

PP-5

March 31, 2008

Mr. Robert Kimball
Wastewater Section Chief
Department of Environmental Protection
Central Region Office
627 Main Street
Worcester, MA 01608

Re: ACTON – DWPC – GW18-3
314 CMR 5.00
UAO-CE-07-1G001
Final SEP Educational Materials

Dear Mr. Kimball:

On behalf of the North Acton Treatment Corporation, Acton, Massachusetts and in accordance with Administrative Consent Order (ACOP-CE-07-1G005-SEP), paragraph 16, Supplemental Environmental Project, Earth Tech is pleased to submit the final educational materials developed as part of the Supplemental Environmental Project (SEP). The materials submitted herein were developed as a result of a collaborative effort with the Acton Board of Health and Massachusetts Department of Environmental Protection.

Specifically, the final educational materials submitted to MassDEP as part of the SEP are as follows:

- Fats, Oils and Grease (FOG) Brochure *for mailing to all private and public sewer system customers in the Town of Acton (approximate 1,000 brochures will be mailed; approximately 2,000 will be provided to the Acton BOH for distribution)*
- Fats, Oils and Grease (FOG) GREASE TRAP Poster *for Acton BOH to independently reproduce and distribute to Food Service Establishments in the Acton sewer system*
- Fats, Oils and Grease (FOG) GREASE TRAP Poster *for NATC to independently reproduce and distribute to Food Service Establishments in the Nagog Park sewer system*
- Fats, Oils and Grease (FOG) GREASE INTERCEPTOR Poster *for Acton BOH to independently reproduce and distribute to Food Service Establishments in the Acton sewer system*
- Fats, Oils and Grease (FOG) GREASE INTERCEPTOR Poster *for NATC to independently reproduce and distribute to Food Service Establishments in the Nagog Park sewer system*
- Water Conservation Bill Stuffer *for Acton BOH to independently reproduce and distribute to all sewer system customers in the Acton sewer system and offer to other private sewer system operators, and for NATC to independently reproduce and distribute to sewer system customers in the Nagog Park sewer system*



With the above materials previously reviewed and approved by MassDEP and the final FOG Brochure being mailed on March 31, 2008 to all the public and private sewer system users in the Town of Acton, the North Acton Treatment Corporation has completed the required components of the SEP. Specific documentation of the SEP components, including expenditures, and mailing lists will be provided to MassDEP under separate cover.

If you have any questions or comments, please contact this office.

Sincerely,

Earth Tech, Inc.

Bethany M. Leavitt, P.E.
Project Manager

enclosures

cc: File - 98577
Mr. Doug Halley, Acton Board of Health
Mr. Kirk Ware, NATC Financial Officer, North Acton Treatment Corporation
Mrs. Gail E. Magenau Hire, Mackie, Shea and O'Brien

April 1, 2008

Mr. Robert Kimball
Wastewater Section Chief
Department of Environmental Protection
Central Region Office
627 Main Street
Worcester, MA 01608

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- Water Conservation Bill Stuffer for Acton BOH to independently reproduce and distribute to all sewer system customers in the Acton sewer system and offer to other private sewer system operators, and for NATC to independently reproduce and distribute to sewer system customers in the Nagog Park sewer system
- Sump Pump Informational Flyer for Acton BOH to independently reproduce and distribute as needed to customers with sump pumps in the Acton sewer system and offer to other private sewer system operators, and for NATC to independently reproduce and distribute as needed to customers with sump pumps in the Nagog Park sewer system



Mr. Robert Kimball, Wastewater Section Chief
Department of Environmental Protection
ACTON - DWPC - GW18-3
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Page 2 of 2

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Do You Have a Sump Pump?

Important Sump Pump FAQs

DO ILLEGAL SUMP CONNECTIONS REALLY HAVE A MAJOR IMPACT ON THE SEWER?

Yes – the impact can be great. A typical 8-inch sanitary sewer main can handle wastewater from about 460 homes, yet it can take only 12 sump pumps operating at full capacity to overload the sewer causing backups and flooding. See Figure 1 below, detailing illegal sewer connections.

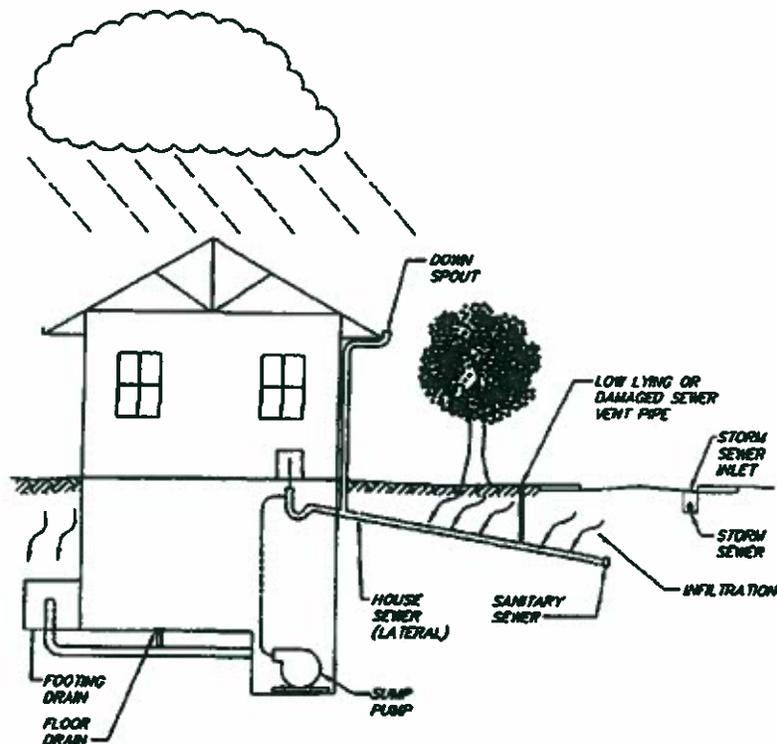


Figure 1: Sources of Inflow and Infiltration through illegal sewer connections

WHAT IS AN ILLEGAL CONNECTION?

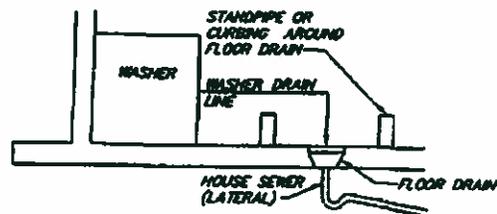
An illegal connection occurs when a pipe that would normally be discharged to the ground surface outside a home or connected to the storm sewer system is connected to the sanitary sewer system. This allows clearwater (rainwater) to end up at the wastewater treatment plant instead of being transported through the storm sewer system. Illegal connections include downspouts, sump pumps, and area drains around a building. Any connection that allows rainwater or groundwater to enter the sanitary sewer system is considered an illegal connection.

CLEARWATER VS. WASTEWATER – WHAT'S THE DIFFERENCE?

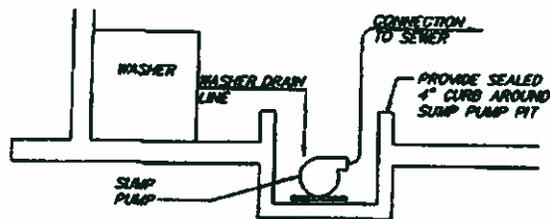
Clearwater (rainwater) is collected and discharged without any treatment into the river through the storm sewer system.

The storm sewer system is separate from, and does not connect with, the sanitary sewer (wastewater) system; *wastewater* must undergo a treatment process before being discharged.

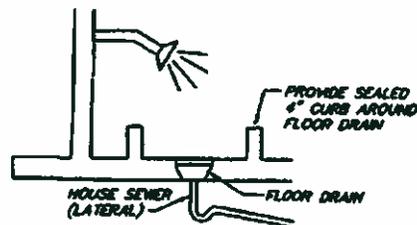
PROPER WAYS TO DISCHARGE WATER FROM SUMP PUMPS?



WASHING MACHINE DISCHARGING TO FLOOR DRAIN



WASHING MACHINE DISCHARGING TO SUMP PUMP PIT



SHOWER ABOVE FLOOR DRAIN

EXAMPLES OF LEGAL SEWER CONNECTIONS

SCALE: NONE

Figure 2: Proper ways to discharge water from sump pumps.



Handling of Fats, Oils, & Grease (FOG) in Restaurants, Bars, and Food Service Operations

What is FOG?



FOG is material composed primarily of Fats, Oils, and Greases, from animal or vegetable sources. It can be either liquid or solid at room temperature.

Common Sources of FOG

- Butter, Margarine
- Lard
- Vegetable/Canola/Olive Oil
- Meats (Steaks, Hamburgers, etc.)
- Nuts
- Dairy Products

Why is FOG a Problem for YOU and YOUR Sewer Operator??




FOG clogs plumbing pipes and sewer pipes. FOG sticks to the walls of these pipes and they eventually become clogged. When pipes are clogged, the wastewater can no longer flow through them making back-ups into drains, toilets, and other areas of your home. This may cause a serious public health and environmental problem.

Where does it go from here??

If you have public sewer, every time you flush the toilet or put something down the drain, it will end up in the pipe in the street. The pipe carries all of the wastewater and brings it to the Wastewater Treatment Facility (WWTF). The WWTF treats the wastewater and releases the clean water into the ground for groundwater recharge or into the rivers and streams. It is important that the pipes in the street are FOG-free so that the wastewater gets to the facility for treatment.

What is a grease interceptor?

A grease interceptor is a device that is installed outside the building to separate and retain grease and solid materials from the waste stream while allowing the rest of the liquid waste to discharge to the wastewater collection system. The capacity of the interceptor is such that adequate residence time is provided to allow the wastewater to cool, and the grease time to congeal and rise to the surface, where it accumulates until the interceptor is cleaned.

Cleanout procedures:

1. Contact a hauler or recycler for cleaning.
2. Record cleanout event in record/log book. Include date, name of person performing the work, estimated volume of grease removed and disposal location.
3. Keep a copy of pumping receipt from grease hauler or recycler.

Outdoor Grease Interceptor

Inspection, Maintenance, and Cleanout Requirements

Your Sewer System Operator may have specific requirements for inspection and pumping frequency depending on your grease trap design and your particular sewer system. Your sewer operator has set the following requirements for your establishment:

How often to inspect? Monthly

When to pump? Whenever the level of grease is 25% of the effective depth of the trap, or at least every three months, whichever is sooner. See manufacturer's information to determine the effective depth of your grease trap. Pumping shall be reported to the Acton Board of Health within thirty (30) days of its occurrence.

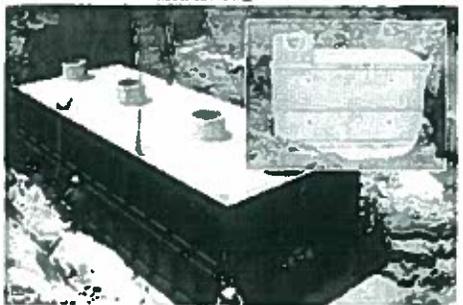
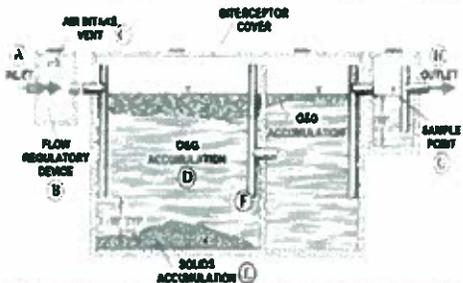
Who to hire to pump out? Any septage hauler licensed by the Town of Acton. Contact the Acton Board of Health for a list of licensed septage haulers.

Acton Board of Health: (P) 978-264-9634; (E-mail) boh@acton-ma.gov

Records/logs? Maintain inspection, cleanout and disposal records. Records shall be mailed within 30 days of each service to your sewer system operator:
Attention: Grease trap records

Non-compliance penalty? \$50/day per occurrence

Typical Grease Interceptor Design



For local grease trap and interceptor regulations, see Acton Board of Health Regulation 11-7.3.1. For national and external grease trap regulations, see 248 CMR, 16.09 of the Uniform State Plumbing Code

DO Best Management Practices for Food Handling

- ✓ Remove food waste with "dry" methods such as scraping, wiping, or sweeping before using "wet" methods that use water. To practice "dry clean-up":
 - Use rubber scrapers to remove fats, oils, and grease from cookware, utensils, chafing dishes, and serving ware.
 - Use food grade paper to soak up oil and grease under fryer baskets.
 - Use paper towels to wipe down work areas. Cloth towels will accumulate grease that will eventually end up in your drains from towel washing/rinsing.
 - Spills of dry ingredients should be swept up or vacuumed to prevent them from being washed down the drain.
- ✓ Put Oil, Grease, and Food Scraps in collection containers for trash disposal or composting
- ✓ Train all kitchen staff on oil and grease management
- ✓ Install and maintain a grease interceptor or grease trap outside of the facility
- ✓ Pump your oil out on a regular basis
- ✓ Keep records of grease pumping

DO NOT

- Do Not Pour oil, grease, or food scraps down the drain
- Do Not Wash pots, pans, plates, fryers, griddles with water until oil and grease are removed
- NEVER "Hot Flush" oil and grease down the sinks and drains



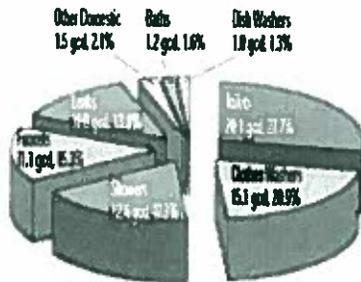
Conserving Water Means Big Savings for the Pocket & the Planet

Typical indoor single-family home water use

Source: WaterWatch.org • 1999 American Water Works Association

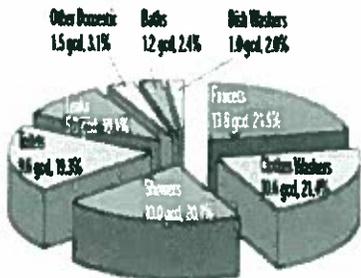
Without Conservation

Total: 72.5 gallons per capita per day (gpcd)



With Conservation

Total: 49.6 gallons per capita per day (gpcd)



References

- William Y Davis, "ACT-ACF Comprehensive Study: Municipal and Industrial Water Use," 1996
- Georgia Environmental Protection Division, "1999-2000 Georgia Usage Report," 2000
- Amy Verber, "Handbook of Water Use and Conservation," WaterPlan Press, Umbagog, MA, 2002

Two-For-One Idea:

Own a fish tank?? When you clean the tank, use the dirty water on your house plants. It's rich in nitrogen and phosphorous. You get a nice fertilizer while you use the same water twice.



How to Save Money at the Tap??

Water Conservation Tricks and Tips that will Save you Money and Preserve our Natural Resources

WANT MORE INFORMATION?
 Contact the Acton Board of Health
 Phone: 978-264-9634
 E-mail: boh@acton-ma.gov
 Website: <http://www.town.acton.ma.us/>

Town of Acton
 Board of Health



Prepared by:

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Acton Board of Health

Simple Steps to Reduce Water Use at Home

Bathroom

Turn the water off while you shampoo and condition your hair and you can save more than 50 gallons a week.



Turn off the water while you shave and you can save more than 100 gallons a week.

Install a water-saving showerhead. They're inexpensive, easy to install, and can save your family more than 500 gallons a week.

Make sure your toilet flapper doesn't stick open after flushing.

Don't allow the water to run when brushing your teeth. This can waste two gallons of water. Wet your toothbrush, brush your teeth, and then rinse.

Listen for dripping faucets and running toilets. Fixing a leak can save 500 gallons each month.



Time your shower to keep it under 5 minutes. You'll save up to 1,000 gallons a month.

Put food coloring in your toilet tank. If it seeps into the toilet bowl, you have a leak. It's easy to fix, and you can save more than 600 gallons a month.

Kitchen

Keep a pitcher of water in the refrigerator instead of running the tap for cold drinks.

Compost instead of using the garbage disposal and save gallons every time.

Use your dishwasher only for full loads.



Plan ahead and defrost food in the refrigerator, not under running water.

Soak dirty dishes before rinsing them off and save up to 15 gallons each time.

Laundry



Choose new water-saving appliances, like washing machines that save up to 20 gallons per load.

For washers with variable settings, select the proper water level.

Reach for the scoop only when you have a full load and save up to 600 gallons each month.



General Maintenance

Grab a wrench and fix that leaky faucet. It's simple, inexpensive, and can save up to 140 gallons a week.



Insulate hot water pipes so you don't have to run as much water to get hot water to the faucet.

Outside

Don't water your grass when it's windy. Your water will go everywhere but the lawn.

Use a broom instead of a hose to clean your driveway and sidewalk and save up to 80 gallons of water every time.



Do You Have An Old Toilet? Was Your Home Built Before 1992? Does your Toilet Pre-date 1992? If so....



REPLACE YOUR TOILET

...It's Likely your Largest Water Use

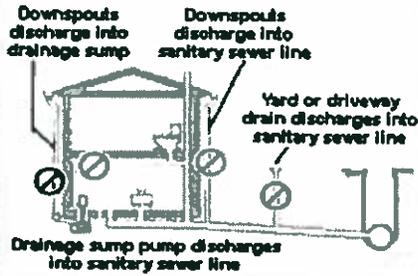
Regular toilets can use 5-7 gallons of water per flush!

Low-flow toilets ONLY use 1.5 gallons per flush!

Did you Know??

All water from rainstorms and underground seepage should be discharged onto the ground or into a drainage ditch. Some of the common improper connections are shown here:

Improper Connections



Don't Flush!!



Medications, also called pharmaceuticals, include prescription drugs such as hormones, antidepressants, and antibiotics, over-the-counter medicines such as pain relievers, cold/flu remedies, and antiseptics, and veterinary medicines.

Water Conservation Saves You Money

- Don't keep the water running when brushing your teeth. This can waste two gallons of water each time you brush! Instead, wet your toothbrush, brush your teeth, and then turn the water on again to rinse.
- Every glass of water brought to your table in a restaurant requires another two glasses of water to wash and rinse the glass. Since nearly 70 million meals are served each day in US restaurants, we'd save more than 26 million gallons of water if only one person in four declined the complimentary glassful.

Prepared by:
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 300 Baker Avenue, Suite 290
 Concord, MA 01742
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For additional information, visit...
<http://www.town.acton.ma.us/>



Town of Acton
 Board of Health

Mailing Address Line 1
 Mailing Address Line 2
 Mailing Address Line 3
 Mailing Address Line 4
 Mailing Address Line 5

Do you Ever..



Cook
 in a
 Frying
 Pan
 and

Dump it Down
 the Drain?

Find Out How These
 Little Things Are

Costing You More Money



Put Food
 Scraps
 Down the
 Drain?

Fats, Oils, & Grease (FOG)

What is FOG?



FOG is material composed primarily of Fats, Oils, and Greases, from animal or vegetable sources. It can be either liquid or solid at room temperature.

Common Sources of FOG

- Butter, Margarine
- Lard
- Vegetable/Canola/Olive Oil
- Meats (Bacon, Hamburger, etc.)
- Nuts
- Dairy Products

Where does FOG come from??

FOG is generated by everyone who prepares and cooks food. Some of the generators of FOG include:

- Residential Homes
- Churches
- School and Industrial Cafeterias
- Restaurants

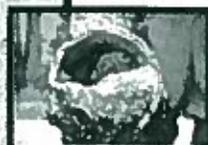
Whenever food is cooked in oils, there is a need to get rid of the cooking oils and greases. The most common place to get rid of these wastes is by pouring them down the drain. This causes problems for you and the Town.

See Dos & Do Not
for proper FOG disposal.

Where does it go from here??

If you have public sewer, every time you flush the toilet or put something down the drain, it will end up in the pipe in the street. This pipe collects all of the wastewater and brings it to the Wastewater Treatment Facility (WWTF). The WWTF treats the wastewater and releases the clean water into the ground for groundwater recharge or into the rivers and streams. It is important that the pipes in the street are FOG-free so that the wastewater gets to the facility for treatment.

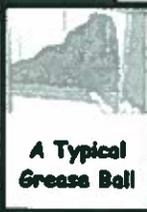
Why is FOG a Problem for YOU and YOUR Sewer Operator??



Grease on the Walls of a Sewer Pipe

FOG clogs plumbing pipes and sewer pipes. FOG sticks to the walls of these pipes and they eventually become clogged. When pipes are clogged, the wastewater can no longer flow through them causing back-ups into sinks, toilets, and other areas

of your home. This may cause a serious public health and environmental problem.



A Typical Grease Ball



Back-up into a Residential Home

Collecting FOG in Containers

and placing the containers in the trash and disposing food in the trash instead of garbage disposals are common sense practices that can help prevent sewer clogs. Grease can also be mixed with an absorbent such as coffee grounds, used paper towels, or cat litter in a lidded container and placed in a trash receptacle.

DO

-  Put oil and grease in collection containers 
-  Remove oil and grease from kitchen utensils, equipment, and food preparation areas with scrapers/towels/brooms
-  Keep grease out of wash water
-  Place food scraps in collection containers for trash disposal or composting

DO NOT

-  Pour oil and grease down drains
-  Wash pots/pans, plates, and fryers/griddles with water until oil and grease are removed
-  Use hot water to rinse grease off surfaces
-  Use the toilet as a wastebasket.
-  Put food scraps down drains.

WANT MORE INFORMATION?

Contact the Acton Board of Health
Phone: 978-264-9634
E-mail: boh@acton-ma.gov