
4. Is seepage in the slope causing bank failure?

This is common when a coarse layer of sand overlays a less permeable soil such as clay. Water tends to move rapidly and freely in the sand. Once it reaches the less permeable clay layer, it tends to flow along the clay's surface and exits the slope face.

Note: This problem is beyond the scope of this fact sheet. A registered professional engineer should be consulted. In a limited number of cases, planting water-loving vegetation at the seep line (shrub willows) may help stabilize the slope. Refer to fascine rolls in "VEGETATIVE STREAMBANK STABILIZATION FACT SHEET".

5. Are there problems with the vegetation holding the slope?

Thick, healthy vegetation contributes greatly to slope stability by holding the soil together with its root structure. Carefully examine the quality of the vegetation on the slope.

Is it mostly bare soil covered with pine needles or leaves (usually the case where tree growth is dominant)?

Has slash been disposed of on the banks (which kills vegetation by smothering it)?

Is the bank overly shaded for shrub growth?

- REMOVE ALL SLASH
- SELECT THE APPROPRIATE VEGETATION, PLANT IT, PROTECT IT, AND FOSTER ITS GROWTH
- INSTALL A COMBINATION OF VEGETATION AND RIPRAP PROTECTION

- INSTALL A COMBINATION OF VEGETATION AND GABIONS

6. Is most of the damage caused during spring runoff or big rainstorms?

This is frequently the case on brooks and streams. Water velocities are often too high for bare soil or vegetation to withstand.

- PLANT BANKS WITH SPECIAL STREAM-BANK STABILIZATION PLANTS
- INSTALL A COMBINATION OF VEGETATION AND RIPRAP PROTECTION
- INSTALL A COMBINATION OF VEGETATION AND GABIONS

Note: If much of the water crossing your land is from off-site, you should hire a registered professional engineer to design bank reinforcement.

7. Is foot traffic or vehicular traffic a problem?

Are pedestrians threatening bank stability by trampling vegetation to get to the water? Are cars parking too close to the water, compacting the soil so that no vegetation can grow? Are ATVs tearing up the place?

- PROVIDE STABLE FOOT PATHS WITH CLEARLY DEFINED BORDERS
- PROVIDE AN ACCEPTABLE, CLEARLY MARKED PARKING AREA AWAY FROM THE ERODING SLOPES
- PHYSICALLY LIMIT ACCESS TO ERODING AREAS AND SLOPES BY INSTALLING BARRIERS AND PLANTING PRICKLY VEGETATION

8. Is ice damage a problem?

Winter ice build-up along shorelines can cause tremendous damage with freezing and thawing cycles, as well as the spring thaw.

- INSTALL A COMBINATION OF VEGETATION AND RIPRAP PROTECTION
- INSTALL A COMBINATION OF VEGETATION AND GABIONS

9. Are fluctuating water levels a problem?

If the water level varies greatly over the course of the year, vegetation may have difficulty getting established.

- PLANT VEGETATION THAT CAN ADJUST TO FLUCTUATING WATER LEVELS
- INSTALL A COMBINATION OF VEGETATION AND RIPRAP PROTECTION
- INSTALL A COMBINATION OF VEGETATION AND GABIONS

Note: If whole sections of the slopes are collapsing during the drawdown period, the rate of drawdown may be too rapid.

10. Is a combination of these problems causing the erosion?

This is the rule rather than the exception! Usually your property is subject to a combination of forces. A great deal of your success depends on identifying them. Take the time to examine your shorefront carefully and determine what combinations of factors are causing the total erosion problem.