Municipality/Organization: Town of Hamilton

EPA NPDES Permit Number: MA 041196

MaDEP Transmittal Number: W-045925

Annual Report Number
& Reporting Period: No. 3: March 05-March 06

NPDES PII Small MS4 General Permit
Annual Report

SEP 27 2006

Part I. General Information

Contact Person: Steven Kenney Title: DPW Director

Telephone #: 978-468-5580 Email: SKenney@HAMILTONMA.GOV

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: Robert M. Bullivant

Printed Name: Robert M. Bullivant

Title: Board of Selectman /chairman

Date: 9-26-06

The Town of Hamilton has successfully implemented or begun implementation of several Measurable Goals noted in Hamilton's Notice of Intent. Prior to the development of Hamilton's Comprehensive Stormwater Management Program, including Measurable Goals, the Town had an assessment performed of current activities, programs, and regulations that could support the NPDES Phase II Stormwater program. This assessment became the basis for modifying current activities, recommending new programs, and informing town boards and departments of their obligation toward successful implementation of Hamilton's Comprehensive Stormwater Program.

Hamilton is pleased to present the following summary describing Hamilton's success at implementing the third year of the town's Comprehensive Stormwater Management Program.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3	Planned Activities – Permit Year 4
3.1	Locate All Catch Basins, Sump Pumps, Stormwater Collection Systems & Culverts	Department of Public Works	Complete Mapping of System	The system map was completed for Hamilton. The map includes the stormwater infrastructure and drainage areas. .	The Town will finalize stormwater impacts, if any, on critical habitats or historic properties.
3.2	Determine if any Violations are present in the Stormwater System	Department of Public Works	Inspect all Catch Basins and Sump Pumps for Non Municipal Discharge Points .	The DPW had an outside contractor clean and inspect 100% of the catch basins.	Continue current program
3.3	Define Drainage Surface Area to Stormwater Collection Systems	Department of Public Works	Identify all Streams, Gullies, Roadways and Land Area that Contributes Runoff to the Drainage System	The system map was completed for Hamilton. The map includes the stormwater infrastructure and drainage areas.	
3.4	Eliminate Contributions to Water Quality Deterioration	Department of Public Works	Identify Indirect Contamination Sources	A Low Impact Development Handbook was developed to mitigate Water Quality Deterioration. All catch basins were inspected and no evidence of contamination was found.	
3.5	Educate Public Works Department on the Importance of Illicit Discharge and Elimination	Department of Public Works	Create/Implement Employee Training Program	The DPW distributed Stormwater information to staff members and conducted a stormwater training meeting in late spring before the catch basin cleanings.	Continue Stormwater Education

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3	Planned Activities – Permit Year 4
4.1	Review/Update Town Control Measures	DPW/Con Com/Planning Board	Review and update all in House Documents and Regulations Concerning Construction Site Run Off	The Planning Board drafted a Stormwater Management Bylaw which includes mitigating impacts from Construction and Post Construction activities.	Distribute Draft Bylaw to Town Boards for review and comments
4.2	Educated Contractors through Permit Process	DPW/Con Com/Planning Board	Hand Out Literature and Examples at Time of Permit	A handbook was developed to educate Contractors on Low Impact Development.	Review and Distribute Low Impact Development Handbook
4.3	Educate Public on Changes or Improvements	Department of Public Works	Public Meetings	All town stormwater runoff control changes and improvements are noted at the monthly, televised Selectman's' Meetings.	Continue current program
4.4	Assure Understanding and Compliance of Runoff and Erosion Control	Department of Public Works	Send Out Flyers Concerning Runoff Control	This goal has been extended into the next Annual Reporting year, so that the Town can finalize their Educational Materials.	Give stormwater brochure to local contractors with building permit

5. Post-Construction Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3	Planned Activities – Permit Year 4
5.1	Assure Post Construction Requirements are Followed	Department of Public Works	Support a By Law at Town Meeting, Conduct Public Hearings	The Planning Board drafted a Stormwater Management Bylaw which includes mitigating impacts from Construction and Post Construction activities.	Distribute Draft Bylaw to Town Boards for review and comments
5.3	Explain Permit Process to Comply with Post Construction Procedures	Department of Public Works	Educate Contractors, Engineers and Public	This goal has been extended into the next Annual Reporting year, so that the Town can finalize their Educational Materials.	Give stormwater brochure to local contractors with building permit
5.3	Work Area Stabilization	Department of Public Works	Require Silt Barriers around or over all catch basins	Silt barriers were required around and over all catch basins in the area of construction projects.	Continue requirements of silt barriers around and over all catch basins
5.4	Assure Current Requirements Meet State/Federal Standards	Department of Public Works	Review all Documents and By Laws	The Planning Board drafted a Stormwater Management Bylaw which includes mitigating impacts from Construction and Post Construction activities.	Distribute Draft Bylaw to Town Boards for review and comments

6. Good Housekeeping

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3	Planned Activities – Permit Year 4
6.1	Maintain Drain Pipes	Department of Public Works	Continue Installing Grease/Oil Hoods	It is the policy of the DPW to install Grease/Oil Hoods as catch basins are installed/repaired.	
6.2	Catch Basin Cleaning	Department of Public Works	Clean CBs in areas of high silt build up in Sump Pumps	An outside contractor cleaned and inspected all of the Catch Basins.	Annually clean all Catch Basins
6.3	Clean Sand & Debris Build up along Paved Shoulders	Department of Public Works	Conduct Street Cleaning Once a Year	An outside contractor conducted street sweeping in town in late April.	Annually conduct street sweeping
6.4	Maintain Roadways	Department of Public Works	Implement a Road Shoulder Improvement Program	2.5 miles of road shoulders were cut back. Road Shoulder improvements were incorporated into the road improvement program.	Conduct annual program to cut road shoulders back

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA)-

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3	Planned Activities – Permit Year 4

7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Stormwater management position created/staffed	(y/n)	
Annual program budget/expenditures	($)	

Education, Involvement, and Training

Estimated number of residents 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.)	
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	
▪ community participation	(%)	
▪ material collected	(tons or gal)	
School curricula implemented	(y/n)	

Legal/Regulatory

	In Place Prior to Phase II	Under Review	Drafted	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

Outfall mapping complete	(%)	
Estimated or actual number of outfalls	(#)	
System-Wide mapping complete	(%)	
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	
Outfalls inspected/screened	(# or %)	
Illicit discharges identified	(#)	
Illicit connections removed	(#) (est. gpd)	
% of population on sewer	(%)	
% of population on septic systems	(%)	

Construction

Number of construction starts (>1-acre)	(#)	
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	
Site inspections completed	(# or %)	
Tickets/Stop work orders issued	(# or %)	

Fines collected	(# and $)	
Complaints/concerns received from public	(#)	

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	
Site inspections completed	(# or %)	
Estimated volume of stormwater recharged	(gpy)	

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	
Total number of structures cleaned	(#)	
Storm drain cleaned	(LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		
Cost of screenings disposal	($)	

Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	
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)	
Cost of sweepings disposal	($)	
Vacuum street sweepers purchased/leased	(#)	
Vacuum street sweepers specified in contracts	(y/n)	

Reduction in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	
▪ Herbicides	(lbs. or %)	
▪ Pesticides	(lbs. or %)	

Anti-/De-Icing products and ratios	% NaCl % $CaCl_2$ % $MgCl_2$ % CMA % Kac % KCl % Sand	
Pre-wetting techniques utilized	(y/n)	
Manual control spreaders used	(y/n)	
Automatic or Zero-velocity spreaders used	(y/n)	
Estimated net reduction in typical year salt application	(lbs. or %)	
Salt pile(s) covered in storage shed(s)	(y/n)	
Storage shed(s) in design or under construction	(y/n)	

Equestrian and Livestock Owners letter and "Horse Owners Guide to Protecting Massachusetts Natural Resources"

sent to all
7/19/05

TOWN OF HAMILTON
DEPARTMENT OF PUBLIC WORKS
577 BAY ROAD
P.O. BOX 429
HAMILTON, MA 01936

TEL. 978-468-5580
FAX 978-468-5582

July 19, 2005

Dear Equestrian and Livestock Owner:

The Town needs to identify and mitigate potential sources of non-point pollution as part of the new Storm Water Management Act recently passed by the Environmental Protection Agency on the Federal level and the Department of Environmental Protection on the State level.

Run-off from equestrian and livestock paddocks, pens and manure piles (although natural) can be a source of such contamination. With this in mind, I have enclosed several pamphlets concerning proper ways to handle manure and other livestock related items to help educate our residents. Some residents may already be aware of these methods and are applying them in keeping our surface waters clean. If you are unaware of these practices I ask that you make the appropriate changes in your handling of your livestock and their manure for the betterment of your livestock, property and the environment.

I thank you for your anticipated cooperation and understanding.

Sincerely,

Steven Kenney
DPW Director

c: Board of Health
Board of Selectmen

A HORSE OWNER'S GUIDE TO PROTECTING MASSACHUSETTS NATURAL RESOURCES

BEST MANAGEMENT PRACTICES FOR STABLES AND PASTURES

If you own horses, this brochure will show how you can play a part in protecting and cleaning up the Commonwealth's water resources. You will learn a few simple "best management practices" specifically designed for landowners with horses. Armed with this new information, you can join the thousands of citizens, businesses, and communities working together for a cleaner environment.

Managing Waste and Protecting Water Quality

Manure management is a big challenge for horse owners, especially if you have several animals on a small parcel of land and no way of spreading or utilizing the manure. Following are manure management tips and other best management practices designed to keep nutrients and soil out of waterways.

Store your manure properly.

Do not store unprotected piles of manure in places where runoff may enter streams, or flood waters may wash the manure away. Place a cover or tarp over the pile to keep rainwater out.

Assistance is available through local conservation districts to design manure storage facilities to protect water quality. These structures usually consist of a concrete pad to protect ground water and a short wall on one or two sides to make manure handling easier.

Try Composting

There are many benefits to setting up a small composting facility for your horse wastes. Composted manure makes an excellent pasture and garden fertilizer as long as it is not spread too heavily. What's more, it can be combined with yard waste and non-meat kitchen scraps. Horse owners should have no trouble giving away or selling properly composted horse manure.

Establish vegetative covers

A vegetative cover placed around buildings or on steeper slopes can help minimize erosion and absorb nutrients while improving the appearance of your property. In addition to avoiding costlier erosion controls, vegetative covers will provide animals with better traction during wet or icy conditions. Examples of commonly used covers include a combination of grasses, vinca and shrubbery.

This information is available in alternative format by calling our ADA Coordinator at (617) 574-6872.

Produced by the Massachusetts Department of Environmental Protection, Office of Watershed Management.. Contact Eben Chesebrough at 508-767-2798 for more information. This brochure was adapted from the Maryland Department of Agriculture's "A Horse Owner's Guide to Protecting the Chesapeake Bay".

Keep animals out of streams

Designed stream crossings provide a safe, easy way for horses to ford streams. Fencing encourages horses to use the crossing instead of the streambed to navigate streams. This will allow vegetation to stabilize stream banks and reduce sediment pollution. Contact your local soil conservation district for assistance in designing crossings and other protection measures for your stream.

Manage water carefully

Manage water within your pasture to control potential nutrient runoff. This may require diverting surface and roof drainage runoff water away from pastures or paddocks. Also, take care to conserve water. Turn the hose off when shampooing horses instead of letting it run, and turn the water on low when rinsing a horse down.

Keeping your Pasture Green

Paddocks, riding rings, trails, and pastures are continuously disturbed area, under constant physical stress from horses' hooves. Overgrazed pastures, in particular, expose patches of bare soil that can easily erode. Here are several management practices that can help minimize overgrazing in your pasture and help control erosion.

Select pasture sites carefully

If you are establishing a new pasture, select a site that is well drained and located on high ground. Avoid flood plains, drainage areas, and tracts with long, steep slopes. Remember, it is illegal to alter wetlands in any way without proper authorization. Contact your local soil conservation district for assistance in selecting an appropriate site.

Inspect pastures for problems

There are many ways to improve the performance of established pastures. For starters, conduct a visual inspection to pinpoint any existing or potential problems. Correcting erosion problems can sometimes be as simple as stabilizing a hill with railroad ties or moving a gate to high ground. Here are some common problems to look for:

Patches of bare ground on slopes
Small hills and gullies
Sediment accumulations downslope

Test your soil

Establishing and maintaining a dense, vigorous sod that will withstand the constant trampling of horses is no easy chore. An inexpensive soil test from the Cooperative Extension Service can help you determine the type and amount of fertilizer needed for good pasture growth. This will also help prevent nutrient runoff from over-fertilized pastures and can improve your horse's nutrition. Pasture soil should be tested every two or three years to determine fertilizer and lime needs. A comprehensive fertilizer program can then be developed. Call the Soil Testing Lab at (413) 545-2311 at the UMass Cooperative Extension Service to obtain sampling and ordering instructions.

Reseed bare ground, rills and gullies

Bare areas should be leveled and smoothed as best as possible before seeding. The best time to reseed is either late winter/early spring or late summer. Tall fescue is a good seed choice.

Minimize spotty growth

Manure clumps are a major cause of spotty pasture growth and reduced grazing. On small parcels, manure should be picked up and removed regularly. Placing a piece of chain-link fence or other drag behind a tractor or truck can also break up manure. In addition to helping your pasture, breaking up manure piles on a regular basis can reduce parasite infestations.

Clip pastures to the proper height.

It is well known that horses graze selectively, consuming nutritious, young pasture grasses while leaving mature grasses and weeds to seed and spread. Proper mowing is the best way to control weeds and minimize spotty growth. Bear in mind that pasture grasses do best at about six inches.

Switch to rotational grazing

Heavily overgrazed pastures offer little feed for horses and may cause colic if soil is ingested while grazing. Moving livestock from one pasture to another during the growing season can minimize overgrazing. In small pastures, horses should be rotated to a fresh area about every two weeks. As a rule, one or two acres of well-managed pasture can support one mature horse during the grazing season with rotation, while four or five acres without rotation will support only one mature horse for the entire grazing season.

Set up a paddock system

A paddock system works especially well for landowners with limited pasture land (two acres or less). Paddocks or riding rings can be used for turnout when the pasture is excessively wet or dry, or when you want to reseed, fertilize, or rest the pasture. The paddock should be set up on high ground, using stone dust for the foundation. It should be surrounded with a hardy grass and, if possible, a trench to capture runoff. Riding rings, especially those being used as turnout areas, should be lined with a mixture of sand and sawdust to help protect the soil from erosion.

If you are unable to set up a paddock system, limit pasture grazing to a few hours each day during the hot, dry summer month.

Material Storage Safety Tips

Many of the chemicals found in barns - formaldehyde, paints, hoof oils, and pesticides to name a few - require careful handling and proper disposal. When using these chemicals, be certain to follow these common-sense guidelines:

- Buy only what you need, and use what you buy.
- Treat spills of hoof oils like a fuel spill. Use kitty litter to soak up the oil and dispose in a tightly sealed plastic bag.
- Store pesticides in a locked, dry, well-ventilated area.
- Whenever possible, select less toxic chemicals.
- Protect stored fertilizer, lime, and pesticides from rain and surface water.

The Commonwealth's Horse Country

Typically, when people think of Massachusetts, they think of rocky and sandy shores. But many horses reside in the state, and they can impact not only the rural areas in which they reside, but also the coast throughout a network of streams and rivers that link the two areas together.

With over 60,000 horses, Massachusetts has a significant horse population which can pose a threat to water quality. Soil from eroding pastures and rainwater runoff from unmanaged animal wastes carry bacteria, nutrients, and sediment to tributaries, and eventually the coast. Scientists have identified erosion and rain water runoff from urban, agricultural, and residential areas, as a major threat to the Commonwealth's water bodies.

Protecting our Natural Resources

In 1993, the Massachusetts Department of Environmental Protection developed "A Clean Water Strategy" premised on the protection and management of water resources at the watershed level. In conjunction with this effort, the Executive Office of Environmental Affairs (EOEA) affirmed and broadened this watershed approach to incorporate the expertise and help of other EOEA agencies, such as the Department of Food and Agriculture. This collaboration of state agencies will offer watershed communities exciting opportunities to protect, enhance, and restore water resources within their towns and in cooperation with their watershed neighbors.

Watershed teams will conduct water quality surveys to determine the "health" of the water resources and watershed. This information will be shared with communities, and will lead to better protection and improvement of water quality in the Commonwealth's 27 watersheds.

For more information, or free assistance in planning or implementing the best management practices described in this brochure, contact your local Natural Resources Conservation Service or the UMass Cooperative Extension Service. Working together, we can make a difference in water resource protection in the Commonwealth of Massachusetts.

Agency Resources

Natural Resource Conservation Service (NRCS) works with farmers on issues relating to the best use of our natural resources. Find them in the phone book under federal government, US Department of Agriculture, Natural Resource Conservation Service.

Conservation Districts also work with farmers and livestock owners, often for smaller, non-commercial places, on similar land management assistance.

Natural Resource Conservation Service Offices Serving:

Berkshire CD	(413) 443-6867
Hampden-Hampshire CD	(413) 586-5440
Essex-Middlesex-Suffolk CD	(413) 692-1904
N.E.N.W., S.Worcester CD	(508) 829-6628
Bristol-Plymouth-Norfolk CD	(508) 824-6668
Cape Cod - Nantucket-Dukes CD	(508) 362-9332

UMass Cooperative Extension Service (413) 545-4800

Massachusetts Department of Environmental Protection

Regional Nonpoint Source Coordinators (technical assistance and outreach)

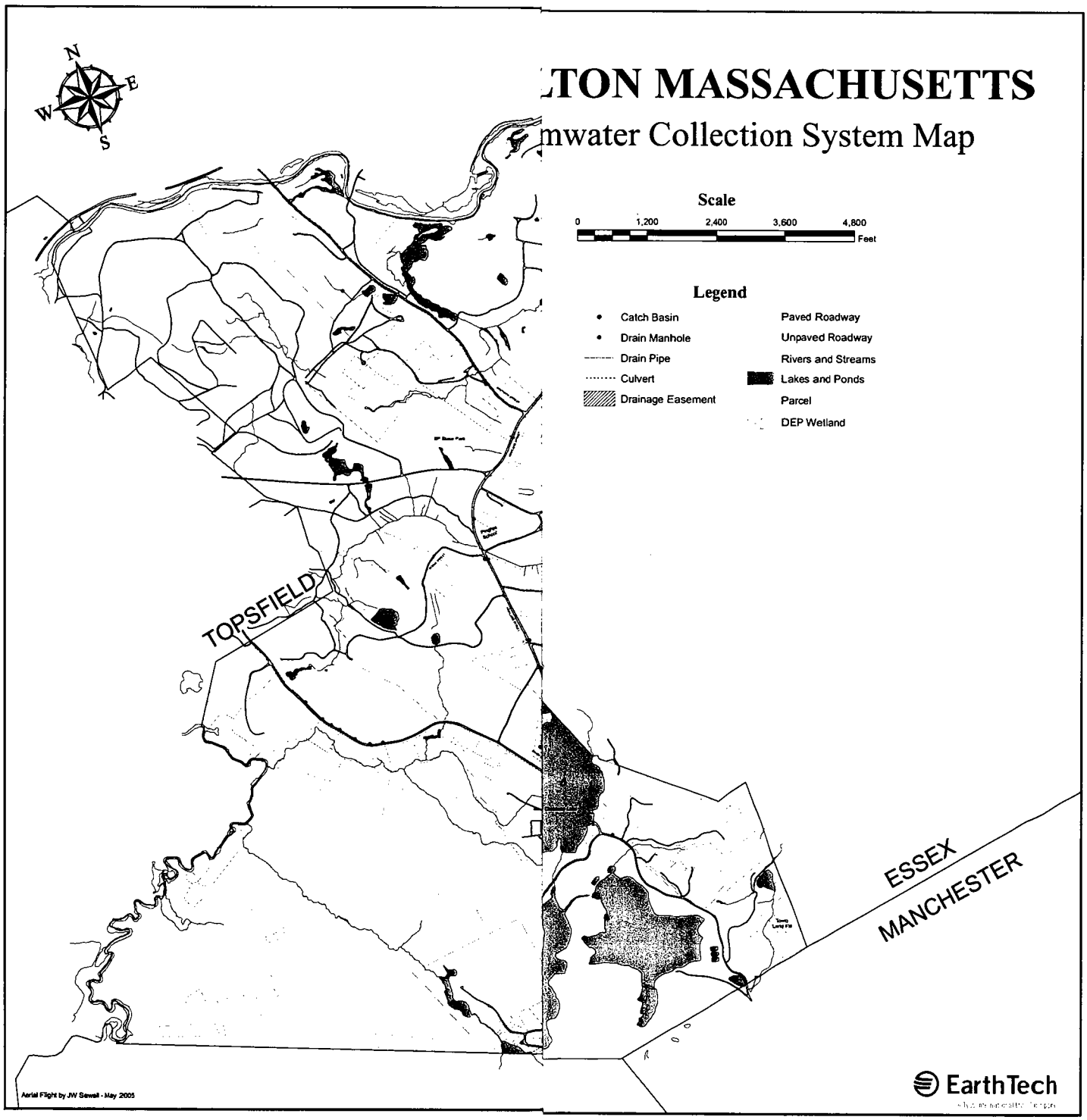
Western Region - Tracey Miller 413-755-2162 or tracey.miller@state.ma.us

Central Region - Brian Duval 508-849-4027 or brian.duval@state.ma.us

Northeast Region - Rosalia Barber (Wollenhaupt) 978-661-7816 or rosalia.wollenahupt@state.ma.us

Southeast Region - Jeff Brownell 508-947-6557 or jeffrey.brownell@state.ma.us

Stormwater Outfall Mapping

LTON MASSACHUSETTS

mwater Collection System Map