

Municipality/Organization: Town of Eastham, MA
EPA NPDES Permit Number: MAR041110
MassDEP Transmittal Number: W- 040891
Annual Report Number & Reporting Period: Year 9
April 1, 2011 – March 31, 2012

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2012)

Part I. General Information

Contact Person: Jane Crowley Title: Health Agent
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Mailing Address: 2500 State Highway, Eastham, MA 02642

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: Sheila Vanderhoef
Printed Name: Sheila Vanderhoef
Title: Town Administrator
Date: April 11, 2012

Part II. Self-Assessment

The Town of Eastham has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions.

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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1.1 Revised	Educational Brochures New brochures educate the public about proper disposal of medical waste and prescription medication New unwanted and unused medical waste drop off box available to the public	DPW, Health Health, Police	Development of Brochures Proper disposal of prescription and non prescription drugs	Updated brochures; disseminated brochures concerning hazardous waste disposal days. Continued to coordinate with Cape Cod Commission on informational campaign. Drug Drop Box located in Police Department available 24/7 to remove medication from waste stream.	Continue to update educational brochures as new information arises; provide information on hazardous waste disposal days. Continue efforts to educate the public about proper disposal of unwanted medical waste.
1.2 Revised	Mailings to Homeowners http://www.eastham-ma.gov/Public_Documents/EasthamMA_Health/index septic pumping brochure	Health	Distribution of Brochures	Homeowner mailings regarding importance of septic system maintenance.	Continue annually. 3,073 mailings have been sent in 2012 to homeowners who have not pumped septic system in 3 or more years
1.3	Mailing to all Property Owners	Health	Distribution of Brochures and educational presentation on wastewater management	Homeowner mailings regarding importance of wastewater management plan including storm water.	Air local wastewater presentation and educational video on local cable and website video on demand
1.4	Coastal/Pond Clean-up	ConCom, DPW	Conducting Clean-up	Private owners clean pond areas and test	DPW continues to clean up as necessary. Possible expansion

Revised			Availability of Brochures	Brochures with local contact information corresponding with 1.1 displayed in NR, DPW, and Town Hall. Distribute educational materials from Cape Cod Water Protection Collaborative or Massachusetts Estuaries Project. Updated brochures; disseminated brochures concerning hazardous waste disposal days. Continued to coordinate with Cape Cod Commission on informational campaign.	Continue to update brochures and informational/educational brochures in Year 9, including information on fertilizers and other potential contaminants. Review grant-funded Pleasant Bay Watershed Management Plan for cross-applicability. Continue strategies to reduce TMDLs as required in Draft Mass Estuaries Report for Rock Harbor. Final reports on TMDL for Nauset expected 2012. Continue to update educational materials as new information arises; provide information on hazardous waste disposal days.
1.5	Office Brochure	NR, DPW, Planning	Availability of Brochures	Brochures with local contact information corresponding with 1.1 displayed in NR, DPW, and Town Hall. Distribute educational materials from Cape Cod Water Protection Collaborative or Massachusetts Estuaries Project. Updated brochures; disseminated brochures concerning hazardous waste disposal days. Continued to coordinate with Cape Cod Commission on informational campaign.	Continue to update brochures and informational/educational brochures in Year 9, including information on fertilizers and other potential contaminants. Review grant-funded Pleasant Bay Watershed Management Plan for cross-applicability. Continue strategies to reduce TMDLs as required in Draft Mass Estuaries Report for Rock Harbor. Final reports on TMDL for Nauset expected 2012. Continue to update educational materials as new information arises; provide information on hazardous waste disposal days.
Revised					

1a. Additions

1.6	Post information on Countywide Rain Barrel Distribution Program http://www.eastham-ma.gov/Public_Documents/EasthamMA_Planning/rainflyer10.pdf	DPW, NR, Planning	Availability of rain barrels	Disseminate information from the Cape Cod Groundwater Guardian Team	Continue indefinitely
1.7	Beach Signage	Health	Development of Signage	Inspect condition of signage at every marine & freshwater beach to enforce compliance with state beach regulations, noting contact info, testing data and periods of testing	Continue indefinitely. 2 new beach signage sites Salt Pond and Jemima Pond installed 2011 to be monitored for bathing water quality in 2012

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
2.1	Stormwater Management Program	NR, DPW, ConCom, Planning, Health, WMC	Development of Program, including prioritization of sites	Program has been developed and sites have been identified. Catchbasins and discharge pipes have been mapped in GIS database, based on paper maps. http://www.eastham-ma.gov/Public_Documents/EasthamMA_Planning/NPDES/Maps/	Contact Mass State Highway about stormwater drainage into Salt Pond and Minister Pond in attempt to mitigate impact to ponds and develop best management practices.
Revised	<i>Map updated September 2009; Priority outfall maps prepared and posted</i>			Obtaining quotes for GPS equipment	
2.2	Pollution Reporting	NR, DPW, Pond Stewards	Visual Monitoring / Recording	Continue routine monitoring of marine areas conducted by NR staff 5 times per week, daily monitoring of drainage system/road network by DPW, and monitoring of fresh surface waters by Eastham Pond Stewards. Monitoring capabilities augmented for summer months in Rock Harbor (marina) by seasonal employee. NR monitoring of Town Cove bacteria levels with MA Division of Marine Fisheries.	Continue with monitoring as described; receive report from Cape Cod Commission's monitoring efforts for action. Pond Report implementation strategies reviewed. http://www.barnstablecountyhealth.org/bseastham.htm
Revised					

2a. Additions

2.3	Volunteer Corp "HOGS & FROGS" Helping Out Growing Shellfish & Friends Revitalizing Our Green Spaces	NR		Development of Program	Program ended due to staffing	Consider staffing with Americorp or Seniorcorp http://www.eastham-ma.gov/Public_Documents/EasthamMA_Resources/Volunteers
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2.4	Pond Associations	NR, Health	Conduct outreach for Pond Remediation Project Planning	2 Private pond associations formed to support Pond issues. Work to educate and gain support for pond remediation and continue to encourage best management practices	Continue indefinitely. Bi annual Association Meeting Planned to update developments on best management practices and pond remediation strategies.
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3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
3.1 Revised	Map Outfalls	NR, DPW	Comprehensive Map GIS/GPS	Program has been developed and sites have been identified.	Continue to Refine and enhance source point/waterways map.
3.2 Revised	Detection of Non-Stormwater Discharge	NR, Health	Correction of Discharges	Continue to identify no stormwater discharges and remedy situations as they arise, depending on the source of the discharge	Continue project indefinitely. Update map as needed
3.3 Revised	Dry Weather Flow Screening	NR, Health	Screening Testing; Correction of Discharges	Incorporate dry weather flow screening into the routine monitoring of marine areas conducted by NR staff 5x per week spring through fall.	Continue project indefinitely.
3.4 Revised	Reporting Line <i>A team is assembled when an illicit discharge is confirmed (DPW, Health, Fire, Building Inspector)</i>	NR, DPW, Fire	Establishment of Line	Line established and maintained for NR and DPW to report any inappropriate inputs to the MS4. Reports involving oil or hazardous waste is reported to the Fire Dept, and MA DEP.	Illicit Discharge and Detection Hotline established. http://www.eastham-ma.gov/Public_Documents/EasthamMA_BBboard/1022B6F80
3.5 Revised	Hazardous Product Collection Medical Waste Disposal Day	Health, DPW, Recycling Health, Police	Conducting Collection Day Conduct Collection Day	Hazardous waste collection days schedules for July 21, 2012 and September 15, 2012. Medical Waste take back day conducted in conjunction with DEA. Drop Box available in Police Department 24/7	Continue project indefinitely. Continue project indefinitely.

3a. Additions

3.6	Outfall Elimination	DPW	Reduction of outfalls contributing to bodies of water	Grant funding received through MA Office of Coastal Zone Management and Cape Cod Water Resources Project	Continue indefinitely (Ellis Road and Herringbrook Road)
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4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
4.1 Revised	Draft Construction Site Runoff Control Bylaw	Planning	Develop Bylaws	Bylaw adopted by Planning Board for adoption at Town Meeting (May 2010) http://www.eastham-ma.gov/Public_Documents/EasthamMA_Planning/LegalNotices/ForATM2010/MLU_Form7_02-18-10_PBNotice.pdf	Implement bylaw
4.2 Revised	Enact Construction Site Runoff Control Bylaw	ConCom, Planning, Town Meeting	Implement Bylaw	Continue to discuss the creation of a bylaw to be incorporated into local wetland control bylaw and local subdivision rules and regulations.	Continue to work on the development and implementation of bylaws. There is a policy, but not a bylaw.
4.3 Revised	Sand Nourishment	ConCom	Regulations	Continuation of goal for better compliance and quality of sand. NR agent frequently meets with applicants.	Homeowners required to do sand nourishment must do so with sand of comparable grain size to what is natural with no debris.

4a. Additions

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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
5.1 Revised	Draft Construction Site Runoff Control Bylaw	ConCom,	Develop Bylaws	Continue to discuss the creation of a bylaw to be incorporated into local wetland control bylaw and local subdivision control rules and regulations.	Continue to work on the development and implementation of a bylaw. Review bylaw for adoption at town meeting for ConCom. Continue “Limit of Work” in Order of Conditions for project as well as use hay bales &/or silt fence until area is stabilized.
5.2 Revised	Amend Site Plan Review	Planning	Bylaw	Bylaw adopted.	Goal achieved
5.3 Revised	Enact Construction Site Runoff Control Bylaw	ConCom, Town Planning, Bd. Of Highway Surveyors	Implement Bylaw	Continue to discuss the creation of a bylaw to be incorporated into local wetland control bylaw and local subdivision rules and regulations.	Continue to work on the development and implementation of bylaws. There is a policy, but not a bylaw.

5a. Additions

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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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6.1 Revised	Annual Training	NR, DPW, Planning, Fire, Health	Training Session	Annual training on best practices for pollution prevention and mitigation.	Annual training for worker safety, attend educational workshops for employees or public given by CCC or WBNERR etc.
6.2 Revised	Review of Town Properties	DPW, Building Maintenance	Monitor and Correct Problems	Audit conducted by MIIA.	Continue indefinitely.
6.3 Revised	Review of Town Operations	DPW, Facilities Manager	Monitor and Correct Problems	Pollution Prevention Control	Ongoing project
6.4 Revised	Catch basin Cleaning http://www.eastham-ma.gov/Public_Documents/EasthamMA_Planning/NPDES/DPW%20Street%20Sweeping%20and%20Catchbasin%20Policy.pdf	DPW	Updated Log	Clean all town-owned catchbasins in spring and fall 2011	Clean all town-owned catchbasins in Spring and Fall 2012
6.5 Revised	Street Sweeping	DPW	Record areas swept	Sweep all town-owned roadways and parking lots in spring and fall 2011. Received beneficial use determination based on testing.	Sweep all town-owned roadways and parking lots in Spring and Fall 2012
6.6 Revised	Remediation of existing outfall	DPW	Elimination of stormwater discharge	One discharge site identified: Cole Road. Funding not received.	Complete survey
6.7 Revised	Drainage Alterations	DPW	Catch basin Replacement	Catch basins identified for replacement or closure.	Continue project indefinitely. Incorporate green infrastructure in at least 1 location
6.8 Revised	Fuel Tanks	Fire	Fuel Tank Removal	Two fuel tanks removal completed 2011	Goal achieved
6.9	Flooding Remediation	DPW	Construction of Detention pond	Brackett Road stormwater design completed	Ensure compliance

Revised							
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6a. Additions

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7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) <<Not applicable>>

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
Revised					
Revised					
Revised					

7a. Additions

7b. WLA Assessment

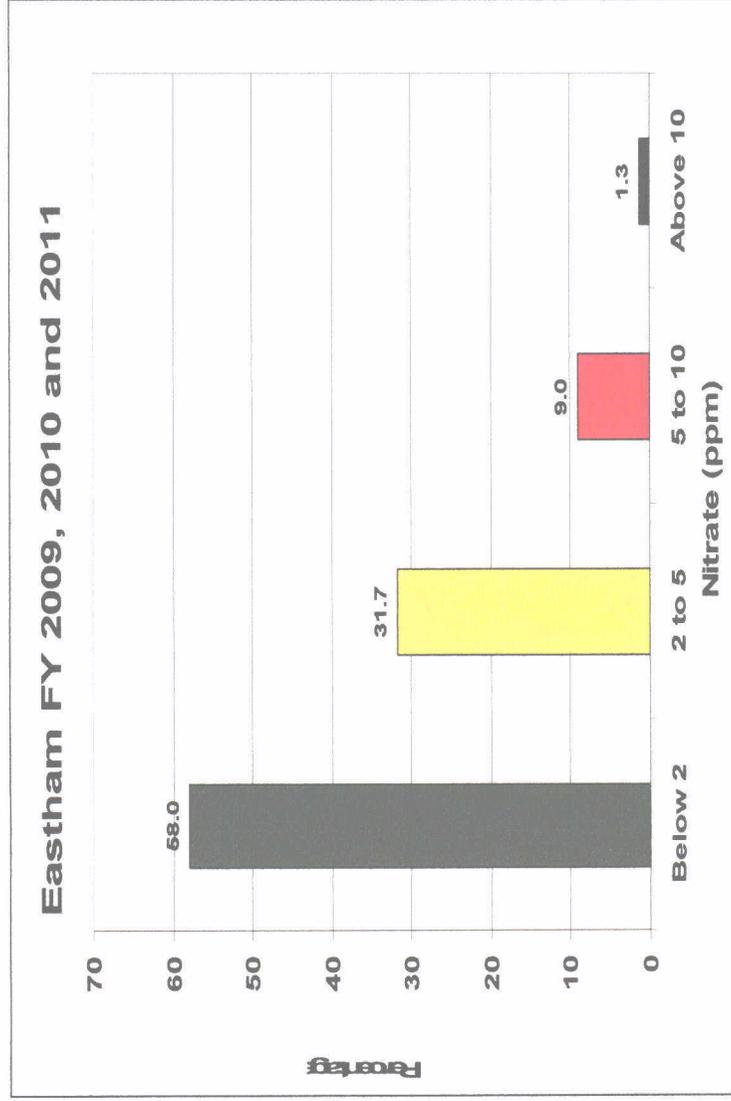
Part IV. Summary of Information Collected and Analyzed

Freshwater Sampling – The Cape Cod Pond and Lake Stewardship (PALS) are continually sampling the Eastham ponds in an effort to identify possible pollutant and recommend best management practices for containing and eliminating possible pollutants. Eastham has a total of 12 ponds currently being sampled. (<http://www.capecodcommission.org/water/PALS/home.htm>)

Beach Sampling – Sixteen Eastham beaches (11 saltwater and 5 freshwater) were sampled during the summer months by the Barnstable County Department of Health and Environment. In 2010 over 260 samples were tested for E. Coli or Enterococci as applicable. In 2011 over 300 weekly samples were tested. Samples exceeding the limits result in the posting of swimming advisory notices and posting on our website. In 2011 only 4 samples exceeded were detected. Repeat samples taken the following day were within acceptable limits in all cases and the beaches were reopened to the public. (<http://www.barnstablecountyhealth.org/bseastham.htm>)

Groundwater Sampling – The town continued its voluntary sampling project to evaluate levels of nitrate in residential wells. Each year one-third of the town is sampled allowing for a three-year sampling rotation schedule. We are experiencing a return of approximately 60% of the vials mailed.

Year	# Samples Returned
2009	1,116
2010	1,010
2011	852



Shellfish Sampling – The Natural Resources Office continues to test for Red Tide and participate in shellfish sampling in coordination with Massachusetts Division of Marine Fisheries on a weekly basis through the Spring, Summer and Fall.

Part V. Program Outputs & Accomplishments (OPTIONAL)

(Since beginning of permit coverage unless specified otherwise by a **, which indicates response is for period covering April 1, 2009 through March 31, 2010)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	
Annual program budget/expenditures **	(\$)	
Total program expenditures since beginning of permit coverage	(\$)	
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	
Stormwater management committee established	(y/n)	
Stream teams established or supported	(# or y/n)	
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	
Shoreline cleaned since beginning of permit coverage	(mi.)	
Household Hazardous Waste Collection Days		
<ul style="list-style-type: none"> ▪ days sponsored ** ▪ community participation ** ▪ material collected ** 	(# or %)	
School curricula implemented	(tons or gal)	
	(y/n)	

Legal/Regulatory

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	Adopted
Regulatory Mechanism Status (indicate with "X")					
▪ Illicit Discharge Detection & Elimination					
▪ Erosion & Sediment Control					
▪ Post-Development Stormwater Management					
Accompanying Regulation Status (indicate with "X")					
▪ Illicit Discharge Detection & Elimination					
▪ Erosion & Sediment Control					
▪ Post-Development Stormwater Management					

Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	
Estimated or actual number of outfalls	(#)	
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	
Outfalls inspected/screened **	(# or %)	
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	
Illicit discharges identified **	(#)	
Illicit discharges identified (Since beginning of permit coverage)	(#)	

Illicit connections removed **	(#); and (est. gpd)
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)
% of population on sewer	(%)
% of population on septic systems	(%)

Construction

	(Preferred Units)	Response
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 (for proper BMP installation & operation) completed **	(# or %)	
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	
Low-impact development (LID) practices permitted and encouraged	(y/n)	

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	
Qty of structures cleaned **	(#)	

Qty. of storm drain cleaned **	(%, LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**		(\$)
• Hourly or per basin contract rate **		(\$/hr or \$ per basin)
• Disposal cost**		(\$)
Cleaning Equipment		
• Clam shell truck(s) owned/leased		(#)
• Vacuum truck(s) owned/leased		(#)
• Vacuum trucks specified in contracts		(y/n)
• % Structures cleaned with clam shells **		(%)
• % Structures cleaned with vacor **		(%)

		(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **		(times/yr)	
Average frequency of street sweeping (commercial/arterial or other critical streets) **		(times/yr)	
Qty. of sand/debris collected by sweeping **		(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **		(location)	
Annual Sweeping Costs			
• Annual budget/expenditure (labor & equipment)**		(\$)	
• Hourly or lane mile contract rate **		(\$/hr. or ln mi.)	
• Disposal cost**		(\$)	
Sweeping Equipment			
• Rotary brush street sweepers owned/leased		(#)	
• Vacuum street sweepers owned/leased		(#)	
• Vacuum street sweepers specified in contracts		(y/n)	
• % Roads swept with rotary brush sweepers **		%	
• % Roads swept with vacuum sweepers **		%	

Reduction (since beginning of permit coverage) in application on public land of:
 ("N/A" = never used; "100%" = elimination)

<ul style="list-style-type: none"> ▪ Fertilizers ▪ Herbicides ▪ Pesticides 	(lbs. or %)
	(lbs. or %)
	(lbs. or %)
	(y/n)
Integrated Pest Management (IPM) Practices Implemented	

(Preferred Units)	Response
Average Ratio of Anti-/De-Icing products used ** (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand
Pre-wetting techniques utilized **	(y/n or %)
Manual control spreaders used **	(y/n or %)
Zero-velocity spreaders used **	(y/n or %)
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln mi. or %)
% of salt/chemical pile(s) covered in storage shed(s)	(%)
Storage shed(s) in design or under construction	(y/n or #)
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)

Water Supply Protection

Storm water outfalls to public water supplies eliminated or relocated	# or y/n
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n
<ul style="list-style-type: none">• Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n