Guide to Storm Drain Marking

Preventing Water Pollution in Your Community

Contents

IEPA and Storm Drain Marking Programs

Storm drain marking is one of the Illinois Environmental Protection Agency's (IEPA) Best Management Practices (BMPs) for addressing the Phase II National Pollutant Discharge Elimination System (NPDES Phase II) requirements. Meet the NPDES II challenge by organizing a marking program in your municipality.

Introduction

This manual is a how-to guide for municipalities interested in starting a Storm Drain Marking Program to reduce nonpoint source pollution. Programs have been instituted across the country and this guide is a reflection of those programs and how-to guides.

The guide covers mainly two methods for marking storm drain inlets. The Lake County Stormwater Management Commission (SMC) does not endorse one marking approach over another, and the guide does not represent a complete catalog of marking products. Its purpose is to give your municipality, and groups such as schools and civic groups, the tools to launch a successful citizen-education effort to reduce dumping and to protect local water resources.

What is Nonpoint Source Pollution?

Nonpoint source (NPS) pollution is caused when rainfall runoff carries pollutants from a wide variety of sources into surface water or ground water. We all contribute to NPS even if we don't mean to. Many of our everyday actions add to NPS. NPS pollutants can be chemicals, like pesticides and fertilizers. They can be automotive products like grease, oil, gasoline, antifreeze and road salt. They can be common household items like paint and solvents. They can even be natural materials like soil, animal wastes, grass clippings and fallen leaves.

What is a Storm Drain?

In urban areas, the most common route for NPS pollutants is through storm drains. A storm drain is a network of underground pipes or open ditches designed to control flooding by transporting stormwater from urban areas to a waterbody. A storm drain may also be known as a curb, gutter, channel, ditch, pipe, or culvert.

Why Be Concerned with What Enters a Storm Drain?

Anything flushed down a storm drain is not treated before it enters a waterbody. This means that wastes on the streets and sidewalks go directly into a nearby waterbody, and not a wastewater treatment plant.

Lake County's 400 miles of streams drain into some 170 lakes and rivers throughout 480 square miles of the county. Polluted runoff harm's our waterways where we fish, swim, and obtain our drinking water.

Why Mark Storm Drains?

Storm drain marking is a great way to make people in your community more aware of nonpoint source pollution and polluted runoff. Storm drain marking serves as an educational tool to remind people about the connection between storm drains and local water resources.

Types of Labeling

Typically, two types of storm drain marking that can be done relatively inexpensively and by using volunteers: stenciling with paint, or glueing storm drain markers.

You will hear the benefits for and against these methods of marking. Choose the method that best fits your budget and needs. Consider the cost of materials and how long they will last, and the ease of application particularly when volunteers provide the labor.

Other marking options include permanent signs made of plastic, plastic or other durable materials like:

Pre-Cast Inlet

This option is manufactured with a written message engraved on the inlet. Some commercial vendors are listed on p. 5.

Aluminum Curb Marker

These markers are applied by applying a mounting adhesive or by drilling a two inch bolt and two nuts into the pavement. *This method is not discussed in this guide.*

Thermoplastic Pavement Marker

A heated torch is used to apply the marker onto the pavement. *This method is not discussed in this guide.*

Marking Options	Approx. Costs*
Stenciling ■ Inexpensive and stencils can be resused. ■ Generally lasts up to 2 years depending on weather and traffic conditions. ■ Easy to implement a project and is ideal for the use of new volunteers on a regular basis.	**Mylar Stencil** Price from Earthwork Stencils: $15.50 ea./25-49 qty. + shipping for in-stock stencils; size 10"x24" Brushes, rollers, paint prices vary
Glue-on Markers or Self-Adhesive Markers ■ Quick to apply and are attractive. ■ Initial costs are higher then stenciling but markers can last up to 10 years. ■ Require little to no maintenance. *Note: Snow plowing may dislodge markers. Make sure surface is clean before applying.*	**Glue-on Marker** Price from DAS Manufacturing: $2.50 including adhesive Wire brush prices vary
Permanent Pre-Cast Inlets/Manholes ■ Permanent and little to no maintenance. ■ Use can be encouraged or required through ordinance or new construction specifications.	**Pre-Cast Inlet** Prices vary. See p. 5 for IJEW vendor contact information.

** Prices are estimates effective per the production date of this guide. Information on the products listed is not intended as an endorsement by SMC. The user is ultimately responsible for determining the suitability of the products. Additional vendors and sources of information pertaining to storm drain marking may also be available through other sources.*

Types of Messages

Storm drain stenciling has one purpose: to discourage deliberate dumping. Your message may focus on a particular material such as motor oil while others may warn against the dumping of chemicals like fertilizers.

Whatever your message, tailor it to the water bodies in and around your municipality by saying, for example, "drains to creek," or "drains to lake." Consider adding the name of the actual creek, lake, or river on your stencil or marker. Some sample messages include:

DON'T DUMP. PROTECT OUR WATER.

DUMP NO WASTE. DRAINS TO LAKE.

NO OIL OR CHEMICALS. DRAINS TO STREAM.

DO NOT DUMP. FLOWS TO FOX RIVER.

YOU DUMP IT, YOU DRINK IT.

SI USTED LO TIRA, USTED LO TOMA.

ONLY RAIN DOWN THE STORM DRAIN.

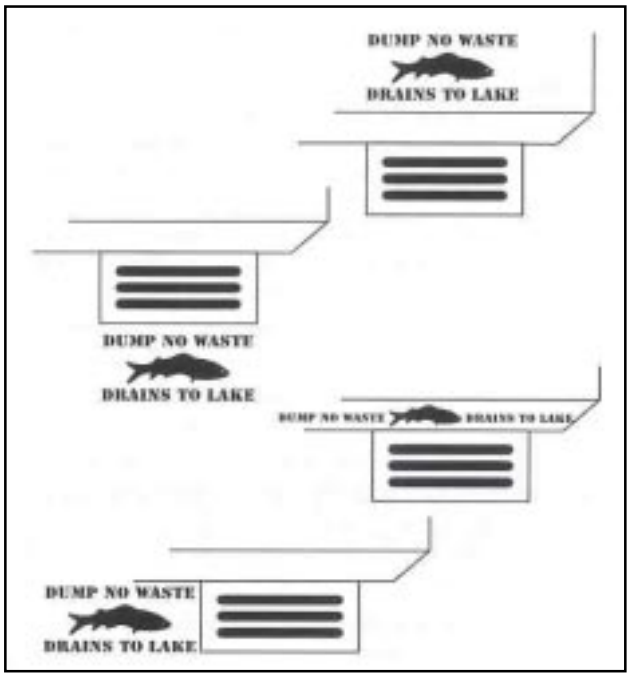

Figure 1. Source: Texas Commission on Environmental Quality

Placement of the Message

Messages can be positioned in several ways. The decision about where to place the message (See Figure 1) also should take into account who *else* will see it. Signs facing the street will be seen more easily by motorists; signs aligned with the sidewalk or with the street itself are more likely to be seen by pedestrians. It's important that even those who would not dump down a storm drain be exposed to the message. In fact, the message may help deter littering, over fertilizing and other practices that contribute to nonpoint source pollution.

The Municipality's Role

Your municipality may have someone designated to coordinate volunteer marking projects. Coordination may mean any of the following:

- providing marking kits containing all the materials and tools needed to carry out a marking project; (See Appendix -- for kit contents);
- furnishing a map showing the project area including identified drains to be marked;
- training volunteers on safety procedures and on the technique for stenciling or affixing signs;
- providing safety equipment: traffic cones, safety vests, masks/goggles (if spray paint is used) and gloves (if glue is used);
- providing incentives and rewards for volunteers (badges, T-shirts, certificates, etc.).

Planning Your Marking Project

Before Marking:

- **Organizing Volunteers:** Each volunteer should sign a liability waiver. A sample is located in Appendix D. You may also want to acquire photo releases from the volunteers. Make sure your police department and front desk personnel are informed.

- **Map the Neighborhood:** Using a neighborhood map or Geographic Information Systems (GIS), identify areas where storm drain marking will occur and those already marked. (Remember, busy roads are not safe.) You can better plan for the amount of needed supplies by having a specific project area in mind.

- **Keep Weather in Mind:** Paints and adhesives stick best when the pavement is dry and warm (above 50.) Windy days are not good because spray can drift onto nearby automobiles and debris can be blown onto freshly painted surfaces. Choose a rain date just in case.

- **Notify the Neighborhood:** A day or two before you plan to mark, distribute flyers explaining the storm drain program and requesting that people avoid parking their cars within 20 feet of the storm drains you plan to label. If you cannot distribute the information ahead of time, have a member of the group distribute flyers/door hangers while others paint. Your flyer should be specific to the area you are conducting the labeling. See p. 5 for the link to the USEPA's stormwater outreach materials or create your own.

- **Invite the Media:** Invite your local newspaper, radio, television or cable station to cover your event and enlist their support to publicize it. This may result in greater community support for the project and may help with volunteer recruitment. See Appendix C for a sample press release and public service announcement. Consider placing an article in your municipal or township newsletter to inform residents and it may result in additional volunteers!

Remember: *Mailboxes are only to be used for mail bearing postage. It is illegal to put anything in the mailbox that has not been delivered by the U.S. Postal Service. Do* ***not*** *place any of your educational materials in a mailbox!*

Day of the Event:

- **Check the Weather:** If unsuitable weather conditions exist, consider using an alternative rain date. The pavement should be dry and temperatures should range between 50 and 80 degrees F. It is no recommended to spray paint on a windy day.

- **Collect All Liability Waivers and Photo Releases.**

- **Review All Safety Procedures.** See Appendix B for some safety considerations. Be mindful of private property and landscaping.

- **Divide Volunteers Into Work Groups:** The ideal work group will consist of six to eight volunteers. When using youth volunteers:
  - One to two adults should be assigned to supervise each group.
  - One to two volunteers to distribute educational materials.
  - Four to six volunteers to apply the stencil or marker.

- **Distribute supplies to each work group.**

- **Assign Work Sections to Groups.** A map should be given to each group.

- **Mark:** Stencilling and curb marking instructions are in Appendix A.

- **Check for Missed Drains:** Have one volunteer from each work group check that all the storm drains in the group's area have been marked.

- **Clean Up:** Clean up work site after the marking is completed.

- **Celebrate:** Thank and congratulate your volunteers for a job well done! You may want to hand out recognition certificates.

Source: South Carolina Department of Health and Environmental Control; Indiana Department of Natural Resources

On-Line Resources

USEPA Nonpoint Source Pollution
www.epa.gov/owow/nps/

USEPA Stormwater Outreach Materials
http://cfpub.epa.gov/npdes/stormwatermonth.cfm
Includes a sample door hanger for distribution during your storm drain marking project.

USEPA Nonpoint Source Pollution Publications
www.epa.gov/owow/nps/whatis.html

USEPA Nonpoint Source Kids Page
www.epa.gov/owow/nps/kids/

IL EPA Citizens Information Center
http://www.epa.state.il.us/citizens/

Clean Water Campaign
www.cleanwatercampaign.com/stormwater_pollution/introduction.html

Low Impact Development Best Management Practices
http://lowimpactdevelopment.org/

State of Illinois Rain Garden Initiative
http://www.raingarden.il.gov/

University of Wisconsin Extension Service - Rain Gardens
http://clean-water.uwex.edu/pubs/raingarden/index.html

Lake County Stormwater Management Commission
http://www.co.lake.il.us/smc

Lake County Health Department, Lakes Management Unit
http://www.co.lake.il.us/health/ehs/lakes.asp

Vendor Resources

Suppliers for Volunteer-Based Projects

Curb Markers

das Manufacturing, Inc.
www.dasmanufacturing.com/

ACP International
www.acpinternational.com/

Stencils

Earthwater Stencils
www.earthwater.org/stencils/

Suppliers for Highways Department Projects

Clay Tiles

Clayworks
www.clayworks.net/stormwater.html

Thermoplastic Pavement Markings

High Performance Preformed Thermoplastic Pavement Marking
www.flinttrading.com/

Zumar Industries, Inc.
www.zumar.com/

Castings

East Jordan Iron Works, Inc.
www.ejiw.com/products/npdes-phase-ii-36/

DISCLAIMER: *Information on the products listed is not intended as an endorsement by SMC. The user is ultimately responsible for determining the suitability of the products. Additional vendors and sources of information pertaining to storm drain marking may also be available through other sources.*

APPENDIX A: How to Mark Your Storm Drain

Spray-Painted or Painted Stencils

This method uses environmentally friendly paint that does not contain heavy metals and is low on volatile organic compounds.

See P. 3 for Message Placement: It is recommended that your volunteers stencil storm drain messages on the sidewalk above the storm drain or on the street in front of the drain. Make sure stencil placement is consistant throughout your community. TIP: Do not stencil a storm drain if vehicles are parked nearby.

Scrub Around the Drain: Scrub the street area surrounding the storm drain with a wire brush, and use a broom to sweep dust and debris into the dustpan. Use garbage bags to dispose of the debris. Do not sweep dirt and debris into the storm drain.

Put the Stencil in Place: Position the stencil on the sidewalk above the storm drain or on the street in front of the drain. Tape or hold the stencil in place.

Paint the Stencil: Two light coats will give you better results than one heavy coat. Allow the first coat of paint to dry before applying the second coat of paint. A cardboard shield may be used to prevent over spray. If the message is unreadable, do not try and clean the paint off. Move on to another storm drain and learn from your mistakes.

Checked for Missed Drains: When you are done with the project, have a team member or two check that all storm drains in your designated area have been stenciled. It's easy to miss one!

Clean Up: Place wet stencils in a plastic bag or between two pieces of cardboard for storage. Out of direct sunlight, lay stencils flat to dry. Do not place them on materials that coudl stick to the stencil.

Clean the Stencils: Once dry, the paint should then flake or peel off. Rolling the stencils can help quicken this process. Removing paint from the stencil will help it to last longer.

Source: North Carolina Department of Health and Environmental Control , and Indiana Department of Natural Resources

Stenciling Supplies

Keep in mind that each work group will need their own set of supplies, which can easily be stored and transported in a plastic container.

- Stencil
- Traffic marking spray paint
- Wire brush
- Broom and dust pan
- Orange safety vest, orange cones, and/or orange flags
- Goggles and face masks (optional)
- Location map showing storm drains to be stenciled
- Letter of permission to stencil from the municipality
- Door hangers or flyers
- Liability waiver form and photo release form
- Garbage bags for wet stencil(s)
- Garbage bags for trash and debris cleaned from around the storm drain
- Cardboard to use for paint shield and stencil transport
- Paper towels or rags
- Heavy duty tape and scissors (optional)

Empty aerosal or paint cans can be recyled through the Solid Waste Agency of Lake County's household hazardous waste collection days. See SWALCO's website at: www.co.lake.il.us/swalco

APPENDIX A: How to Mark Your Storm Drain

Curb Markers

Vinyl curb markers can be purchased pre-glued or volunteers will need to apply the glue to each marker.

It is recommended the marker be placed on the sidewalk above the storm drain inlet or the curb facing the street. Make sure the markers are consistantly placed relative to one another. Avoid placing the markers directly on the street or on the edge of a manhole cover.

Clean the Area: Make sure the surface is flat, dry, and free of any loose debris. Scrub the street area surrounding the storm drain with a wire brush, and use a broom to sweep dust and debris into the dustpan. Use garbage bags to dispose of the debris. Do not sweep dirt and debris into the storm drain.

Glue the Marker in Place: Apply adhesive to the back of the marker starting with 1/8 of an inch from teh outside edge circling toward the center. For pre-glued makers, remove the protective cover.

Press and Twist: Press the marker firmly on a flat surface and twist. The adhesive should be visible around the entire edge of the marker.

Supplies

Keep in mind that each work group will need their own set of supplies.

- Drain markers
- Heavy duty adhesive
- Wire brush
- Broom and dust pan
- Orange safety vest, orange cones, and/or orange flags
- Location map showing storm drains to be stenciled
- Door hangers or flyers
- Letter of permission to stencil from your municipality
- Liability waiver form and photo release form
- Garbage bags for trash and debris cleaned from around the storm drain
- Paper towels or rags

APPENDIX B: Safety

Safety is the most important consideration when organizing your project.

- Volunteers should wear safety vests or brighly colored t-shirts.
- Safety cones should be placed around the work areas.
- At least one adult should be assigned to watch and divert traffic away from workers.
- The safest areas to mark are residential and low traffic areas.
- If events are planned for high traffic areas, consider local law enforcement officers to direct traffic.
- Provide gloves for volunteers.
- Never mark storm drains alone.

APPENDIX C: Sample News Release, Public Service Announcement

(Municipality logo)

FOR IMMEDIATE RELEASE
(Date)

STORM DRAIN STENCILING PROJECT AIMS TO REDUCE WATER POLLUTION

This _____ (insert day or date), a group of volunteers from _____ (name the organization if applicable) will be painting stencils on storm drain inlets in the (name of area or neighborhood). These volunteers are participating in a project to alert residents that dumping in storm drains pollutes local lakes, rivers, streams and wetlands. The village of _____ (municipality's name) is sponsoring the project as part of its effort to reduce nonpoint source pollution.

Most of the pollution in Lake County water bodies come from common, every-day materials, like household chemicals, fertilizers, pesticides, gasoline, used motor oil and antifreeze and litter. These are washed by rainwater and melting snow from our streets, yards, driveways and parking lots into storm drain inlets. Contrary to what many people think, these storm drains don't lead to a wastewater treatment plant. They actually carry untreated storm water directly into our water resources. Deliberate dumping of hazardous materials into storm sewers makes the pollution problem worse.

The stenciled message _____ (say what your message is) is there to remind citizens not to dump waste into storm sewers or contribute more pollutants to ordinary storm water runoff by littering, overfertilizing lawns or sweeping yard debris into the street.

_____(City official) pointed out that the storm drain stenciling has been used successfully in other communities across the country.

"Every citizen has a role to play in preventing pollution," he (she) said. "These kinds of project raise awareness of the impacts of pollution on our natural resources. Storm drain marking projects also are a great way to get government, volunteer groups and businesses working together to solve a common problem."

The (name of group) will be stenciling storm drains in the following neighborhoods on (date):_____ (list neighborhoods). Several businesses have donated materials and refreshments including _____ (name of other sponsors).

For mor information, call _____.

APPENDIX C: Sample News Release, Public Service Announcement

STORM DRAINS AND WATER POLLUTION
:30 Radio PSA

ANNR: Contrary to popular belief, the storm drains on our neighborhood streets do not lead to a water treatment plant. They lead to nearby streams, lakes, rivers and wetlands and effect water quality, recreation and fishing, and even groundwater used for drinking water. And that's bad for all of us. So don't dump waste down your neighborhood storm drains. Help keep our water resources clean. For more information, call _____.

Announcement courtesy of _____ and this station.

STORM DRAINS AND WATER POLLUTION
:60 Radio PSA

ANNR: Contrary to popular belief, the storm drains on our neighborhood streets do not lead to a water treatment plant. They lead to nearby streams, lakes, rivers and wetlands. So when hazardous materials like motor oil and antifreeze get dumped into a storm drain, or when street trash and garden chemicals wash into the sewer after a rain, they end up in our water resources. And that's bad for all of us. You can help keep our water resources clean. Don't litter and don't use fertilizers and pesticides before a rain. And never dump any kind of waste down your neighborhood storm drains.

If your group would like to volunteer to label storm drains with the message "_____," please call _____ (your municipality).

APPENDIX D: Sample Liability Waivers for Volunteers

Your municipality may require participating volunteers (or their parents) to sign a waiver of liability. To follow are two samples. Your legal counsel may want to review a waiver including a photo release form.

Storm Drain Marking Program

I am authorized to act on behalf of [name of your group or organization] (referred to as the Sponsor). I have carefully read and understand the guidelines for the Storm Drain Marking Project, (the Project). In order to participate in the Project the Sponsor assumes the following responsibilities:

1. Participants in the Project are solely under the supervision of the Sponsor.
2. Waivers of Liability will be signed for each participant prior to commencement of the Project.
3. Sponsor will train each participant in pedestrian and other relevant safety rules. All participants will be evaluated by the Sponsor to determine if they are responsible individuals who will be able to abide by the rules of the road and use due caution while participating in the Project.
4. Sponsor will use stencil kit and instructions as provided by the Village of [your village's name] only for the purposes intended.

_____ _____

Signature Date

_____ _____

Print Name Organization

_____

Office or capacity of person signing

Liability Waiver

I, the undersigned, being of lawful age or the parent or legal guardian of the volunteer involved in the Storm Drain Marking Project (Project), in consideration of being allowed to participate in the Project, I hereby release, discharge, and forever acquit the Village of [your village's name], a municipal corporation, and its officers, agents, and employees from any and all actions, causes of action, claims, or any other liabilities whatsoever, known or unknown, or that may arise in the future, on account of or in any way arising out of my participation in the Project.

Further, I assume liability for any non-participants who accompany me.

Participants name (Please print) _____

Age _____

Signature of participant or legal guardian _____

Date _____

References

This guide was adopted from the following stenciling and marking guides, and municipalities:

City of Austin, Texas. *"Storm Drain Marking."* [http://www.ci.austin.tx.us/watershed/stormdrain_marking.htm]

Indiana Department of Natural Resources. *"Storm Drain Marking Manual."* [http://www.in.gov/dnr/stormdrain/pdf/Stormdrain_Manual_web.pdf]

New Jersery Department of Environmental Protection, Division of Watershed Management. *"Storm Drain Labeling Guidelines for New Jersey."* [http://www.state.nj.us/dep/watershedmgt/DOCS/StormDrainLabeling.pdf]

North Carolina Sea Grant. *"Storm Drain Stenciling in North Carolina, A Local Government's Guide to Storm Drain Stenciling."* [http://www.bae.ncsu.edu/bae/programs/extension/wqg/smp-18/stormdrain/localgov.html]

South Carolina Department of Health and Environmental Control. *"Conducting a Storm Drain Tagging Project."* [http://www.scdhec.net/water/pubs/wwtag2.pdf]

Texas Commission on Environmental Quality. *"Storm Drain Stenciling, A Manual for Communities."* [http://www.tceq.state.tx.us/comm_exec/forms_pubs/pubs/gi/gi-212_991707.pdf]

Village of Deerfield, Public Works.

Village of Lincolnshire, Public Works.

Village of Vernon Hills, Public Works.

Photos courtesy of:
P. 5 Upper left: Portland Bureau of Environmental Services
P. 6: University of Illinois Extension
P. 7: Indiana Department of Natural Resources

What You Can Do To Reduce Nonpoint Source Pollution

NOTE: Feel free to use any of the following USEPA information for articles in your municipal or township newsletter!

Household Chemicals

- Be aware that many chemicals commonly used around the home are toxic. Select less toxic alternatives. Use non-toxic substitutes wherever possible.
- Buy chemicals only in the amount you expect to use, and apply them only as directed. More is not better.
- Take unwanted household chemicals to hazardous waste collection centers; do not pour them down the drain. Pouring chemicals down the drain may disrupt your septic system or else contaminate treatment plant sludge.
- Never pour unwanted chemicals on the ground. Soil cannot purify most chemicals, and they may eventually contaminate runoff.
- Use low-phosphate or phosphate-free detergents.
- Use water-based products whenever possible.
- Leftover household pesticide? Do not indiscriminately spray pesticides, either indoors or outdoors, where a pest problem has not been identified. Dispose of excess pesticides at hazardous waste collection centers.

Landscaping and gardening

- When landscaping your yard, select plants that have low requirements for water, fertilizers, and pesticides.
- Cultivate plants that discourage pests. Minimize grassed areas which require high maintenance.
- Preserve existing trees, and plant trees and shrubs to help prevent erosion and promote infiltration of water into the soil.
- Use landscaping techniques such as grass swales (low areas in the lawn) or porous walkways to increase infiltration and decrease runoff.
- Leave lawn clippings on your lawn so that nutrients in the clippings are recycled and less yard waste goes to landfills.
- If you elect to use a professional lawn care service, select a company that employs trained technicians and follows practices designed to minimize the use of fertilizers and pesticides.
- Compost your yard trimmings. Compost is a valuable soil conditioner which gradually releases nutrients to your lawn and garden. (Using compost will also decrease the amount of fertilizer you need to apply.) In addition, compost retains moisture in the soil and thus helps you conserve water.
- Spread mulch on bare ground to help prevent erosion and runoff.
- Test your soil before applying fertilizers. Over-fertilization is a common problem, and the excess can leach into ground water or contaminate rivers or lakes. Also, avoid using fertilizers near surface waters. Use slow- release fertilizers on areas where the potential for water contamination is high, such as sandy soils, steep slopes, compacted soils, and verges of water bodies. Select the proper season to apply fertilizers: Incorrect timing may encourage weeds or stress grasses. Do not apply pesticides or fertilizers before or during rain due to the strong likelihood of runoff.
- Calibrate your applicator before applying pesticides or fertilizers. As equipment ages, annual adjustments may be needed.
- Keep storm gutters and drains clean of leaves and yard trimmings. (Decomposing vegetative matter leaches nutrients and can clog storm systems and result in flooding.)

Septic Systems

Improperly maintained septic systems can contaminate ground water and surface water with nutrients and pathogens. By following the recommendations below, you can help ensure that your system continues to function properly.

- Inspect your septic system annually.
- Pump out your septic system regularly. (Pumping out every three to five years is recommended for a three-bedroom house with a 1,000-gallon tank; smaller tanks should be pumped more often.)
- Do not use septic system additives. There is no scientific evidence that biological and chemical additives aid or accelerate decomposition in septic tanks; some additives may in fact be detrimental to the septic system or contaminate ground water.
- Do not divert stormdrains or basement pumps into septic systems.
- Avoid or reduce the use of your garbage disposal. (Garbage disposals contribute unnecessary solids to your septic system and can also increase the frequency your tank needs to be pumped.)
- Don’t use toilets as trash cans! Excess solids may clog your drainfield and necessitate more frequent pumping.

Source: EPA Journal article, November/December 1991

Water Conservation

Homeowners can significantly reduce the volume of wastewater discharged to home septic systems and sewage treatment plants by conserving water. If you have a septic system, by decreasing your water usage, you can help prevent your system from overloading and contaminating ground water and surface water. (Seventy-five percent of drainfield failures are due to hydraulic overloading.)

- Use low-flow faucets, shower heads, reduced-flow toilet flushing equipment, and water saving appliances such as dish and clothes washers. (See table on water savings possible with conservation devices.)
- Repair leaking faucets, toilets, and pumps.
- Use dishwashers and clothes washers only when fully loaded.
- Take short showers instead of baths and avoid letting faucets run unnecessarily.
- Wash your car only when necessary; use a bucket to save water. Alternatively, go to a commercial carwash that uses water efficiently and disposes of runoff properly.
- Do not over-water your lawn or garden. Over-watering may increase leaching of fertilizers to ground water.
- When your lawn or garden needs watering, use slow-watering techniques such as trickle irrigation or soaker hoses. (Such devices reduce runoff and are 20-percent more effective than sprinklers.)

Other Areas Where You Can Make a Difference

- Clean up after your pets. Pet waste contains nutrients and pathogens that can contaminate surface water.
- Drive only when necessary. Driving less reduces the amount of pollution your automobile generates. Automobiles emit tremendous amounts of airborne pollutants, which increase acid rain; they also deposit toxic metals and petroleum byproducts into the environment. Regular tuneups and inspections can help keep automotive waste and byproducts from contaminating runoff. Clean up any spilled automobile fluids.
- Recycle used oil and antifreeze by taking them to service stations and other recycling centers. Never put used oil or other chemicals down stormdrains or in drainage ditches. (One quart of oil can contaminate up to two million gallons of drinking water!)

Community Action

- Participate in clean-up activities in your neighborhood.
- Write or call your elected representatives to inform them about your concerns and encourage legislation to protect water resources.
- Get involved in local planning and zoning decisions and encourage your local officials to develop erosion and sediment control ordinances.
- Promote environmental education. Help educate people in your community about ways in which they can help protect water quality. Get your community groups involved.

Source: Village of Lincolnshire

Source: EPA Journal article, November/December 1991