

# WHAT IS NONPOINT SOURCE POLLUTION?

Short answers to frequently asked questions about nonpoint source pollution

- What is nonpoint source pollution?
- Where does nonpoint source pollution come from?
- How can nonpoint source pollution be controlled?
- What can I do to reduce nonpoint source pollution?
- Who can I contact if I have questions or a problem related to nonpoint source pollution?
- What are some additional resources related to nonpoint source pollution?

## What is nonpoint source pollution?

Nonpoint source pollution (NPS) is sometimes called polluted runoff. It may be hard to recognize and is often hard to control. It is pollution or runoff that comes from diffuse sources, rather than from a "point source" like the end of a discharge pipe.

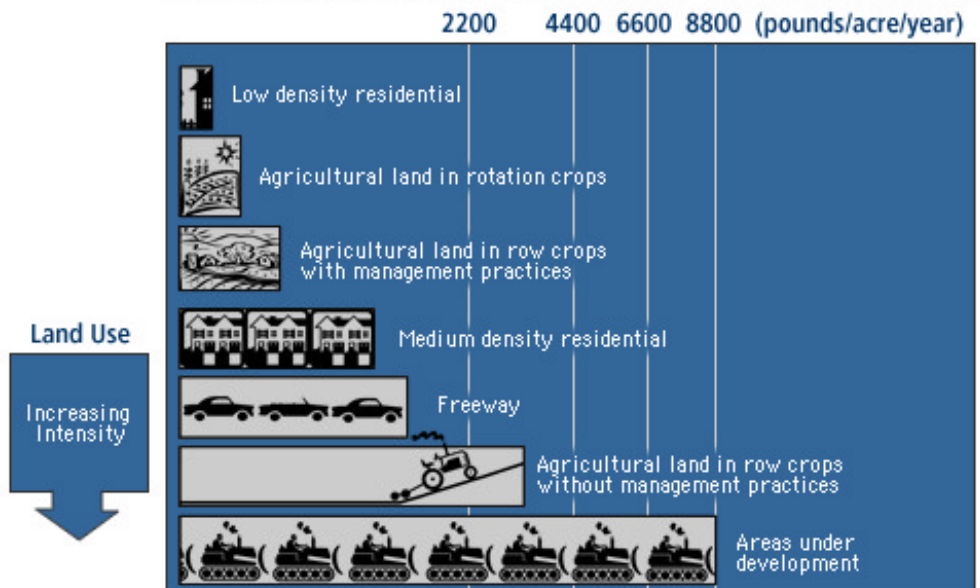
Nonpoint source pollution runs off the land and can affect lakes, rivers, wetlands, groundwater, and drinking water supplies. Sediment and nutrients are the most commonly recognized nonpoint pollutants, but toxic contaminants (heavy metals and man-made chemicals such as pesticides and solvents), airborne inputs, and pathogens (disease-causing organisms) from human or animal waste are also NPS pollutants.

## Where does nonpoint source pollution come from?

Nonpoint sources include urban and agricultural runoff, mining, silviculture (forestry), wastewater treatment, construction and transportation, and recreational activities. NPS from urban and residential areas includes nutrients and pesticides from lawn and garden care, automotive fluids, salt and sand, pet waste, hazardous household waste, and airborne emissions from cars and industry. Agricultural sources include fertilizer and pesticides from crop production, manure management, sediment, and drainage. Human activities

that disturb the land, such as mining, clearcutting, road building, or construction can greatly increase the nonpoint pollutant load. Inadequate wastewater treatment (municipal or on-site) can contribute nutrients, pathogens, and toxic chemicals to surface or groundwater. Many everyday activities have the potential to produce nonpoint source pollution.

## Typical suspended sediment load for different land uses



Typical Sediment load. Credit: Wisconsin DNR

## **How can nonpoint source pollution be controlled?**

Reducing the effects of nonpoint source pollution requires reducing the amount of polluted runoff and improving the quality of water that runs off the land. Nonpoint source pollution can be managed most effectively at the source, by implementing Best Management Practices (BMPs) to eliminate or minimize polluted runoff. Alternatively, NPS can be managed through controls built into the path of runoff, such as sedimentation ponds or wetland detention systems that slow, settle, or filter the runoff.

The most expensive way to manage the effects of NPS is to clean up after the fact. The expense of "cleaning up" is not only financial, it also takes time and has ecological consequences. Using alum or other treatments to seal lake bottoms and trap excessive nutrients, dredging ponds or ditches to remove sediment, or intensively treating water to make it safe to drink are examples of how systems are treated to cope with the impacts from nonpoint source pollution.

## **What can I do to reduce nonpoint source pollution?**

You can do many things on your property to reduce the amount of nonpoint pollution that reaches your lake or river. You can minimize erosion and sedimentation by keeping bare soil covered, mulching gardens, establishing or maintaining a buffer of native vegetation between your lawn and the lake or river, and maintaining healthy, dense turf. A dense turf lawn can be effective in reducing runoff, but will probably need fertilizer. Have a soil test BEFORE applying fertilizer, choose zero-phosphorus fertilizer, especially in shoreland areas, and apply carefully to prevent excess fertilizer from reaching the water. Maintain your lawn with proper mowing, sprinkling and aeration to increase infiltration and reduce runoff. Reduce the amount of impervious area on your property and divert downspouts from your roof into a rain garden or seepage pit to slow runoff. Eliminate bare, compacted paths by substituting a boardwalk, gravel or mulch, or steps down to the water's edge.

Encourage or restore the native vegetation along your shoreline to further slow runoff and filter nutrients that might otherwise reach your lake or stream. The benefits of a shoreline buffer strip also include improving habitat, increasing privacy, enhancing aesthetics, and deterring nuisance geese.

## **Who can I contact if I have questions or a problem related to nonpoint source pollution?**

Check your local telephone listing, the "Who to Contact" section of the Minnesota Shoreland Management Resource Guide Web site, [www.shorelandmanagement.org](http://www.shorelandmanagement.org), or the Web sites listed below for: Your local Soil and Water Conservation District

- [www.mn.nrcs.usda.gov/partners/maswcd/maswcd.html](http://www.mn.nrcs.usda.gov/partners/maswcd/maswcd.html)

Minnesota Board of Water and Soil Resources (BWSR)

- [www.bwsr.state.mn.us](http://www.bwsr.state.mn.us)

Minnesota Pollution Control Agency (MPCA)

- [www.pca.state.mn.us](http://www.pca.state.mn.us)

Minnesota Department of Agriculture (MDA)

- [www.mda.state.mn.us](http://www.mda.state.mn.us)

University of Minnesota Extension Service

- [www.extension.umn.edu](http://www.extension.umn.edu)

Natural Resources Conservation Service (NRCS)

- [www.mn.us.usda.gov](http://www.mn.us.usda.gov)

## **What are some additional resources related to nonpoint source pollution?**

Protecting Water Quality in Urban Areas. 2000. Minnesota Pollution Control Agency

Protecting Minnesota's Waters... The Land-use Connection. 1986. Minnesota Pollution Control Agency

A Watershed Approach to Urban Runoff. A Handbook for Decision Makers. 1996. Terrene Institute

Municipal Nonpoint Source Pollution Guidebook. 1994. New York Sea Grant Extension