Automotive Care Practices for a Healthy Watershed: Car Washing

Why does it matter?
In recent years sources of water pollution from point sources such as waste water treatment plants and industrial discharges have been greatly reduced. Now, more than 60 percent of water pollution comes from diffuse nonpoint sources (NPS) such as leaking oil from vehicles, excess fertilizers and pesticides from farms, residential and commercial landscapes, road salt, failing septic systems, and others.

There is no problem with washing your car. It's how and where you do it that is harmful. When you wash your car in the driveway, the soap, together with dirt and oil washed from you car, flows into nearby storm drains, which runs directly into lakes, rivers, or streams. Most soap contains phosphates and other chemicals that will affect water quality and aquatic wildlife. Phosphates from soap can also cause excess algae to grow. Algae not lonely looks and can smell bad, but it also uses up the oxygen in the water that fish need to survive.

Best Management Practices for Car Washing

- Take you car to a car wash where the waster water is treated and sometimes recycled.
- Use non-toxic soaps and waxes on your automobile.
- Avoid washing your car on the street or driveway where runoff can drain to a stormdrain. Wash vehicles on gravel or grass to allow water to soak into the ground.

Good Housekeeping for a Healthy Watershed: Taking Care of Pet Waste

Why does it matter?
In recent years sources of water pollution from point sources such as waste water treatment plants and industrial discharges have been greatly reduced. Now, more than 60 percent of water pollution comes from diffuse nonpoint sources (NPS) such as leaking oil from vehicles, excess fertilizers and pesticides from farms, residential and commercial landscapes, road salt, failing septic systems, and others.

When pet waste is not properly disposed of, it can wash into nearby water bodies or be carries by runoff into storm drains. Since most storm drains do not connect to waste water treatment facilities, but rather drain directly into lakes and streams, untreated animal waste can become a significant source of runoff pollution. As pet waste decays in a water body, the degradation process uses oxygen and sometimes releases ammonia. Low oxygen levels and the presence of ammonia, combined with warm temperatures can be toxic to fish and aquatic life. Perhaps most importantly, pet waste contains microbes such as bacteria, viruses and parasites that can pose a health risk to humans and wildlife.

Proper disposal of pet waste
Pet owners have several options for properly managing pet waste. Collecting the waste and flushing it down the toilet where it can be treated by a sewage treatment facility or septic tank, is the preferred method. Small quantities can also be buried in the yard (when ground water is not used in the home via a well), where it can decompose slowly. When buried, the waste should be at least 5 inches below the ground surface and way from water bodies and vegetable gardens. In public areas, the waste can be sealed in a plastic bag and thrown in the trash.

- Some towns have house hold hazardous wastes collections day, which may collect used motor oil.
- Some communities accept used oil at their transfer stations.
- Massachusetts law requires retailers to accept used oil with receipt of the sale. There is no charge returning used oil to the store you purchased the original oil from.
- Many service stations will accept used motor oil without a receipt.

Other Automotive Wastes

- Dirty oil filters can be disposed of in the trash with precautions. Remove any remaining oil by puncturing the filter and letting it drain over a container. Then add the recovered oil to the oil you previously drained from your engine. Wrap the filter carefully in a rag or paper towel and throw it away.
- Antifreeze is a poison, but it can attract children, pets and wild animals because it has a sweet taste. Since there are few readily available collection centers in Massachusetts, the Department of Environmental Protection (DEP) recommends that you have your car's radiator flushed at a service station that recycles used antifreeze. If you decide to do it yourself, drain the antifreeze into a container, being careful not to spill any on the ground, then seal the container tightly and store it out of reach until the next household hazardous waste collection day in your community.
- Dead automotive batteries should never be thrown in the trash. State law prohibits landfills from accepting them because they contain lead, which can contaminate drinking water supplies. But there's another important reason not to throw used batteries away. Many parts of them can be used again. You can take your used battery back to the retailer when you buy a new one. Many community recycling centers also accept used batteries. If you have accumulated several, check the Yellow Pages for scrap metal dealers.
- Old Tires can be safely recycled in a number of ways. Recapping worn tires so they can be used again is a decades-old form of recycling. Because they make money on recapping, most dealers will take your old tires in partial trade for new ones. Also, a number of industrial processing facilities use chipped tires for fuel or as feedstock for recycled products such as rubberized asphalt. While it is better to recycle old tires than to throw them away, some Massachusetts landfills still accept tires if they are chipped or quartered.

Automotive Care Practices for a Healthy Watershed: What to do with Waste Oils and Fluids

4

Do-it-yourself auto maintenance and repair can save time and money, but care should be taken in the disposing of used motor oil, dirty oil filters, dead batteries and antifreeze. Handles or discard improperly, automotive wastes can pose a serious risk to your health and the environment.

Why does it matter?
In recent years sources of water pollution from point sources such as waste water treatment plants and industrial discharges have been greatly reduced. Now, more than 60 percent of water pollution comes from diffuse nonpoint sources (NPS) such as leaking oil from vehicles, excess fertilizers and pesticides from farms, residential and commercial landscapes, road salt, failing septic systems, and others. Used motor oil is the single largest source of oil pollution in U.S. harbors and waterways. Used oil contains heavy metals, which can contaminate water supplies and harm ecosystems. Recycling used motor oil prevents contamination of the environment and wise use of a non-renewable resource - petroleum.

How do these waste products enter the environment?
Used oil poured down a drain, thrown into the trash or poured out on the ground can eventually work its way into nearby rivers, streams, ponds, and aquifers. Waste oil poured down a sanitary sewer (i.e. toilet) connected to a waste water treatment plant can greatly limit the plant's ability to safely and cheaply dispose of the sludge, which is the primary byproduct of sewage treatment, due to the heavy metals contained in the oil. Waste oil disposed of in an unlined landfill can leach into the ground and contaminate groundwater.

- One gallon of used oil can create an eight-acre slick on surface water, threatening fish, waterfowl, and other aquatic life.
- Over time, used oil disperses throughout a body of water, polluting the sediment as well as the surface. This process can kill the microorganisms that form the base of the food chain
- Americans throw away 385 million gallons of waste oil per year, that is thirty-five times more oil than was spilled in the entire Valdez oil spill. At least half that amount is thrown out by do-it-yourself oil changers.

How is used motor oil recycled?
Used oil is only recyclable if it arrives at the recycling point as it came from the vehicle. Waste should never be mixed with other elements: gasoline, antifreeze, engine degreasers, solvents, pool "shock", water, dirt, leaves, and other debris. Contamination with any of these elements ruins your oil for recycling.

- Drain the oil into a clean, sturdy container with a tight fitting cap. Try to avoid containers that previously held a "hazardous" substance such as antifreeze, paint thinner, or chlorine bleach.

Thomas Hamel

From: Thomas Shea

Sent: Monday, August 21, 2006 9:58 AM

To: Dan Bresnahan; Helen Caulton-Harris; Jean Galloway; Lisa Sanders; Roy Guilmain; Thomas Hamel

Subject: chicopee cso activation

Chicopee WWCF CSO Notification
(08/21/2006)

Dear Health Official:

Please be advised that precipitation (as recorded at the Chicopee Water Pollution Control Facility) within the previous (24) hours may have resulted in combined sewer overflow discharges from the City of Chicopee's sewage collection system to both the Connecticut and Chicopee Rivers. These discharges may have negative water quality impacts downstream including the Connecticut River adjacent to your community. Swimming, fishing, boating and other uses which may involve water contact is discouraged.

Thomas Hamel

From: Bob Paquette

Sent: Monday, August 28, 2006 9:42 AM

To: Dan Bresnahan; Helen Caulton-Harris; Jean Galloway; Lisa Sanders; Roy Guilmain; Thomas Hamel

Subject: chicopee cso activation

Chicopee WWCF CSO Notification
(08/28/2006)

Dear Health Official:

Please be advised that precipitation (as recorded at the Chicopee Water Pollution Control Facility) within the previous (enter #24 hrs) hours may have resulted in combined sewer overflow discharges from the City of Chicopee's sewage collection system to both the Connecticut and Chicopee Rivers. These discharges may have negative water quality impacts downstream including the Connecticut River adjacent to your community. Swimming, fishing, boating and other uses which may involve water contact is discouraged.

Thomas Hamel

From: Bob Paquette

Sent: Sunday, September 03, 2006 9:36 AM

To: Dan Bresnahan; Helen Caulton-Harris; Jean Galloway; Lisa Sanders; Roy Guilmain; Thomas Hamel

Subject: chicopee cso activation

Chicopee WWCF CSO Notification
(09/03/06)

Dear Health Official:

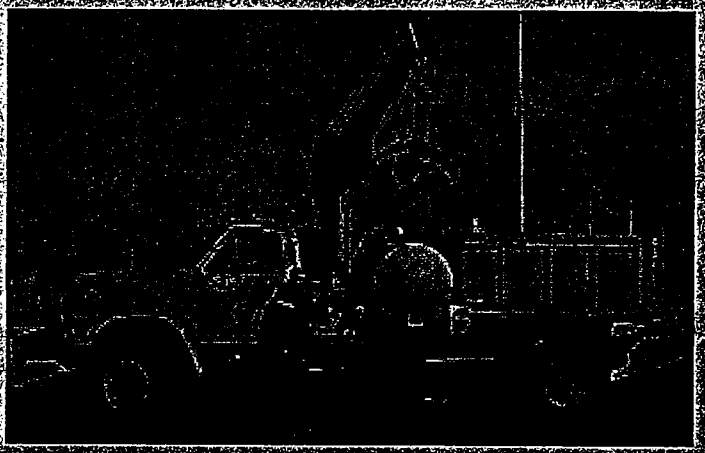
Please be advised that precipitation (as recorded at the Chicopee Water Pollution Control Facility) within the previou 24hrs) hours may have resulted in combined sewer overflow discharges from the City of Chicopee's sewage collection system to both the Connecticut and Chicopee Rivers. These discharges may have negative water quality impacts downstream including the Connecticut River adjacent to your community. Swimming, fishing, boating and other uses which may involve water contact is discouraged.

Thomas Hamel

Distribution List Name: Chicopee WWTP CSO Notification

Members:

Dan Bresnahan	bresnahd@ci.holyoke.ma.us
Helen Caulton-Harris	hcaulton@springfieldcityhall.com
Jean Galloway	jgalloway@west-springfield.ma.us
Lisa Sanders	lsanders@chicopeema.gov
Roy Guilmain	rguilmain@chicopeema.gov
Thomas Hamel	thamel@chicopeema.gov



A Catch Basin Cleaning Crew from the City of Chicopee Visited Your Neighborhood Today _____

(Date) & (Initial)

A City of Chicopee catch basin cleaning truck was here today to keep your catch basin in good working order. Catch basins are the openings in the curb and street that allow rain water to drain from outside your home to the storm drain system underground. Catch basins are a vital part of the City's emergency network to prevent flooding.

When catch basins become clogged with trash and debris, they usually smell bad, attract rodents and flies, and during a rain storm may cause flooding in your neighborhood. A clean catch basin helps make a healthier neighborhood, and keeps us safe during the rainy season. It also means a cleaner river.

Our storm drain system moves water from your home directly to the river or a combined sewer overflow (CSO) with little or no treatment. The trash, debris and harmful chemicals that end up in the catch basin pollute our rivers.

So remember . . . **Storm Drains are for Rainwater Only!**

What Can You Do to Help?

The pollution in storm drains comes from things we do every day, which means it is an every day problem. The good news is that we can all be part of the solution. Here are eight things you can do to keep your neighborhood's catch basins and our storm drain system clean:

1. **DON'T LITTER!** Never throw waste of any kind into a catch basin or on the street. Everything winds up in the storm drains and goes straight to the river.
2. Don't over-water your lawn and garden, and be careful about using pesticides, herbicides and fertilizers.
3. **Keep these things out of the catch basin:** gas, oil and antifreeze from cars, pesticides and fertilizers from lawns and gardens, and animal wastes.
4. Sweep your driveways and sidewalks — never use a hose.
5. Pick up after your pets.
6. Wash cars on grass or gravel surfaces.
7. Report trash dumping on streets or in alleys.
8. **Remove leaves from top of catch basins.**

Call 594-3585 to Report Trash Dumping or a Clogged Catch Basin.

Keep Our City's Catch Basins Clean

Board of Sewer Commissioners

It is our mission to enhance our environment, to preserve natural resources and to protect the public health of our community.

In order to provide better and reliable service:
This street is scheduled to have the sewer main pipeline cleaned by City of Chicopee crews on _____ between the hours of _____.

This work is done to reduce sewer back-ups, street flooding, and foul odors. A high-pressure sewer "vactor" truck is used to clean the pipe. This cleaning process usually is performed without any inconvenience to the resident.

While very rarely there is a problem, occasionally a resident may experience:

- Water back up into homes that have sinks and drains in the basement.
- Water in the toilets may make 'gurgling' sounds.
- Water in the drains of sinks and toilets may drain.
- Water level in toilets may rise.

Recommendations:

- Close shut-off valve (if you have one) when the truck is in front of your residence or if no one is home that day.
- Close lid to your toilets.
- Put old towel over toilet lid.
- After the truck leaves or when someone comes home, run water for about thirty seconds in all sinks and flush toilets once to refill water traps.

This is only a precautionary measure. It is very rare that these problems occur. If you have any questions or concerns do not hesitate to call 594-3585.

Sincerely,
Board of Sewer Commissioners

How are we doing? Would you please let us know?

Chicopee Water Pollution Control - WPC

How was:

1) The quality & completeness of the on-site service?
   ☐ Poor ☐ Fair ☐ Good ☐ Excellent ☐ Outstanding

2) Your WPC Crew's knowledge & experience?
   ☐ Poor ☐ Fair ☐ Good ☐ Excellent ☐ Outstanding

Thank You

3) Do you support higher sewer/storm fees for cleaner Chicopee & Conn. Rivers?
   ☐ Yes ☐ No

4) Do you support a higher sewer/storm fee to separate storm & sewer pipes to stop sewer backups?
   ☐ Yes ☐ No

Overall, what is your impression of the services provided by WPC - Staff?
☐ Poor ☐ Fair ☐ Good ☐ Excellent ☐ Outstanding

Comments? Suggestions? (How could we improve our services to you?)

Name (optional):

NO DUMPING
DRAINS TO RIVER

END OF YEAR REPORT

2006
CHICOPEE CONSERVATION COMMISSION

Wetland Permitting, Environmental Quality Improvement, and Public Awareness Activities

The City of Chicopee Conservation Commission engaged in and supported the following activities during 2006. In addition to the mandated wetland permit review of site activities within the Commission's regulatory areas of jurisdiction, the Conservation office continues to focus on public awareness and education within the local school systems, the community and the region at large. The Commission continues to emphasize the following philosophy,"The Importance of Taking Personal Responsibility in Affecting Improvements in Environmental Quality." in its community outreach work.

Commission staff joined Silvio Conte National Wildlife refuge staff and volunteers in 2 days of handpulling via canoe a substantial Water Chestnut (Trapa natans) infestation. Disposal of the invasive plants was provided by the Chicopee Department of Public Works. The DPW transported over 7 tons of bagged water chestnuts to the landfill.

The Conservation Commission co-sponsored "Greenfest" an Earth Day celebration held at the Emily Partyka Memorial Library last May. Area residents were invited to learn about turtle habitat, endangered species, re-stocking salmon to the Connecticut River, 'greening" of communities and other environmentally related topics.

The Commission sponsored the Chicopee area segment of the "*10th annual Connecticut River Watershed Source to Sea Cleanup* , a one-day community cleanup of the Connecticut River and its tributaries held on 9/30/06. Over 6 tons of metal, tires, shop[ping carts, and other debris was hauled off for proper disposal.

During 2006 the Commission reviewed 27 wetland filings under the Massachusetts Wetlands Protection Act and the Chicopee Wetlands Protection Ordinance (see attached report) and issued 3 Violation Notices.

Mary E. Donahue
Conservation Administrator
3/5/07

FOR IMMEDIATE RELEASE – 9/28/06

Contacts: Mary Elizabeth Donahue, Conservation Administrator
Chicopee City Hall
274 Front St.
Chicopee, MA 01013 (413) 594-1493
mdonahue@chicopeema.gov

PLEASE JOIN US !
CHICOPEE AREA VOLUNTEERS AND SPONSORS SOUGHT TO CLEAN UP CONNECTICUT RIVER AND TRIBUTARIES

Chicopee area volunteers will work on the bank of the Connecticut River in Chicopee and Willimansett Brook at Robert's Pond on September 30, 2006 as part of the "*10th annual Connecticut River Watershed Source to Sea Cleanup*", a one-day community cleanup of the Connecticut River and its tributaries.

We will have a kick-off meeting at River's Park located on Meadow Street, Chicopee, this Saturday, 9/30/06, beginning at 8 AM. A second group will be dispatched to one of the 2 clean up locations again at 9AM. Please come equipped with work gloves if you have them, footwear that you will not mind getting wet and sun protection. We do have a supply of work gloves for those who may need them.

Beverages and snacks will be provided. The day will conclude around 12:45 PM with a pizza party and t-shirt raffle at River's Park for all participating volunteers. The four-state event is sponsored in Chicopee by the *Chicopee Conservation Commission* and supported by *United Water of Agawam* and the *Chicopee Department of Public Works.*

If you would like to participate as a volunteer or to offer support, please contact Mary Donahue at the Chicopee Planning/Conservation Department - (413) 594-1493, or (413) 265-0615 (Saturday) or mdonahue@chicopeema.gov (before 4PM)

As a volunteer, you will be joined by thousands of other volunteers working in Vermont, New Hampshire, Massachusetts and Connecticut on the same day to make a positive contribution to improving water quality, wildlife habitat and river based recreational opportunities in our Connecticut River watershed.

Bobcat

CITY OF CHICOPEE
ENGINEERING DEPARTMENT

MEMO

Steven J. Frederick, P.E.
City Engineer

To: Tom Hamel
Chief Operator WPC

From: Steven J. Frederick
City Engineer

Date: March 7, 2007

RE: STORM WATER MANAGEMENT ANNUAL REPORT - 2006

Below is the data requested for the above-mentioned report.

Section 3A – Mapping Stormwater Outfalls
All of the existing outfalls have been located via GPS. A condition log of each location has been established to monitor and identify problems areas.

Section 3B – Develop Illicit Discharge Plan
Chapter 231 Chicopee Storm Water Management Ordinance outlines this activity. Additionally the drainage network plan will serve as a tool to track illicit discharge sources.

Section 4A – Construction Runoff Ordinance
Chapter 231 Chicopee Storm Water Management Ordinance addresses this section.

Section 4B – Plan Review
The Engineering Department has reviewed the following plans during this period:

- Commercial Sites – 9
- Definitive Subdivisions – 2
- Preliminary Subdivisions - 2
- Infrastructure Improvements – 1

Section 4C – Inspection/Reporting
The commercial sites and subdivisions listed above were inspected for adherence to the approved plans.

Section 5A – Post Construction Runoff Ordinance
Chapter 231 Chicopee Storm Water Management Ordinance addresses this section.

Section 5B – Site Plan Review
Chapter 231 Chicopee Storm Water Management Ordinance addresses this section.

If you have any questions please contact me at 594-3416.

S:\Steve\Phase II\Annual Report - 2006.doc

City of Chicopee Conservation Commission Activity Summary

Period: 12/12/05 - 1/12/07

Address	Applicant	Address ID#	Filing Date	Hearing Opened	Hearing Closed	City #	DEP #
Type of Filing: ANORAD							
chicopee river Business par	KenDelude	195	6/21/2006	7/5/2006	7/19/2006	W06-234	133-259
ANORAD(s) 1							
Type of Filing: Enforcement							
661 Montgomery	AmyRodriguez and Jose Sullivan	177	1/30/2006	2/15/2006		W06-225	
Enforcement(s) 1							
Type of Filing: NOI							
Facemate Rail Spur	WalterMrozinski	217	9/20/2006	10/4/2006	11/15/2006	W06-243	133-262
Front	StanKulig	194	6/21/2006	7/5/2006		W06-235	
505 Front	Holyoke Health Center	209	10/18/2006	11/1/2006	1/3/2007	W06-243	133-264
', 400, 435 Fuller Road	Western MassRedevelopment Corp.	219	11/15/2006	12/6/2006	1/3/2006	W06-247	133-266
2 James	GregKereakoglow	183	3/16/2006	4/5/2006	5/3/2006	W06-227	133-257
Jones Ferry Road	StanleyKulig for the DPW	205	10/4/2006	10/18/2006	11/15/2006	W06-241	
340 Montgomery	JoelMarchand	206	10/4/2006	10/18/2006	10/18/2006	W06-241	133-265
444 Montgomery	Riverbend Medical Group	199	8/16/2006	9/6/2006	9/20/2006	W06-239	133-261
North Fairview area ROW	City of Chicopee	198	8/2/2006	8/16/2006	11/1/2006	W06-238	133-260
Robbins Road	Harvey Industries	221	11/15/2006	12/6/2006	12/20/2006	W06-246	133-026
904 Sheridan	AmericanTool Supply	225	1/3/2007	1/3/2007	1/17/2007	W07-250	133-269
NOI(s) 11							
Type of Filing: RDA							
B & M ROW	B & M Railroad	182	5/11/2006	6/7/2006	8/16/2006	W06-236	
40 Bunker Lane	AllanKotowicz	186	5/3/2006	5/17/2006	5/17/2006	W06-230	
Chicopee River	BethGoettel	180	1/31/2006	2/15/2006	3/1/2006	W06-226	
Dale	MarieLaflamme	197	7/19/2006	8/2/2006	8/16/2006	W06-237	
Depot	CarlGrabinski	223	12/18/2006	1/3/2007	1/3/2007	W06-249	
Depot	Josyln Manufacturing Co.	188	5/17/2006	6/7/2006		W06-232	

	Address	Applicant	Address ID#	Filing Date	Hearing Opened	Hearing Closed	City #	DEP #
27	Landing Drive	DanielStamborski	214	11/1/2006	11/15/2006	11/15/2006	W06-244A	
340	Montgomery	JoelMarchand	175	12/12/2005	12/21/2005	1/4/2006	W05-223	
67	Old James	StephenCorrigan	181	3/6/2006	3/15/2006	4/5/2005	W06-228	
33	Pendleton Avenue	EstrellitaSantiago	204	9/20/2006	10/4/2006	10/4/2006	W06-241- A	
838	Sheridan	Western MassDevelopment Corporation	220	11/15/2006	12/6/2006	12/6/2006	W06-245	
	Uniroyal RR - ROW	M.Bergdal	187	5/3/2006	5/17/2006	6/7/2006	W06-231	
	WARB ditch crossing	Westover ARB	224	12/18/2006	1/3/2007	1/3/2007	W06-248	
	WARB–munitions storage	WARB	201	9/20/2006	10/4/2006	10/4/2006	W06-240	
	Westover ARB	Westover ARB	191	5/17/2006	6/7/2006		W06-233	
	Westover ARB	JackMoriarty for WARB	207	10/4/2006	10/18/2006	10/18/2006	W06-245 A	
RDA(s)	**16**							

CITY OF CHICOPEE

DEPARTMENT OF PUBLIC WORKS

CLEAN WATER

Stanley W. Kulig. P.E.
Superintendent

Recreational Septage

Thomas Hamel
Chief Operator

2006

PLEASE DUMP AT DESIGNATED SITE

Camper and Septic Tank Discharges Monthly Record of _____ 19____

Date	Septic Company Name or Resident Name	Manifest Number or Resident Address for Camper	Permit # or License Plate #	Gallons	Signature of Driver
04-24-06	Gerald Forcier	17 Southwick St	71457	8	Gerald Forcier
5-4-06	Art Pshollka	32 Pheasant Way		35	Art Pshollka
3/16/06	Ken Sevrodan	216 Kool St.		?	[illegible]
5/31/06	Ed Grogan	19 Rochester St Chic.		20	[illegible]
6-4-06	TRAVIS WILLIAMS	37 LEARY AVE CHIC	CA 1078	20	[illegible]
6-14-06	PAUL ROY	47 WOODCREST CT. CHIC	5TH WHEEL TRAVEL TRAILER		Paul Roy
6-21-06	ALBERT DEMERS	50 CHAPEL ST	5TH WHEEL TRAV. TRA.	40	A. Demers
		55 Holyoke Ave	83527 MS	20	
6-30-06	Tracy Clapp (Ben)	178 Holyoke AVE	592 24A	40	Tracy Clapp
7/3/06	DAVID POTHIER	5 GRISE DR CHIC	950 ZLN	40	David Pothier
7/7/06	Tracy Clapp	178 Holyoke Ave		40	Tracy Clapp

PC-23 Rev. 5/95 CSTD

TOTAL_____

Water Pollution Control

80 MEDINA STREET • CHICOPEE, MA 01013 • TEL. (413) 594-3585 FAX # (413) 592-5368

CITY OF CHICOPEE

DEPARTMENT OF PUBLIC WORKS

CLEAN WATER

Stanley W. Kulig. P.E.
Superintendent

Thomas Hamel
Chief Operator

2006

PLEASE DUMP AT DESIGNATED SITE

Camper and Septic Tank Discharges Monthly Record of _____ 19____

Date	Septic Company Name or Resident Name	Manifest Number or Resident Address for Camper	Permit # or License Plate #	Gallons	Signature of Driver
7-10	Tim Germaine	91 Norman St	4416	40	[illegible]
7-18	Edward Kenfield	44 Wilson Ave	J4684	30	Edward Kenfield
7-18	Robert Desrochers	102 Jacob St	31785	40	[illegible]
7-[illegible]	ART PSHOLKA	32 PHEASANT WAY		30	[illegible]
7/24	Ken Desrochers	216 Red St	26542	30	[illegible]
8-14	GERALD FORCIER	17 SOUTHWICK ST		30	Gerald Forcier
8-14	Peter Chaban	320 Beauchamp	905	30	Peter G Chaban
8/24	James Dolan	95 Lauzier Terr	87068	60	James Dolan
9/1	Roland Ducharme	448 Prospect St		150	R. Ducharme
9/1	Tracy Clapp	178 Holyoke Ave		30	Tracy Clapp
8/8	R. Ducharme		GCC - ECM	150	R. Ducharme

PC-23 Rev. 5/95 CSTD

TOTAL _____

Water Pollution Control

80 MEDINA STREET • CHICOPEE, MA 01013 • TEL. (413) 594-3585 FAX # (413) 592-5368

CITY OF CHICOPEE

DEPARTMENT OF PUBLIC WORKS

CLEAN WATER

2006

Stanley W. Kulig. P.E.
Superintendent

Thomas Hamel
Chief Operator

PLEASE DUMP AT DESIGNATED SITE

Camper and Septic Tank Discharges Monthly Record of _____ 19____

Date	Septic Company Name or Resident Name	Manifest Number or Resident Address for Camper	Permit # or License Plate #	Gallons	Signature of Driver
9-11-06		Ken Desrochers	2654A		[signature]
9-18-06		Mark MacDonald	91095		[signature]
10-10-06	G. TAYLOR	324 IRENE ST	19103	40	[signature]
10/20/06	Robert Roy	41 Dallaire Ave	1098 CAMPER	40	
10/25/06	Timothy Germaine	91 Norman St	4417	30	[signature]
10/25/06	James Norfolk	Bo Box 1005 Winner St	8160ST Camper	5	[signature]
10/29/06	Ken Desrochers	216 Shoal St	2754A	30	[signature]
11/17/06	Ed Grogan	67 Rochesters	Camper	30	[signature]
11/30/06	James Dolan	95 Laurier Terr	RV	50	[signature]

PC-23 Rev. 5/95 CSTD

TOTAL _____

Water Pollution Control

80 MEDINA STREET • CHICOPEE, MA 01013 • TEL. (413) 594-3585 FAX # (413) 592-5368

Joe Kietner

From: Lisa Sanders
Sent: Monday, March 12, 2007 8:25 AM
To: Joe Kietner
Subject: Failed Title V

Hi Joe,

Here is my list for 2006 . They have all been repaired.

100 Angela Dr.
38 Basil Rd
68 Basil Rd
1093 Burnett Rd
104 Fairway Dr.
35 Honey Lane

If you need more info let me know.

Thank You,

Lisa

CITY OF CHICOPEE

DEPARTMENT OF PUBLIC WORKS

Stanley W. Kulig, P.E.
Superintendent

Thomas Hamel
Chief Operator

TO: JOE KIETNER, ENVIRONMENTAL COORDINATOR
FROM: LAURIE GOFF, PRETREATMENT COORDINATOR

DATE: FEBRUARY 12, 2007

RE: REQUIRED INFORMATION FOR ANNUAL STORMWATER MANAGEMENT COMPLIANCE REPORT

This correspondence is intended to fulfill the Industrial Pretreatment Program's reporting requirements for inclusion in the Stormwater Management Compliance Annual Report to EPA.

IPP staff completed the following tasks during 2006:

- The Industrial Pretreatment Program's effectiveness is evaluated as required annually each March 1st. This includes the demonstration that EPA requirements for Industrial User monitoring, inspecting, enforcement, and permitting has been satisfied; the City has implemented local discharge limitations that are sufficiently protective to the POTW and its workers, its receiving stream, and sludge disposal options; the City's IPP is appropriately funded and staffed. The report submitted for calendar year 2006 will be provided to you upon request.

- WPC staff involved the public in two different projects during 2004. From April to December, water quality sampling and analysis was performed by students and staff of Chicopee High School. These sites include Bemis Pond, Riprap Brook, Mountain Lake and points on both the Connecticut and Chicopee Rivers

If I can provide any additional information, let me know.

Laurie Goff
IPP Coordinator
City of Chicopee

Enclosures
Pretreat/letters00/strmanrep06

Water Pollution Control

80 MEDINA STREET • CHICOPEE, MA 01013-1041 • TEL. (413) 594-3585 FAX # (413) 594-3588

Drainage Areas

from 1/1/2006 to: 12/31/2006

Date	Operator	Vehicle#	Start#	Stop #	Distance	Site	Operation	Description	Comments
7/12/2006	JL	13	6			Drainage	Visual Inspect		Small drainage basin @ rear of house which is slow draining.JL advised resident to have outflow pipe cleaned by contractor and it mat stop water from running towards house.[see diagram on back of W.O.]
7th Avenue									
5/12/2006	CT JL	4	60	0	0	Drainage	Visual Inspect		DRAINAGE FAILING MORE
Britton Street									
8/24/2006	BUK SR	7	113	0	0	Drainage	Vactored	Other	ASSIST HWY/REPAIR
5/16/2006	BUK JL	13	678	0	0	Drainage	Visual Inspect		11:07NO WATER ON STREET HEAVY RAIN
Buckley Boulevard									
5/9/2006	CT JZ	4	42	0	0	Drainage	Visual Inspect		O.k.
Carew Street									
5/19/2006	JL CT	13	176	154	0	Drainage	Visual Inspect		Blocked drain line
Center Street									
10/30/2006	CT SR	4	651	0	0	Drainage	Visual Inspect		OK
6/2/2006	BUK JL	4	595	0	0	Drainage	Visual Inspect	Other	OUT FLOW CLEAR down to rock bed
5/10/2006	BUK	10	652	0	0	Drainage	Cleaned Basin	Other	
2/14/2006	BUK JZ	13	650			Drainage	Visual Inspect		OUT FLOW CLEAR
2/7/2006	CT ELL	4	651			Drainage	Visual Inspect		Tires
End Street									
7/20/2006	ELL JZ	6	2	0	0	Drainage	Vactored	Other	
7/19/2006	JZ ELL	6	1	0	0	Drainage	Vactored	hand gun was	
2/22/2006	CT ELL J	4	1			Drainage	Visual Inspect		

Date	Operator	Vehicle#	Start#	Stop #	Distance	Site	| ---------- Operation	Description ----------|	Comments
Exchange Street									
5/19/2006	CT JL	13	1	0	0	Drainage	Visual Inspect		C.S.O. OUTFALL O.K.
Front Street									
3/28/2006	CT JL	4	725	0	0	Drainage	Visual Inspect		PRIVATE PROPERTY
Gaylord Street									
7/7/2006	BUK SR	6	54	0	0	Drainage	Vactored		ASSIST HWY-NOT RECQUIRED
7/6/2006	BUK SR	6	54	0	15	Drainage	Jet Rodded	Vactored	ASSIST HWY
7/6/2006	BUK SR	6	54	0	0	Drainage	Jet Rodded	Vactored	ASSIST HWY
Granby Road									
6/19/2006	BUK VH	7	675	374	16	Drainage	Jet Rodded	Other	OUT FLOW CLEAR
1/11/2006	CT ELL	4	95			Drainage	Other		Cleared outflow
Hajec Circle									
7/12/2006	BUK SR	13	15	0	0	Drainage	Visual Inspect	Other	Bak yard flooded/RUNOFF SLOPES
Hampden Street									
8/23/2006	BUK SR	7	2	0	0	Drainage	Vactored		ASSIST DPW/HWY
Hearthstone Terrace									
6/16/2006	BUK JZ	7	34	44	300	Drainage	Jet Rodded	Vactored	1x
Nutmeg Circle									
2/1/2006	CT ELL	13	36			Drainage	Visual Inspect		Ground water
Parenteau Court									
6/19/2006	BUK VH	7	1	0	0	Drainage	Vactored	Other	ASSIST DPW-HWY-4
Patriot Avenue									
10/18/2006	ELL VH	7	2450	5375	610	Drainage	Jet Rodded		OUT FLOW CLEAR

Date	Operator	Vehicle#	Start#	Stop #	Distance	Site	| ---------- Operation	Description ----------|	Comments
Rzasa Drive									
12/14/2006	VH JZ	7	29	0	0	Drainage	Vactored		
Simone Road									
5/31/2006	VH JZ	7	28	55	230	Drainage	Jet Rodded	Vactored	
5/31/2006	VH JZ	7	28	55	275	Drainage	Jet Rodded	Vactored	
5/31/2006	VH JZ	7	28	55	275	Drainage	Jet Rodded	Vactored	
5/31/2006	VH JZ	7	20	0	0	Drainage	Vactored		
5/18/2006	VH ELL	7	28	60	295	Drainage	Jet Rodded	Vactored	295x2 Roots
5/18/2006	VH JZ	7	28	60	295	Drainage	Jet Rodded	Vactored	295x3
Taylor Street									
5/3/2006	BUK	10	30	0	0	Drainage	Visual Inspect		OUT FLOW CLEAR/RES. @ 36 RPAST PRBLMS-DRAINAGE-CORRGTD PIPE ROTTED

total count 35

Total Distance: 2311

City of Chicopee, Massachusetts

Building Department

Development Projects Reviewed for Stormwater Management Compliance in 2006

In addition to the larger projects listed below the Building Department reviewed 32 building permit applications for single and two-family residences. New zoning regulations require stormwater management for all new construction.

Adult Club	645 Shawinigan Drive	Revival of adult entertainment club.
Applebee's	Chicopee Marketplace site north side Wal-Mart entrance drive.	5,300 SF Restaurant
Condominiums	Buckley Boulevard	6 condos in two buildings.
Condominiums Pinecrest	Sheridan Street across from Tarnow's.	26 condominium units.
Convergent Prima	E. Main Street	Expansion of existing facility
McDonald's	1460 Memorial	Rebuild facility
Warehousing	Montgomery Street	Phase 1: Bay State Rugs warehouse
WMDC	Airpark North, Griffith Road	42,000 SF multipurpose office/industrial building

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WATER POLLUTION CONTROL
CITY OF CHICOPEE

City of Chicopee, Massachusetts
Department of Planning & Conservation
Development Projects Reviewed for
Stormwater Management Compliance in 2006

In addition to the larger projects listed below the Planning and Conservation Department reviewed 28 building permit applications for single and two-family residences. New zoning regulations require stormwater management for all new construction.

Adult Club	645 Shawinigan Drive	Revival of adult entertainment club.
Applebee's	Chicopee Marketplace site north side Wal-Mart entrance drive.	5,300 SF Restaurant
Condominiums	Buckley Boulevard	6 condos in two buildings.
Condominiums Pinecrest	Sheridan Street across from Tarnow's.	26 condominium units.
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WMDC	Airpark North, Griffith Road	42,000 SF multipurpose office/industrial building

CITY OF CHICOPEE

DEPARTMENT OF PUBLIC WORKS

Stanley W. Kulig, P.E.
Superintendent

Thomas Hamel
Chief Operator

To:
Kate Brown, Planning Director (mailed 2/5/07)
Barry Brouillard, Environmental Program Coordinator (given to Stanley 2/5/07)
Chief Stephen Burkott, Chicopee Fire Department (mailed 2/5/07)
Jeff Cady, CELD (mailed 2/5/07)
Earl Desrochers, City Messenger (mailed 2/5/07)
Mary Donahue, Conservation Administer (mailed 2/5/07)
Steve Frederick, City Engineer (given to Stanley 2/5/07)
Laurie Goff, Industrial Pretreatment Program (given to Laurie 2/5/07)
Stanley Kulig, DPW Superintendent (given to Stanley 2/5/07)
Alan Ryczek, Water Superintendent (mailed 2/5/07)
Raymond St. Peter,Golf Superintendent (mailed 2/5/07)
Lisa Sanders, Health Director (mailed 2/5/07)
Ron Simard, School Maintenance Supervisor (mailed 2/5/07)
Dave Theroux, CMG Superintendent (mailed 2/5/07)
Joseph Viamari, Building Director (mailed 2/5/07)
Stanley Walczak, Parks Superintendent (mailed 2/5/07)

From: _____
Tom Hamel, Chief Operator WPC

Date: February 2, 2007

Re: Storm Water Management Annual Report

The annual Storm Water Management Report is due. This is going to be a fact of doing business for many years to come. As submitted last year, (attached if you responded in time)) your department is required to provide either updated training (provide dates of any training or implementation of your plans) or planning information and/or other related activities for which you were required to keep records. US EPA did not comment as to last year's submission, which I will take as tacit approval of our efforts. Since all departments that submitted information received a copy from this department you may wish to just update your submittal of last year.

In order to submit an annual Storm Water Management Compliance Report to the US EPA, please submit your report to me by March 1, to be included (or not included if not submitted) in the summary report to be mailed April 1, 2007 . If you have any questions do not hesitate to call me.

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Water Pollution Control

80 MEDINA STREET • CHICOPEE, MA 01013-1041 • TEL. (413) 594-3585 FAX # (413) 594-3588

CITY OF CHICOPEE

DEPARTMENT OF PUBLIC WORKS

Stanley W. Kulig, P.E.
Superintendent

Thomas Hamel
Chief Operator

Date: 3/20/2007

To: Thomas Hamel

From: Joe Kietner

Environmental Compliance Supervisor

RE: Stormwater Management Annual Report

The City of Chicopee WPCF staff participated in various training in 2006. Topics included: Lockout/Tagout, Confined Space, Chemical and Environmental Training. The training was performed by Tighe & Bond of Westfield.

The WPCF has a Hazardous Chemical Inventory as prepared by Tighe & Bond. The WPCF installed a board with chemical information and emergency phone numbers and contacts. Facility Chemicals were also labeled according to NFPA standards. This list will be updated yearly as the inventory changes. The City of Chicopee WPCF has also retained Tighe & Bond of Westfield to prepare a Hazardous Waste Contingency Plan that will be complete in 2007.

JK

CITY OF CHICOPEE

PARKS AND RECREATION DEPARTMENT

STANLEY J. WALCZAK, C.P.R.P.
Superintendent

RICHARD G. MACIOLEK
Assistant Superintendent

February 12, 2007

To: Thomas Hamel , Chief Operator, Waste Water Mgt.

From: Stanley J. Walczak , Parks & Recreation Superintendent

Re: 2007 Storm Water Management Activity Report

Dear Mr. Hamel :

I am submitting to you our Storm Water Management Activity Report which documents specific areas by our department in the three subsections listed to comply with necessary requirements.

(Section 6A) Municipal Activity Report

1. In regards to grounds maintenance of areas near storm drains, we are using a special mower which eliminates major clumping of grass.
2. We continue to use an Integrated Pest Management system (IPM) which provides effective and environmentally sensitive approaches to pest problems.
3. The Department properly cleans –up any fertilizer spills from paved areas that can pollute drain areas.
4. The Department regularly cleans parking lots and major roadways in parks and cemeteries to prevent salt and sand from stormwater areas. The acquisition of a Green Machine is used for these purposes.
5. Catch basins in parks are cleaned regularly by employees to prevent litter and other unsuitable materials from entering the storm system.
6. Paints, .solvents are properly stored in vented areas and paint cans and brushes are properly disposed of when product is depleted or finished.

(Section B) Training of Employees

1. Employees are properly trained to address oil spills in the garage so as to prevent runoff to drains. Waste oil is properly stored and removed on a regular basis.
2. Employees must properly clean grass cutting machines in areas where grass does not infiltrate storm drains.
3. Employees attend the New England Turfgrass Conference to learn more about the proper use of chemicals for pesticide, herbicide and insecticide applications. The employees also learn to properly calibrate fertilizer amounts on acreage so there is no

excessive overuse or run off damage.

4. Recently, 3 park employees attended a 2007 Pesticide Education Seminar at UMASS to learn more about Mass. Pesticide regulations and laws.
5. We also teach the proper irrigation water management control so fields are watered timely and at the appropriate time of day.
6. We also send employees to one day seminars to properly service equipment and machinery which may impact storm water situations.

(Section 6-C) Storm Water Pollution Plan

1. Development of a Best Management Practices manual which would be distributed to all employees where parks operations directly effect storm water management concerns.
2. Develop a site analysis program where specific areas are targeted for careful scrutiny of B.M.P.
3. Continue to offer training seminars to all employees to better educate them on the proper techniques of handling chemicals and pesticide use, spill prevention and clean-up and other general housekeeping practices which will eliminate site run-off problems.
4. Continue to work with other city agencies to identify and rectify problem areas that will reduce storm water concerns.

CHICOPEE MUNICIPAL GOLF

Office of Golf Superintendent
1290 Burnett Road
Chicopee MA 01020

Tel. (413) 594-1826
Fax (413) 594-7596

Raymond R. St. Peter
Superintendent

TO: Water Pollution Control

FROM: Raymond R. St. Peter, GCS

DATE: February 12, 2007

RE: Storm Water Phase II Requirements

The Chicopee Municipal Golf Course is actively on a management program of training for our employees.

1. Training of Municipal Golf Employees

   A. Training in emergency spill response and use of the response kit will be done every spring prior to use of the sprayer.
   B. Refresher training of safety equipment
   C. Refresher training of MSDS forms and what/where chemicals are at the facility.

2. Handling of Pesticides

   A. Only trained or licensed personnel are to handle pesticides. All required safety equipment will be worn during handling and loading of spray unit.

3. Storage of Pesticides

   A. Pesticides are to be stored in a locked, vented room. The room is designed to contain any accidental spill.
   B. Building has sign on outside door and door to pesticide room.
   C. A letter will be sent to fire department to notify where in the building and what is being stored in pesticide room – along with copies of MSDS forms.

CITY OF CHICOPEE
WATER DEPARTMENT

27 Tremont Street - Chicopee, MA. 01013
Tel 413 / 594-3420 • Fax 413 / 594-3461

Allen J. Ryczek
WATER SUPERINTENDENT

MEMORANDUM

TO: Tom Hamel, Chief Operator WPCP

FROM: Allen J. Ryczek

DATE: February 7, 2007

SUBJECT: Storm Water Management Annual Report

Chicopee Water Department
Pollution Prevention

Listed below is the Maintenance/Prevention, and Employee Training program that the Chicopee Water Department has implemented or will implement to continue to participate in the Storm Water Phase II Requirements.

Maintenance and Prevention – Chicopee Water Treatment Plant

a. Daily inspection of Chlorination and chemical feed apparatus
a. Scheduled maintenance on Chlorination feed lines
b. Tier II report outlining emergency and chemical inventory
d. Weekly sight inspections of facilities
a. Routine maintenance of septic system logged and dated
b. Storage of chemicals in clearly marked and approved storage containers
c. Routine inspection of fire extinguishers

Maintenance and Prevention – Water Department Office

a. Weekly sight inspection of facility
b. Storage of chemicals in clearly marked and approved storage containers
c. Vehicle washing program which prevents soap from entering city drain lines
d. Routine cleaning of catch basin and drains located on property
e. Routine inspection of fire extinguishers
f. Dechlorination of superchlorinated water used for water main disinfection

Employee Training

a. Annual review of Material Safety Data Sheets
b. Various safety seminars presented by vendors of purchased chemicals
c. Safety seminars to promote a safe work environment
d. Spill containment training for stored chemical
e. Tanker hazard decal identification training
f. CPR and Workplace first aid training

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CITY OF CHICOPEE

ANNUAL REPORT (2006)
CITY OF CHICOPEE
STORMWATER MANAGEMENT PROGRAM

Section 6: Good Housekeeping/Pollution Prevention

Part A: Municipal Maintenance Activity Program

The Chicopee Department of Public Works (DPW) has implemented this management measure by outlining programs and procedures in the areas listed below. The DPW will continue to monitor, review, revise, and implement these programs and activities.

- Weekly site inspection of DPW central facility grounds performed by the Environmental Programs Coordinator and maintained on written log.
- Site Familiarization Walk performed annually (Nov 14, 2006) by Clean Harbors Environmental Services, Inc. as part of Emergency Response Agreement
- Periodic resident collections of motor oil, oil-based paint, universal waste
- Tier II Report outlining emergency and chemical inventory
- Vehicle washing program which prevents runoff from entering the storm drain system

Part B: Training of Municipal Employees

The Department has provided training for DPW personnel (mandatory attendance) in conjunction with the Municipal Maintenance Activity Program. Areas of training have included:

- Stormwater Pollution Prevention Plan requirement
- Safety compliance and good housekeeping
- Emergency response and spill prevention
- Tanker hazard decal identification
- Hazmat Awareness training
- MSDS and Right-to-Know information
- CPR and Workplace First Aid
- Ergonomics
- Workplace Violence
- Security awareness
- Fire extinguisher training
- Work Zone safety
- Frontline supervisor Development

Part C: Stormwater Pollution Prevention Plan /MSGP

The DPW has finalized an Integrated Pollution Prevention Plan (IPPP) which includes Stormwater Pollution Prevention Plan (SWPPP) and a Spill Prevention Countermeasure and Control (SPCC). The plans were reviewed, revised and implemented during calendar year 2006 as part of the City's Phase II Stormwater Program Multi-Sector General Permit (MSGP), and in accordance with EPA regulations 40 CFR 112. DPW implemented the best management practices outlined in the plan and yearly refreshers will be held with DPW personnel in the form of training seminars.

IMPLEMENTATION OF ITEMS FROM TABLE 11

1. An Integrated Prevention Plan (SWPPP and SPCC) was finalized and is currently on file at the DPW.

2. Environmental Programs Coordinator conducts weekly inspections of fuel areas, waste storage, garage and vehicle wash areas, exterior grounds, and all interior areas where exit signs, emergency response telephone number postings, and fire extinguishers are located. Written log kept on file.

3. Oil/water separator is inspected yearly. Pumping was required based on last inspection and completed on June 22, 2006.

4. Quarterly Stormwater outfall visual inspections will be performed during the months of March, June, September, and December and catch basins and drainage areas will be monitored regularly.

Tighe&Bond

C-471 (8100)
March 15, 2007

Joe Kietner
Environmental Compliance Supervisor
City of Chicopee
Wastewater Treatment Plant
80 Medina Street
Chicopee, MA 01013

Re: Phase II Stormwater Pollution Prevention Plan Update

Dear Mr. Kietner:

This Stormwater Pollution Prevention Planning (SWPPP) update is provided on behalf of Chicopee Electric Light (CEL). This correspondence is intended to summarize the SWPPP implementation elements of the facility. We understand that this summary will be included in the City's Stormwater Phase II Update due to EPA on May 1, 2007. Further, we recognize that implementation of SWPPP for the facility was included in the City's Phase II plan.

Coverage under the MSGP is required for the municipal entities for activities associated with transportation facilities, specifically vehicle and fleet maintenance. EPA has stayed the requirement for MSGP coverage for DPW garages and other vehicle maintenance operations. However, CEL has chosen to proactively address the need to implement stormwater pollution prevention measures in order to assist the City with the Phase II Plan.

In past updates, we've documented the key components of CEL's SWPP planning efforts. We've detailed Comprehensive Site Compliance evaluations conducted at the facility jointly by a Tighe & Bond representatives and CEL representatives. Further, we've documented best management practices (BMPs) specific for facilities that conduct transportation activities. EPA refers to these activities in its Sector P of the multi-sector general permit (MSGP).

The MSGP expired on October 30, 2005. EPA has yet to release an updated MSGP. However, EPA has indicated that a new MSGP will be available in 2007. Once the new MSGP is available, a notice of intent will be filed on behalf of CEL for coverage. Further, the facility's site specific SWPPP will be updated to include changes in the 2007 MSGP. We anticipate that these changes will be incorporated in CEL's SWPPP no later than August 1, 2007.

Tighe&Bond

We've attached a checklist that the facility uses for stormwater evaluations. The checklist includes BMPs for typical Sector P locations.

If you have any questions or require additional information, please do not hesitate to contact me (413) 572-3243.

Very truly yours,

TIGHE & BOND, INC.

Jeff Bibeau
Project Manager, Environmental Compliance

J:\C\C0471\SWPPP\SW Update to Tom Hamel 031307.doc

Fueling

	True/False (circle one)	Comments
Use spill and overflow protection.	True/False	All underground tanks have spill buckets.
Minimize runon of storm water into the fueling area by grading the area such that storm water only runs off.	True/False	
Reduce exposure of the fuel area to storm water by covering the area.	True/False	
Use dry cleanup methods for fuel area rather than hosing the fuel area down.	True/False	
Use proper petroleum spill control.	True/False	
Perform preventive maintenance on storage tanks to detect potential leaks before they occur.	True/False	
Inspect the fueling area to detect problems before they occur.	True/False	
Train employees on proper fueling techniques.	True/False	

Vehicle & Equipment Maintenance

	True/False (circle one)	Comments
Maintain an organized inventory of materials used in the maintenance shop.	True/False	
Dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers properly.	True/False	
Label and track the recycling of waste material (e.g. used oil, spent solvents, batteries).	True/False	
Drain oil filters before disposal or recycling.	True/False	
Drain and contain all fluids from wrecked vehicles and "parts" cars.	True/False	
Store cracked batteries in a nonleaking secondary container.	True/False	
Promptly transfer used fluids to the proper container; do not leave full drip pans or other open containers around the shop. Empty and clean drip pans and containers.	True/False	
Do not pour liquid waste down floor drains, sinks, or outdoor storm drain inlets.	True/False	
Plug floor drains that are connected to the storm or sanitary sewer; if necessary, install a pump that is plugged regularly.	True/False	

Vehicle & Equipment Maintenance (cont.)

	True/False (circle one)	*Comments*
Inspect the maintenance area regularly for proper implementation of control measures.	True/False	
Train employees on proper waste control and disposal.	True/False	

Outdoor Vehicle & Equipment Storage & Parking

	True/False (circle one)	*Comments*
Use drip pans under all vehicles and equipment waiting for maintenance.	True/False	
Cover the storage area with a roof.	True/False	
Inspect the storage yard for overflowing pans and other problems regularly.	True/False	
Train employees on procedures for storage and inspection items.	True/False	

Obsolete Equipment Stored Outside*

	True/False (circle one)	*Comments*
Where possible, dispose of unused equipment properly, or move indoors.	True/False	
Cover obsolete equipment with a tarp or roof.	True/False	
Consider using booms, oil/water separators, sand filters, etc. for outfalls draining areas where oil is potentially present.	True/False	
Minimize runoff coming into contact with old equipment through berms, curbs, or placement on a concrete pad.	True/False	

Locomotive Sanding Areas

	True/False (circle one)	*Comments*
Cover sand storage piles.	True/False	
Install sediment traps.	True/False	
Install curbs or dikes around storage piles to minimize storm water runon.	True/False	

Painting Areas

	True/False (circle one)	*Comments*
Keep paint and paint thinner away from traffic areas to avoid spills.	True/False	
Spray paint in an Occupational Safety and Health Act (OSHA) approved hood.	True/False	
Use effective spray equipment that delivers more paint to the target and less over-spray.	True/False	
Avoid sanding in windy weather and collect and dispose of waste properly.	True/False	
Recycle paint, paint thinner, and solvents.	True/False	
Inspect painting procedures to ensure that they are conducted properly.	True/False	
Train employees on proper sanding, painting, and spraying techniques.	True/False	

Vehicle or Equipment Washing Areas

	True/False (circle one)	*Comments*
Avoid washing parts or equipment outside.	True/False	
Use phosphate-free biodegradable detergents.	True/False	
Designate an area for cleaning activities.	True/False	
Contain and recycle washwaters.	True/False	
Ensure that washwaters drain well.	True/False	
Inspect cleaning area regularly.	True/False	
Train employees on proper washing procedures.	True/False	

Liquid Storage in Above Ground Storage

	True/False (circle one)	*Comments*
Maintain good integrity of all storage containers.	True/False	
Install safeguards (such as diking or berming) against accidental releases at the storage area.	True/False	
Inspect storage tanks to detect potential leaks and perform preventive maintenance.	True/False	
Train employees on proper filling and transfer procedures.	True/False	

Cold Weather Activities

	True/False (circle one)	*Comments*
Minimize salt application.	True/False	
Use uncontaminated dirt or ash, if use is necessary.	True/False	
Train employees on proper salt, dirt, sand, or ash application.	True/False	

Improper Connection to Storm Sewer

	True/False (circle one)	*Comments*
Plug all floor drains connected to sanitary or storm sewer or if connection is unknown. Alternatively, install a sump that is pumped regularly.	True/False	
Perform smoke or dye testing to determine if interconnections exist between sanitary water system and storm sewer system.	True/False	
Update facility schematics to accurately reflect all plumbing connections.	True/False	
Install a safeguard against vehicle washwaters entering the storm sewer unless permitted.	True/False	
Maintain and inspect the integrity of all underground storage tanks; replace when necessary.	True/False	
Train employees on proper disposal practices for all materials.	True/False	

Erosion and Sediment Control*

	True/False (circle one)	*Comments*
Minimize runon from adjacent properties, e.g. diversion dikes, berms, or equivalent.	True/False	
Trap sediment at downgradient locations and outlets serving unstabilized areas. This may include filter fabric fences, gravel outlet protection, sediment traps, vegetated or riprap swales, vegetated strips, diversion structures, catchbasin filters, retention/detention basins or equivalent.	True/False	
Runoff containing oil and grease may include the use of absorbent booms or sand filters in front of outlet structures or other equivalent measures.	True/False	
Stabilize all high traffic areas, including all vehicle entrances and exit points.	True/False	
Conduct periodic sweeping of all traffic areas.	True/False	
Provide employee training on the proper installation and maintenance of erosion and sediment control.	True/False	

Other Activities*

	True/False (circle one)	*Comments*
	True/False	
	True/False	
	True/False	
	True/False	
	True/False	
	True/False	
	True/False	

Note: * Indicates not specifically listed under Sector P.

J:\C\C0471\SWPPP\Sector P checklist.doc

CITY OF CHICOPEE

Central Maintenance Garage

677 Meadow Street
Chicopee, MA 01013
(413) 598-8989
Fax: (413) 594-3407

David R. Theroux
Supervisor of Motor
Equipment & Repair

TO: **Thomas Hamel, WWTP**
Chief Operator

FROM: **David Theroux, CMG**
Supervisor of Motor Equipment & Repair

DATE: **February 12, 2007**

RE: **STORM WATER MANAGEMENT ANNUAL REPORT -2006**

Attached please find the annual report for 2006. If you have any questions please feel free to contact me.

CITY OF CHICOPEE

CENTRAL MAINTENANCE

2006 ANNUAL REPORT

STORMWATER MANAGEMENT PROGRAM

Part A: MUNICIPAL MAINTENANCE ACTIVITY PROGRAM

The Chicopee Central Maintenance Garage (CMG) has continued to work on this Management measure by outlining programs and procedures in the areas listed below. The Central Maintenance will continue to monitor, revise, and implement these programs and activities.

Weekly site inspection of Central Maintenance Garage facility grounds performed and maintained in a log.

Part B: TRAINING OF MUNICIPAL EMPLOYEES

The Department will provide training for Central Maintenance Garage personnel (mandatory attendance) in conjunction with the Municipal Maintenance Activity Program. Areas of training are expected to include:

- **Stormwater Pollution Prevention Plan requirements**
- **Safety compliance and good housekeeping**
- **MSDS and right-to-know information**
- **Ergonomics**
- **Workplace violence**

City of Chicopee

CITY MESSENGER'S OFFICE

City Hall - Market Square - Chicopee, MA 01013 - Telephone (413) 594-1533

Earl R. Desrochers
City Messenger

TO: Joe Kietner
Environmental Compliance Supervisor

FROM: Earl R. Desrochers
City Messenger

DATE: March 9, 2007

RE: STORM WATER MANAGEMENT ACTIVITY REPORT

(Section 6 A) Municipal Maintenance Activity Report

1. The department cleans up fertilizer spills away from paved areas that may enter stormwater drains.

2. The department has parking lots swept on a regular basis to prevent sand and other debris from entering stormwater areas.

3. Paints, solvents are properly stored and empty cans, brushes and roller covers are properly disposed of when the project is finished.

(Section 6 B) Training of Municipal Employees

1. Employees follow proper procedures when oil or solvent spills occur with the use of dry cleanup methods.

2. Employees are trained to clean grass cuttings from lawnmowers in an area where the clippings will not affect storm drains.

CHICOPEE FIRE DEPARTMENT

CHIEF'S OFFICE (413)594-1630
FAX (413)594-1645

FAX

To: Tom Hamel

From: Deputy M Inerney

Date: 2-8-07

Re:

Comments:

Total number of pages (including this cover page) 3

Chicopee Fire Department
Annual Storm Water Report
2007
February 8, 2007

Prepared By Deputy Fire Chief James McInerney

CHICOPEE FIRE DEPARTMENT

STANDARD OPERATING PROCEDURE 00038
PAGE 1 OF 1

Storm Water Pollution Prevention

Date: April 3, 2006

Purpose: To adopt practices to prevent and eliminate water pollution from fire department operations. The goal of the Storm Water Management guideline is to improve water quality and address water quality problems by implementation of performance standards for water run-off management.

General: The Environmental Protection Agency has mandated a Storm Water Management Program for the City of Chicopee. All city departments must comply with this mandate. The program is designed to eliminate water pollution due to water run-off. By eliminating the discharge of contaminated water into the storm water system water pollution can be greatly reduced. Several easily followed steps can be performed to reduce this pollution.

BEST MANAGEMENT PRACTICES;

Hard surface areas such as apparatus floors shall be swept prior to washing. All debris will be placed in the trash. This will insure no hazardous materials or chemicals are washed down drains. All floor drains shall be cleaned after washing floors. A spill cleanup bucket with speedy dry shall be placed in each station to be used for the absorbent of liquid spills.

Landscape areas will be maintained as required to reduce introduction of leaves and other landscape waste into the storm water system.

Driveways and sidewalks shall be swept May 1, August 1, and October 1 or as necessary to eliminate sand and salt from entering the water system.

A plan detailing water flow destination for each station floor drain shall be developed and submitted by the Water department.

Vehicles are to be cleaned where runoff will be directed to the sewer system as apposed to the storm water system.

TRAINING;

Best management practices shall become part of recruit training with an annual review of this departmental Standard Operating Guideline.

ANNUAL REPORT (2006)
CITY OF CHICOPEE
STORMWATER MANAGEMENT PROGRAM

Section 6: Good Housekeeping/Pollution Prevention

Part E: STREET SWEEPING

For calendar year 2006, the City of Chicopee had the following three (3) mechanical sweepers available.

- 1998 Broom Bear
- 2000 Broom Bear
- 2003 Broom Bear

The winter of 2005-2006 allowed sweeping operations to begin a bit sooner than usual, commencing in March 2006. Street sweepers were on the road continuously from March 2006 through the end of November 2006.

In accordance with permit requirements, every street in the City was swept at least once during 2006. Most main arteries were swept several times as sweepers moved in and out of secondary streets.

The permit calls for Central Business Districts to be swept monthly during the sweeping season. This was accomplished. To make sure that the monthly goal was met, the City set a higher internal goal of weekly sweeping of business districts per the attached schedule.

CITY OF CHICOPEE

DEPARTMENT OF PUBLIC WORKS

Stanley W. Kulig, P.E.
Superintendent

MEMO

TO: Fran Soucie
Operations Supervisor

FROM: Stanley W. Kulig

DATE: April 3, 2006

RE: BUSINESS DISTRICT SWEEPING SCHEDULE

Like last year, please schedule sweeping in the business districts once a week per the following schedule:

STARTING WEEK OF MAY 8, 2006

MONDAY	-	CHICOPEE FALLS
TUESDAY	-	FAIRVIEW
WEDNESDAY	-	WILLIMANSETT
THURSDAY	-	ALDENVILLE
FRIDAY	-	CHICOPEE CENTER

Thank you.

CC; Each sweeper operator

CITY OF CHICOPEE

DEPARTMENT OF PUBLIC WORKS

Stanley W. Kulig, P.E.
Superintendent

Thomas Hamel
Chief Operator

Received 04/09/07 '07 Rpt.

April 1, 2007

Ann Herrick
US Environmental Protection Agency
1 Congress Street Suite 1100 (CIP)
Boston, MA 02114-2023

CERTIFIED MAIL: 7005 1160 0002 6891 3281

Re: Storm Water Management Phase II 2006 Annual Report

Dear Ms Herrick:

Enclosed please find the Storm Water Management Phase II 2006 Annual Report. This report is submitted in compliance with Chicopee's July 2003 Notice of Intent. If you have any questions do not hesitate to call me.

Sincerely,

Thomas Hamel
Chief Operator

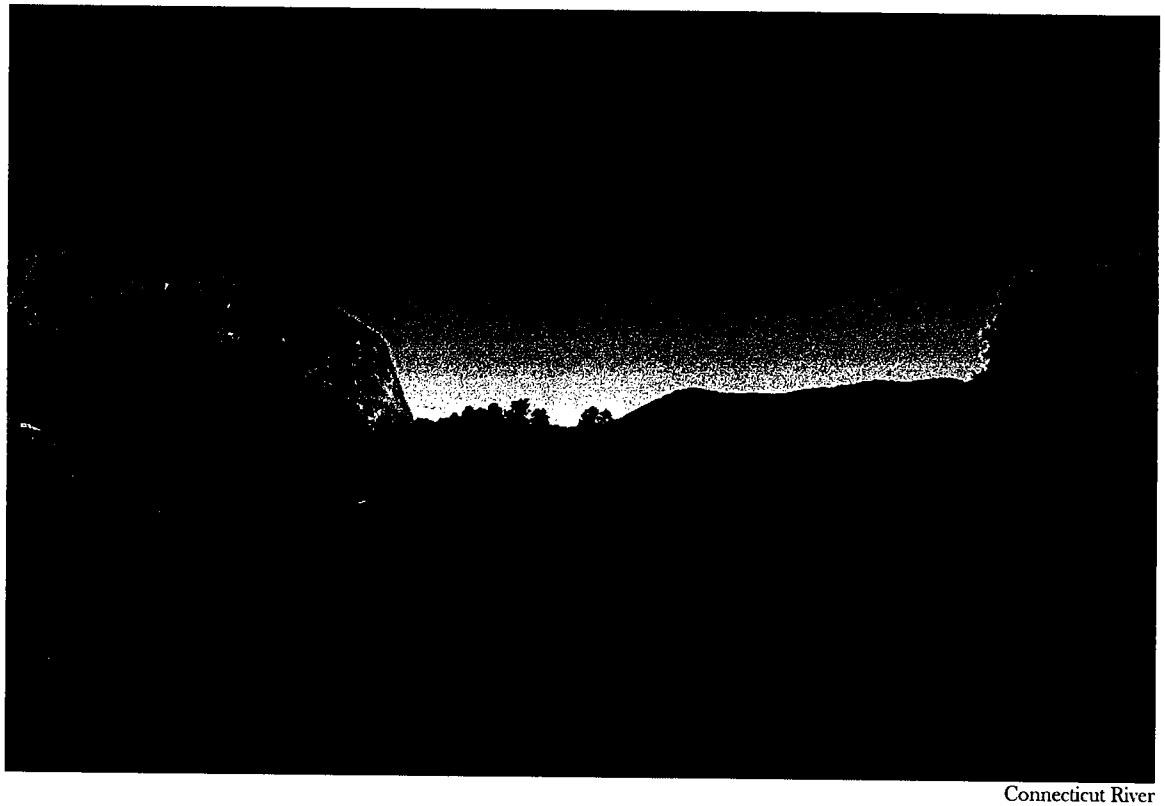
Copy: Mayor Michael Bissonnette
MA. DEP Worcester
Board of Alderman
Stanley Kulig, Superintendent
Sewer Commission

S:\DATA\WORD97\OFFICE97\REPORT\Stormwater Report 06 Letters.DOC

Water Pollution Control

80 MEDINA STREET • CHICOPEE, MA 01013-1041 • TEL. (413) 594-3585 FAX # (413) 594-3588

DPW-Water Pollution Control
Chicopee, Massachusetts



Connecticut River

2006 Annual Report
Phase II
Storm Water Management

Submitted: April 1, 2007
By Thomas Hamel
Chief Operator WPC

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Attachments:

Public Participation/Education

+IPP Summary, Community Bulletin Board, Poster, Newspaper Notice, Survey, Door Hanger, Conservation Environmental Quality Improvement Activities, Hazardous Waste Collection, Chicopee High School Storm water monitoring program, Springfield, Holyoke, Chicopee Press Release.

Storm Water Management Ordinance enacted & previously submitted.

Septic System Failures

Building, Engineering, & Planning Departmental Reviews

Conservation Commission Activities

Street Sweeping

Good Housekeeping / Training

Central Maintenance Garage (CMG), Golf Course, Parks & Recreation, DPW, Water Department, WPC, City Messenger, Fire Department, Chicopee Electric Light

Section 1 Public Education and Outreach

1A Educational Displays

The City posted an educational display in City Hall and the Main Branch of the Chicopee Public Library, during the summer of 2006. A copy of this posting is attached.

The City's Conservation Commission co-sponsored "Greenfest" an Earth Day celebration held at the main branch of the Chicopee Library. Area residents were invited to learn about turtle habitat, endangered species, restocking of salmon to the Connecticut River, 'greening' of communities and other environmentally related topics.

The City of Chicopee has posted signs at all active CSOs in order to inform residents of the location and possibility of overflows. Signs are posted to be seen from land and the adjacent water body. A structure was installed at the Medina Street boat ramp. The purpose of this structure is to inform users of water quality, such as the results of the Fecal Coliform testing, at that location. The posting was updated weekly from early spring to early autumn. Two other structures will be installed at the Stanley Berchulski Fisherman Access and the access point near the Davitt Bridge on Granby Road. Posting will begin in spring of 2007.

1B Classroom Education

The City supports Chicopee High School with some laboratory supplies and equipment and encourages storm water educational topics to be included. Staff spoke to a Chicopee High School Chemistry class September 19th 2006 about storm water topics and the possibility of continuing the river-monitoring program. The Chicopee HS chemistry instructor Kathy Lukasik is working with IPP staff to continue the river monitoring challenge.

The testing of some local water bodies was started in April 2006 and ended in December of 2006. Laurie Catarino of the Chicopee WPCF met with Ms. Lukasik and her students until they became proficient with the testing. The City of Chicopee did the sampling and delivered them to the students for analysis. Water samples form Bemis Pond, the Chicopee River, Mt. Lake, and the Connecticut River were analyzed for a number of parameters. See attached.

The City of Chicopee WPCF provides a tour for students of two local community college Biology classes. This gives students an opportunity to ask questions and to see first hand what steps are being taken to mitigate the water pollution problems the City of Chicopee faces.

1C Local Cable Access

The City broadcast *After the Storm* created by the U.S. EPA and The Weather Channel seven times during the summer months. The dates of the broadcast were June 26th, 27th, 28th and July 24th, 25th and twice on the 26th. The City of Chicopee worked with the Pioneer Valley Planning Commission Stormwater subcommittee to obtain and broadcast the videos. A copy of the video cover and the broadcast schedule are attached.

The local Public Television station, WGBY Channel 57 in Springfield, aired four fifteen second spots for thirteen weeks. These spots ran from September – November 2006

1D Informational Door Hangers and Mailings

The City has sent a mailing to residents that will be affected by the Fairview area sewer separation. The mailing invited residents to a informational meeting regarding this work. Door hangers are placed on homes in neighborhoods where catch basins were cleaned and maintenance with the City's Vactor truck was done. A mailing was sent to let city residents know of the Household Hazardous Waste Collection Day and bulk drop off procedures.

1E Hazardous Waste Collection Day

The City conducted an annual household hazardous waste collection for residents Saturday May 6, 2006. Results:

800 gallons of oil-based paint

650 gallons of waste oil

Swapped 8% useable paint back to residents

1375 gallons of miscellaneous hazardous waste

2400 linear feet of mercury-containing fluorescent light bulbs

The event was publicized in a local newspaper the local cable access channel, two public postings and the City's website.

Information and signups were available to residents at the City's website: www.Chicopee.ma.us and at the DPW office.

There is an additional waste collection available to residents by appointment during the months of September – May. 732 gallons of waste oil was collected during this time period at the DPW.

Biweekly paint collection held April-October yielded 200 gallons of paint. Paint that could still be used was swapped back to residents.

A copy of the details of these events is attached. Barry Broullard DPW Environmental Coordinator organized this work.

1F Newspaper Press Releases

The City, as part of the PVPC Stormwater Subcommittee, issued press releases and public service announcements. These were published in the Chicopee Register and Springfield Republican. The topics of the PSAs were: pet waste, leaking oil and fertilizer use. The press release titles were: "Regional Stormwater Education Campaign Launched", "Summer Lawn Care Practices May Be Bad for Waterways" and "Think Blue Stormwater Campaign Targets Connecticut River Watershed." Copies of the press release text are attached.

The City's Conservation Commission sent out a press release inviting residents to participate in a clean-up of the Connecticut River and its tributaries. A copy of this release is attached.

A feel good story about city employee ingenuity was also released. The story is about a stray shovel which decided to break ranks and jump into the collection system. The stray shovel landed in the middle of a ten inch siphon. Retrieving the shovel could have been a $100,000 project if not for the ingenuity of some city employees. The employees used their fishing expertise to fish out the $100,000 shovel. The story was printed in the Chicopee Plus section of The Republican newspaper. A copy of the article is attached.

The Chicopee Register runs an occasional series about the reality of different jobs. The September 7th 2006 issue featured the City's Collection System Working Foreman. The story showcased the amount of work that needs to be done in order to keep the City's antiquated sewer system running. The article provided residents with some information about Combined Sewer Overflows and Stormwater flows.

1G CSO Notification E-mail

The City of Chicopee sends emails to surrounding communities so they can be informed about the possible negative effect of the CSOs during rain storms. The City has a CSO facility which is activated when flow at the treatment plant is greater than 25 MGD. During 2006 the e-mail list includes Health Department representatives from Holyoke, Chicopee, Springfield and West Springfield. The program was started in mid-summer of 2006. Examples of these e-mails are attached.

Section 2 Public Involvement/Participation

2A Community Hotline

The City publicizes the community hotline through the distribution of door-hangers with the catch basin cleaning program and with other mailings. In 2006, 953 catch basins were cleaned and two to four hangers are distributed per basin. The phone number for the city's water pollution control facility is included to facilitate reporting of dumping, illicit discharges, and spill emergencies. A copy of door hanger is attached.

2B Attitude Surveys

The City continued its Customer Survey Program, which involves providing a questionnaire to customers following receipt of service. Two storm water related questions are on the survey form. The survey will be conducted to measure the success of the Public Education and Public Involvement components of the Storm water Management Plan. The two Stormwater questions on the survey in 2006 were: 1) Do you support higher sewer/storm fees for cleaner Chicopee & Conn. Rivers? And 2) Do you support a higher sewer/storm fee to separate sewer pipes to stop sewer backups? There were 26 responses to these questions in 2006 with residents answering 12 yes and 14 no for each question.

2C Storm Drain Marking

The DPW-WPC stencils catch basins or marks them by installing placards. Messages may include such phrases as "Do Not Dump" or "No Dumping, Drains to River". The DPW-WPCF's collection system department marked approximately 300 catch basins in 2006. A photo copy of an example placard is attached.

2D Watershed Committee

The DPW-WPC will encourage and support the activities of the Chicopee River Watershed Council (CRWC).

2E Conservation Commission

The Commission participated in 2 days of hand pulling a substantial Water Chestnut infestation. Over 7 tons of this invasive species was disposed of by the DPW. On September 30, 2006 the Commission organized a watershed to source of the Connecticut River and its tributaries. Over 6 tons of metal, tires, shopping carts and other debris was hauled off for proper disposal. Two photos of the cleanup day are attached.

SECTION 3 ILLICIT DISCHARGE DETECTION AND ELIMINATION

3A Mapping Storm Water Outfalls

The City of Chicopee's Engineering Department has located all existing stormwater outfalls using GPS. A condition log of each location has been established to monitor and identify problem areas. This data and a copy of this map is on file with the City Engineer.

3B Develop Illicit Discharge Plan

Chapter 231 of the Chicopee Storm Water Management Ordinance outlines this activity. Additionally, the drainage network plan will serve as a tool to track illicit discharge sources.

3C Storm Water Discharge Ordinance

The City adopted a Storm Water Management Ordinance (October 28, 2003) to prohibit non-storm water discharges into the MS4 system. A copy was previously sent.

3D Illegal Dumping

The DPW performs regular patrols of areas known for illegal dumping. The DPW has post signage to deter illegal dumping at common dumping areas. The City picks up dumping daily as it occurs to prevent the trash breeding trash phenomenon.

3E Recreational Septage

The Sewer Commission currently allows Chicopee residents with Recreational Vehicles to dump their septage at the WPCF. The program is designed to deter illegal dumping and is provided at no cost to the resident. Thirty-one recreational vehicles utilized this service in 2006.

3F Failing Septic Systems

The Health Department currently keeps records of septic system failures that are used to identify problem areas. The Health Department reported 6 failed systems and all have been corrected. A list of their locations is attached.

3G Industrial / Business Connections

The Industrial Pretreatment Program's effectiveness is evaluated as required annually each April 1st. This includes the demonstration that EPA requirements for Industrial User monitoring, inspecting, enforcement, and permitting has been satisfied; the City has

implemented local discharge limitations that are sufficiently protective to the POTW and its workers, its receiving stream, and sludge disposal options; the City's IPP is appropriately funded and staffed. The IPP report submitted during 2006 will be provided to you upon request.

3H Video Inspection

The DPW – WPC uses a video camera to inspect storm drain pipes as needed to follow up on illicit discharges discovered. Over 2,311 feet at 35 different locations were TV inspected and or cleaned in 2006. See attached.

Section 4 Construction Site Runoff Control

4A Construction Runoff Ordinance

The City adopted a Storm Water Management Ordinance that requires sediment and erosion control at construction projects with over one acre in total disturbance.

4B Construction Plan Review

Under the Storm Water Management Ordinance, applicants with projects with disturbance over one acre will be required to submit sediment and erosion control plans for City review and approval. The Building & Planning Departments each reviewed 8 projects for storm water management compliance in 2006. Conservation reviewed 27 projects for storm water management and compliance wit the Chicopee Wetlands Protection Ordinance. Engineering reviewed 13 commercial, and subdivision sites along with infrastructure improvements. A copy of the projects list is attached.

4C Inspection / Reporting

Under the Storm Water Management Ordinance, projects with disturbance over one acre will be required to have regular inspection of sediment and erosion controls and reporting of construction activities. The commercial sites and subdivisions referred to above were inspected for adherence to the approved plans.

SECTION 5 POST CONSTRUCTION STORMWATER MANAGEMENT

5A Post Construction Runoff Ordinance

The City adopted a Storm Water Management ordinance to address post construction runoff from projects with over one acre in total disturbance.

5B Site Plan Review

Under the Storm Water Management Ordinance applicants with projects with disturbance over one acre are required to submit storm water control plans for City review and approval.

5C Storm Water System Maintenance Plan

Under the Storm Water Management Ordinance projects with disturbance over one acre are required to include a program outlining procedures for long term operation and maintenance of storm water facilities. Additional staffing has been requested in FY07 budget to carry out the inspections. The position is expected to be filled early 2007

SECTION 6 GOOD HOUSEKEEPING / POLLUTION PREVENTION

6A Municipal Maintenance Activity Program

The City is continuing to work to develop a program to outline procedures associated with maintenance of open spaces and parks, vehicular fleets, City-related construction activities, streets and the storm sewer system. The City is evaluating existing municipal procedures; modifying any procedures as needed, and starting implementation of the program plans. Representatives of Chicopee's Water Department, Electric Light Department, Water Pollution Control, Fire Department, DPW, School Department and Golf Club met November 6, 2003 with Tighe and Bond Environmental Engineers. Jeff Bibeau of T & B conducted a presentation a Storm Water Management Training Seminar. Utilizing this information each department is reexamining their procedures and make the required modifications.

6B Training of Municipal Employees

Municipal employees performing activities under the new Municipal Maintenance Activity Program (BMP #6A) will be informed of new policies and procedures. This will occur pending adoption of the Program. DPW employees will also be informed of the Storm Water Pollution Prevention Plan requirements for the DPW, as applicable. Initial training was given in Year 2. An Annual Refresher in the form of a seminar or memorandum will be given each year for Years 3 through 5. Program outlines for the Fire Dept., Parks Dept., Water Dept., City Hall Maintenance, DPW, Golf Course, Central Maintenance Garage, School Department and WPC facility are attached.

6C Storm Water Pollution Prevention Plan / MSGP

A Storm Water Pollution Prevention Plan (SWPPP) was revised for the DPW facility. The plans were implemented during calendar year 2006. The Central Maintenance Garage (CMG), and the Chicopee Electric Light Department (CELD) and Fire

Department under the EPA Phase II Storm water Program Multi-Sector General Permit (MSGP).

6D Catch Basin Cleaning Program

The City cleaned approximately 953 catch basins in 2006. Informational flyers are distributed to homes in the immediate area around the basins.

6E Street Sweeping

For calendar 2006 the City had three mechanical sweepers. The winter of 2005-2006 allowed sweeping operations began a bit sooner than usual, commencing in March of 2006. Street sweepers were on the road continuously from March through November 2006. Every street in the City was swept at least once. Most main arteries were swept several times as sweepers moved in and out of secondary streets. While only monthly sweeping is required in the business districts the City set a higher goal. The Central business districts, Chicopee Falls, Fairview, Willimansett, Aldenville and Chicopee Center, were swept once per week. A copy of the street sweeping schedule is attached.

6F Used Oil Recycling

The City currently collects used oil at the DPW facility for utilization as a regulated recyclable material in the DPW garage waste oil heater. The City will continue to offer Used Oil Recycling in Years 1 through 5. The DPW has the responsibility for this BMP.

6G Hazardous Waste Collection

The City continued its annual Hazardous Waste Collection Day, in 2006 it was held May 6th. Every year, the City publicizes the collection day through newspaper ads, radio and local cable access. There is also seasonal paint collection at the DPW. This DPW will continue to have the responsibility for this BMP, which will be utilized in Years 1 through 5. See section 1E

SECTION 7 BMPs for Meeting TMDLs

7A TMDL for Connecticut River

According to the Massachusetts Year 2002 Integrated List of Waters, the Connecticut River is designated as Category 5 "Waters requiring a TMDL". The targeted pollutants are priority organics, pathogens, and suspended solids. Sources of priority organics may include but are not limited to: road surfaces, inadequate fueling areas or practices, illegal dumping. Sources of pathogens may include but are not limited to: pet waste, winter road maintenance materials, illicit sewer discharges, and failing septic systems. Sources of this suspended solids may include but are not limited to: lawn care products, litter,

winter road maintenance materials, erosion from construction activities, and illicit sewer discharges. The Storm water Management Program includes many BMPs to address reduction of contaminants from these sources under all Six Minimum Control categories..

7B TMDL for Chicopee River

According to the Massachusetts Year 2002 Integrated List of Waters, the Chicopee River is designated as Category 5 "Waters requiring a TMDL". The targeted pollutant is pathogens. Sources of pathogens may include but are not limited to: pet waste, winter road maintenance materials, illicit sewer discharges, and failing septic systems. The Storm water Management Program includes many BMPs to address reduction of contaminants from these sources under all Six Minimum Control categories. The City will implement these BMPs under the responsible department and timeframes as previously described.

7C TMDL for Bemis Pond

According to the Massachusetts Year 2002 Integrated List of Waters, Bemis Pond is designated as Category 5 "Waters requiring a TMDL". The targeted pollutant is suspended solids. Sources of this pollutant may include but are not limited to: lawn care products, litter, winter road maintenance materials, erosion from construction activities, and illicit sewer discharges. The Storm water Management Program includes many BMPs to address reduction of contaminants from these sources under all Six Minimum Control categories. The City will implement these BMPs under the responsible department and timeframes as previously described.

EPA
United States Environmental Protection Agency

EPA 841-F-03-003

Protecting Water Quality *from* URBAN RUNOFF

Clean Water Is Everybody's Business

In urban and suburban areas, much of the land surface is covered by buildings and pavement, which do not allow rain and snowmelt to soak into the ground. Instead, most developed areas rely on storm drains to carry large amounts of runoff from roofs and paved areas to nearby waterways. The stormwater runoff carries pollutants such as oil, dirt, chemicals, and lawn fertilizers directly to streams and rivers, where they seriously harm water quality. To protect surface water quality and groundwater resources, development should be designed and built to minimize increases in runoff.

The most recent National Water Quality Inventory reports that runoff from urbanized areas is the leading source of water quality impairments to surveyed estuaries and the third-largest source of impairments to surveyed lakes.

Did you know that because of impervious surfaces like pavement and rooftops, a typical city block generates more than 5 times more runoff than a woodland area of the same size?

How Urbanized Areas Affect Water Quality

Increased Runoff

The porous and varied terrain of natural landscapes like forests, wetlands, and grasslands traps rainwater and snowmelt and allows them to filter slowly into the ground. In contrast, impervious (nonporous) surfaces like roads, parking lots, and rooftops prevent rain and snowmelt from infiltrating, or soaking, into the ground. Most of the rainfall and snowmelt remains above the surface, where it runs off rapidly in unnaturally large amounts.

Storm sewer systems concentrate runoff into smooth, straight conduits. This runoff gathers speed and erosional power as it travels underground. When this runoff leaves the storm drains and empties into a stream, its excessive volume and power blast out streambanks, damaging streamside vegetation and wiping out aquatic habitat. These increased storm flows carry sediment loads from construction sites and other denuded surfaces and eroded streambanks. They often carry higher water temperatures from streets, roof tops, and parking lots, which are harmful to the health and reproduction of aquatic life.

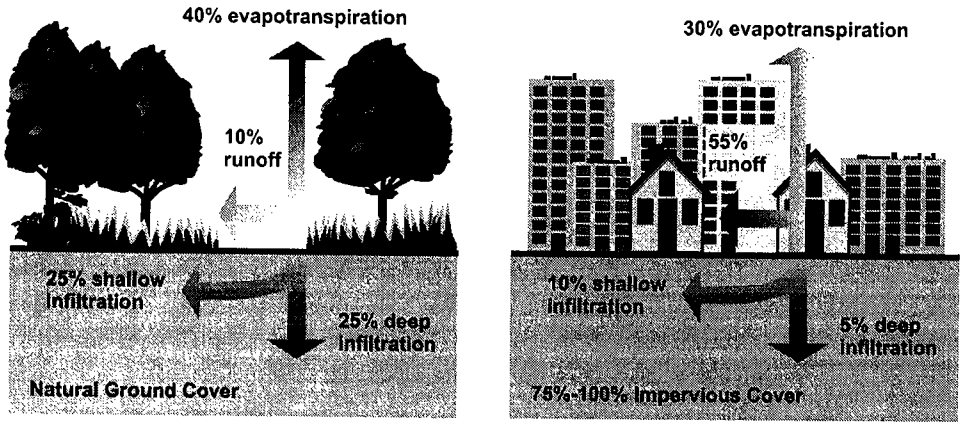
The loss of infiltration from urbanization may also cause profound groundwater changes. Although urbanization leads to great increases in flooding during and immediately after wet weather, in many instances it results in lower stream flows during dry weather. Many native fish and other aquatic life cannot survive when these conditions prevail.

Increased Pollutant Loads

Urbanization increases the variety and amount of pollutants carried into streams, rivers, and lakes. The pollutants include:

- Sediment
- Oil, grease, and toxic chemicals from motor vehicles
- Pesticides and nutrients from lawns and gardens
- Viruses, bacteria, and nutrients from pet waste and failing septic systems
- Road salts
- Heavy metals from roof shingles, motor vehicles, and other sources
- Thermal pollution from dark impervious surfaces such as streets and rooftops

These pollutants can harm fish and wildlife populations, kill native vegetation, foul drinking water supplies, and make recreational areas unsafe and unpleasant.



Relationship between impervious cover and surface runoff. Impervious cover in a watershed results in increased surface runoff. As little as 10 percent impervious cover in a watershed can result in stream degradation.

Managing Urban Runoff

What Homeowners Can Do

To decrease polluted runoff from paved surfaces, households can develop alternatives to areas traditionally covered by impervious surfaces. Porous pavement materials are available for driveways and sidewalks, and native vegetation and mulch can replace high maintenance grass lawns. Homeowners can use fertilizers sparingly and sweep driveways, sidewalks, and roads instead of using a hose. Instead of disposing of yard waste, they can use the materials to start a compost pile. And homeowners can learn to use Integrated Pest Management (IPM) to reduce dependence on harmful pesticides.

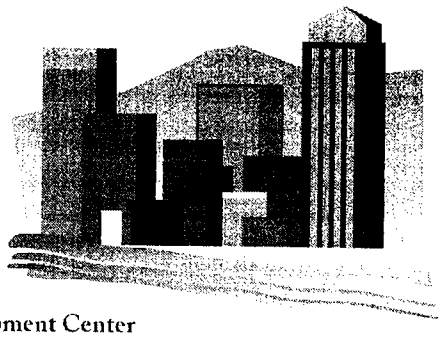
In addition, households can prevent polluted runoff by picking up after pets and using, storing, and disposing of chemicals properly. Drivers should check their cars for leaks and recycle their motor oil and antifreeze when these fluids are changed. Drivers can also avoid impacts from car wash runoff (e.g., detergents, grime, etc.) by using car wash facilities that do not generate runoff. Households served by septic systems should have them professionally inspected and pumped every 3 to 5 years. They should also practice water conservation measures to extend the life of their septic systems.

Controlling Impacts from New Development

Developers and city planners should attempt to control the volume of runoff from new development by using low impact development, structural controls, and pollution prevention strategies. Low impact development includes measures that conserve natural areas (particularly sensitive hydrologic areas like riparian buffers and infiltrable soils); reduce development impacts; and reduce site runoff rates by maximizing surface roughness, infiltration opportunities, and flow paths.

Controlling Impacts from Existing Development

Controlling runoff from existing urban areas is often more costly than controlling runoff from new developments. Economic efficiencies are often realized through approaches that target "hot spots" of runoff pollution or have multiple benefits, such as high-efficiency street sweeping (which addresses aesthetics, road safety, and water quality). Urban planners and others responsible for managing urban and suburban areas can first identify and implement pollution prevention strategies and examine source control opportunities. They should seek out priority pollutant reduction opportunities, then protect natural areas that help control runoff, and finally begin ecological restoration and retrofit activities to clean up degraded water bodies. Local governments are encouraged to take lead roles in public education efforts through public signage, storm drain marking, pollution prevention outreach campaigns, and partnerships with citizen groups and businesses. Citizens can help prioritize the clean-up strategies, volunteer to become involved in restoration efforts, and mark storm drains with approved "don't dump" messages.



Related Publications

Turn Your Home into a Stormwater Pollution Solution!
www.epa.gov/nps

This web site links to an EPA homeowner's guide to healthy habits for clean water that provides tips for better vehicle and garage care, lawn and garden techniques, home improvement, pet care, and more.

National Management Measures to Control Nonpoint Source Pollution from Urban Areas
www.epa.gov/owow/nps/urbanmm

This technical guidance and reference document is useful to local, state, and tribal managers in implementing management programs for polluted runoff. Contains information on the best available, economically achievable means of reducing pollution of surface waters and groundwater from urban areas.

Onsite Wastewater Treatment System Resources
www.epa.gov/owm/onsite

This web site contains the latest brochures and other resources from EPA for managing onsite wastewater treatment systems (OWTS) such as conventional septic systems and alternative decentralized systems. These resources provide basic information to help individual homeowners, as well as detailed, up-to-date technical guidance of interest to local and state health departments.

Low Impact Development Center
www.lowimpactdevelopment.org

This center provides information on protecting the environment and water resources through integrated site design techniques that are intended to replicate preexisting hydrologic site conditions.

Stormwater Manager's Resource Center (SMRC)
www.stormwatercenter.net

Created and maintained by the Center for Watershed Protection, this resource center is designed specifically for stormwater practitioners, local government officials, and others that need technical assistance on stormwater management issues.

Strategies: Community Responses to Runoff Pollution
www.nrdc.org/water/pollution/storm/stoinx.asp

The Natural Resources Defense Council developed this interactive web document to explore some of the most effective strategies that communities are using around the nation to control urban runoff pollution. The document is also available in print form and as an interactive CD-ROM.

For More Information

U.S. Environmental Protection Agency
Nonpoint Source Control Branch (4503T)
1200 Pennsylvania Avenue, NW
Washington, DC 20460
www.epa.gov/nps

February 2003

NOTICE

THIS IS A COMBINED SEWER OUTFALL (CSO)

RIVER WATER MAY BECOME POLLUTED DURING OR AFTER PERIODS OF RAIN, SNOW, OR SNOWMELT. SWIMMING IS DISCOURAGED DURING AND AFTER THESE EVENTS. IF YOU SEE A DISCHARGE DURING DRY WEATHER PLEASE CALL OR IF YOU DESIRE ADDITIONAL INFORMATION CONTACT:

City of Chicopee
Chicopee Water Pollution Control
413-594-3585

Outfall # 001

NPDES permit #MA0101508

END OF YEAR REPORT

2006
CHICOPEE CONSERVATION COMMISSION

Wetland Permitting, Environmental Quality Improvement, and Public Awareness Activities

The City of Chicopee Conservation Commission engaged in and supported the following activities during 2006. In addition to the mandated wetland permit review of site activities within the Commission's regulatory areas of jurisdiction, the Conservation office continues to focus on public awareness and education within the local school systems, the community and the region at large. The Commission continues to emphasize the following philosophy,"The Importance of Taking Personal Responsibility in Affecting Improvements in Environmental Quality." in its community outreach work.

Commission staff joined Silvio Conte National Wildlife refuge staff and volunteers in 2 days of handpulling via canoe a substantial Water Chestnut (Trapa natans) infestation. Disposal of the invasive plants was provided by the Chicopee Department of Public Works. The DPW transported over 7 tons of bagged water chestnuts to the landfill.

The Conservation Commission co-sponsored "Greenfest" an Earth Day celebration held at the Emily Partyka Memorial Library last May. Area residents were invited to learn about turtle habitat, endangered species, re-stocking salmon to the Connecticut River, 'greening" of communities and other environmentally related topics.

The Commission sponsored the Chicopee area segment of the "*10th annual Connecticut River Watershed Source to Sea Cleanup* , a one-day community cleanup of the Connecticut River and its tributaries held on 9/30/06. Over 6 tons of metal, tires, shop[ping carts, and other debris was hauled off for proper disposal.

During 2006 the Commission reviewed 27 wetland filings under the Massachusetts Wetlands Protection Act and the Chicopee Wetlands Protection Ordinance (see attached report) and issued 3 Violation Notices.

Mary E. Donahue
Conservation Administrator
3/5/07

Chicopee High School Stormwater Monitoring Program 2006

Bemis Pond

Date:	pH:	Alkalinity	DO:	Turbidity	TColiform	E Coli:	Hardness:	Ammonia:	Nitrate:	Chloride:	Nitrite:	Phosphorus	Iron:	Weather
4/5/2006	7.12	29.2	10.9	17	2419.6	1413.6	60.8	0.11	1.3	130	0.004	0.61	1.16	snowy 30 deg
4/12/2006	6.25	37.5	11	11			106.4	0.08	1.1	185	0.005	0.64	1.26	sunny 60deg
4/26/2006	7.5	37.8	11.3	14	913.9	96	74	0.07	0.4	176	0.001	0.42	1.62	sunny 32 deg
5/3/2006	5.87	44.6	10.7	15			100.8	0.6	0	243	0	0.36	1.72	rainy 40 deg
5/10/2006		31.6	9.8	12	608.8	378.4	113.2	0.14	2.9	22	0.001	0.48	1.37	rainy 50 deg
5/17/2006	7.63	24.1	10.7	19	2419.6	2419.6	64.4	0	0.7	101	0	0.46	1.19	sunny 50 deg
5/23/2006	6.16	29.7	10	15	3465.8	68.2	92.4	0.24	2.5	114	0.002	0.47	2.02	sunny/cloudy 45 deg
5/31/2006	6.09	63.6	9.4	18			95.2	0	2.8	200	0.004	183	1.02	sunny 60 deg
6/7/2006	6.17	58	9.2	16	2419.6	310.6		0.12	0.5	140	0.009	0.62	0.93	rainy 55 deg
6/14/2006	6.18	33.1	8.8	0				0.11	0.7	1.36	0.011	0.23	1.82	sunny 55 deg
10/4/2006	6.76		9.4	12	2419.6	178.2		0.01	0.1	123		0.14	1.23	foggy, 57deg
10/13/2006	6.42	17.9	8.9	34	4839.2	4839.2	36.1	0.01	0	60.5	0.01	0.18	1.36	rainy, 50 deg
10/19/2006	6.96	38.4	13.8	27	4839.2	1454	66	0	0		0	0.1	1.81	Sunny 57 deg
10/26/2006	6.59	44	15.1	15	1986.3	39.7	65.2	0.11	1.3	61.75	0	0.36	1.85	Sunny, 40 deg
11/1/2006	6.38	53.2	9.9	33	2022.4	143.4	47.2	0.06	0	82.25	0.006	0	1.22	rainy/cloudy 50 deg
11/8/2006	6.7	45.3	10.5	14	730.8	34.6	73.6	0.011	0.1	44.6	0.012		1.42	50 deg

Chicopee High School Stormwater Monitoring Program 2006

Bemis Pond

Date:	pH:	Alkalinity	DO:	Turbidity	TColiform	E Coli:	Hardness:	Ammonia:	Nitrate:	Chloride:	Nitrite:	Phosphorus	Iron:	Weather
11/15/2006	6.49	35.4	7.5	17	1011.2	285.1	62	0.11	0.1	106	0.001	0.29	1.3	rainy 56deg
11/29/2006	6.46	26.4	15.6	17	2239.8	63	67.6	0.06	0.1	99.25	0.004	1.21	1.24	cloudy, 45 deg
12/7/2006	7.07	142	11.1	8	4839.2	186.6	91.2	0.04	0	123.7	0	0.35	1.79	18 deg
12/13/2006	6.65	39.2	11.6	15	1413.6	34.1	81.2	0	0.7	160.8	0.008	0.14	1.85	rainy, 45 deg

Chicopee High School Stormwater Monitoring Program 2006

Chicopee River

Date:	pH:	Alkalinity	DO:	Turbidity	TColiform	E Coli:	Hardness:	Ammonia:	Nitrate:	Chloride:	Nitrite:	Phosphorus	Iron:	Weather
4/5/2006	6.35	12.8	11.7	10	816.4	41.4	35.8	1.04	0	40	0	0.65	0.3	
4/12/2006	6.54	12.5	11.9	2			29.1	0	0.8	36.2	0.006	0.16	0.29	
5/3/2006	5.94	19.8	11	4	1413.6	119.8	32.3	0	0	38.6	0.001	0.37	0.53	
5/10/2006	6.83	13.3	10.9	19	190.4	25.9	31.6	0.06	2.1	40	0.004	0.31	1.37	
5/17/2006	6.17	17.4	10.9	10	1373.4	125.8	41.5	0.22	0.8	83.75	0.1	0.32	0.68	
5/22/2006	7.95	21.8	11.9	9	648	35.9	36	0	1	38.7	0.002	0.47	0.63	
5/31/2006	6.58	20.9	10.1	4			26.5	0	0	36	0.035	0.29	0.52	
6/7/2006	6.33	23.3	10.5	59	2419.6	2419.6		0.33	0	33.1	0.004	0.38	1.06	
6/14/2006	6.39	20.2	9.7	11				0.02	2.6	36	0	0.32	0.61	
10/4/2006	6.86		14.7	0	1553.1	86.2		0	1.7	144		0.07	0.43	
10/12/2006	6.9	19		0.73	4839.2	976.8	32.5	0	1.5	35.8	30	0.17	16.5	
10/19/2006	6.74	18.3	16.5	32	648.8	40.8	35.9		0.6	53.25	0.002	0.16	0.69	
10/25/2006	6.55	18.5	10.2	8	579.4	34.1	31.2	0	0.6	35	0.005	0.44	0.64	
11/1/2006	6.48	60	11	12	3106.2	296.6	32.4	0.04	1.7	42.25	0.005	6.47	0.59	
11/8/2006	6.38	14	12	0	185	9.8	57.2	0	0	28.4	0		0.48	
11/15/2006	6.45	14	12.2	0	1540.2	47.6	29.3	0	1.6	74	0	0.13	0.47	

Chicopee High School Stormwater Monitoring Program 2006

Chicopee River

Date:	pH:	Alkalinity	DO:	Turbidity	TColiform	E Coli:	Hardness:	Ammonia:	Nitrate:	Chloride:	Nitrite:	Phosphorus	Iron:	Weather
11/29/2006	6.3	16	12.2	6	4839.2	51.2	30.5	0.16	0.4	44	0	0.2	0.51	
12/6/2006	7.3	117.2	13.2	0	1841.6	99.2	51.2	0	0.4	52.8	0	0.11	0.42	
12/13/2006	6.55	17.5	12.9	2	770.1	41.4	34.1		1.8	80	0.012	0.34	0.53	

Chicopee High School Stormwater Monitoring Program 2006

Conn. River

Date:	pH:	Alkalinity	DO:	Turbidity	TColiform	E Coli:	Hardness:	Ammonia:	Nitrate:	Chloride:	Nitrite:	Phosphorus	Iron:	Weather
4/5/2006	6.22	30.3	13.4	10	517.2	71.2	40	0.09	1.2	10.1	0.004	0.5	0.03	
4/12/2006	6.49	21.2	9.6	2			34.8	0.02	0.9	27.5	0	0.23	0.03	
5/3/2006	6.43	25.9	16.5	2	2419.6	1046.2	41.7	0.06	1.1	24.6	0.003	0.21	1.13	
5/10/2006	8.76	32.4	10.7	39	980.4	30.5	39.5	0.05	16	34.5	0.008	0.31	0.14	
5/17/2006	6.41	20.2	10.7	16	1986.3	238.2	29.8	0.04	0.3	31.7	0.04	0.32	0.49	
5/22/2006	6.48	26.4	13.4	21	770.4	129.6	31.2	0	0.8	17	0	0.66	0.6	
5/31/2006	6.65	25	12.1	7			38.7	0.03	0.5	28	0.003	0.46	0.26	
6/7/2006	6.49	24	10	34	691	131.7		0.01	0.2	26.4	0.003	0.73	0.17	
6/14/2006	6.52	22.8	10.7	12				0	0	18.7	0	0.21	0.17	
10/4/2006	7.1		10.6	0	2419.6	88.6			1.1	82		0.05	0.14	
10/12/2006	6.88	24.4	9.4	24	4839.2	3465.8	40.1	0.07	0	17.8	1.2	1.65	0.66	
10/19/2006	7.01	18.3	10.9	5	976.8	169.2	22.3		0.9	37.75	0.003	0.27	0.29	
10/25/2006	6.77	25.8	11.8	9	1158.8	62.6	28	0.01	0.8	25	0.008	1.34	0.2	
11/1/2006	6.67	67.6	11.7	19	3106.2	143.4	43.2	0.07	1.7	25	0.01	0.1	0.57	
11/8/2006	6.68	24	12.2	0	866.4	69.2	36	0	1		0		0	
11/15/2006	6.74	21.4	13.3	0	691	98.7	31.8	0	1.2	50.8	0.003	0.03	0.33	

Chicopee High School Stormwater Monitoring Program 2006

Conn. River

Date:	pH:	Alkalinity	DO:	Turbidity	TColiform	E Coli:	Hardness:	Ammonia:	Nitrate:	Chloride:	Nitrite:	Phosphorus	Iron:	Weather
11/29/2006	6.7	18.8	16.5	6	178.9	88.6	37.3	0.01	1.7		0	0.14	0.19	
12/6/2006	6.75	43.2	12.8	0	2406.6	222.4	55.6	0.1	0.9	91.6	0.009	0.27	0.55	
12/13/2006	6.8		16.5	4	1413.6	178	36.6		0.9	78	0.01	0.25	0.23	

Chicopee High School Stormwater Monitoring Program 2006

Mt. Lake

Date:	pH:	Alkalinity	DO:	Turbidity	TColiform	E Coli:	Hardness:	Ammonia:	Nitrate:	Chloride:	Nitrite:	Phosphorus	Iron:	Weather
4/5/2006	5.93	20.6	15.3	180	2419.6	53.7	76.8	0.57	0	35	0	0.54	3.3	
4/12/2006	6.33	19.7	16.5	14			77.6	0.11	1.8	88	0	0.24	1.47	
5/3/2006	5.78	15.5	10.1	21	1413.6	222.4	59.6	0.24	1	67	0.001	0.46	1.56	
5/10/2006	6.7	20.5	11	7	2827.2	97.6	70	0.06	3.7	100	0	0.45	1.17	
5/17/2006	6.07	19.6	11.1	47	2599.4	100.8	85.6	0.02	0	100	0	0.7	0.02	
5/22/2006	6.18	21	15.7	15	1175.4	43.6	73.2	0.15	1.5	95	0	0.65	3.3	
5/31/2006	6.26	21.1	9.9	26			85.2	0.21	0.2	97.5	0.001	0.23	2.59	
6/7/2006	6.15	20	15.6	79	2419.6	2419.6		0.4	0	70.25	0.001	0.59	0.3	
6/14/2006	6.41	18.9	9.6	6				0.1	0	88.75	0.006	0.5	0.95	
10/4/2006	6.61		12	6	1553.1	133.6			2			0.12	0.42	
10/12/2006	6.07	10.8	16.5	78	4839.2	1540.2	36.7	0.26		37	0.024	2.35	3.3	
10/19/2006	7	18.2	12	12	1732.9	72.7	70.8	0.01	2.6	92	0.001	0.36	2.47	
10/25/2006	6.52	21	11.6	8	1986.3	21.6	49.6		2.2	93.5	0.002	0.28	1.04	
11/1/2006	6.44	60	11.5	17	3106.2	55.8	52	0.1	1.4	78.25	0	0.3	1.44	
11/8/2006	6.36	21.8	12.5	14	378.4	61.9	71.2	0.14	0.1	21.2	0		1.19	
11/29/2006	6.43	89.2	10.7	10	1119.9	35.9	58.8	0.25	0.7	88	0.003	0.07	1.33	

Chicopee High School Stormwater Monitoring Program 2006

Mt. Lake

Date:	pH:	Alkalinity	DO:	Turbidity	TColiform	E Coli:	Hardness:	Ammonia:	Nitrate:	Chloride:	Nitrite:	Phosphorus	Iron:	Weather
12/6/2006	7.6	82	12.7	0	689.6	113.2	90	0.28	2.7	114.4	0.006	0.27	1.2	
12/13/2006	6.58	18.7	15	12	509.9	30.5	66.4	0	1.3	149.6	0.012	0.22	1.15	

Chicopee High School Stormwater Monitoring Program 2006

Rip Rap Brook

Date:	pH:	Alkalinity	DO:	Turbidity	TColiform	E Coli:	Hardness:	Ammonia:	Nitrate:	Chloride:	Nitrite:	Phosphorus	Iron:	Weather
4/5/2006	6.23	28.3	11	36	2419.6	1046.2	80	0.2	0	22.3	0.05	0.23	1.25	
4/12/2006	6.18	39	8.8	10			90.8	0.05	1	170	0.001	0.27	1.23	
4/26/2006	6.21	29.7	11	6	913.9	119.8	73.2	0	0	139	0.017	0.64	1.26	
5/3/2006	6.16	39.1	10.6	13		157.6	100.8	0.01	0.5	177	0	0.46	1.27	
5/10/2006	6.56	39.1	9.7	8	561.8	156.5	115.6	0.18	1.2	125	0.008	0.35	1.25	
5/17/2006	6.2	27.6	10.7	15	2419.6	1732.5	73.6	0.01	0.7	100	0.03	0.25	1.1	
5/23/2006	6.11	33.1	10	8	1986.3	52.9	84.8	0.25	0.8	131	0.002	0.87	2.5	
5/31/2006	6.26	27.6	12.3	5			84.8	0.15	1	160	0.015	0.54	1.14	
6/7/2006	6.31	28.2	9.9	10	2419.6	186.8		0.26	0.2	120	0.015	0.42	1.26	
6/14/2006	6.51	29	9.9	3				0.22	0.7	178	0.014	0.48	0.99	
10/4/2006	6.9		9.7	14	2419.6	235.2		0	0.2	15.75		0.08	1.04	foggy, 57deg
10/13/2006	6.59	18.65	12.6	46	4839.2	4839.2	31.9	0.09	0	59	0.018	2.12	1.21	
10/19/2006	7	36.8	11.3	30	4839.2	496.2	62.4	0.07	0.3	108	0.002	6.48	2.28	
10/26/2006	6.68	41.6	14.1	11	1732.8	163.2	72.8	0.13	0.6	39.7	0.004	0.21	1.36	
11/1/2006	6.88	74.4	10.3	20	4839.2	237.8	7.88	0.01	0.1	92.25	0.02	0.11	1.23	
11/8/2006	6.69	44.5	11	3	1203.3	7.5	95.2	0.07	0.9	74.4	0		1.27	

Chicopee High School Stormwater Monitoring Program 2006

Rip Rap Brook

Date:	pH:	Alkalinity	DO:	Turbidity	TColiform	E Coli:	Hardness:	Ammonia:	Nitrate:	Chloride:	Nitrite:	Phosphorus	Iron:	Weather
11/15/2006	6.67	29.6	10.1	0	4839.2	222.4	52.8	0.11	0	111.2	0.006	0.24	1.41	
11/29/2006	6.64	46	16.5	17	1226.2	37.8	83.6	0.07	0.3	390	0.005	0.28	1.33	
11/30/2006	6.58	44.8	10.2	13	960.6	161.6	85.6	0.13	0.001	150	0.3	0.29	1.06	
12/7/2006	7.12	129.2	11.8	6	2419.6	137.2	80.8	0.12	1.4	129.2	0	0.11	1.69	
12/13/2006	6.63	38.9	10.5	3	1553.1	19.5	73.6	0.02	0.2	160	0.006	0.19	1.13	

SPRINGFIELD TECHNICAL COMMUNITY COLLEGE

One Armory Square, P.O. Box 9000, Springfield, MA 01101 • Telephone (413) 781-7822 • www.stcc.mass.edu

October 24, 2006

Thomas Hamel, Chief Operator
City of Chicopee
Department of Public Works
80 Medina St.
Chicopee, MA 01013

Dear Tom,

Thank you once again for taking the time on October 19 to lead the tour of the Waste Water Treatment plant and Laboratory for my Environmental Biology class. The tour was interesting, informative, and has helped tremendously with our in-class discussions on water use and pollution. Your knowledge and enthusiasm for the process is remarkable. Thank you for your help!

Best Wishes,

Kenneth Petit,
Biology Department
STCC

Springfield Technical Community College is a nationally-recognized pace-setting leader in technology education and instructional innovation. With its myriad of degree and certificate programs in technologies, health sciences, business and engineering, the institution is the most comprehensive community college in New England. A highly qualified faculty and advanced academic and technological facilities provide an exceptional learning environment. The college is committed to comprehensive institutional assessment and effectiveness. The philosophy and process of continuous quality improvement serve as the underlying foundation of all college programs and services. Springfield Technical Community College has a strong and recognized commitment to the economic development of the Pioneer Valley, Massachusetts, and the nation.

STCC's Mission Statement

After the Storm

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

EPA

PVPC worked with the local cable access television stations in eight of the nine member communities (Granby doesn't have a station) to air two videos about stormwater, watershed ecology, Low Impact Development and other best management practices. Programs to be run weekly May through August during primetime. The two films provided to the stations were:

Eckert, David. Reining in the Storm: One Building at a Time. Virginia Village Productions. 2004
United States Environmental Protection Agency and The Weather Channel. After the Storm. The Weather Channel 2004.

Community Cable Channels	Programming Notes
Springfield – Channel 15	After the Storm ran through July and August about 4 time daily and as a time spot filler when needed.
Ludlow – Ludlow Community TV	Videos run through May and June - 3 times a day at 1pm, 8pm and 3 am
Easthampton Community Cable	Data not available
Longmeadow Community Television	Data not available
Holyoke Community Cable Channel	Broadcasting the four MADEP Clean Water Tip .pdf as stills throughout the month of July.
Chicopee Media Education Center	Broadcast *After The Storm* in June: June 26 @ 7:00PM, June 27 @ 8:00PM, June 28 @ 9:00PM, July 24 @ 7:00PM, July 25 @ 8:00PM, July 26 @ 11:00AM, - July 26 @ 9:00PM
Agawam Community Cable	Both films were broadcast regularly in May and June during a majority of daytime hours and at least 6 primetime weekday spots.
South Hadley	Both films were shown through May and June on a rotating schedule at least 3 time each day.
Granby	Broadcasts at 1:30 pm and 5:30 pm daily

5. **WGBY Public Television**
Beginning August 1, 2006, WGBY will broadcast a 13 week sponsorship of ROS Local Programming consisting of two 15 second spots per week. The spots will run in the 7:30 pm time slot at the beginning or close of the broadcast of local programming (Making It Here). Additionally, WGBY will produce four 15 second spots that will be made

WGBY Public Television

- 4 – 15 second spots; Aired for 13 weeks in September – November 2006
- Negotiated contract to air 60 second Think Blue PSA during primetime in April, May and June 2007. PSA will overlap and be tied to radio PSA that will be airing during same period.

Radio

- Purchased 8 week programming with Clear Channel Radio
  - 30 commercials per week
  - Program to air April – May 2007
  - 10 spots from 6am-7pm M-F
  - 10 spots 6am -12 midnight Sun-Sat
- Package cost $2,800
- 5 Radio Stations:
  - Zone 640 Sports Radio
  - WHYN Mix 93.1
  - KIX 97.9
  - WHYN News Talk 560
  - WRNX 100.9 FM

Public Presentations

Longmeadow Rotary Club - August 21, 2006
Chicopee Rotary Club – March 19, 2007 (scheduled)
Scheduling under way at one civic/business organization per member community

THINK AGAIN.
THINK BLUE.

When you leave dog poop on the ground – or throw it down a storm drain – the rain carries Spike's mess into the storm drains and straight to our rivers, lakes, and ponds, making them unsafe for swimming.

Help keep our waters blue – pick up after your dog and throw the waste into the trash.

www.pvpc.org/thinkblue

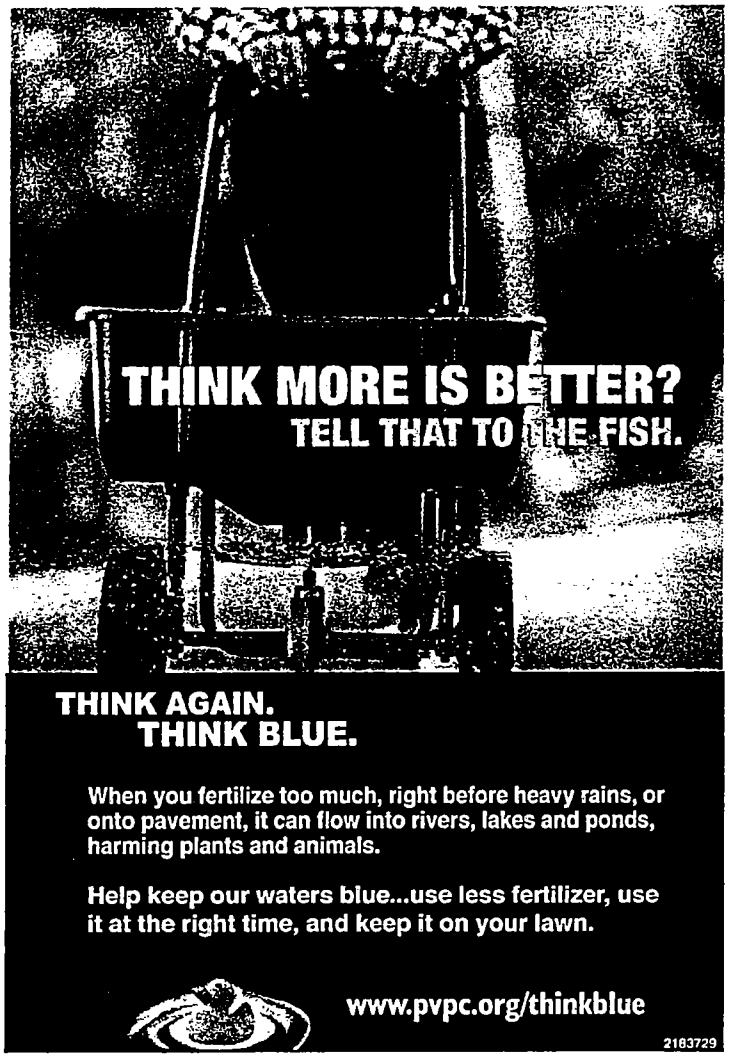
3 1/8" x 6"

sent to Wendy
9/11/06

Hampshire Gazette
The Summit

$110.88

to run
9/14/06



City of Chicopee
DPW Water Pollution Control

Do You Experience Sewer Backups?
Street Flooding?

The City through your sewer and storm fees has been working on a long-term solution to the problem of sewer backups. A new two-pipe system one for rainwater and one for sanitary sewage are planned to be installed on many City streets and in 2009 new sewers are planned for all or part of the following streets:

Ann St.
Beaudry Ave.
Beech St.
Beeler St.
Bessette Lane
Blanchard St.
Britton St.
Cherryvale St.
College St.
Filmore St.
Forest Hill
Furguson St.
Gladdu Ave.
Hamburg St.
Holgate Ave.
Hudson St.
Julian St.
Kendrick St.
Langevin Ave.
Lombard St.
Lorreta St.
Ludlow Road
Manola St.
Memorial Ave.
Montcalm St.
New Ludlow Rd.
Pervier Ave.
Quincy Ave.
Royal St.
Russell Terrace
South Winthrop .
Winthrop St.
Woodlawn Ave.

We cordially invite you to attend an informational meeting in regards to this work.
We need to know the problems you experience in order to design a solution.

Date: Monday February 6, 2006
Time: 6:30 PM
Place: Knights of Columbus
1599 Memorial Drive
Chicopee, Ma.

Please feel free to contact the treatment facility with any more questions that you may have. We would like to know what you think and encourage you to attend.

Thomas Hamel: Chief Operator
(413) 594-3585

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CITY OF CHICOPEE

DEPARTMENT OF PUBLIC WORKS

Stanley W. Kulig, P.E.
Superintendent

February 15, 2007

Thomas Hamel
Chief Operator
Water Pollution Control
80 Medina Street
Chicopee, Ma 01020

Dear Tom:

Enclosed please find the annual report detailing tasks performed by the DPW Environmental Programs Coordinator to meet requirements of the City of Chicopee's Stormwater Management Program.

Sincerely,

Barry Brouillard

Barry Brouillard
Environmental Programs Coordinator

CITY OF CHICOPEE

DEPARTMENT OF PUBLIC WORKS

Stanley W. Kulig, P.E.
Superintendent

CY '06 ANNUAL REPORT
DPW EDUCATION & OUTREACH TASKS

Employee Training – May 4th, 2006

Pre-event refresher training for all DPW personnel involved with hazardous and universal waste handling during upcoming HHW Drop-Off

Household Hazardous Waste Drop-Off Day – May 6th, 2006

Collected 650 gallons used motor oil, 68 vehicle batteries, 2400 linear feet of mercury-containing fluorescent light bulbs, 25 55-gal drums HW, and 800 gallons oil-based paint

Monthly hazardous paint collection – held 6 times between April – October; Collections yielded 200 gallons paint; distributed 8% usable paint to residents

Waste oil collection – open to residents by appointment between September-May; 732 gallons motor oil collected/burned as "Regulated recyclable material" at DPW

Public Announcements (copies enclosed) –

For HHW event: Televised Aldermanic meeting April 18th, 2006
Cable Access Channel: run from March 28th to April 3rd, 2006
HHW Registration form and confirmation letter in city hall offices
Local Newspaper: Chicopee Register April 6th edition
Public posting: Public Library-Main Branch, City Hall entrances, Chicopee landfill, Chicopee DPW
HHW downloadable sign-up form and information sheet is made available to all residents on the web site www.chicopeema.gov

For drop-off during the year: Posting at DPW front counter and at landfill

Respectfully submitted,

Barry Brouillard

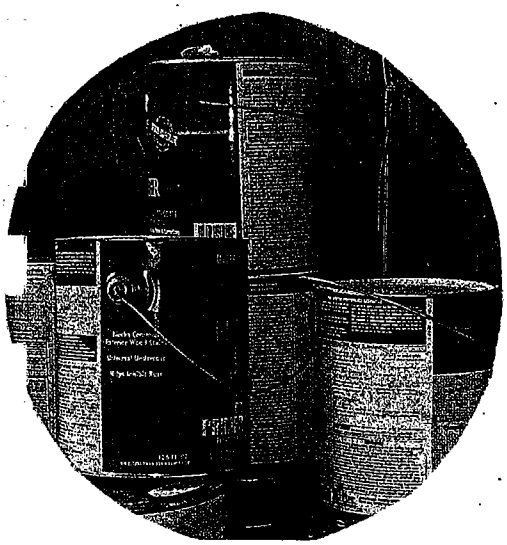
Barry Brouillard
Environmental Programs Coordinator

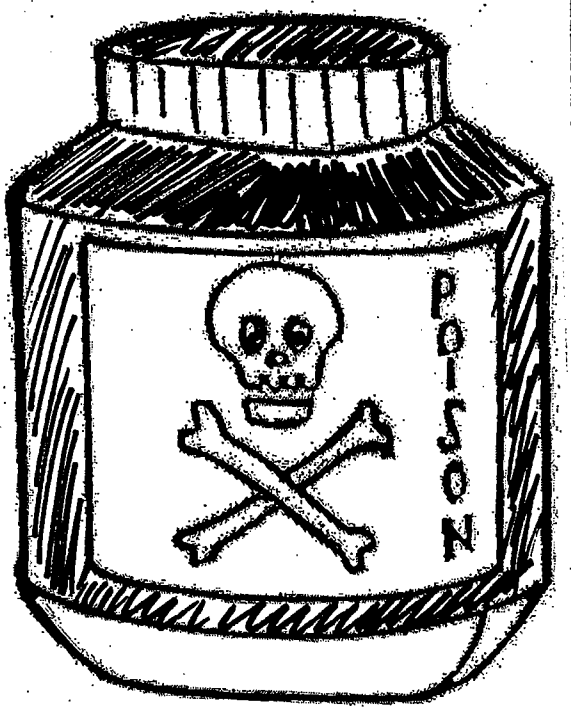
HOUSEHOLD HAZARDOUS WASTE

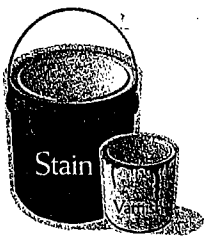
DROP-OFF DAY

SATURDAY, MAY 6TH

REGISTER NOW







CITY OF CHICOPEE

DEPARTMENT OF PUBLIC WORKS

Stanley W. Kulig, P.E.
Superintendent

CONFIRMATION LETTER

You are registered to participate in the Household Hazardous Waste (HHW) Drop-off on Saturday, May 6th. You should arrive at the DPW on Baskin Drive in Chicopee between **8:30-9:00.** **Early arrivers may be held out of line and delayed 30 minutes or more. Call the DPW if you need to change or cancel your appointment.**

HOW TO PREPARE FOR THE DROP-OFF IN ADVANCE:

- ✓ Review the list of materials accepted at this drop-off event.
- ✓ Use up a product according to directions or give it to a friend or relative who could use it.
- ✓ Properly store and label items you intend to keep. All handling and packing of HHW's should be performed by a responsible adult. Keep them away from children and pets, and sources of heat. Propane tanks should be brought to the landfill with valves closed.
- ✓ Treat HHW's with respect when inventorying, grouping together, or transporting them.
- ✓ Check containers before handling or placing in your vehicle and use tight-fitting lids. If any containers are leaking, place each original container into a larger one packed with an absorbent material (i.e., kitty litter, speedi-dry, sand, or crumpled newspaper) to soak up any spillage. Be especially careful when handling corrosive material such as car batteries and drain cleaners. In general, avoid inhalation of fumes or direct skin contact. Protective face mask and gloves are recommended to be worn when handling and wash hands thoroughly after handling HHW's.
- ✓ Make sure that all HHW's are properly labeled. Unidentified materials are usually accepted, though Clean Harbors' site supervisor reserves the right to refuse any materials based on their nature or quantity. 25 gallons or 100 pounds is the maximum amount per household.
- ✓ Double-up with friends, neighbors, or relatives if amounts are small (under 10 gallons).
- ✓ Used motor oil can be consolidated with transmission fluid or hydraulic or brake fluid. **Containers of oil mixed with water, antifreeze, gasoline, or other solvent are contaminated.** Please label container accordingly (e.g., gas/oil mix", or "oil contaminated with antifreeze").
- ✓ Use our "EXPRESS LANE" if you have just motor oil, fluorescent lights, or car batteries.
- ✓ Upon arrival, tell the greeter your name and unlock the door or trunk. Stay in line and remain inside your vehicle - workers will unload your vehicle for you.
- ✓ Extinguish all smoking materials before arriving onto DPW property.

115 Baskin Drive • Chicopee, MA 01020 • (413) 594-3557 • FAX (413) 594-3569

CHICOPEE SCHOOLS COMMUNITY TELEVISION
CABLE CHANNEL 5

COMMUNITY BULLETIN BOARD FOR NON-PROFIT ORGANIZATIONS

Aug-21-96 08:11 413 594 3442 P.01

Dear Friend:

Below is a guideline to be used when submitting messages for our Community Bulletin Board. Because of limited space available, events happening in Chicopee will be given preference over events happening in other cities or towns. All messages are limited to Non-Profit Organizations. LISTINGS MUST BE SUBMITTED AT LEAST 72 HOURS BEFORE YOU WANT THEM TO APPEAR AND WILL RUN FOR A MAXIMUM OF 1-2 WEEKS FROM START DATE. Messages are limited to 30 characters across and 8 lines down as shown. Please list your announcement EXACTLY as you want it to appear. Do not use more spaces than shown or your message will not fit! Do not break one word into two lines. Please use punctuation and remember that commas, periods, etc. each use one space. For your convenience, make additional copies of this notice for use in the future, or use a separate piece of paper and limit your space to guidelines below.

Thank you for using Chicopee Schools Community TV - Cable Channel 5.

Date Submitted MARCH 28 Start Date APRIL 3RD

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Mail To: Jan Benard
Chicopee Public Schools
T. V. Center
816 James St.
Chicopee, MA 01022

594-3487
594-3442 (fax)

Submitted By - Name: BARRY BROUILLARD
Address: 115 BASKIN DR.
Chicopee, MA 01020
Phone: 594-3557 594-3569 fax
Organization: CHICOPEE DPW

HAZARDOUS WASTE IN YOUR HOME?

Hazardous waste is not just an industrial problem. Many household products contain dangerous chemicals. If you throw them into the trash or pour them down the drain or sewer, you may cause unnecessary environmental, health, and safety risks. Be part of the solution by participating in:

- City of Chicopee -

Chicopee DPW 115 Baskin Dr.

Household Hazardous Products Collection

Saturday, May 6, 2006, from 9 a.m. - Noon

By appointment only.

Pick up a pre-registration form at the Department of Public Works and other public offices.

Limit of 25 gallons per household. Proof of residency required.

BRING:

FROM THE YARD
- Pesticides
- Insect sprays
- Lighter fluid
- Chlordane
- Rodent killers
- Muriatic acid
- Pool chemicals
- Charcoal lighter
- Herbicides
- Root killers

FROM THE GARAGE
- Antifreeze
- Brake fluid
- Engine degreaser
- Carburetor cleaner
- Creosote
- Oil-based paint
- Gasoline
- Kerosene
- Paint thinner
- Motor oil

FROM THE HOUSE
- Oven cleaners
- Furniture polish
- Metal polish
- Moth balls
- Art/photo supplies
- Upholstery cleaners
- Rechargeable batteries
- Thermometers
- Spot removers
- Fluorescent lights

FROM THE WORKSHOP
- Rust inhibitors
- Wood preservatives
- Wood strippers
- Wood stains
- Paint thinner
- Lead paint
- Oil-based paint
- Solvents
- Degreasers
- Sealants

DO NOT BRING:

- Water reactive materials
- Medical wastes
- Radioactive wastes
- Latex paint
- Asbestos
- Commercial wastes
- Industrial wastes
- Explosives
- Smoke detectors
- Furniture or rubbish
- Empty containers
- Household batteries
- PCBs (transformers)
- Latex driveway sealer
- Gas cylinders

Sponsored by Mayor Michael Bissonnette, Waste Management, Inc. and the Chicopee Department of Public Works

Get More Than The Headlines

Get The Whole Story

When you want the best source of the local news, turn to the Chicopee
You'll get the complete story with all the details on local news and s
plus all the people news - wedding, anniversary, birth and engagement ann

Chicopee **Register**

DPW Front-counter posting

CHICOPEE DEPARTMENT OF PUBLIC WORKS

Hazardous waste accepted during the year at DPW
BY APPOINTMENT ONLY:

- Oil-based paint, oil-based stain, and oil-based polyurethane – all must be fluid, not solid
  Must be in original cans with readable labels, minimum quart, maximum 5 gallon size

- Motor oil*, clean and not mixed with water, gas, diesel, or antifreeze;
  OIL CAN BE MIXED WITH BRAKE*, HYDRAULIC*, OR TRANSMISSION FLUID* ONLY
  ***These fluids are not accepted in June, July, or August to meet state requirements**

- Antifreeze

- Car batteries, button batteries, and rechargeables; (household batteries can be thrown away)

- Fluorescent light bulbs

- Thermometers & thermostats

- Elemental mercury (Hg)

- Mercury-containing items such as ballasts and high-intensity bulbs

The above items cannot be placed in your trash – dry, empty containers can be thrown away

---

Please transport hazardous items safely-contain leaks within another container with absorbent.

DPW reserves the right to refuse items based on their nature or quantity.

The above items are accepted during months May-October **by appointment.**

Contact Barry Brouillard, DPW Environmental Coordinator at 594-3557 to leave a detailed message or email at bbrouillard@chicopeema.gov to schedule a drop-off appointment time.

Wastewater operator fishes shovel from line

CHICOPEE – It started out with Carl walking into the office with some information he wanted to share.

Having been in the wastewater business for 27 years you learn that 80 percent of the news is not good.

The collection crew had opened a manhole at the top of a 3 barrel siphon for inspection when the shovel decided to perform an Olympic caliber dive, landing perfectly in the center of the middle 10 inch siphon. A siphon is when sewer pipes are laid following the contour of the land such as a valley or under a river and water flows because the outlet is lower than the inlet.

There was just enough flow to carry the shovel into the pipe before anyone could react. Gates were fabricated to stop the flow as soon as possible and crisis management mode kicked in to address the situation. The siphon crosses a ravine which is too steep to walk and a road would have to be constructed to bring in construction equipment which could easily cost $100,000. After studying the prints it was noticed that 400 feet down from the manhole there may be a bend that the shovel could be lodged in.

A number of attempts with special retrieval tools were unsuccessful when "Captain" Jim Lawson came up with an idea incorporating his wealth of fishing knowledge and his fishing drift anchor.

The anchor is a nylon funnel with cords attached around the circumference of the large end and joined to a center ring, much like a parachute.

Jim attached a rope to the center ring and used the wastewater to carry the anchor down into the siphon. On his second attempt he felt a nibble and set the hook.

As he worked his trophy back to the boat Jim couldn't help wondering, "Could this be a state record?"

I'm not sure about the state record but it was a $100,000 idea, said Roy Guilmain, assistant chief operator, of the Chicopee wastewater treatment plant.

"Captain" Jim Lawson is head collection systems operator and Carl Thurston is collection systems working foreman at the city's wastewater treatment plant.

Guilmain said, "Jim is an avid fisherman who applied his hobby and creative thinking to solve this serious problem" and said this example is a positive story "where city employees rise to the occasion."

Story and photo submitted by Roy Guilmain

Submitted photo

"Captain" Jim Lawson, head collection systems operator at the Chicopee wastewater treatment plant, and Carl Thurston, collection systems working foreman at the plant.

AIC announces fall dean's list

SPRINGFIELD – American International College has announced its dean's list for the fall semester. The following is the list of qualifying students who achieved a grade point average of between 3.3 and 4.0 for the semester:

Chicopee:

Michelle M. Mulhern, child of Elvira and Thomas Mulhern, a junior majoring in entrepreneurship; Carley Louise Czepiel, a senior majoring in human resource management.

Madeline Colon, a senior majoring in criminal justice; Stacy Marie Martel, a junior majoring in criminal justice; Samantha R. Barfosz, child of Denise Barfosz, a sophomore majoring in nursing.

Melanie A. Stewart, child of Diane Stewart, a senior majoring in gerontology; Raula Minsis, child of Wangelia and Christoforod Minsis, a junior r in hum rce accounting.

Granby:

Jason Ernest Leonard, a sophomore majoring in nursing.

Holyoke:

Laura-Ann Jude Kadlewicz, child of Betty and David Kadlewicz, a junior majoring in RN to BSN nursing.

Jacqueline Marie Sampson, child of Carla Sampson, a senior majoring in general business; Lindsey M. Lajoie, child of Linda and Rick Lajoie, a senior majoring in communications.

Jenna M. Insero, a sophomore majoring in psychology; Norbert M. Dusza, a junior majoring in marketing.

Poriesa Jaimangal, a junior majoring in accounting; Raeann Pelletier, a sophomore majoring in occupational science.

South Hadley:

Neal J. Quesnel, child of Alaine and James Quesnel, a senior majoring in finance; Caira Marie Dominguez, a junior majoring in nursing.

Megan E. Davis, a junior majoring in nursing; Michael S. Russell, a sophomore majoring in human resource management.

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COLLISION REPAIR & AUTO PAINTING
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See store for details of package
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LIMITED TIME OFFER!

It's a dirty job, but someone has to do it

Chicopee Register photo by KATHLEEN MITCHELL

Carl Thurston gets splashed with stinking raw sewage every day. He is a working foreman for Chicopee collections systems and in addition to enduring the constant smell and mess, his job duties include opening 50 to 100 manholes a day, going down inside them and standing in sewage wearing rubber boots and a gas monitor, using his hands to pull up cables covered with sewage by hand, and dealing with homeowners after their cellars fill with sewage due to pipes that are too antiquated to handle the load they must carry.

Job REALITY

Editor's note: This is one in an occasional series of stories which showcases the reality of different jobs and gives readers an inside look at what is required to do some jobs well.

By **Kathleen Mitchell**
Staff Writer

CHICOPEE - When it comes to a down and dirty job, Carl Thurston has one that's hard to match. The 43-year-old working foreman for Chicopee Collections Systems gets splashed almost every day with raw sewage. He has to pull up cables snaked into clogged sewer lines with his hands that are covered with human excrement and rancid grease. Thurston must go down into the bowels of the sewer system via manholes and stand in the nasty stuff wearing a gas monitor and rubber boots. He also must deal with irate homeowners whose cellars fill with

Please see JOB page 18

JOB from page 1

sewage after heavy rains, due to 100 year-old pipes whose load exceeds far more than they can carry.

And that's not all. There's the sickening smell that permeates everything, including the vehicles he rides in. Thurston wears clean clothes to work every day and stores them in a locker before putting on his uniform. He showers before going home, but the sewage treatment plant smells so bad inside and out, that his clean clothes stink so badly he has to leave them in the cellar when he gets home, then shower again.

"My wife complains about the smell when I get home," he said.

In order to prevent illness, Thurston and his men have to get typhoid and hepatitis shots. The job is also physically dangerous.

"There are gases which build up. It can be fatal if they explode or if you make a spark, which can happen just by opening a manhole," he said.

Thurston opens 50 - 100 manholes every day.

He has been working for the city for 13 years.

"It's hard to fill these jobs," he said. "Not everyone can stomach it. I've seen guys come in, get a whiff of what it smells like near the time clock and turn around and never come back. I've also seen a guy work until lunchtime and quit."

There are only eight people in the collections system to oversee 250 miles of sewer lines, countless manholes and about thirty combined sewer overflows which they check after every rainstorm to make sure sewage is not overflowing into the rivers.

"When it's raining, it's permissible for sewage to overflow into the river. But when it stops, we have to make sure the sewage is not still going in," Thurston said. "We have built dams and gone down inside manholes. Even my wife didn't realize how nasty this job was until she saw it on the TV show 'Dirty Jobs,'" Thurston said.

Despite the dirty work, dealing with upset homeowners is the part of his job that Thurston dislikes most. Many of Chicopee's pipes are close to a century old and in some areas of the city, pipes meant to accommodate three streets and thirty homes are serving thirty streets with 300 homes.

"People in some areas get sewage inside their houses all the time. It's society's fault, as there is not enough money to fix all the pipes at once," Thurston said.

His job is to determine, however, if the problem is coming from the peoples' toilets or from the pipes.

"We only service the pipes going out of their homes," he said.

He doesn't blame them for being frantic and tries to explains to many that they need to install a flapper valve to keep sewage from bubbling up in their toilets and showers.

"There's not a lot we can do. But people tell me that it's my fault, even though I try to explain how and why it happens," he said.

Problems also arise because roots grow into pipes and people put grease down them, which turns into lard, coagulates and sticks to the pipes.

"It's supposed to go through to the sewage plant." Thurston said.

But small sags in pipes or roots which grow into them collect the grease, which causes things to stick to it, blocking the pipes. Thurston said diapers, handiwipes and feminine products don't break down "even thought they say they are flushable. They often attach to the grease and dirt that has built up," he said.

When a pipe is clogged, a truck is sent out carrying a "snake" with a light and camera on the end.

"It crawls up the pipe and you can actually see what's in it instead of just guessing if it's broken. Then it drags in the crap at the bottom and we have to pull it back by hand. You get splashed with sewage all day," Thurston said.

Some pipes do break due to age, while others sag or have problems where they join together caused by years of freezing and movement.

Another job is going down into manholes to remove dirt and sewage out of them with a vacuum called a jet rodder. The men carry fresh water on the truck and spray it into the sewer line, going from one manhole to the next. They also use a root cutter, which is run by water and has a spinning blade. "It's not fun. It's dirty when the spray water mixes with the sewage. There are vapors which come out of the manholes and it really smells," Thurston said.

Still, he said, the odor is not as bad as when he worked on the back of a trash truck.

"That's the only place where I ever gagged. Once you get the bags in the truck, it squishes them and they break. There's a different smell from every house so you never get used to it," he said.

Another gross job is emptying the boulder catcher, which is a cone-shaped device stationed between the sewerage pipes at the sanitation plant, which catches rocks and heavy things to keep them from entering the pump station. It has to be emptied on a frequent basis and "we end up pulling sewage out of it. The crane lifts it up and the sewage drips and spits everywhere before it's dumped into containers," Thurston said.

The storm drains must also be cleaned. The men pull up to them in trucks, open the cover and lower the truck's crane with a bucket on the end into the catch basin to pull out the dirt.

"Years ago, people used to pull up their cars and change their oil right over them," Thurston said.

As if that's not enough, the men have to traipse through the woods twice a year to check the sewer lines that run through them. One follows the Chicopee River to the Connecticut River, another starts at Westover Road and goes to Fuller Road and a third begins at Britton Street and ends up at Buckley Boulevard.

"We have to use weed whackers to make our way through," Thurston said.

There are also winter evenings when Thurston is out sanding streets all night, then has to get up and go back to his dirty work in the morning. Although he gets paid to do the job, "I'd rather be home sleeping," he said.

PRESS RELEASE

CONTACT: Anne Capra, PVPC Senior Planner, (413) 781-6045

FOR IMMEDIATE RELEASE
April 18, 2006

Regional Stormwater Education Campaign Launched

The Pioneer Valley Planning Commission, in concert with the Stormwater Subcommittee of the Connecticut River Cleanup Committee (CRCC), is launching a public education campaign about water pollution and protecting water resources from common pollutants found in stormwater.

The multi-year regional public education and outreach program aims to raise awareness about how our daily activities affect the water resources around us. The outreach program will instruct people about better ways to manage landscape fertilizers, pet waste, car washing, and leaking car oil. Each of these activities generates waste products that are picked up by stormwater runoff and transported to rivers, streams, lakes, ponds, and wetlands, causing pollution.

Information will be disseminated to the public through newspapers, local cable access television stations, displays at town offices and libraries, town websites, and other venues.

STORMWATER PROBLEMS: Massachusetts communities have a serious problem with pollution from stormwater. When it rains or snows, the water running off streets, parking lots, construction sites, and yards can wash sediments, oil, toxins, and other pollutants over land or into nearby storm drains. The polluted water is then discharged untreated into local streams, rivers, lakes, ponds, and wetlands. This pollution degrades water quality and aquatic habitat and is a leading threat to public health and the environment today.

CONNECTICUT RIVER CLEANUP COMMITTEE BACKGROUND: In 1993, the Connecticut River Cleanup Committee formed to address combined sewer overflows (CSOs) to the Connecticut River. CRCC is composed of representatives from five Massachusetts communities—Springfield, Chicopee, Holyoke, Ludlow, and South Hadley—and the Pioneer Valley Planning Commission. CRCC explores funding sources and opportunities for inter-municipal cooperation on river cleanup. Each of the five member communities is under administrative orders from the U.S. Environmental Protection Agency to address negative water quality impacts to the Connecticut River from CSOs.

STORMWATER SUBCOMMITTEE BACKGROUND: In response to the National Pollutant Discharge Elimination System (NPDES) Stormwater Phase II program of March 2003, CRCC formed a Stormwater Subcommittee to address Phase II's public education and outreach requirements. Membership was opened to any communities within Hampshire and Hampden counties regulated under Phase II. Nine communities formed the the Stormwater Subcommittee in June 2005: Springfield, Chicopee, Holyoke, Ludlow, South Hadley, Agawam, Granby, Longmeadow, and Easthampton.

For more information, contact PVPC Senior Planner Anne Capra at acapra@pvpc.org or (413) 781-6045.

—MORE—

STORMWATER INFORMATION SHEET #1

Why Stormwater? The Nexus Between Land Development Patterns and Water Quality and Quantity

Since 1972, implementation of the Clean Water Act (CWA) has shown success in controlling water pollution from point sources such as municipal waste water treatment plants and industrial discharges. This progress is overshadowed, however, by the emergence of nonpoint source pollution as a main contributor to water quality problems. The National Water Quality Inventory: 2000 Report to Congress identified urban runoff as one of the leading sources of water quality impairment in surface waters (USEPA 2002b in EPA 2005). Of the 11 pollution source categories listed in the report, urban runoff/storm sewers was ranked as the fourth leading source of impairment in rivers, third in lakes, and second in estuaries.

Nonpoint source (NPS) pollution comes from many diffuse sources. NPS pollution originates when rainfall or snowmelt moves over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and even underground sources of drinking water called aquifers. These pollutants include:

- Excess fertilizers, herbicides and insecticides from agricultural lands and residential areas.
- Oil, grease, and toxic chemicals from urban runoff.
- Sediment from improperly managed construction sites, crop and forest lands, and eroding stream banks.
- Bacteria and nutrients from livestock, pet wastes, wildlife, and faulty septic systems.

Inadequately controlled or treated runoff causes problems for water bodies including changes in flow, increased sedimentation, higher water temperature, lower dissolved oxygen, degradation of aquatic habitat structure, loss of fish and other aquatic populations, and decreased water quality due to increased levels of nutrients, metals, hydrocarbons, bacteria, and other constituents.

For urban and suburban areas, these problems can largely be traced to activities that occur on the land. Whether the problem arises from lawn care chemicals, pet wastes, or motor oil and toxic metals from parking lots and streets, stormwater plays a major role in transporting pollutants to streams, drinking water sources, and other receiving water bodies.

The marriage of land and water is the watershed. A watershed is a land area that drains to a given body of water. Precipitation that falls in the watershed will either infiltrate into the ground, evapotranspirate back into the air, or run off into streams, lakes, or coastal waters. A watershed may be large or small. The Connecticut River, for example, drains 11,260 square miles in four states (Connecticut, Massachusetts, New Hampshire, and Vermont). Along its 410 miles, from its headwaters at the Canadian border to the confluence with the Atlantic Ocean in Long Island Sound, this huge watershed includes 149 tributaries, 38 major rivers, and numerous lakes and ponds. Each of the smaller water bodies also has its own watershed, or subwatershed. Fitting together like the pieces of a puzzle, each of these smaller watersheds continue to drain downstream, one into the other, until reaching the Connecticut River.

—MORE—

Rivers and streams support diverse aquatic communities and perform vital ecological roles of processing carbon sediments and nutrients upon which downstream ecosystems depend. Healthy, functioning watersheds naturally filter pollutants and moderate water quality by slowing surface runoff and increasing the infiltration of water into soil. The result is less flooding and soil erosion, cleaner water downstream, and greater ground water reserves.

Land development directly affects watershed functions. The U.S. Census Bureau projects that the U.S. population will grow by 50 million people, or 18 percent, between 2000 and 2020. Many communities are asking where and how they can accommodate this growth while maintaining and improving their water quality. Residential and commercial development create impervious surfaces and compacted soils that filter less water, which increases surface runoff and decreases groundwater infiltration. These changes can increase the volume and velocity of runoff, the frequency and severity of flooding, and peak storm flows. Studies have shown that at 10 percent imperviousness, a watershed is likely to become impaired and grows more so as imperviousness increases (Arnold, 1996; Shueler, 1994 in EPA 2006).

While land development necessarily involves the creation of impervious surfaces, how and where development takes place can influence the ultimate degree of environmental impact from streets, rooftops, and yards. Where development has occurred on forest and undeveloped land, critical areas for infiltration and aquifer recharge that soaked up rainwater prior to development now export runoff to lower lying areas and local receiving bodies. Water flowing over pavement absorbs heat, which impacts waterways that support cold water species. It also flows faster, thus delivering water in pulses. The faster flows can scour stream banks and accelerate erosion, while increased temperatures can spur excessive algal growth. The higher rate of algal growth can interfere with a variety of ecological, industrial, recreational, and water filtration processes. Conventional construction practices have relied on mass clearing and grading. This practice compacts the soil surface and further prevents infiltration, even on lots overlaid with turf. Thus, the generation of stormwater volume, as well as the pollutant load carried in that volume, is very much tied to how and where land is developed.

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PRESS RELEASE

CONTACT: Anne Capra, PVPC Senior Planner, (413) 781-6045

FOR IMMEDIATE RELEASE
September 7, 2006

"Think Blue" Stormwater Campaign Targets Connecticut River Watershed

The Pioneer Valley Planning Commission, in concert with the Stormwater Subcommittee of the Connecticut River Cleanup Committee (CRCC), is urging Connecticut River watershed residents to "Think Blue" via an advertising campaign that aims to raise awareness about water pollution and protecting water resources from common pollutants found in stormwater.

Originally used by the Massachusetts Bays Program in the greater Boston area, the "Think Blue" ad campaign in the Connecticut River watershed will be the first of its kind in western Massachusetts in what is intended to be a far-reaching program promoting stormwater education throughout the country.

Newspaper advertisements scheduled to appear in September and October will encourage the public to "Think Blue" and consider the water quality impacts of everyday activities like washing the car, picking up pet waste, and fertilizing the lawn. Also during this period, "Think Blue" spots will air on WGBY Public Television during the 7:00 p.m. news hour, focusing on common water pollutants and simple ways to reduce pollution at its source.

The campaign has also targeted the public through programs on local cable access television stations, displays at town offices, libraries, and town websites.

The "Think Blue" campaign is part of a multi-year regional public education and outreach program aiming to raise awareness about water pollution. Citizens will learn how to manage landscape fertilizers, pet waste, car washing, and leaking car oil, all of which generate waste products that are picked up by stormwater runoff and transported to rivers, streams, lakes, ponds, and wetlands, causing pollution.

For more information, contact PVPC Senior Planner Anne Capra at acapra@pvpc.org or (413) 781-6045 or visit www.pvpc.org.

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BACKGROUND INFORMATION

STORMWATER PROBLEMS: Massachusetts communities have a serious problem with pollution from stormwater. When it rains or snows, the water running off streets, parking lots, construction sites, and yards can wash sediments, oil, toxins, and other pollutants over land or into nearby storm drains. The polluted water is then discharged untreated into local streams, rivers, lakes, ponds, and wetlands. This pollution degrades water quality and aquatic habitat and is a leading threat to public health and the environment today.

CONNECTICUT RIVER CLEANUP COMMITTEE BACKGROUND: In 1993, the Connecticut River Cleanup Committee formed to address combined sewer overflows (CSOs) to the Connecticut River. CRCC is composed of representatives from five Massachusetts communities—Springfield, Chicopee, Holyoke, Ludlow, and South Hadley—and the Pioneer Valley Planning Commission. CRCC explores funding sources and opportunities for inter-municipal cooperation on river cleanup. Each of the five member communities is under administrative orders from the U.S. Environmental Protection Agency to address negative water quality impacts to the Connecticut River from CSOs.

STORMWATER SUBCOMMITTEE BACKGROUND: In response to the National Pollutant Discharge Elimination System (NPDES) Stormwater Phase II program of March 2003, CRCC formed a Stormwater Subcommittee to address Phase II's public education and outreach requirements. Membership was opened to any communities within Hampshire and Hampden counties regulated under Phase II. Nine communities formed the Stormwater Subcommittee in June 2005: Springfield, Chicopee, Holyoke, Ludlow, South Hadley, Agawam, Granby, Longmeadow, and Easthampton.

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Rivers and streams support diverse aquatic communities and perform vital ecological roles of processing carbon sediments and nutrients upon which downstream ecosystems depend. Healthy, functioning watersheds naturally filter pollutants and moderate water quality by slowing surface runoff and increasing the infiltration of water into soil. The result is less flooding and soil erosion, cleaner water downstream, and greater ground water reserves.

Land development directly affects watershed functions. The U.S. Census Bureau projects that the U.S. population will grow by 50 million people, or 18 percent, between 2000 and 2020. Many communities are asking where and how they can accommodate this growth while maintaining and improving their water quality. Residential and commercial development create impervious surfaces and compacted soils that filter less water, which increases surface runoff and decreases groundwater infiltration. These changes can increase the volume and velocity of runoff, the frequency and severity of flooding, and peak storm flows. Studies have shown that at 10 percent imperviousness, a watershed is likely to become impaired and grows more so as imperviousness increases (Arnold, 1996; Shueler, 1994 in EPA 2006).

While land development necessarily involves the creation of impervious surfaces, how and where development takes place can influence the ultimate degree of environmental impact from streets, rooftops, and yards. Where development has occurred on forest and undeveloped land, critical areas for infiltration and aquifer recharge that soaked up rainwater prior to development now export runoff to lower lying areas and local receiving bodies. Water flowing over pavement absorbs heat, which impacts waterways that support cold water species. It also flows faster, thus delivering water in pulses. The faster flows can scour stream banks and accelerate erosion, while increased temperatures can spur excessive algal growth. The higher rate of algal growth can interfere with a variety of ecological, industrial, recreational, and water filtration processes. Conventional construction practices have relied on mass clearing and grading. This practice compacts the soil surface and further prevents infiltration, even on lots overlaid with turf. Thus, the generation of stormwater volume, as well as the pollutant load carried in that volume, is very much tied to how and where land is developed.

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3-28-06

Press Releases,

A Message Brought To You By the Stormwater Subcommittee of the Connecticut River Cleanup Committee

Contact: Anne M. Capra, Senior Planner / Manager
Pioneer Valley Planning Commission
acapra@pvpc.org (413) 781-6045

In 1993, the Connecticut River Cleanup Committee (CRCC) formed to address combined sewer overflows (CSOs) to the Connecticut River. CRCC is composed of representatives from five Massachusetts communities (Springfield, Chicopee, Holyoke, Ludlow, and South Hadley) and the Pioneer Valley Planning Commission (PVPC). Each of the five member communities are under Administrative Orders from the U.S. Environmental Protection Agency to address negative water quality impacts to the Connecticut River from CSOs. CRCC was formed through the signing of an intergovernmental compact between the communities and PVPC. The committee is an action oriented entity that explores funding sources and opportunities for intermunicipal cooperation on river cleanup.

In response to the National Pollutant Discharge Elimination System (NPDES) Stormwater Phase II program which came into effect in March of 2003, CRCC decided to form a Stormwater Subcommittee tasked with addressing Phase II's Public Education and Outreach requirements. CRCC also decided to open membership to the Stormwater Subcommittee to any community within Hampshire and Hampden counties that is regulated under Phase II. In June of 2005, the Stormwater Subcommittee formed between nine member communities (Springfield, Chicopee, Holyoke, Ludlow, South Hadley, Agawam, Granby, Longmeadow, and Easthampton).

Massachusetts communities have a serious problem with pollution from stormwater. When it rains or snows, the water that runs off streets, parking lots, construction sites, and yards can wash sediments, oil, toxics and other pollutants over land or into nearby storm drains. The polluted water is then discharged untreated into local streams, rivers, lakes, ponds, and wetlands. This pollution degrades water quality and aquatic habitat and is a leading threat to public health and the environment today.

In its first year, the Stormwater Subcommittee has begun designing a multi-year regional public education and outreach program about stormwater. The first tier of the public outreach program is due to be released in late April / early May of 2006. The goal of the program is greater awareness about how our daily activities affect the water resources around us. Information will be disseminated to the public through the newspaper, local cable access television stations, displays at town offices and libraries, town websites, and other venues. The outreach program will instruct people in better ways to manage

landscape fertilizers, pet waste, car washing, and leaking car oil. Each of these activities generates waste products that are picked up by stormwater runoff and transported to rivers, streams, lakes, ponds, and wetlands causing pollution.

4-15-06

Why Stormwater? The Nexus Between Land Development Patterns and Water Quality and Quantity

2

Since 1972, implementation of the Clean Water Act (CWA) has shown success in controlling water pollution from point sources such as municipal waste water treatment plants and industrial discharges. This progress is overshadowed, however, by the emergence of nonpoint source pollution as a main contributor to water quality problems. The National Water Quality Inventory: 2000 Report to Congress identified urban runoff as one of the leading sources of water quality impairment in surface waters (USEPA 2002b in EPA 2005).Of the 11 pollution source categories listed in the report, "urban runoff/storm sewers" was ranked as the fourth leading source of impairment in rivers, third in lakes, and second in estuaries.

Nonpoint source (NPS) pollution comes from many diffuse sources. NPS pollution originates when rainfall or snowmelt moves over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and even underground sources of drinking water called aquifers. These pollutants include:

- Excess fertilizers, herbicides and insecticides from agricultural lands and residential areas.
- Oil, grease, and toxic chemicals from urban runoff.
- Sediment from improperly managed construction sites, crop and forest lands, and eroding stream banks.
- Bacteria and nutrients from livestock, pet wastes, wildlife and faulty septic systems.

Inadequately controlled or treated runoff causes problems for water bodies including changes in flow, increased sedimentation, higher water temperature, lower dissolved oxygen, degradation of aquatic habitat structure, loss of fish and other aquatic populations, and decreased water quality due to increased levels of nutrients, metals, hydrocarbons, bacteria and other constituents.

For urban and suburban areas, these problems can largely be traced to activities that occur on the land. Whether the problem arises from lawn care chemicals, pet wastes, or motor oil and toxic metals from parking lots and streets, stormwater plays a major role in transporting pollutants to streams, drinking water sources, and other receiving water bodies.

The marriage of land and water is the watershed. A watershed is a land area that drains to a given body of water. Precipitation that falls in the watershed will either infiltrate into the ground, evapotranspirate back into the air, or run off into streams, lakes, or coastal waters. A watershed may be large or small. The Connecticut River, for example, drains 11,260 square miles in four states (Connecticut, Massachusetts, New Hampshire and Vermont). Along its 410 miles, from its headwaters at the Canadian border to the confluence with the Atlantic Ocean in Long Island Sound, this huge watershed includes

149 tributaries, 38 major rivers, and numerous lakes and ponds. Each of the smaller waterbodies also has its own watershed, or subwatershed. Fitting together like the pieces of a puzzle, each of these smaller watersheds continue to drain down stream, one into the other, until reaching the Connecticut River.

Rivers and streams support diverse aquatic communities and perform vital ecological roles of processing carbon sediments and nutrients upon which downstream ecosystems depend. Healthy, functioning watersheds naturally filter pollutants and moderate water quality by slowing surface runoff and increasing the infiltration of water into soil. The result is less flooding and soil erosion, cleaner water downstream, and greater ground water reserves.

Land development directly affects watershed functions. "The U.S. Census Bureau projects that the U.S. population will grow by 50 million people, or 18 percent, between 2000 and 2020. Many communities are asking where and how they can accommodate this growth while maintaining and improving their water quality."[1] Residential and commercial development create impervious surfaces and compacted soils that filter less water, which increases surface runoff and decreases groundwater infiltration. These changes can increase the volume and velocity of runoff, the frequency and severity of flooding and peak storm flows. Studies have shown that at 10 percent imperviousness, a watershed is likely to become impaired and grows more so as imperviousness increases (Arnold, 1996; Shueler, 1994 in EPA 2006).

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Lawn Care Practices for a Healthy Watershed: Eight Steps to a Healthy and Attractive Lawn with Less Maintenance and Fewer Chemicals 3

Lawns are a significant feature in the urban and suburban landscape. This large area of managed landscape has the potential to contribute to urban runoff pollution due to over-fertilization, over-watering, over-application of pesticides, and direct disposal of lawn clippings, leaves and trimmings. Erosion from bare patches of poorly managed lawns contributes sediment to waterways, and disposal of lawn clippings in landfills can reduce the capacity of these facilities to handle other types of waste.

There are eight steps for maintaining a healthy, attractive lawn with less maintenance and fewer chemical inputs.

Step 1 Lawn Conversion

Grasses are very water-hungry and labor intensive landscaping plants when compared to ground covers, flowers, shrubs and trees. To reduce the maintenance requirements of a lawn and address problem areas where turf is difficult to grow, property owners can identify areas where turf grass can be replaced with other types of plantings. These areas may include lawn edges, frost pockets, exposed areas, dense shade, steep slopes, and wet areas. Choose vegetation that is suited to the local conditions. New England Wildflower Society's 2005 Plant Catalog contains detailed descriptions of hundreds of native plants as well as list of species appropriate for specific environmental conditions. The catalog is available online at http://www.newfs.org/nurscat05/

Step 2 Soil Building

Lawn owners should analyze their soil every one to three years to determine its suitability for supporting a lawn and to identify whether additives are needed or adjustments should be made to optimize growing conditions. Soil characteristics that should be measured include pH, fertility, compaction, texture, and earthworm content. Soil test kits (for pH and fertility) can be purchased inexpensively at a garden center or samples can be analyzed for a small fee at UMASS Extension in Amherst. More information about UMASS's soil testing services can be found at http://www.umass.edu/plsoils/soiltest/ .

Soil amendments should be added based on the results of your soil test. Prior to planting, sandy and heavy clay soils may be amended by adding organic compost to improve aeration and nutrient-holding capacity. Compacted soil under an established lawn should be aerated to improve the flow of water, air, and nutrients to the system. Aeration is a non-chemical technique that relieves compaction, increases rooting, helps prevent thatch accumulation, incorporates organic matter into the soil surface and helps prevent damage by insects and disease. While the presence of earthworms is an indicator of healthy soil, the presence of white, healthy roots is the ultimate goal. Rooting can be checked by cutting a four-inch deep slice of plug or turf and soil. Roots should be at least four inches deep and the tips should be white. Poor root condition may be the result of compacted soils, ineffective watering practices, and poor fertilization.

Step 3 Grass Selection

Grass seed is available in a wide range of cultivated varieties so care must be taken to choose the type that grows well in your climate, matches site conditions, and is consistent with the property owner's desired level of maintenance. The following are the four major types of lawn grasses.

Kentucky Bluegrasses *(Poa pratensis)*
This is a popular lawn grass in New Jersey. It is hardy, attractive, widely adapted and known for its pleasing color and leaf texture. New varieties have some shade tolerance and improved disease resistance. It is suitable for moderately to well-drained soil but is somewhat slow to establish from seed. Spreading underground rhizomes (stems) enhance recovery from injury and fill in voids. Seeding rate is approximately 2 pounds per 1000 square feet. Spring seedlings are difficult to establish.

Tall Fescues *(Festuca arundinacea)*
This is a coarser bunch-type grass able to persist in moderate to well-drained, infertile soils. Newer varieties are improved in leaf color, texture and density. Tall fescues are also known for rapid establishment from seed, excellent drought tolerance and ability to tolerate traffic. Seeding rates are 4 to 6 pounds per 1000 square feet.

Fine Fescues *(Festuca spp.)*
Fine fescues are comprised of several species (hard, sheeps, creeping red). As a group, they are known for their ability to persist in shady areas as well as in dry infertile locations. They establish slightly faster than Kentucky bluegrass. Improved newer varieties are useful for lower maintenance turfgrass areas. Fine fescues do not tolerate high traffic. Seeding rates are 4 to 6 pounds per 1000 square feet.

Perennial Ryegrass *(Lolium perenne)*
Breeding advances have produced varieties markedly improved over the older non-persistent types. These newer turf type ryegrasses have excellent color and fine textured leaves. They survive in a wide range of soil conditions but grow poorly in extremely wet areas. They possess moderate shade tolerance and very rapid establishment. Seeding rates are 4 to 6 pounds per 1000 square feet.

Step 4 Mowing and Thatch Management
Each turf grass variety has an ideal mowing height range. Kentucky Bluegrass, Fescues and Ryegrass prefer a mowing height of 3 inches. Turf grasses use water more efficiently and out-compete weeds better when kept at the higher end of their mowing range. Mowing grass too short decreases rooting and increases the need for frequent watering. Tall turf competes more vigorously against weeds and can usually tolerate more insect and disease pressure. Grass grows at different rates throughout the season. Therefore, grass should be mowed only as needed. If excessive thatch (which can prevent water and nutrients from reaching the roots) has developed, the lawn should be dethatched by raking or with an automated dethatcher. A thatch layer less than ½ inch can be beneficial by providing insulation and increasing the turf's resiliency.

Step 5 Minimal Fertilization
Based on the results of the soil test described above, a lawn might require nutrients to promote or maintain healthy growth. Nutrients can be partly supplied by leaving a moderate amount of fine grass clippings on the lawn after mowing. These clippings can provide nearly half of the required nutrients to the lawn and they hold in moisture, speed

decomposition and relieve the burden of landfills to handle excessive yard waste. Additional fertilizers can be supplied with compost or commercial fertilizers that are of an organic encapsulated nitrogen type (slow-release), but they should be applied at or below the rates prescribed on the packaging. Compost or organic and encapsulated nitrogen fertilizers reduce the risk of nutrient leaching and have been shown to release nutrients more gradually. Slow-release fertilizers are also beneficial for reducing nitrogen losses from soils that are prone to leaching. Organic products offer the additional benefits of increasing soil condition and promoting the growth of desirable soil organisms. For more information, Rutgers University Cooperative Extension publishes fact sheets such as *How to calculate the Amount of Fertilizer Needed for your Lawn and Best Management Practices for Home Lawns* http://www.rcre.rutgers.edu/garden/

Step 6 Weed Control and Tolerance

A property owner must decide how many weeds can be tolerated before action is taken to eradicate them. A few weeds will not substantially interrupt the continuity of the turf. The best way to keep weeds at bay is to maintain a healthy, dense lawn that shades the ground surface, preventing weed seedlings from taking root. However, if weeds do take hold, they should be dug or pulled out. Chemical herbicides should only be used to spot treat persistent weeds, not applied universally.

Step 7 Pest Management

Effective pest management begins with maintenance of a healthy, vigorous lawn that is naturally disease-resistant. Integrated Pest Management (IPM) is an effective and environmentally sensitive approach that relies on a combination of common-sense practices. IPM is not a single pest control method but a series of pest management evaluations, decisions, and controls. IPM is a sustainable approach to managing pests by combining biological, cultural, physical and chemical tools. Biological controls involve the use of natural enemies to manage pests. Cultural practices include mowing, fertilization, irrigation, aeration, dethatching and rolling. Chemical controls involve the use of pesticides.

Chemical controls are highly effective but may result in dmage to or death of desirable species, such as bees. If strong chemical pesticides are applied improperly, they can contaminate receiving waters. Several less toxic pesticide alternatives area available to prevent infestation or halt current infestations. Biopesticides, for example, are used to control pests without the use of poison. Biopesticides can be biochemical such as garlic and pheromones or microbial such as bacteria, fungi and viruses. The Biopesticides and Pollution Prevention Division in EPA's Office of Pesticides Programs promotes the use of biopesticides as components of IPM programs. The Biopesticides website is http://www.epa.gov/pesticides/biopesticides .

Step 8 Sensible Irrigation

Underwatering fails to provide water below a few inches of soil, causing grasses to be fragile and shallow rooted. Overwatering promotes excessive growth and humid disease prone conditions that can damage the lawn. Overwatering can also result in runoff and leaching of nutrients. It is best to water deeply, but not too often. Deep watering

encourages the grass to grow deep roots, whereas shallow watering maintains shallow roots and reduces the lawns ability to retain moisture during dry periods. The lawn should be watered only when needed and sprinklers should be carefully calibrated to wet the soil to a depth of 6 inches without causing runoff. Watering should be done in the early morning to prevent excessive evaporation. Determining and controlling the rate, amount, and timing of watering will reduce soil erosion, runoff and fertilizer and pesticide movement. An irrigation system should be designed to have an average application rate that is less than the infiltration capacity of the soil to avoid surface ponding and to maximize water percolation. Trickle and drip irrigation systems can save water by more directly irrigating the roots, resulting in less evaporation than overhead sprinklers.

Other Resources:
USDA's Natural Resources Conservation Service web site Backyard Conservation presents technical information and management practices to increase food and shelter for birds and other wildlife, control soil erosion, reduce sediment in waterways, conserve water and improve water quality, inspire a stewardship ethic, and beautify the landscape. http://www.nrcs.usda.gov/feature/backyard/

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