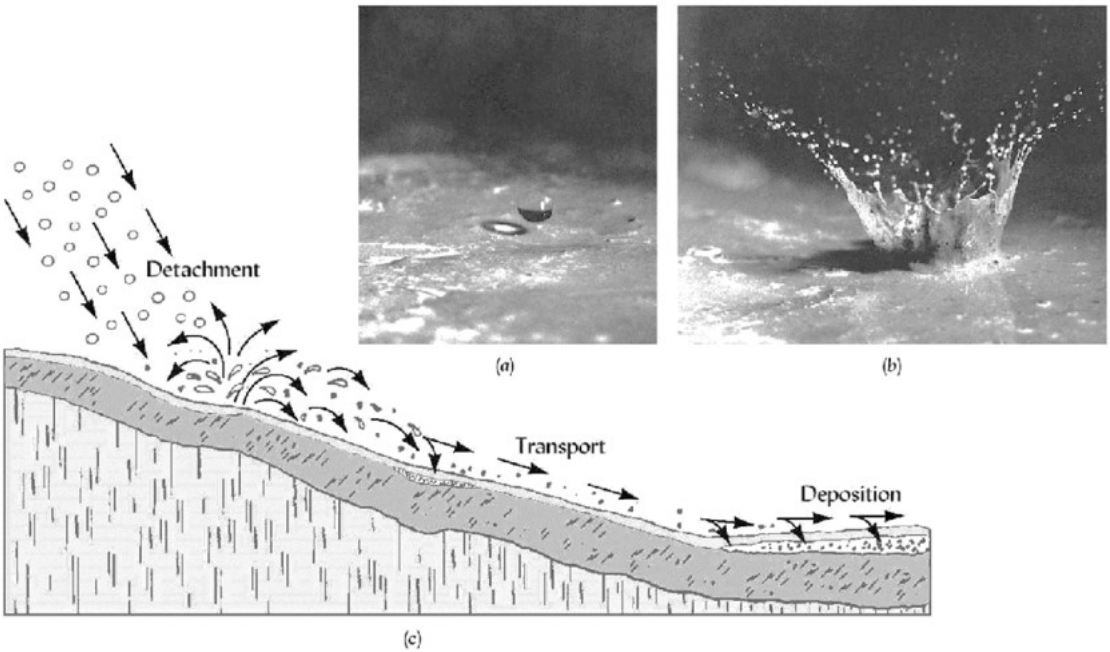
Phase II Storm Water Program

Summer 2021

Splash Erosion

Did you know that a large rain drop falls at about 20 miles per hour? At this speed the kinetic energy of a raindrop impacting bare soil is enough to detach the soil particles and send them flying in all directions. This detachment of soil particles is called splash erosion. The amount of soil material detached by raindrop splash erosion is determined by several factors including the erosivity of the rainfall, size of the soil particles, and the slope of the ground. The soil that is most easily eroded by rain drops is nutrient rich top soil which contains silt. In order to reduce stormwater runoff it is effective to target the first step in the erosion of soil, the raindrop splash.

Erosion caused by raindrop impact is controlled most effectively by vegetative cover. It is estimated that the kinetic energy of sub canopy rainfall is reduced to 70% of what it would be on unprotected soils. For nutrient rich topsoil, seed and mulch is an effective method for the establishment of vegetative cover when properly installed. In order to properly stabilize exposed ground the use of staked sod, rip rap, erosion control blanket, or other materials may be required according to the soil type and application. For more information on stabilizing ground for the protection of splash erosion The Alabama Handbook for Erosion Control is a great source of information and can be found at alabamasoilandwater.gov



Sources: Sciencedirect.com
Researchgate.net