

Resources

STATE AGENCIES

Minnesota Department of Natural Resources (DNR)
Division of Waters www.dnr.state.mn.us/waters

Minnesota Pollution Control Agency
Storm Water www.pca.state.mn.us/water/stormwater
Water www.pca.state.mn.us/water

Learning Library
www.pca.state.mn.us/about/library.html
520 Lafayette Avenue
St. Paul, MN
Monday - Friday (8 a.m. - 4 p.m.)

Environmental Protection
www.pca.state.mn.us/education

FEDERAL AGENCIES

Environmental Protection Agency
Surf Your Watershed www.epa.gov/surf

Storm water Outreach Materials
cfpub.epa.gov/npdes/stormwatermonth.cfm

LOCAL CONTACTS

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Director of Facilities
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Consulting Engineer
612-752-6921



www.LHBcorp.com

Organizations

Potential partners in cleaning up our storm water and public waters are:

- Red Lake Watershed District
- International Erosion Control Association – Northern Plains Chapter
- Phi Theta Kappa, S.O.S. Veterans and other student organizations
- City of East Grand Forks, a Municipal Separate Storm Sewer System (MS4)

Water Quality & Storm Water

What is NCTC doing to improve our water quality?



Urban storm water runoff contains heavy metals including lead, organics such as pesticides, and nutrients like nitrogen and phosphorus in threatening concentrations which cause water quality problems in the receiving water bodies.

Northland Community & Technical College (NCTC) is participating with adjoining cities and communities across the country to clean up storm water and reduce flooding. This will improve our public waters for recreational and environmental uses.

When it Rains, It Drains



Compared to natural areas, urban settings have a significantly higher percentage of impervious surfaces. Rooftops, sidewalks, parking lots, and streets create an impervious network that prevents storm water from infiltrating into the soil.

Water flows rapidly through this network and into storm sewers, which discharge directly into our lakes and streams. Unlike sanitary sewers, storm water is usually not treated (unless environmentally sensitive elements like detention ponds or bio-filters are utilized in the design).

The storm water enters our waterways carrying pollutants like oil drippings, pet waste, lawn fertilizers, and excess organic matter and sediment. But leaves and grass clippings are natural, right? Yes. But impervious roofs and pavements are not and they deliver the organics to our waters in unnatural volumes. The decaying vegetation releases carbon dioxide and uses up valuable oxygen needed by fish and other aquatic life.



Nitrogen and phosphorus from fertilizers and pet waste cause excessive algae growth, which further consumes oxygen and produces carbon dioxide. Other seemingly innocuous elements like silt and fine clay particles are flushed into our waters by rapid flowing runoff.



Sediment-loaded streams are said to have high turbidity. The result is habitat destruction for aquatic organisms. Gravel spawning beds are covered and interstitial spaces are filled. Micro habitats for nymphs and other fish food disappear.

Add to the equation things like road salt and warm runoff from sun-baked asphalt and we begin to see the perils facing our beloved waterways.

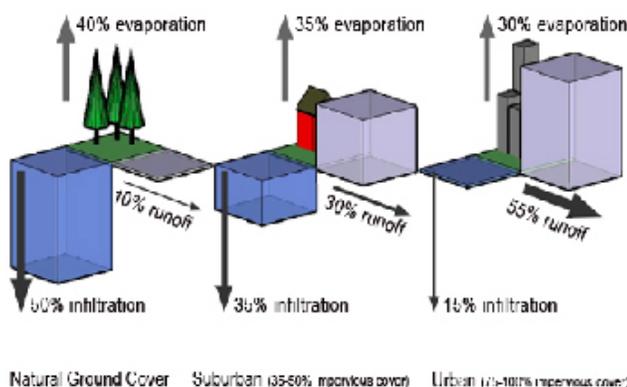
But there is hope. Through small personal efforts you can help improve our watershed health.



10 Things You Can Do to Prevent Stormwater Runoff Pollution

- Use fertilizers sparingly and sweep up driveways, sidewalks, and gutters
- Never dump anything down storm drains or in streams
- Vegetate bare spots in your yard
- Compost your yard waste
- Use least toxic pesticides, follow labels, and learn how to prevent pest problems
- Direct downspouts away from paved surfaces; consider a rain garden to capture runoff
- Take your car to the car wash instead of washing it in the driveway
- Check your car for leaks and recycle your motor oil
- Pick up after your pet
- Have your septic tank pumped and system inspected regularly

Where Does Rain Go?



For more information, visit
www.epa.gov/wqa or
www.epa.gov/npsdes/stormwater