



**MINNEHAHA CREEK
WATERSHED DISTRICT**
QUALITY OF WATER, QUALITY OF LIFE

STORMWATER BEST MANAGEMENT PRACTICES

You can help keep our water clean.

- Minimize the use of fertilizers and other lawn chemicals
- Keep leaves and grass clippings out of the street; compost yard waste
- Plant native vegetation to reduce irrigation and provide habitat for beneficial insects, songbirds, and other wildlife
- Properly dispose of oil, antifreeze, cleaners, and other household chemicals
- Wash dirty vehicles at a commercial car wash or on your lawn

Learn more:

Minnesota Pollution Control Agency:
www.pca.state.mn.us

Look for the following publications:

- Minnesota Stormwater Manual
- Plants for Stormwater Design
- Protecting Stormwater in Urban Areas

WHAT IS STORMWATER RUNOFF?

In a natural environment, most rainwater soaks into the ground or is captured by trees and other plants. As land is developed, it is covered by hard surfaces - roads, parking lots and rooftops - that prevent natural infiltration, and allow water to quickly run downstream. This runoff, known as stormwater, carries dirt, fertilizer, pet waste, pesticides and debris into lakes, streams and wetlands. Polluted stormwater runoff is the number one water quality problem in Minnesota and across the country.

In many urban environments, stormwater is managed with storm sewer systems that quickly move stormwater away to prevent localized flooding. However, storm sewers often drain directly into lakes, streams and wetlands, rapidly carrying pollution into our valuable surface waters.

WHY IS STORMWATER RUNOFF A PROBLEM?

Stormwater runoff has many negative impacts in an aquatic environment. Increased volume and velocity of runoff causes downstream flooding and erodes streambanks, sending excessive sediment pollution downstream and damaging aquatic habitats.

Runoff carries excess nutrients into lakes and streams, resulting in algae blooms and excessive growth of aquatic plants. As the algae and plants decay they deplete the water of oxygen, reducing the water's ability to support life.

High levels of sediment reduce the clarity of water, degrading aquatic habitat. Other pollutants - including debris, toxic contaminants like heavy metals and pesticides, and pathogens like bacteria - pose safety hazards and limit our ability to use and enjoy our lakes and streams for recreational activities such as swimming, boating, and fishing.

Our entire community bears the cost when valuable aquatic habitats are damaged or destroyed.



WHAT'S BEING DONE ABOUT STORMWATER POLLUTION?

Stormwater Best Management Practices (BMPs) are the primary method for dealing with polluted runoff. BMPs include ponds, raingardens, porous pavement, green roofs, and a host of other practices that slow down or reduce the flow of stormwater.

BMPs are designed to minimize localized flooding and downstream pollution by intercepting runoff and treating it in one of four main ways: storage and settling; filtration through plants and soils; infiltration (water soaking into the ground); and evapotranspiration (trees and plants converting water to water vapor).

Many BMPs like raingardens and pervious pavements serve multiple functions and, if well designed and properly maintained, are an asset to the community.

All BMPs require regular maintenance to function properly. It is important to understand what, if any, BMPs exist on your land and how they function in order to recognize when maintenance is needed.

Here are some examples of BMP's and where to go for more information:

- Stormwater ponds collect stormwater runoff, allowing sediment to settle to the bottom and removing some pollutants. www.pca.state.mn.us
- Raingardens allow runoff to infiltrate through the soil and filter out pollutants. www.metroblooms.org; www.bluethumb.org
- Pervious pavements allow runoff to infiltrate into the soil through the permeable surface. www.icpi.org
- Rainbarrels collect runoff from your roof to water your lawn or gardens. www.extension.umn.edu/environment/00023.pdf
- Green roofs are vegetated rooftops that collect stormwater and allow for evapotranspiration. www.mngreenroofs.org
- Shorelines stabilized with native plants slow down runoff allowing it to infiltrate into the soil before reaching the water, and prevent shoreline erosion. www.bluethumb.org
- Trees slow down stormwater as it falls and allow for infiltration and evapotranspiration, reducing runoff. www.arboretum.umn.edu; www.nrs.fs.fed.us

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Visit the MCWD Permitting webpage:
www.minnehahacreek.org/permits.php



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