

Stormwater Runoff

What is stormwater runoff?

Stormwater runoff begins as rain and carries pollutants from land surfaces on its way to water bodies, such as streams, lakes, and rivers. The pollutants picked up by stormwater come from a variety of sources, including construction sites, fluids from leaking vehicles, vehicle emissions and exhaust, bacteria from failing septic systems, and animal wastes, as well as trash and other debris. Often as land is developed the character of stormwater is altered. The paving of surfaces result in runoff entering water sources at a much faster rate. It is important to properly manage stormwater runoff to reduce or eliminate the negative impacts associated with it.

What are the impacts of stormwater runoff when left unmanaged?

Flooding occurs when an excessive volume of runoff is generated. This is a result of the amount of impervious land surfaces and the rate at which runoff is delivered. Flooding accounts for most of the nation's disaster declarations. Floods are one of the most deadly types of weather conditions and claim hundreds of lives each year. They also cause more damage to property and infrastructure than any other weather hazard. Property damage estimates range into the billions yearly.

Pollution?

The amount of pollutants entering water bodies is increased by untreated runoff. Pollutants can damage the quality of a lake or stream, adversely impacting the aquatic habitat of many insects and animals. The major sources of water pollution are physical, biological, and chemical and fall under three categories: agricultural, industrial, and municipal. Water pollutants commonly consist of petroleum products, hazardous wastes, organic matter, trace metals, heat, and herbicides and pesticides.

What are the types of pollution?

Point Source

Point source pollution is generated from pollutants that enter a body of water directly from a specific source, usually a pipe. These are generally discharged as a result of agricultural, industrial or municipal activities. The point sources of pollution may typically include:

- Pipe discharges from an industrial or municipal plant
- Sewage system overflows and bypasses
- Chemical spills from oil and gas companies
- Seepage from underground storage tanks
- Illegal discharges into storm sewers and drains

Non-Point Source

Non-point source pollution is generated from a variety of sources. The pollutants are indirectly deposited. As runoff travels it picks up and carries man made and natural pollutants, transferring them into the various water sources. The non-point sources may include the following:

- Sediments from construction sites
- Stream bank erosion
- Animal wastes
- Hazardous wastes from landfills
- Oil, grease, and chemical spills
- Herbicides, fertilizers and insecticides, trash, litter and other debris.

What are some benefits of stormwater management?

- Reduced flooding
- Reduced auto accidents and traffic congestion as a result of flooding
- Reduced street and property damage as a result of flooding
- Improved insurance rates

Cleaner and healthier water sources