HOUSATONIC VALLEY ASSOCIATION

SPECIAL REPORT

Polluted Runoff

YOU CAN STOP IT!

Top: An excellent vegetation buffer along the water's edge prevents pollutants from washing into the water when it rains. Above: Pollutants have free access to the water because the land has been cleared along the riverbank.

First, a quiz . . . According to the U.S. Environmental Protection Agency, the primary source of water pollution in New England's rivers, and the secondary source in our lakes and estuaries, is:

a) **DDTs** (*Deadbeats Dumping Trash*)
b) **CFCs** (*Children Flinging Chip bags*)
c) **BBBs** (*Big Bad Businesses*)
d) **SSTPs** (*Stinky Sewage Treatment Plants*)
e) **MAYs** (*Me and You(s) — runoff from lawns, roads, roofs)*

If you're like most people . . . you probably picked "c" or "d." In surveys, casual conversations, and community meetings, citizens regularly blame large corporations for environmental pollution here and across the country. That perception wasn't all wrong in the past, and in isolated stretches of New England's rivers, it's still right. But with the passage of the state and federal Clean Water acts more than 25 years ago, and subsequent enforcement and education since, industries and businesses have been cleaning up their acts.

In 1998, the EPA announced . . . that urban runoff is now the major source of water pollution in New England's rivers, more than agriculture, industrial discharges, or eroding streambanks. This means that the extra fertilizer on your lawn, oil and gas on the roads, dirt from unprotected building or landscaping sites, and sewage leaking out of failing septic systems are now polluting the Housatonic River, its tributaries, and nearby lakes more effectively than any other source. But comprehensive strategies to address these problems have not been devised.

Through our Community Watershed Initiative . . . HVA and two partner organizations, the Connecticut River Watershed Council and Farmington River Watershed Association, interviewed more than 200 community leaders and land-use volunteers. They identified the barriers they face in attempting to stop polluted runoff during and after local development, and offered ideas on how to improve the situation. Last fall more than 60 government and private resource and legal experts joined the effort. Dubbed the "Watershed Task Force," they analyzed and prioritized the survey findings and drafted strategies to assist local efforts to stop polluted runoff. In addition to providing state and federal technical and legal support, improving inter- and intra-government relations, and supporting local enforcement officers, the task force identified the most critical need as education of the MAYs (Me and You(s)).

Enter, stage left . . . your favorite watershed association. This special report is designed to give you easy-to-follow tips. Read on . . .

story by
Kristen Andersen

photos by
Jane Bakker

Don't worry, most of these aren't difficult or time-consuming. Some will even save you money. Pick one or two and, while you're at it, pass this on to your friends.

10 simple things you can do to

Save the world

. . . or at least protect your favorite local river or lake!

by **Kristen Andersen**

If you own . . .

Waterfront land . . .
Let nature take its course. Allow natural vegetation to grow along streambanks and lakeshores to prevent pollutants and silt from washing into the water when it rains.

A good vegetation buffer along a streambank.

photos by Jane Bakker

A vehicle . . .
Fix leaks to keep oil and antifreeze from spilling on the driveway or the road. Get regular tune-ups and cut back on driving to reduce air emissions — a major source of acid rain.

A gravel driveway . . .
Keep your driveway in good condition so that a major rainstorm doesn't create ruts that wash dirt into the lake.

An underground oil tank . . .
Replace it with an aboveground one. Yes, it's expensive but it will cost a lot more if you wait until it's leaking, or the amnesty program has run out. (Connecticut residents see back page.)

A septic system or use one . . .
Don't flush anything down the toilet or drain that can safely be disposed of in the garbage or a household hazardous waste collection day, including medication, paint, solvents, hair, facial tissues, and feminine sanitary supplies, disposable diapers, paper towels, and kitty litter. Owners, see *Get Pumped!* on next page.

Pets . . .
Keep pet waste as far away from waterways as possible. Dispose of it in a garbage can if you're within 100 feet of a stream or lake.

Livestock . . .
Buffer the fields and pens from nearby waterways with brushy vegetation. A manure containment system can make a dramatic difference in water quality (see *Waste system improves water clarity* on back page).

If you are a . . .

Builder . . .
Install erosion controls (hay bales and silt fences), and make sure they're working.

Silt fences prevent erosion from washing into lakes and streams.

Landscaper or gardener . . .
Keep pesticide and fertilizer use to a minimum, and use organic ones. To find out how much and what kind of nutrients your lawn needs, test the soil through the state university cooperative extension offices or use home kits (available at garden stores). Lawn tips: aerate annually, leave the clippings to decompose, and add compost/humus each year.

Liners on regraded slopes prevent erosion while allowing new vegetation to take root.

Caring, responsible human being. . .
Don't drop *anything* down stormdrains. They flow directly to rivers, not sewage treatment plants.

HVA tackles polluted runoff

Kevin Case, executive director of the Farmington River Watershed Association, highlights polluted runoff issues for task force members. Inset: Connecticut DEP Commissioner Arthur Rocque gives the keynote address at the task force meeting.

photos by Kristen Andersen

Get Pumped!

photo courtesy of Northwest Corner Septic Systems

by Kristen Andersen

Here's a riddle for you: What lives underground, drinks from the toilet, and could cost you thousands of dollars if you ignore its needs?

Your septic system, of course. In rural and some suburban areas almost everyone has one. When septic systems are well-maintained, well-designed, and well-sited, they are technological miracles. Each effectively treats and filters wastewater before returning it to the soil. As the treated water soaks into the ground, it replenishes nearby streams, lakes, and underground aquifers.

So why does a mystique seem to surround their care and feeding? Perhaps because they don't teach Septic Systems 101 in school.

Here's how the systems work:

Wastewater flows to an exit pipe from every drain pipe in your house (toilets, sinks, showers, tubs, dishwasher, washing machine, etc.) This pipe empties into your septic tank — a large, concrete holding structure with several doors on top, buried a foot or so underground. These doors will need to be dug out when your friendly pumper comes to empty your tank. Remembering the location so the pumper doesn't have to locate it will save you time and money. You'll save even more if you dig the doors out yourself.

The tank allows solids to settle out of the wastewater and noxious gases to rise to the top. The gas should be contained by the tightly sealed doors. If you smell a sewage odor coming from your system, you've got a problem. Seek professional help.

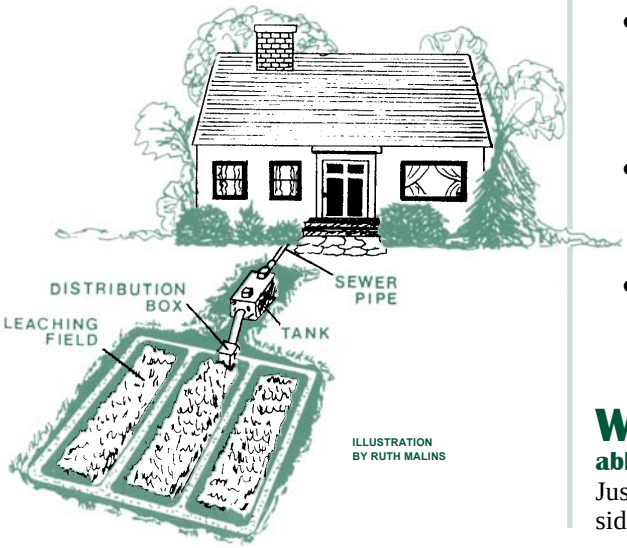


ILLUSTRATION BY RUTH MALINS

On the other side of the tank, another pipe exits and connects to a liquid distribution "D" box, and then to the drain field, or leach field. This pipe is up high enough on the side of the tank to prevent solids from traveling through it to the drain field, if everything's working properly. If your tank hasn't been pumped for a long time, the solids may not be able to settle below this pipe and could clog the system.

But since you take such good care of your system, that won't happen to you! The effluent will slowly work its way through the drain field, being filtered by the gravel or other sediments on its way into the soil and, eventually, surrounding waterways.

Many people stubbornly refuse to take the few easy but critical steps to make sure their system keeps working properly. Maybe they think it's too much trouble. Maybe they don't know any better. But the results, sooner or later, are:

- nearby swimming holes flooded with pathogens, making anyone sick who is in contact with the water for too long;
- nearby lakes and slow-moving streams flooded with excess nutrients, causing unnatural algae growth that chokes out other plants and suffocates fish as its decay consumes oxygen;
- a sudden drop in visitors to your house, as people say, "Pee-ew! What's that smell?" when they arrive in your front yard;
- and, last but not least, thousands of dollars in repairs for what was a completely avoidable problem.

With the correct information, you'll be able to take good care of your system. Just follow the "Do and Don'ts" in the sidebar. **Happy pumping!**

Do . . .

- Get pumped every two to three years. When in doubt, pump it out.
- Only let grass grow over your drain field. Dandelions and other short, light weeds are okay. Woody shrubs or trees can destroy an entire system.
- Make sure your pumper gets a local permit for sewage disposal, or get it at town hall for them. This way you know that your sewage is not going to wind up dumped in an empty field or secluded river.
- Divert rainspouts from your gutters away from the leach field. Too much water soaking through the soil can flush effluent through the leach field before it's adequately filtered.
- Share the "Don't" list with your family and guests.

Don't . . .

- Ever, ever, ever flush anything down the toilet or sink that can be disposed of safely and healthfully in the garbage.
- Ever, ever, ever flush anything down the toilet or sink that qualifies as hazardous waste and cannot be filtered out by gravel or sand, such as oil, pesticides, and photographic chemicals.
- Ever, ever, ever drive over the system, including the leach field. The weight can crush key system components, and the compacted soil will lose much of its filtering capacity.
- Waste water, or use lots of water appliances at once. Too much water at once can overload the system and wash things through the tank that should be allowed to settle first. So take a shower, run the dishwasher and do the laundry one at a time.

Thanks to Northwest Corner Septic Systems for providing much of this information on its website . . . www.septicinspection.com.

For more information and/or a list of registered contractors, call the DEP at

(860) 424-3370

or write them at

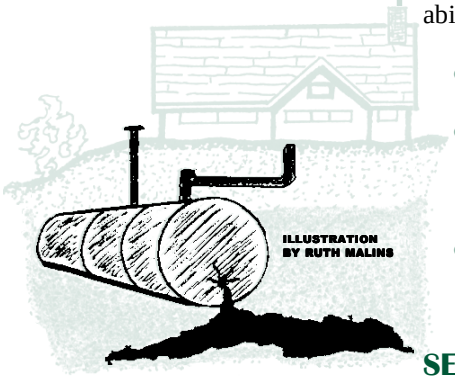
Connecticut Department of Environmental Protection

Bureau of Waste Management

Underground Storage Tank Program – Residential

79 Elm Street, 4th Floor,

Hartford, CT 06106-5127.



Replacing residential underground oil tanks —

Law protects homeowners from liability

by Kristen Andersen

Connecticut homeowners now have a strong incentive to replace their underground oil tanks. Last year the state legislature created a public amnesty program for removing home heating oil tanks that protects homeowners in three ways.

FIRST . . . It releases homeowners from liability for costs related to the oil spill if:

- the tank is on residential real estate comprised of four units or less;
- the tank is removed or replaced by a Department of Environmental Protection (DEP)-approved contractor between July 1, 1999, and January 1, 2002; and
- notice and documentation of the removal or replacement is provided to the DEP Commissioner on the required forms.

SECOND . . . The act provides for reimbursement up to $50,000 directly to the DEP-approved contractor for remediation of any spill found during tank removal. The homeowner must pay the first $500, any insurance payments must reimburse the state.

The state will reimburse costs of removal and disposal of contaminated soils and groundwater, clean fill replacement, and preparation of the remediation plan, but not tank excavation and disposal, new tank installation, or landscaping.

THIRD . . . The act creates a DEP-registration system for contractors who do this work.

FUNDING UPDATE

The $2 million approved by the State Bond Commission for this fiscal year has been spent. The commissioner can and may put in another request to the Bonding Commission.

In the meantime, DEP is still accepting claims, which are date-stamped when they are approved. Claims will be paid in date-stamp order as more funding becomes available.

For more information and fact sheets, go to the DEP's website, www.dep.state.us and search for "underground storage tanks." Funding updates will *not* be on the web, however. Call DEP periodically to check.

Waste system improves lake water clarity

Farms are a large source of phosphorous and other nutrients that reach waterways. The 690-acre Tanner dairy farm in Warren, Conn., housing more than 200 livestock, is adjacent to Sucker Brook, a tributary of Waramaug Brook which empties into Lake Waramaug. Runoff from Tanner Farm fed the blue-green algae that often clouded the surface of the lake.

Then a farm waste management system, with a waste collection and storage feature and an irrigation network, was installed in 1999 to collect milkroom wastewaters, silage leachate, and contaminated barnyard runoff.

About 5,420 tons of manure each year is pumped from the pit into a spray-irrigation system that fertilizes a large hay field. To protect groundwater, the system is used only when the field can sufficiently absorb the water and nutrients.

Since this system was installed, water quality tests show dramatic improvement. Nutrients in Sucker Brook have been drastically reduced and Waramaug Lake's water quality has improved.

photos courtesy of Litchfield County Soil & Water Conservation District

Above: Workers lay down the impervious, heavy-duty liner in the manure pit below the barnyard and away from Sucker Brook to eliminate wastewater infiltration.

Below: The pit prevents discharge to both the ground and surface waters of the Lake Waramaug watershed. It holds more than four months of waste and runoff.

The Tanner Dairy Farm waste management system was installed through the cooperation of federal (U.S. Department of Agriculture, Natural Resource Conservation Service and the Environmental Protection Agency), state (Connecticut Department of Environmental Protection), nonprofit (Litchfield County Soil and Water Conservation District) and local agencies (Lake Waramaug Task Force).

HVA

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