

HOMEOWNER'S GUIDE TO: Protecting Water Quality and the Environment



XCM-223

It's a fact of modern life –

many of our activities have altered the natural cycles of water movement and purification that give us clean water.

While our individual homes may contribute only small amounts of pollutants, they add up to bigger problems downstream.

The watershed in which you live probably consists of a mixture of houses, businesses, parks, and undeveloped land. The water from this area drains to a creek or river. As cities develop and streets are paved, the loss of natural vegetation results in much more rapid water runoff. This runoff carries contaminants to nearby water bodies.

IN THE HOME

The typical home contains a wide-ranging assortment of cleaning products, paints, solvents, oils, fertilizers, pharmaceuticals, and pest control products. If used according to their labels, they can make our lives easier. But, many of these products fall within the Environmental Protection Agency's definition of hazardous substances because they can catch fire, explode, corrode, or they are toxic.

No matter how beneficial these products are when properly used, improper disposal can cause serious environmental problems. As little as one teaspoon of certain pesticides flushed down a drain or toilet is enough to show up as a pollutant in local waterways. This tiny amount can



Cleaning up polluted water is difficult and costly. Keeping our water clean in the first place is much easier and affordable.



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HAZARDOUS HOUSEHOLD CHEMICALS

AUTOMOTIVE PRODUCTS:

oil, battery acid, brake fluid, antifreeze, gasoline.

FERTILIZERS AND PESTICIDES:

herbicides, fungicides, insecticides, no-pest strips, flea collars and some pet shampoo.

HOUSEHOLD CLEANERS:

spot removers, furniture polishes, deodorizers, drain cleaners, oven cleaners, disinfectants, moth repellents, bleach, ammonia.

MAINTENANCE SUPPLIES:

paint, varnish, lacquer, turpentine, wood stains, wood preservatives, asphalt, asbestos, roofing tar, swimming pool/hot tub chemicals.



cause a wastewater treatment plant to fail federal water quality requirements. Municipal wastewater treatment plants cannot effectively remove certain substances before returning treated wastewater to our waterways.

In addition, pollutants entering street gutters and storm drains will lead directly to waterways without any treatment at all.

Use care when disposing of household chemicals and pharmaceuticals.

- Follow all label directions for use and disposal.
- Ask your pharmacist how to properly dispose of unused prescription drugs.
- Never dump leftover chemicals in your backyard, in the trash, down the sink or toilet, or in storm drains.
- Contact your local health department, wastewater treatment plant, Colorado State University Extension office, or visit Colorado.gov/ag/pw for the location of hazardous waste collection sites near you.

The best way to minimize the problem is to reduce or eliminate the use of hazardous products. When possible, consider using a non- or less hazardous product.

- A steady stream of water can wash many landscape insects off plants and adding insecticidal soap increases the control.
- Try using white vinegar or baking soda in water as a household cleaning solution. These products may work as well and won't pose a threat to your community water supply or your health.
- Buy only enough chemical for the immediate job.
- Store leftover products in their original containers.

- Share unused products with neighbors and friends.
- Hire a licensed professional to apply chemicals.

OUTSIDE YOUR HOME

A garage, driveway, or sidewalk can be a conduit for water pollution. Anything that drips from your car; oil, gas, and antifreeze can wash off concrete or asphalt into storm drains. Pet wastes, de-icing salts, pet flea shampoos, water softener chemicals, and even car washing detergents can be harmful to aquatic life.

Wash your car at a commercial car wash rather than in your driveway. Commercial car washes recycle some of the wastewater. They also pre-clean the wastewater before discharging it into the sewage system.



If spilled or dumped down a storm drain, just four quarts of oil from your car's engine can form an eight-acre oil slick bigger than a city block.

Remember, dumping waste oil and other chemicals into the storm drain is no different than pouring it directly into the nearest stream.

Your landscape can either help prevent water quality problems or contribute to them. For example, rain and irrigation water can wash misapplied lawn fertilizer and pesticide off sidewalks and driveways into storm drains. On the other hand, careful landscaping and sound lawn care practices can reduce the need for chemicals and watering. Consider using these beneficial landscape design practices:

- Use planting beds or ground covers to reduce the amount of area in high-maintenance turf and concrete surfaces. Mulched planting beds and ground cover can be maintained with fewer pesticides and less water than high-maintenance turf.
- Replace turf grass in inappropriate areas, such as dense shade, steep slopes, or hard-to-water places. Instead, plant hardy groundcovers or ornamental grasses.
- Establish a groundcover or use mulch or porous paving material on all bare soil areas.

- Use organic mulches, such as wood chips, in flower beds to reduce weeds and conserve water.
- Compost leaves and other yard wastes.
- Select native and xeriscape plants, which require less water and fertilizer and fewer pesticides.
- Consider the use of swales, rather than berms, to catch rainwater.
- Install water-efficient sprinkler or drip systems that direct water away from paved surfaces.
- Establish a chemical-free buffer strip of dense vegetation next to any watercourse, stream, or lake that borders your property.

Chemicals can be an asset to homeowners in some situations. But fertilizing when the lawn doesn't really need it, using weed killers at the wrong time of year, spraying insecticides "just to be safe," and even watering a little bit every day are unnecessary and can contaminate our water supplies. Sometimes, just changing the method of watering can take care of pest problems. In other cases, beneficial insects could destroy garden pests better than any insecticide.

Many potential sources of pollution exist around the home that may impact water quality.





Degraded fish and wildlife habitat and recreation opportunities often result from overgrowth of aquatic weeds and algae. Nutrient runoff from improperly fertilized lawns, parks, and gardens can contribute to this problem.

Some beneficial lawn care practices include:

- Use only the amount of fertilizer that is recommended – more is not better.
- Choose slow-release forms of nitrogen fertilizer. In most cases, you do not need phosphorus in turf fertilizer.
- Use pesticides (herbicides, insecticides, and fungicides) only as a last resort.
- Calibrate spray equipment for accurate delivery, and follow all label instructions.
- Safely dispose of pesticide containers, rinse water, and leftover pesticides without dumping them down a house drain or storm drain.
- Keep a record of pest problems and what worked and didn't work to control them.
- Water the lawn when it is dry rather than on a calendar schedule.

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- Consider getting a sprinkler irrigation audit to better understand how well your system is operating and how much water you apply.

- Turn off the sprinkler clock during rain or cool weather.
- Don't water the pavement.

Much of our pesticide and fertilizer use is because of a desire for “perfect,” pest-free lawns and gardens, but these products can kill beneficial insects that naturally help to control unwanted ones. Learn to accept a few weeds or insects in your yard as part of nature's balance.

IN THE COMMUNITY

Public awareness about water quality needs to start at home, in our own neighborhoods.

- Act on your interest in safeguarding and cleaning up local waters. Learn about your watershed. Tell public officials that a healthy watershed is important today and for future generations.
- Support the preservation of open space and natural areas that filter runoff water and buffer the effects of urban life.
- Participate in projects and events that promote conservation and preservation of our water resources.

SIMPLE THINGS YOU CAN DO TO PROTECT WATER QUALITY

- Redirect downspouts from paved areas to vegetated areas and away from foundations.
- Select landscape plants that are well adapted to our climate and soils and that have minimal chemical and water requirements.
- Mow your grass up to three inches high, and do so regularly to keep your lawn healthy. A healthy lawn requires fewer chemicals.
- Leave grass clippings on your lawn to recycle nutrients.
- Apply only enough irrigation water to satisfy plant needs. Never over-water after pesticide or fertilizer applications.
- Adjust sprinklers to avoid watering paved areas.
- Keep fertilizers and pesticides off sidewalks and driveways.
- Use alternative pest control measures first. If a pesticide is needed, apply it at the correct time and rate.
- Store all pesticides and fertilizers in a safe, dry place with the labels intact.
- Check with your local health or natural resources department, wastewater treatment plant, Colorado State University Extension office, or visit Colorado.gov/ag/pw about the safe disposal of hazardous household wastes.

Home gardeners may use on average more fertilizer and pesticides per square foot than farmers do in their fields.

SMALL CHANGES



ADD UP





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For more information on protecting water quality and the environment
around your home, please see the other Homeowner's Guides:

XCM-219, Household Water Conservation

XCM-220, Pesticide Use Around the Home and Garden

XCM-221, Alternative Pest Management for the Lawn and Garden

XCM-222, Fertilizing Your Lawn and Garden

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