormwater pollution prevention recommendations to the Board when reviewing plans.</p>

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2009*
<p>2.A. The City will involve stakeholder groups, including local governments, businesses, and citizens in making decisions about storm water management priorities and programs throughout the City.</p> <p>City Hall/DPW</p>	<p>Collaborate with public and private entities to increase awareness, as well as improve on design and implementation of storm water treatment issues related to building and site development design and construction throughout the City.</p> <p>Develop the storm-water pollution prevention programs and City ordinance</p>	<p>The City submitted comments to the EPA with regard to the next 5-year MS4 Permit (2008) with the intent of establishing good working relationships and practical BMPs toward significant reduction of stormwater pollution.</p> <p>City rep coordinated with other Seacoast Stormwater Coalition, submitted comments to the EPA with regard to the next 5-year MS4 Permit (2008) with the intent of maintaining good working relationships and ensuring practical BMPs toward significant reduction of stormwater pollution.</p> <p>April & May 2008, City rep participated in APWA Stormwater Certification Job Analysis Conference.</p> <p>April 30, 2008, in collaboration with DES, EPA, UNH and W&S/BC Staff established Interim Measures. Identified opportunities and measures for stormwater mitigation and BMPs.</p>	

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2009*
<p>2.A. The City will involve stakeholder groups, including local governments, businesses, and citizens in making decisions about storm water management priorities and programs throughout the City.</p> <p>City Hall/DPW</p>	<p>The Technical Advisory Committee (TAC) review and approval of NOIs from private contractors.</p> <p>Reduce the total bacteria loads from the MS4 to Little Harbor by 5%</p>	<p>The City has procured a web based asset management software program (ViewWorks) that contains a storm water module to track administration of NOIs. 10 employees trained in program. Software on-line summer '08.</p> <p>NHDES conducted a TMDL study for bacteria in Little Harbor. Report published August 2006.</p> <p>The City began and completed a sewer system project in the Pleasant Point area. The project involved both City and cooperative funding from benefiting parties. The City installed a low pressure sewer system to provide public sewer on Pleasant Pt Rd in lieu of subsurface systems, some of which have failed. To date 13 properties have been connected to the City's sewer line.</p> <p>Money has been budgeted for a low pressure sewer system, replacing failed septic sewer systems on Sagamore Ave in the FY '08 Capital Plan (July '07 – June '08).</p> <p>RFP issued and contract awarded to Wright, Pierce June '08.</p> <p>(Identified induced growth issues.) Design efforts continue. Project identified for budget. Authorization for funding is pending.</p>	<p>Upgrade software and continue to incorporate asset info into the program and integrating into management practices.</p> <p>Zoning ordinance to be modified to ensure induced growth does not occur in an area that has been identified as environmentally sensitive.</p> <p>Secure funding authorization.</p>

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2009*
<p>2.B. Maximize resources and effectiveness, and coordinate with neighboring communities occupying the same watershed for appropriate and feasible education and out reach.</p> <p>City Hall / DPW</p>	<p># of meetings and/or coordinated efforts with the Storm Water Coalition and/or other organizations.</p>	<p>The City has designated a representative to sit on the Seacoast Storm Water Coalition. The Coalition meets quarterly throughout the year.</p> <p>City of Portsmouth employee and Town of Exeter employee attended EPA Stormwater Monitoring Meeting update January 2008.</p>	<p>On-going meetings and attendance.</p> <p>Attend working groups and meetings as scheduled to ensure for best possible program and practical application.</p>

3. ILLICIT DISCHARGE DETECTION AND ELIMINATION

The Permittee must develop, implement and enforce a program to detect and eliminate illicit discharges.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2009*
<p>3. A. Develop a comprehensive map of the storm drain system.</p> <p>DPW</p>	<p>Percentage of Storm-water system mapped.</p>	<p>Storm-water map/model completed December 2003. Model includes streams, 109 miles of drainage pipe, 105 outfalls, 4,700 catch basins, horizontal location of pipe system and catch basins.</p> <p>Elevations, flow direction, pipe size, material condition and verify land drainage data obtained from contractor May 2007.</p> <p>City acquired a camera truck (to inspect sewer and storm water lines). In 2008 54,995.9 linear ft of sewer line inspected and video taped. Data WRT pipe type, length, manhole numbers, etc. continually being updated to reflect accurately what is in the field.</p>	<p>City inspecting sewer and storm water lines; updates, as appropriate, will be made to map system as areas are inspected.</p> <p>Inspect minimum 20,000 linear ft of sewer line; inspect minimum 300 linear ft of stormdrain lines.</p> <p>Focus inspection in Hodgson Brook and Elwyn Park area.</p>

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2009*
<p>3. B. Identify any illicit discharges and eliminate.</p> <p>DPW</p>	<p>Number of illicit discharges detected and/or eliminated.</p>	<p>Investigated and resolved IDDE complaint:</p> <p>1) Feb '08 Jet rod drain line after sewer infiltration; video inspect sewer main.</p> <p>2) April '08 Inspected Dennett / Maplewood area - specifically dealing with Fats, Oils & Grease (FOG) and Inflow and infiltration (INI).</p> <p>54,995.9 linear ft of sewer line inspected and video taped. Everything surveyed was cleaned.</p> <p>Conduct IDDE survey in Hodgson Brook Watershed.</p> <p>Jan and Feb '07, inspected and televised Panaway Manor area. Inspected, televised and cleaned Coakley Rd –repair made to broken, leaking section of pipe.</p> <p>April/May '07, replaced 2,000 linear feet of sewer line on Borthwick Ave – subsequently cleaned and televised again.</p>	<p>Continue to follow up investigations and enforcement of complaint phone calls and routine patrols.</p> <p>Inspect minimum 20,000 linear ft of sewer line; inspect minimum 300 linear ft of stormdrain lines. Focus inspection in Hodgson Brook and Elwyn Park area.</p> <p>Continue to inspect sanitary and storm sewers. In the course of inspections and identifying ID, work orders and/or projects will be under taken to implement corrective action/remove ID.</p>

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2009*
<p>3. B. Identify any illicit discharges and eliminate. DPW</p>	<p>Create standard operating procedures for the detection of non-storm-water discharges.</p>	<p>Developed SOPs for detection and elimination via the Seacoast Coalition grant project. City obtained grant money through Seacoast Coalition to develop SOPs.</p> <p>A Manual was created and approved by the State and produced in November 2006. The Manual is also available on the web at www.des.state.nh.us/stormwater/NH_IDD_E_SOP.pdf</p> <p>Between May 2007 and October 2007, 220 employees were trained in good housekeeping and IDDE. Collectively this has a positive effect in 18 communities throughout the seacoast area.</p>	
<p>3.C. Establish legal authority for enforcement actions. City Hall</p>	<p>The City to adopt a storm water ordinance that provides enforcement mechanisms and penalties to halt illegal discharges.</p>	<p>Ordinance passed Oct 15, 2007.</p> <p>Reviewed and updated as appropriate Site Review Regulations and Zoning Ordinance to include other aspects of storm water pollution prevention at construction and post construction sites.</p>	<p>Adoption of modified Site Review Regs and Zoning ordinance July '09</p>

4. CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

The Permittee must develop, implement and enforce a program to reduce pollutants in any storm water runoff to the MS4 from construction activities that result in a land disturbance greater than or equal to 1 acre.

BMP / ID	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2009*
<p>4.A. Establish a set of minimum erosion and sediment control (ESC) requirements for construction sites.</p> <p>City Hall / DPW</p>	<p>Require ESC plans for any land disturbance greater than 5,000 square feet.</p> <p>Site Review procedures to include storm water pollution prevention activities. All procedures at the Planning dept to involve storm water activities site review on any level.</p> <p>Create AutoCAD files, which will detail the standards for erosion control.</p>	<p>Storm Water Master Plan was completed May 2007. Task 4 of the Plan included recommendations to the Zoning and Site Review City Regulations to include aspects of Storm Water Pollution Prevention for the construction and post construction site requirements. The Site Review Regs are built upon the Zoning ord., which was reviewed throughout '08. The Planning Board and Planning Dept. will complete review of Zoning ord.</p> <p>AutoCAD files 35% complete</p>	<p>Final adoption of updated regs will be completed after adoption of updated Zoning ord. July '09.</p> <p>Continue work on developing AutoCAD files.</p>

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2009*
<p>4.A. Establish a set of minimum erosion and sediment control (ESC) requirements for construction sites.</p> <p>City Hall / DPW</p>	<p>Enforce new ordinance.</p>	<p>The Site Review regs, which are built upon the Zoning ord., address storm water pollution prevention at construction sites. Both Site review regs and zoning ordinance are under review.</p> <p>In the meantime, at TAC meetings, the City may require an independent consulting engineer to inspect construction sites during a project. "Deemed necessary" is based upon the complexity, size of project and other variables discussed during the TAC meeting.</p>	<p>Final adoption of updated regs will be completed after adoption of updated Zoning ord. July '09.</p>

5. POST-CONSTRUCTION RUNOFF CONTROL

The Permittee must develop, implement and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than 1 acre and discharge into the municipal system.

BMP / ID	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2009*
<p>5. A. Improve the quality of storm water runoff by disconnecting impervious surfaces and installing and maintaining structural storm water controls.</p>	<p># of structural controls installed.</p>	<p>Since the inception of the Storm Water Phase II permitting the City has installed a total of 5 stormwater treatment devices. In 2007 they were inspected 2 times each. They contained some debris and floatables. They were cleaned of floating debris on top but sediment was not removed—as per parameters described in the maintenance manual.</p> <p>Intent was to install a stormwater treatment device on Bartlett St in 2007. Total design, construction and installation cost \$86,178.22. Project is moving forward, pending announcement of easement rights to property.</p>	<p>Continue inspection, maintenance and cleaning of the units.</p> <p>Complete imminent domain hearing; commence project May '09.</p>
<p>DPW</p>	<p># of conventional BMPs, such as swales and retention ponds, low impact development (LID) designs and manufactured BMPs such as filtration and infiltration units and hydrodynamic separators.</p>	<p>City held Public Necessity Hearing and initiated imminent domain proceedings.</p> <p>Rt 33 project in design completed in '07. Construction begun in '08.</p>	<p>Two year project, anticipate completion end of '09.</p>

6. GOOD HOUSEKEEPING

The Permittee must develop and implement a program with a goal of preventing and/or reducing pollutant runoff from municipal operations. The program must include an employee training component, including, at a minimum, maintenance activities for parks and open space, fleet and building maintenance, new construction roadway drainage and storm water system maintenance. During the implementation of the storm water management program, the Permittee must address recharge and infiltration for the minimum control measures as well as reasons for not implementing.

BMP / ID	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2009*
<p>6. A. Reduce the amount of nutrients and sediments entering receiving waters through education of municipal employees about spill prevention and control, vehicle washing, lawn activities, etc.</p> <p>DPW</p>	<p># of in-house training sessions held and number of attendees.</p>	<p>February 12, 2008 employee / departmental summary review of UNH Stormwater Center's 2007 Annual Report.</p>	
<p>6. B. Reduce the amount of nutrients and sediments entering receiving waters through mechanical and operational means.</p>	<p>Storm/Sanitary Sewer Separation Quantify separation of sewers.</p>	<p>Miller Ave sewer separation project – no progress in '07. Design and proposals for Miller Ave sewer separation went out '08. Design work continues. Bartlett St. intersection sewer separation designed. Intent was to install a stormwater treatment device on Bartlett St in 2007. Total design, construction and installation cost \$86,178.22. Project is moving forward, pending announcement of easement rights to property. City held Public Necessity Hearing and initiated imminent domain proceedings.</p>	<p>Bid project in Fall '09 Complete imminent domain hearing; commence project May '09.</p>

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2009*
6. B. Reduce the amount of nutrients and sediments entering receiving waters through mechanical and operational means.	Upgrades to Sewage Pump Stations	<p>Increased pumping and treatment of sewage Improvements include:</p> <ul style="list-style-type: none"> ♦ Rye line pump station design completed. Construction began Aug '08 ♦ Mechanic St pump station control up grades to improve reliability. Bid and awarded project in '07. Construction began and completed Sept '08 	<ul style="list-style-type: none"> ♦ Rye line construction anticipate completion in July '09
City to identify critical catch basins and frequency for cleaning.	City to identify critical catch basins and frequency for cleaning.	<p>A new/second Vactor truck was purchased - 3X per month an employee with the vac truck dispatched to critical areas to clean/repair catch basins.</p> <p>Jan '08 emergency main repair April '08 Basins on Peverly Hill Rd repaired</p>	Based on field observations and conditions of the storm water system a list of identified critical basins for regular cleaning will be developed and every basin will be cleaned within a 5-year cycle.
Miles of City streets swept.	Miles of City streets swept.	<p>Daily street sweeping of areas identified as significant litter/pollution areas. 6 days /week street sweeping of the business/tourist district commencing in the Spring through the Fall.</p> <p>Once a year, after Winter ops concluded, the following identified neighborhoods are swept: Maplehaven, South end, Jones Ave, Denny St., Middle St., Borthwick Ave, Woodbury Ave, Panaway Area, the Heights, Essex Ave area, Elwyn Park.</p>	Continue street sweeping.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s) Permit Year 5	Planned Activity for calendar year 2009*
6. B. Reduce the amount of nutrients and sediments entering receiving waters through mechanical and operational means.	Implement BMPs at snow disposal collection site.	<p>Winter 2004/2005 a site was designated for temporary storage of snow pursuant to the snow removal ops. The area is enclosed with silt fence; disposed snow is stored at least 25' from high water mark; debris in snow storage area to be cleared prior to snow storage; all subsequent debris accumulated in snow storage area cleaned from site and properly disposed of no later than May 15th.</p> <p>There are no wells at the snow storage collection site.</p>	Continue maintaining the site and using for snow disposal.
	City to incorporate storm water treatment units in long term control plan/separation project.	<p>Design of Bartlett Street project complete. Design included storm water treatment unit and deep sump catch basins. Total design, construction and installation cost \$86,178.22. Easement rights need to be procured in order to move forward with the project. A portion of easement rights have been obtained. Project is moving forward, pending announcement of remaining easement rights to property.</p> <p>City held Public Necessity Hearing and initiated imminent domain proceedings.</p>	Complete imminent domain hearing; commence project May '09.
	Number of activities the DPW coordinates or conducts to clean up public lands of debris around sensitive watersheds.	<p>Coordinated effort between the City and the Blue Ocean Society to clean litter on Pierce Island. Once a month, throughout the year, volunteers organized and took part in cleaning debris on Pierce Island. Specific items of waste were categorized and a substantial amount of litter was removed from the area and kept out of City storm drains and open water bodies.</p>	Continue to support initiatives.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2009*
<p>6. C. Reduce the amount of hazardous waste being disposed of inappropriately through programs/services, education of municipal employees and local residents.</p>	<p>i. The number of household hazardous waste collection events and the volume (i.e gallons) of household hazardous waste disposed (in accord with hazardous waste regs and diverted from the landfill).</p>	<p>Events held May '08 & October '08 – a total of 609 cars attended the events and over 15,000 gals of hazwaste collected.</p>	<p>Two Household Hazardous Waste Collections scheduled for 2009.</p>