Identifying Your Shoreline Erosion Problems

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Defining the problem is the first step in shoreline erosion abatement. Deciding upon a specific solution before the problem is adequately defined wastes time, effort and money. A careful visual survey of your property using this "do-it-yourself checklist" will help you define your particular problem.

SHORELINE CHECKLIST

I. On what shore type is your property located? (Check the answer below that describes your situation.)

   ___ high erodible bluff (greater than 30 feet high)
   ___ low erodible bluff (10 to 30 feet high)
   ___ low erodible plain (less than 10 feet high)
   ___ sand dunes
   ___ wetlands or marsh

II. Describe your shoreline property. (Actually measure the distances with a tape and fill in the blanks below.)

   ___ How high above the water level is your house?
   ___ How close to the edge of a bluff is your house?
   ___ How close are other structures to the edge of a bluff?
   ___ What is the angle of slope of the bluff, sand dune or beach?
      (See page 5)
   ___ How wide is the beach from the waterline to the base of the bluff?

      What kinds of material make up the bluff? (Place a check beside the appropriate answer.)

      ___ sand
      ___ one layer of clay or unstratified material
      ___ one layer of sand or silt
      ___ bedrock
      ___ mixed layers of sand, silt, clay or till
What kinds of materials make up the beach?

___ sand
___ sand and gravel
___ gravel and rock
___ other (specify)

III What are the problems along your shoreline? (Place a check in the box beside the appropriate answer to the following questions.)

A. Wave Action:

yes   no
___   ___  Are waves eroding the beach?
___   ___  Are waves eroding the base of the bluff during storms?
___   ___  Are there presently any shore protection structures on your property?
___   ___  Are there presently any shore protection structures on your neighbor's property?
___   ___  Are shore protection structures, if present, in good repair?

B. Groundwater:

yes   no
___   ___  Does groundwater flow out of the face of your bluff?
___   ___  Is active slumping (landslides) occurring?

In what ways do you add water to the groundwater supply on the top of the bluff?

___ septic tank
___ sprinkling or irrigation
___ drain pipes
___ swimming pool
C. Surface Runoff and Wind Erosion:

   yes  no

   Are the effects of either visible on your property?

   ____ raindrop impact
   ____ rills (small ruts)
   ____ gullies

   Are you contributing to surface runoff?

   ____ drain pipes from home or garage
   ____ sprinkling or irrigation
   ____ other (specify) _______________________

   Is sand being blown off the beach or are
dunes shifting?

   ____  ____

D. Vegetation:

   yes  no

   Is there any vegetation on the bluff top,
   bluff face or toe?

   ____  ____

   Was there ever any vegetation on the bluff
   top, bluff face or toe?

   If yes, what happened to it?

   ________________________________

   ________________________________

   What vegetation types are (or were) found on the bluff top, bluff face
   or toe?

   ____ trees or woods
   ____ shrubs or brush
   ____ grass

Definitions and terms:

[Diagram showing backshore, top of bluff, face of bluff, angle of the slope of the bluff, toe of bluff, beach, waterline]
E. Property Use:

How do you use your shoreline property? (Check the appropriate answer.)

___ homesite
___ vacation cottage or recreation
___ agriculture or forestry
___ developed for business
___ rental property

How do you use the bluff or backshore area?

___ for access to beach by foot or vehicle
___ as a place to view the lake
___ as a building site
___ for fill
___ other (specify) ______________________________

After you have defined your shore area and have identified its erosion problems, your next step is to determine solutions to each of the problems you have identified. Learn as much as you can about the nature of shoreline erosion. Organize with your neighbors to cooperatively combat the common problem. Seek out competent advice on technical matters such as engineering, soils, drainage and vegetation, before you proceed. Consult experienced coastal engineers, the Soil Conservation Service, County Extension Service agents, Sea Grant Advisory Service agents and others knowledgeable about specific aspects of shoreline erosion for information.

Information in this fact sheet was adopted from the following two publications:


Angle of Slope Guide

Make a guide to determine the angle of the slope of the bluff by pasting this drawing to a piece of cardboard. Attach a piece of string with a weight on the end to the upper left hand corner. Align the bottom edge along the slope of the bluff. Read the angle of the slope. (Adapted from "Harmony with the Lake: A Guide to Bluff Stabilization," Division of Water Resources, Illinois Department of Transportation.)