Section 2
Resource Planning

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The Problems

Housing, industry, transportation, and recreation are taking increasing amounts of land in West Virginia. These uses invariably disturb the land and that produces a two-headed problem of soil erosion and sedimentation.

Erosion

Disturbed land erodes more easily than land in a natural condition. Soil erosion involves the detachment of soil particles by water or wind, causing them to move.

The rate of soil erosion is affected by rainfall intensity, soil type, steepness and length of slope, vegetative or other protective cover, and the length of time the soil is exposed to water and/or wind.

The four types of soil erosion in West Virginia are splash, sheet, rill, and gully.

Raindrops have an explosive effect on bare soil.

Pillars left under stones sometimes indicate the almost invisible loss of soil by sheet erosion.

The difference between rill and gully erosion is in the size of channels cut by eroding water.

Splash Erosion is the detachment of soil particles by the impact of raindrops. It loosens the soil and causes it to be subject to movement.

Sheet Erosion is the most deceptive type. The soil is lost in a uniform layer from a particular area similar to removing sheets of paper from a tablet. The loss is hard to detect unless the soil depth is measured frequently. This type of soil erosion usually occurs on areas with uniform slopes and which have received an even distribution of surface runoff or wind.

Rill and Gully Erosion are similar, differing according to the degree of erosion that has taken place. Where surface runoff is allowed to concentrate on a specific area, small valleys or cuts called rills are formed in the soil. If the erosion continues unchecked, these rills will enlarge and combine into larger cuts called gullies.

Soil erosion is most critical just after the land has been disturbed. The initial disturbance loosens the soil and makes it easier to be transported by water or wind.

Soil erosion creates ugly scars on our landscape. It damages public and private property. Fertile topsoil lost from an area where it has taken years to develop is irreplaceable. Repairs of erosion are costly. Roads and bridges wash out and pavements fail due to undercutting. Pipelines and other utilities are damaged. Eroded soil loses its ability to hold water. Faster runoff of water increases flooding.