

Factors in Selecting the SCM

Environmental Factors

The first step in selecting your stormwater control measure is to review the stormwater runoff volume for the specific site. In residential developments there are no requirements for reducing rate or volume of runoff from a site even though this is one of the largest known sources of water pollution. As WaterRICH citizens, we are looking to return the hydrology of the site towards its undeveloped natural state and will use this information in the siting and selection of an appropriate SCM.

Stormwater management practices for residences are designed to be both aesthetic improvements as well as pollutant-removal devices. Typically, the lower you are in the watershed, the more water runoff and pollutants you will receive. Slowing runoff and allowing it to be absorbed by a cast of native plants will filter the runoff returning the stormwater to the cycle cleansed and healthy. Examine the table below to get a better idea of what improvements you will be making to your watershed by taking responsibility for the runoff from your property.

Stormwater Pollutant	Sources	Related Impacts
Nutrients: Nitrogen, Phosphorus, various others	Animal waste, fertilizers, failing septic systems	Algal growth, reduced clarity
Total Suspended Solids (TSS): Sediment deposited and suspended in the water	Construction sites, bare soil, road sanding, eroding banks	Increased turbidity, reduced clarity, deposition of sediment, lower dissolved oxygen
Organic Materials	Leaves, grass clippings, compost, brush	Oxygen deficit to receiving waters
Pathogens: Bacteria and Viruses	Animal waste, livestock, failing septic systems	Human health risks
Hydrocarbons: Oil and Grease, Polycyclic aromatic hydrocarbons	Automobile wear, waste oil, emissions and fuel leaks	Water toxicity, sediment, and bioaccumulation through the food chain
Metals: Lead, Copper, Cadmium, Zinc, Mercury, Chromium, Aluminum	Wear of automobile brake linings and tires, emissions and fuel leaks, and metal roofs	Water toxicity, sediment, and bioaccumulation in the food chain
Pesticides: PCBs, Synthetic Chemicals	Herbicides, insecticides, fungicides, etc.	Water toxicity, sediment, and bioaccumulation in the food chain
Chlorides	Road salt, uncovered salt storage	Toxicity of water columns and sediment
Trash and Debris	Litter washed through storm drain networks	Degradation of the beauty of surface waters, threat to wildlife

Adapted from Minnesota Urban Small Sites BMP Manual

