What Can Citizens Do To Help Prevent Non-Point Source Pollution?

Urban Storm Water Runoff

- Keep litter, pet wastes, leaves, and debris out of street gutters and storm drains – these outlets drain directly to lake, streams, rivers, and wetlands.
- Apply lawn and garden chemicals sparingly and according to directions.
- Dispose of used oil, antifreeze, paints, and other household chemicals properly, **not** in storm sewers or drains. If your community does not already have a program for collecting household hazardous wastes, ask your local government to establish one.
- Clean up spilled brake fluid, oil, grease, and antifreeze. Do **not** hose them into the street where they can eventually reach local streams and lakes.
- Control soil erosion on your property by planting ground cover and stabilizing erosion-prone areas.
- Encourage local government officials to develop construction erosion/sediment control ordinances in your community.
- If you have a septic system, have it inspected and pumped, at a minimum, every 3-5 years so that it operates properly.

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.

Please visit the following website for more information on City of Irvine's Household Hazardous Waste Collection:
http://www.ci.irvine.ca.us/depts/cd/recycling_waste/household_hazardous_waste_management.asp

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.
- Other landscaping tips:
    - Install wood decking or bricks or interlocking stones instead of impervious cement walkways.
    - Install gravel trenches along driveways or patios to collect water and allow it to filter into the ground.
    - Restore bare patches in your lawn as soon as possible to avoid erosion.
    - Grade all areas away from your house at a slope of one percent or more.
- 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).

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 drain field 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.
- 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.
- If you need to wash your car, take it 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 tune-ups 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 storm drains or in drainage ditches (one quart of oil can contaminate up to two million gallons of drinking water).

Interested and concerned citizens are also encouraged to participate in the following activities:

Volunteer Monitoring

Local groups organize volunteers of all skill levels to gather water quality data. This information can help government agencies understand the magnitude of NPS pollution. More than 500 active volunteer monitoring groups currently operate throughout the United States. Monitoring groups may also have information about other NPS pollution projects, such as beach cleanups, stream walks, and restoration activities.

Ecological Restoration

Ecological restoration provides opportunities for the public to help out with a wide variety of projects, such as tree planting and bank stabilization in both urban and rural areas. Restoration efforts focus on degraded waters or habitats that have significant economic or ecological value.

Educational Activities

Teachers can integrate NPS pollution curricula into their classroom activities. The U.S. Environmental Protection Agency (EPA), federal and state agencies, private groups, and nonprofit organizations offer teachers a wide variety of materials. Students can start on an NPS control project in the primary grades and carry their work through to the intermediate and secondary levels.

Public Meetings and Hearings

Decisions made during public hearings on storm water permitting and town planning can determine a community's capability to manage NPS pollution over the long term. Laws or regulations may require federal, state, or local agencies to hold public hearings when permits are issued or when town plans are formed. Notices about hearings often appear in the newspaper or in government office buildings.

Community Organizations

Many communities have formed groups to protect local natural resources. These community-based groups provide citizens with information about upcoming environmental events in their watershed, such as ecological restoration, volunteer monitoring, and public meetings. Watershed-level associations are particularly effective at addressing a wide range of NPS pollution problems.

Environmental Information on the Internet

Citizens can obtain a tremendous amount of environmental data and educational material with a computer linked to the World Wide Web. EPA's site (http://www.epa.gov) on the World Wide Web provides up-to-date information on Agency activities and enables citizens to find out about air and water quality data in specific communities.

EPA supports NPSINFO, a forum for discussion of NPS issues, including NPS education. Citizens with access to e-mail can subscribe to NPSINFO free of charge by sending an e-mail message to:

listserver@unixmail.rtpnc.epa.gov

and include in the body of the message:

subscribe NPSINFO (your first name) (your last name)

Other federal, state, tribal, and local agencies, as well as businesses and nonprofit groups, also provide environmental information on the World Wide Web.