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Evolution of Hydrologic Regimes in the Early Years of Reclamation

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Soil water is a critical parameter for plant establishment in the early years after reclamation. The relative importance of the various components of the hydrologic cycle will determine the soil water regime that establishes during the first few years of reclamation. Infiltration is the predominant process affecting soil water and one affected by disturbance and reclamation. Runoff is in turn affected by changes to infiltration, and a reduction in infiltration can lead to higher runoff, which is critical in the re-establishment of wetlands in reclaimed landscapes. Evapotranspiration is expected to be low for the initial years as plants establish, with evaporation likely remaining small, but dependent on soil texture, raising soil water which in turn reduces infiltration. How hydrologic regimes change in the first few years of reclaimed soil development will be discussed.