



MI-6946-S
1998

UNIVERSITY OF MINNESOTA
Extension
SERVICE

Understanding Shoreland BMPs

SHORELAND BEST MANAGEMENT PRACTICES

NUMBER 1 IN THE SERIES

What Are Shoreland BMPs?

Best Management Practices (BMPs) are actions you can take to reduce your impact on the environment. BMPs have been described for agriculture, forest management, and construction. This series of fact sheets describes BMPs you can adopt on your shoreland property to help protect and preserve water quality. In many cases, the best management for shorelands may be retaining the natural characteristics of your property.

These BMPs are guidelines that have been established for many areas of shoreland property. As more research is carried out along shorelines to measure the impact of landuse activities on water quality, BMPs may be refined or revised. In the meantime, these fact sheets will assist you in making decisions about your property to minimize impact on Minnesota's valuable water resources.

Some BMPs are clearly aimed at residents who already live seasonally or year-round on their shoreland property and who value the resource enough to protect it. Other fact sheets are designed for those developing new acreage in the future or for short-term visitors to Minnesota waterways. The guidelines are equally appropriate for property near lakes or rivers, and all are relevant for every Minnesotan who shares a commitment to preserve our abundant water resources.

Even if you do not live directly on the shoreline, the way you manage your household wastewater and property can have a significant impact on water quality downstream. Pathways that carry contaminants may not always be obvious. Drain tiles, ditches, storm sewers, paved roads, and shallow ground water can all carry pollutants from residential, industrial, and agricultural areas into lakes, rivers, or wetlands.

Fertilizers and chemicals applied to lawns or crops can wash down driveways or ditches and end up in surface water. Improper disposal of hazardous household waste or industrial chemicals can add toxics to our lakes. Poor landuse and construction practices result in erosion, increasing the load of sediment in our rivers. These adverse impacts on surface and ground waters not only affect water quality for human use, but also damage wildlife and fish habitat and other natural resources.

REMEMBER ...

Everyone lives in the watershed of some lake or river, even if they don't own property directly on the waterfront. People who own shoreland property must remember that Minnesota's lakes and streams are a public resource; they have the right and responsibility to preserve those waters for present and future generations to enjoy.

Use of the Fact Sheets

These fact sheets may be distributed to shoreland property owners, lake association members, local elected officials, technical staff, and other decision makers. Individual fact sheets may be copied and handed out at meetings or information booths. Fact sheets may be reproduced as pages in newsletters or included with mailings such as utility bills or tax statements. See reverse side for additional guidelines on use.

On the inside front cover of the folder is a property management section. Locate the appropriate information for your property and buildings and record it in the folder.

Most of the fact sheets outline simple actions to implement on your shoreland property or household to minimize adverse impacts on water quality. For help in getting started on more technical projects, fact sheet #16 *Accessing Information to Protect Water Quality* gives additional information about the agencies and organizations that can provide assistance. *Shoreland Stewardship Scorecard*, fact sheet #17, lets you measure your success in protecting water resources.

Helpful Definitions

beach sand blanket – Sand that is added to form a beach; it should not be added where it would destroy fish or wildlife habitat, wild rice or other protected vegetation; size restrictions do apply; contact the DNR Area Hydrologist for specifics.

erosion – The process by which soil or rock material is worn down and carried away by wind or water; erosion is increased when vegetation is removed and soil is left exposed.

eutrophic – Water very high in nutrients, generally referring to lakes; eutrophic lakes commonly experience algal blooms and excessive weed growth.

filter strip – Vegetated area adjacent to shoreline that helps prevent contaminants from reaching the water; preferably native vegetation.

infiltration – Water seeping into the ground through pores in soil, sand, or gravel or through cracks in bedrock; infiltration can help minimize erosion.

ordinary high water level (OHWL) – Highest water level that a lake has maintained for enough time to leave evidence on the landscape; commonly where natural vegetation changes from aquatic to upland species; for streams, the OHWL is generally the top of the bank of the channel.

riparian zone – Land area adjacent to a stream or lakeshore that may experience periodic flooding.

runoff – Water flowing over the surface of land or soil; runoff can cause erosion and is increased when surfaces are paved or covered with roofs, patios, or decks.

setback – The required distance between the shoreline and property development; different distances apply for dwellings, septic systems, outbuildings, and wells; required setbacks vary for different water bodies; county and municipal ordinances may vary.

shore impact zone – Land area adjacent to a shoreline in which certain regulations apply; some activities are prohibited

shoreland regulations – DNR regulations determining the type and extent of development allowed near shorelines; counties or municipalities may adopt more restrictive ordinances.

topography – Shape or contour of the land; topography and slope influence how property should be developed; construction or other activity on steep slopes increases runoff and erosion.

water bar – A small, raised ridge on the road surface used to deflect water flow into a ditch; designed to reduce erosion by minimizing flow down the road.

watershed – The drainage basin or area in which surface water drains toward a lake or stream; ground water flow may or may not parallel surface topography.

For More Information...

call

county offices:

- University of Minnesota Extension Service
- Soil and Water Conservation District (SWCD)

regional offices of MN State agencies:

- MN Board of Water and Soil Resources (BWSR)
- MN Pollution Control Agency (PCA)
- MN Department of Natural Resources (DNR)
- MN Department of Health (MDH)

federal agencies:

- Natural Resources Conservation Service (NRCS)
- Environmental Protection Agency (EPA)
- U.S. Army Corps of Engineers (USACoE)

PART OF A SERIES...

This fact sheet is one of a series designed to assist shoreland property owners in protecting and preserving water quality. The series includes:

- 1 Understanding Shoreland BMPs
- 2 Maintaining Your Shoreland Septic System
- 3 Installing a Shoreland Septic System
- 4 Ensuring a Safe Water Supply
- 5 Limiting Impact of Recreation on Water Quality
- 6 Developing Shoreland Landscapes and Construction Activities
- 7 Stabilizing Your Shoreline to Prevent Erosion
- 8 Minimizing Runoff from Shoreland Property
- 9 Caring for Shoreland Lawns and Gardens
- 10 Managing Your Shoreland Woodlot
- 11 Valuing Your Shoreland Trees
- 12 Preserving Wetlands
- 13 Managing Crops and Animals Near Shorelands
- 14 Reducing the Use of Hazardous Household Products
- 15 Preventing the Introduction of Exotic Species
- 16 Accessing Information to Protect Water Quality
- 17 Shoreland Stewardship Scorecard
- 18 Conserving Water

This series of fact sheets is a cooperative effort of the following agencies:

University of Minnesota Extension Service of the Arrowhead counties
College of Natural Resources, University of Minnesota
Water Plan Coordinators of the Arrowhead counties
Minnesota Board of Water and Soil Resources
Minnesota Department of Health
Minnesota Department of Natural Resources, Division of Fish and Wildlife, Division of Waters, Division of Forestry
Minnesota Pollution Control Agency
Minnesota Sea Grant Extension Program
Mississippi Headwaters Board
St. Louis County Health Department, Environmental Services Division
Soil and Water Conservation Districts of the Arrowhead counties
Natural Resources Conservation Service
Environmental Protection Agency
Western Lake Superior Sanitary District

USE OF PUBLICATION...

Copyright © 1998 Regents of the University of Minnesota. All rights reserved.

These publications may be photocopied for local distribution. The addition of commercial names, products, or identifiers is not permitted. Please do not add or delete any text material without contacting:

University of Minnesota Extension Service, Distribution Center
20 Coffey Hall • 1420 Eckles Ave
St Paul, MN 55108-6069 • 612-625-8173

You may add information about contact persons or regulations specific to your county, region, or lake association.

Find more University of Minnesota Extension Service educational information on the World Wide Web at <http://www.extension.umn.edu/>

♻️ Printed on recycled paper with a minimum 10% postconsumer waste. Produced by the Educational Development System, University of Minnesota Extension Service.

In accordance with the Americans with Disabilities Act, this material is available in alternative formats upon request.

Please contact your Minnesota county extension office or, outside of Minnesota, contact the Distribution Center at (612) 625-8173.