

California Environmental Protection Agency  
Regional Water Quality Control Board  
Santa Ana Region 8

---

# Urban Runoff and Water Pollution

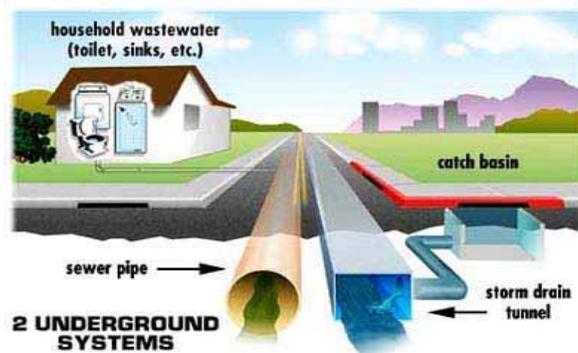
June 28, 2001, Associated Press

Washington D.C. – Americans support protecting the nation’s rivers but lack a good understanding of how watersheds work, a poll for the National Geographic Society suggests.

- Protecting and conserving rivers was important for 98 percent of the respondents. But only 15 percent knew that the greatest source of river pollution comes from the actions of individuals. Nearly three times as many, 44 percent, incorrectly identified industrial sources as the biggest culprit in polluting waterways.
- Just 36 percent knew that nonpoint-source pollution - contamination from many sources that is carried by runoff - is the largest source of water-quality problems for rivers. *For more information on nonpoint source pollution, please visit <http://www.swrcb.ca.gov/rwqcb8/>*
- **42 percent incorrectly thought water that goes down storm drains is treated at waste water treatment plants.**

“What we need to get across is that everyone’s small actions have greater impacts downstream,” said Rebecca R. Wodder, president of American Rivers, a conservation group. The national telephone poll, conducted by Penn, Schoen, and Berland Associates Inc., of Washington D.C., covered 750 adults and 250 children. The margin of error was plus or minus 4 percentage points.

---



## **Managing Pollutants in Urban Runoff**

### **Lawn, Garden and Landscaping Activities:**

Pesticides, fertilizers and soil from lawn, garden and landscaping can result in pollution of urban runoff and storm water. Proper gardening techniques, however, can effectively reduce pollutant runoff and water use, while enhancing the aesthetics of landscape areas. Environmentally friendly landscape management, including thoughtful planning and design, routine soil analysis, appropriate plant selection, minimal use of turf, water conservation, use of mulches, and appropriate maintenance reduces urban runoff. Keeping grass clippings, leaves and other "biodegradable" debris out of the gutter is also important to protect the quality of urban runoff. Environmentally friendly landscapes are also cost effective: native plants require less water and fertilizer and fewer pesticide applications. Mulching with compost made from organic waste promotes healthy lawns, gardens and other landscapes while diverting wastes from landfills.

### **Proper Disposal of Household Hazardous Wastes:**

In 1976, Congress passed the Resource Conservation and Recovery Act, which led to regulations governing the generation, storage, transport, treatment, and disposal of hazardous materials. This legislation has helped to solve some of the problems associated with disposal of hazardous materials from industry. Many products used in homes and businesses contain chemicals that are potentially harmful to the environment. Oven cleaners, paint removers, bug killers, solvents, and drain cleaners are just a few common hazardous chemicals in the home.

Over the last 20 years, concern about the disposal of chemicals used in the home has grown. Improper use of household hazardous materials, such as solvents, fuels, paints, swimming pool chemicals, miscellaneous flammable and corrosive substances, and improper disposal of household hazardous wastes, including used motor oil, is not only dangerous, but it also contributes to pollution of urban runoff and storm water. To properly dispose of household hazardous wastes, take them to a hazardous waste collection center in your community. This assures proper disposal and reduces the risk of environmental pollution from landfills. Even though modern landfills are lined to prevent leakage of landfill leachate into the environment, some hazardous chemicals can damage landfill liners rendering them ineffective. For the location of your nearest Household Hazardous Waste Collection Center, call 1-800-CLEANUP.

### **Pet and Animal Waste Management:**

When pet and animal wastes are not properly disposed of, these wastes can be carried into storm drains and pollute urban runoff and storm water. Since storm drains do not connect to treatment facilities, but empty directly into waterways, pet and animal wastes dumped into storm drains can lead to pollution of lakes, streams, rivers and beaches. Pet wastes contain bacteria, viruses, and parasites that can cause health risks to humans and wildlife. Proper management of pet and animal wastes will result in benefits such as improved water quality and a cleaner neighborhood. Always carry materials to pick up after your pet, and deposit the waste in an appropriate container, such as a garbage can.

### **Automobile Maintenance Activities**

Detergents, solvents and other chemicals used to clean or detail cars and trucks, or car/truck parts, contribute to pollution of urban runoff and storm water. Instead of washing vehicles on the street or driveway, where wastewater can enter storm drains, use full service or self-service car washes that recycle and reuse wash water. Another option available is to wash vehicles where runoff flows into landscaped areas. Mobile automobile detailers and fleet service companies always need to use methods and materials that prevent wastes and wash water from entering storm drains. In some areas, air quality regulations require that solvents and degreasers must be used in closed systems. Never wash solvents or soapy water into gutters or storm drains. Never pour or dump used motor oil, antifreeze or other automotive fluids into gutters or storm drains. Used motor oil from one oil change can contaminate more than a mile of storm drain, and pollute over 100,000 gallons of urban or storm water runoff. Always recycle used motor oil, oil filters, antifreeze and other automotive fluids by taking them to your auto parts retailer, household hazardous waste collection center, or auto repair facility. Finally, keep cars and trucks in good repair to minimize leaks.

---

**Did you know** that dumping anything in the storm drain system is **illegal** and may be harmful to the environment?

**Did you know** that many products we use in our home, car and business like motor oil, paint, pesticides, fertilizers and cleaners can wind up in the street, storm drain and eventually the ocean?

**Trash Management:**

Trash and floating debris are significant pollutants in urban runoff and storm water, especially in cities where a large volume of trash comes from a relatively small area. Trash in waterways, on beaches, and stream and riverbanks, contributes to visual pollution and detracts from the pleasure of outdoor experiences. Trash also poses a threat to wildlife and human health (e.g., choking hazards to wildlife and bacteria to humans). Floating trash and debris can damage boats and boat engines, which results in expensive repairs. Effective trash management and litter control enhances enjoyment of the natural environment and decreases health and safety risks to both wildlife and humans. Controlling litter and trash at its source reduces the cleanup and maintenance costs borne by local communities. Effective recycling programs reduce the amount of waste going to landfills, conserve natural resources and energy, and allow valuable materials to be reused.

Before you allow anything to go into the gutter or storm drain, stop to think, "Am I about to pollute my environment?". Storm drains run directly into channels, lakes, creeks, streams, rivers, wetlands, and the ocean.

---

**Common Pollutants found in Storm Drains include:**

1. Detergents, cleaners and solvents
  2. Oil and latex paint
  3. Swimming pool chemicals
  4. Outdoor trash and litter
  5. Pet, animal and human waste
  6. Insecticides, herbicides, and other pesticides
  7. Fertilizer
  8. Oil and grease
  9. Radiator fluids and antifreeze
  10. Gasoline and other fuels
  11. Brake pad dust
  12. Cement and plaster waste
-



These pollutants flow together on a journey from the storm drain to the flood control channel where they can eventually empty into the ocean. Urban runoff and storm water runoff are both linked to pollution at Southern California beaches. Polluted urban runoff and storm water runoff is a serious threat to Southern California beaches and near-shore ocean areas, leading to public health advisories and beach closures. Studies have shown that swimming at polluted beaches is linked to increased risk of illness.

---

### **What you can do:**

1. Buy non-toxic cleaners and use only what you need.
  2. Properly store all toxic products including cleaners, solvents, and paints. Share leftovers with a neighbor.
  3. Take household hazardous wastes to a hazardous material collection center.
  4. Use kitty litter or other absorbent material to clean up spills. Dispose of used absorbent with household trash, or if absorbent was used to clean up a hazardous material, dispose at a hazardous materials collection center.
  5. Clean up water-based paints in a sink, not the gutter. Filter and reuse paint thinner and brush cleaners.
  6. Recycle reusable materials.
  7. Keep trash container lids tightly shut to prevent foraging by animals.
  8. Control erosion at construction and landscape sites to prevent dirt and debris from entering storm drains. Sweep dirt and waste from the gutter. Do not hose down until after you have swept.
  9. Sweep dirt and waste from the gutter. Hose down ONLY after you have swept.
  10. Use pesticides, herbicides, and fertilizers in accordance with label instructions. Do not apply pesticides outdoors if rain is predicted within 48 hours. Take unused pesticides to your hazardous materials collection center for disposal.
  11. Use a broom or blower, rather than a water hose, to clean up landscape maintenance debris. Put debris in a trash container, or better still, compost debris to produce mulch.
  12. Position sprinklers to water only your landscape areas, not sidewalks, driveways or streets.
  13. Divert rainspouts from paved surfaces onto turf areas or planters, to allow water to filter through the soil. Caution! Do not use this suggested action in areas with steep slopes or landslide potential.
  14. Pick up animal waste and dispose in a trash container.
  15. Take used motor oil and antifreeze to facilities that accept recyclable automotive fluids, such as selected auto parts retail stores, gas stations, or auto repair shops, or to a hazardous materials collection center.
  16. Have your vehicles maintained regularly to prevent oil, antifreeze and other fluid leaks.
  17. Conserve water when washing cars or trucks and use biodegradable cleaners. Clean engines at a "Do It Yourself Car Wash" where the drainage is not connected to the storm drain.
  18. Recycle, RECYCLE, **RECYCLE** – For recycling tips, visit <http://www.ciwmb.ca.gov>
-