

What is stormwater runoff?

Stormwater runoff occurs when rain or melting snow runs over lawns, sidewalks, streets, roofs, and farm land. As the water flows over surfaces it can't seep through, it carries with it sediments, soil, fertilizer, pesticides, grass clippings, leaves, and other small matter that it picks up. This water then runs either directly into lakes or streams, or if in the city, it is directed to these sources by stormwater drains located under the streets.



Why is it a problem?

Stormwater runoff is not clean water. As rain water and melting snow flow over various surfaces, the water picks up numerous substances that can seriously harm waterways. Stormwater runoff affects us all; people, animals, fish, and plants.

- **Nutrients** and herbicides from lawn fertilizer that are carried to lakes lead to algae blooms and increase weed growth. Algae blooms damage water quality and take oxygen from the water leading to the death of fish and other aquatic life. Certain algae blooms can also hurt humans and animals, causing bad skin, respiratory, and gastrointestinal reactions, and even organ failure and death in pets.
- **Chemicals** such as pesticides, herbicides, cleaners, motor oil, gasoline, paint, and other automobile chemicals can make animals and humans sick, and destroy aquatic plants.
- **Sediments** washed from farm land and construction areas cause lake and river waters to become murky and can gradually fill lake and stream beds. It makes it hard for plants to grow and can destroy aquatic habitats.
- **Bacteria and viruses** from human and animal fecal matter can also be washed into water sources, leading to possible contamination of drinking water and illness in people who swim in beach areas with high bacteria counts.
- **Solid garbage** such as plastic bottles, cigarette butts, and plastic bags can kill animals such as turtles and birds by suffocating or choking them.



What You Can Do At Home

Motor oil:

- After you change your oil, take it directly to a collection site to be recycled.
- Instead of changing your oil yourself, you can always take your car to a mechanic shop and they will change and dispose of your oil for you.
- If you spill oil, clean it up right away

Other motor vehicle chemicals:

- Never pour chemicals directly into stormwater drains. Read the disposal directions on the bottle or look into local recycling methods.
- If using petroleum-based products such as degreasers, be sure to use all of the product, or share it with neighbors.

Washing your car:

- Use a no-phosphorus, biodegradable soap.
- Wash your car in your yard, so the grass can absorb the water.
- Take your car to a commercial car wash. These companies dispose of the wastewater properly.

Exposed soil:

- Mulch or seed areas of open soil.
- Cover piles of dirt with a tarp.
- Work with construction companies who take steps to prevent erosion.

Leaves and grass clipping:

- Compost leaves and yard clippings to make a rich fertilizer.
- Till leaves into your garden.
- Mulch leaves and grass clippings into your yard or flower beds.
- Rake leaves and clippings into a pile on the curb and cover with a tarp until pick-up day.

Fertilizer:

- Do not over fertilize
- Use a no-phosphorus fertilizer, unless soil tests indicate a need for it.
- Keep fertilizers off pavement and on the lawn.

Pesticides and herbicides:

- Use herbicides and pesticides according to their directions.
- Do not over use these chemicals.
- Consider the use of Integrated Pest Management for environmentally friendly pest and weed control.

Pet waste:

- Pick up pet waste with a bag or scoop and then flush it down the toilet (not the bag though).
- Bury pet waste 4-6 inches deep in your yard or use a pet waste "composter".
- Do not throw pet waste in the garbage, food gardens, or compost pile.

Other Tips For Managing Stormwater

- In garden beds use a mixture of plants, such as flowers, trees, and shrubs.
- Direct your downspouts into grassy areas and not onto pavement, such as your driveway.
- Rather than paving areas around your house, try bricks, stones, gravel, wood chips or gridded and permeable pavers.
- Protected sloped surfaces from erosion by maintaining grass and plants on them.
- Create natural landscapes along river and lakeshore.