

Shoreline Vegetation Management Workshop Key Points - Pg.1

Shoreline slope stability factors

- Soil type, drainage and vegetation are the main factors that affect slope stability
- Uncompacted, coarse (sandy) soil layers more prone to sliding
- Deep layers of fine, compact soils restrict water movement, causing seepage on slopes that can trigger slides
- Tree and shrub roots are important for reinforcing slopes
- Having multiple layers of vegetation is important: trees, tall shrubs, short shrubs, ground covers
- Grass and herbaceous plants ineffective for stabilization

How development affects shorelines

- Trees and shrubs in the landscape soak up a lot of rainwater, so clearing the causes more runoff – not just on the shoreline but higher up in the watershed too
- Cutting down trees weakens slopes and makes them more prone to sliding
- Soil compaction, driveways, streets, and hardscaping increase runoff
- Top 6 things homeowners do to make matters worse:
 1. Cutting down all the trees on a slope
 2. Topping trees
 3. Directing downspouts on or near slope
 4. Throwing yard waste on slopes
 5. Putting dead weight at the top of a slope
 6. Neglecting to maintain roof gutters

Preventing damage to shorelines

- Top 6 ways to prevent shoreline problems:
 1. Retain trees and shrubs
 2. Redirect drainage away from the slope
 3. Relocate heavy structures away from slopes

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4. Properly dispose of yard waste
5. Mulch bare ground
6. Control invasive weeds

Recognizing signs of potential instability

- Warning signs to watch for when you look at your shorelines:
 1. Slumping soil surface at the top
 2. Overhanging vegetation/dangling roots
 3. Tension cracks and spongy depressions
 4. Terracing
 5. Rills and gullies on face
 6. Water-loving vegetation on face
 7. Soil pile and sod chunks at base
 8. English ivy

Slope stabilization techniques

1. Seeding grass is ineffective on slopes - too shallow-rooted, heavy when wet, suppresses more beneficial plants
2. Jute netting prevents surface erosion only and must be installed correctly to be effective
3. Planting trees and shrubs is simple and effective:
 - Shore pine - hardy native evergreen tree, grows fast and stays relatively small
 - Snowberry - great for erosion control, spreading, low-growing, can be planted from live stakes, good for top of a slope
 - Willows - native shrubs, 12-15' tall, can be planted from live stakes, grow fast, soak up a lot of water, great for slope stabilization
4. Live stakes - simple easy way to stabilize slopes. Unrooted cuttings collected and planted from late fall to late winter. Willows, cottonwoods and snowberries can be used. Great for slopes because you don't have to dig a hole to plant them.