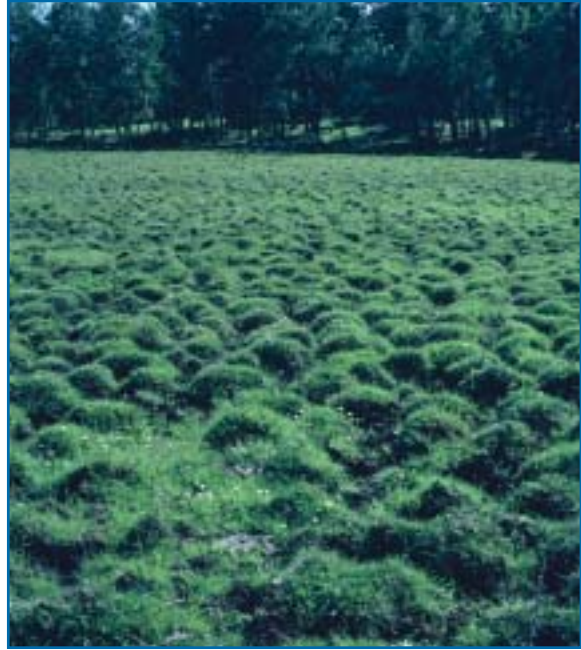




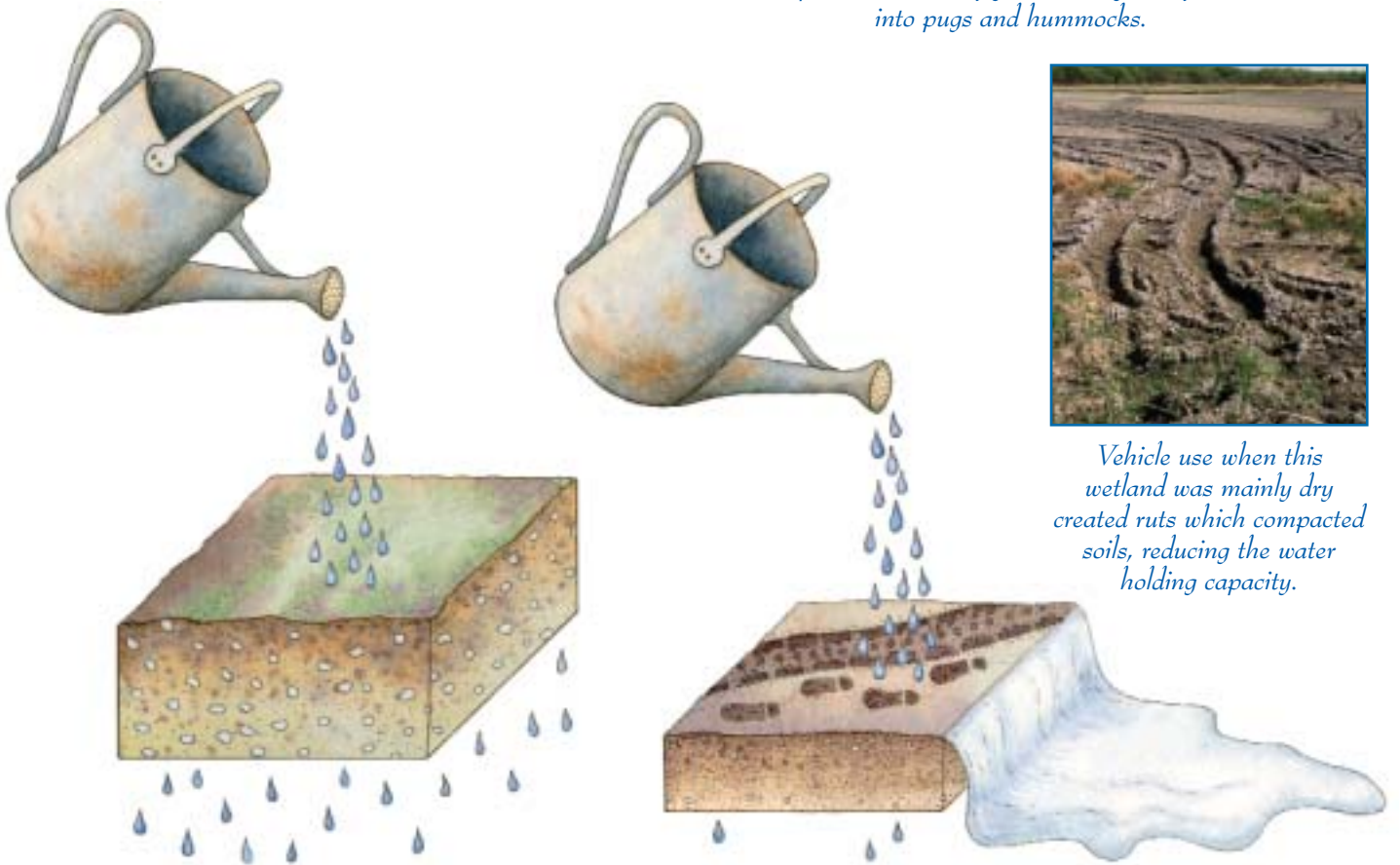
## *Are riparian area soils compacted from use?*

Plants filter and trap sediments to build a riparian soil layer of moist, fine textured materials. Roots and underground fauna create soil structure and spaces that allow water infiltration and storage. This is the “sponge” that supports riparian vegetation. This sponge is very susceptible to vehicle traffic, hoof action and compaction. Compaction can be difficult to evaluate and the effect is often related to soil type. Evaluating the amount of pugging, hummocking and rutting provides some measure of soil compaction from livestock and vehicle use in riparian areas. Pugging describes large animal tracks left in soft soil. Pugged areas have a honeycomb appearance and an irregular soil surface difficult to walk across. Hummocking describes the raised mounds of soil above the surrounding ground. Rutting describes deep animal paths or vehicle tracks that indicate significant compaction of riparian soils.

With extensive animal or vehicle compaction, the water-holding capacity of the soil is reduced, normal plant succession is disrupted and the soil surface is exposed and roughened, which increases the possibility of erosion.



*The soft soil of this wet meadow has been compacted and reconfigured through hoof action into pugs and hummocks.*



*Vehicle use when this wetland was mainly dry created ruts which compacted soils, reducing the water holding capacity.*

*Think of riparian areas as a sponge which collects, stores and slowly releases water. Compaction of the soil that makes up the sponge inhibits this key function.*