



**STORMWATER RUNOFF
POLLUTION ZONE**

**NO SALMON
NO FISHING**

**Let's protect our streams
and salmon today or they
could be history tomorrow.**

**It's NOT too late!
Use fertilizers and pesticides carefully.
Conserve water.
Keep trees and shrubs alongside streams.**

A message from the Puget Sound Action Team, Washington Department of Ecology,
Puget Sound Clean Air Agency and Partners

What is Stormwater Runoff?

Stormwater runoff is rain that falls on streets, parking areas, sports fields, gravel lots, rooftops or other developed land and flows directly into nearby lakes, rivers and Puget Sound. The drizzling or pounding rain picks up and mixes with what's on the ground:

- Oil, grease, metals and coolants from vehicles;
- Fertilizers, pesticides and other chemicals from gardens and homes;
- Bacteria from pet wastes and failing septic systems;
- Soil from poor construction site practices;
- Soaps from car washing; and
- Accidental spills, vehicle or equipment washing, or leaky storage containers.

The dirty runoff then rushes into nearby gutters and storm drains and into Puget Sound's streams, rivers and bays. In most areas, stormwater runoff enters these waters without being cleaned of pollutants.

Why Is Stormwater a Problem?

Across the U.S., unmanaged stormwater runoff has caused serious damage to streams, lakes and estuaries, particularly where land uses change from rural to urban activities. It is taking its toll in Puget Sound, too. In Washington state, stormwater pollution contributes to 30 percent of the pollution in waters with some pollution problems. Most of the four million people who live in the Sound region contribute to stormwater pollution every day.

The Washington Department of Ecology estimates that one-third of all the polluted waters in the state are polluted by stormwater runoff. Stormwater pollution has contributed to closing thousands of acres of productive shellfish growing beaches. Stormwater runoff can also close swimming beaches and contaminate drinking water supplies.

Poorly managed stormwater causes three big problems.

- Pollution from stormwater contaminates our waters, closes local businesses, and harms or kills fish and other wildlife. As stormwater passes over developed land, it picks up pollutants and transports them to the nearest storm drain and eventually Puget Sound's rivers and bays.
- Flooding harms streams and wetlands and destroys habitat needed for fish and other wildlife. Unable to soak into the ground, stormwater quickly flows or floods downstream from developed land during the rainy season. As a result, floods can damage homes and businesses, flood septic system drain fields and overwhelm streams, wetlands and wildlife habitat.
- Water shortages in growing communities may occur, especially in developed areas with impervious surfaces or areas where water cannot filtrate through, such as roads, parking lots and rooftops. The impervious surfaces keep rainfall from soaking into the ground and replenishing groundwater and streams used for drinking water or fish habitat.



Puget Sound Action Team photograph

Fascinating Facts

Pollution:

- Pollution from stormwater sources in waters polluted in Washington state: one-third
- Number of pesticides found in Puget Sound streams during rainstorms: 23
- Number of the pesticides found in Puget Sound streams with concentrations higher than levels that protect aquatic life: five
- Gallons of treated wastewater discharged in the Puget Sound region each day: 675,000,000
- Gallons of stormwater runoff from a 1,200 square foot roof, after one inch of rain: 748
- Gallons of stormwater runoff from a one-acre parking lot, after one inch of rain: 27,000

Salmon:

- Amount of all salmon and steelhead stocks in Puget Sound considered healthy: Less than half
- Percent of estuary miles assessed statewide with temperatures exceeding state water quality standards: 65 percent
- Percent of stream miles assessed in the Puget Sound lowlands that exceeded state water quality standards for fecal coliform bacteria: 57 percent
- Percent of Coho salmon, in Seattle's Longfellow Creek in Spring 2003, likely killed by stormwater runoff before they could spawn: 88

What Can You Do?

A pollution permit or a treatment plant can't solve stormwater pollution, because stormwater runoff comes from small, individual sources in all parts of the watershed. It is a problem that everyone plays a part in solving. It is a problem that residents can change by stopping small, individual activities that cause pollution and result in large-scale pollution. It is a problem that communities can manage to prevent stormwater runoff as development takes place.

You can do a lot to help minimize stormwater problems.

Start with doing one of the actions on the following Top 10 list:

1. Maintain your car or truck. Never dump anything down a storm drain. Always recycle used oil, antifreeze and other fluids. Fix oil leaks in your vehicles.
2. Wash your car at a commercial car wash rather than in the street or in your driveway. If you wash your car at home, wash it on your lawn.
3. Drive less. Leave your car at home at least one day each week and take a bus, carpool or bike to work. Combine errands when you drive. Get vehicle emissions checked and repaired. Buy a low emission vehicle.
4. Cut down on fertilizers, pesticides and herbicides. If you use these chemicals, follow directions and use them sparingly. Don't fertilize before a rainstorm. Consider using organic fertilizers. Let your lawn go golden brown in the summer months; it will rebound in the fall. Compost or mulch lawn clippings. Preserve existing trees or plant new ones - trees hold rainfall and help manage stormwater.
5. Remove part or all of your lawn. Lawns require a lot of watering, mowing and caring. Replace part of your lawn with native, drought-resistant plants. Add compost to planting soil and dress it with mulch to improve plant growth and reduce stormwater runoff.
6. If you are on a septic system, maintain the system. Septic systems require regular inspections, maintenance and pumping, or they will fail, cost a lot of money to fix and could pollute nearby lakes and streams. Have a professional inspector check your system regularly and have it pumped out when needed.
7. Pick up after your pets and keep animals out of streams. Scoop your dog's poop and properly dispose of it. Also, make sure fences and other structures are keeping cows, horses and other animals out of streams. Compost manure in a designated area so that it doesn't wash off into nearby waterways.
8. Reduce impervious surfaces at home and increase the vegetated land cover of your property. Impervious surfaces include your roof, driveway, patios and lawn. Reduce rooftop runoff by directing your downspouts to vegetated areas, and not to the storm drain on your street. For your driveway and patios, consider putting in permeable paving or patterns of cement and brick that allow water to filter through it.
9. Support your local storm or surface water program. Programs to maintain a community's stormwater system, prevent flooding and protect natural resources may cost money in the short run but save money for damages to public and private property in the long term. Take advantage of opportunities to educate yourself and your family about your local watershed. Consider volunteering for stream restoration or other local volunteer projects.
10. Make smart growth choices. Choose to live in a neighborhood that provides you with all conveniences- low maintenance homes and lawns, nearby shopping, walking paths, easy-access to buses and trains, and green, open spaces to enjoy.



Puget Sound Action Team photograph

For more information:



Puget Sound Action Team:
<http://www.psat.wa.gov> or 800-54-SOUND



Washington Department of Ecology:
<http://www.ecy.wa.gov>



Puget Sound Clean Air Agency:
<http://www.pscleanair.org/>

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