

# STORMWATER GENERAL CONSTRUCTION PERMIT

## Kentucky Division of Water

### Construction and Environmental Issues

Erosion is caused by the removal of trees, meadow grasses, and agricultural crops during site preparation. Land that is graded is more compacted and results in less water absorption capabilities. Natural depressions that could temporarily pond water may be graded to a uniform slope and cause rapid runoff.

The stormwater runoff resulting from these types of construction activities can have a significant impact on water quality. As stormwater flows over the disturbed land of a construction site, it picks up pollutants like sediment, debris, and chemicals, and transports them to nearby storm sewer systems or directly to rivers, streams, or lakes. Polluted stormwater runoff can harm or kill fish and other wildlife. Sedimentation can destroy aquatic habitat, and high volumes of runoff can cause stream bank erosion. Debris can clog waterways and potentially reach the ocean where it can kill marine wildlife and impact habitat.

### Who needs a stormwater permit?

Construction sites can be a significant source of pollutants, all construction site operators engaged in clearing, grading, and excavating activities that disturb one acre or more of land are required to obtain permit coverage for their stormwater discharges. The permit is also required for smaller sites that are part of a larger, common plan of development. The stormwater general permit requires operators of construction sites to implement stormwater controls and develop stormwater pollution prevention plans to eliminate pollutants from being discharged in stormwater runoff.

Stormwater controls are implemented based on best management practices (BMPs). Examples of BMPs include diversion ditches, detention ponds, erosion control mats, sediment traps, covered storage areas, and good housekeeping practices. These techniques help control nonpoint source pollution by minimizing pollutants that can enter surface runoff, and controlling the rate the stormwater is discharged to surface waters. Documentation and accountability are also important aspects of the stormwater general permit. Permittees are required to conduct inspections at least once every 7 days or once every 14 days and within 24 hours of any storm event greater than 0.5 inches.

They must also maintain on-site copies of inspection reports and any associated enforcement actions. In a move to further protect the waters of the Commonwealth, certain construction projects are ineligible for coverage under the 2014 (or most recent) general stormwater permit. Specifically, permits will not be issued for: Projects that discharge to a receiving stream listed as impaired for sediment in the most recent 305b Integrated Report and for which an approved Total Maximum Daily Load has been approved.

Activities conducted on properties that have already obtained an individual KPDES permit which requires the development and implementation of a BMP Plan.

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### Problems Related to Stormwater Runoff

**Sedimentation:** Sediment is one of the biggest sources of water pollution in Kentucky and the nation. Sedimentation can destroy aquatic habitat, and high volumes of runoff can cause stream bank erosion. Polluted stormwater runoff can harm or kill fish and other wildlife and damage recreational areas. Debris can obstruct waterways and potentially reach the ocean where it can kill marine wildlife and impact habitat. Inflow of sediment can cloud water, blocking sunlight from submerged plants. Sediment also settles to the bottom of streams, clogging the gravel beds used by fish for laying their eggs.

**Chemicals:** Nutrients from fertilizers, such as phosphorus and nitrogen, enter the water and promote rapid algae growth. As this algae dies, its decomposition reduces or eliminates oxygen needed by fish, shellfish, and other aquatic life for survival.

**Post-construction Runoff:** Roof tops, roads, parking lots, driveways, and other impervious surfaces prevent rainfall from soaking into the ground. Consequently, most rainfall is converted directly to runoff. The increase in stormwater runoff can be too much for the existing natural drainage system to handle. As a result, the natural drainage system is often altered to collect runoff and convey it to downstream waters (using curb and gutter, enclosed storm sewers and lined channels). The stormwater runoff is subsequently discharged to streams, reservoirs, lakes, or estuaries.

### Basic Principles of Erosion Prevention:

- Preserve existing vegetation when possible.
- Mulch or seed bare soil immediately for the best and cheapest erosion protection.
- Use silt fences, brush barriers or other approaches to pond and filter sediment from runoff.
- Install silt check dams made of rock, brush, or other products to prevent ditch erosion and remove sediment.
- Protect inlets and outlets.
- Use sediment traps and basins to settle soil particles.

