IMPACT OF HYDRAULIC LOADING ON GROUNDWATER UNDER LARGE SUBSURFACE SEWAGE DISPOSAL SYSTEM

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Abstract:
This paper presents the findings of an extensive (2.8 years) field investigation undertaken to determine the impact of hydraulic loading on groundwater due to discharge from a large (0.54 ha) subsurface sewage disposal system. The outcome of this study indicated that the disposal from the target subsurface system caused groundwater mounding under the leaching bed. The hydraulic loading rate directly affected the rise and fall of the water table under the bed. Excessive hydraulic loading resulted in surface ponding and failure of the bed. In addition to the hydraulic loading, the fluctuations in the water table were influenced by other factors, mainly, the soil and subsoil conditions, precipitation, evapotranspiration and the infiltration due to spring thaw.

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