

FERGANA CITY GROUNDWATER LEVEL REDUCTION

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ABSTRACT

This article analyzes the problems of raising groundwater in the city of Fergana and their impact on buildings, structures and utilities. The hydrogeological state of the area was studied, a drainage scheme was selected depending on the geodetic height and the location of buildings and structures on the site, in other words, a general plan of the site was developed. Hydrogeological calculations determined the flow rates of drainage water and depression lines. Hydraulic calculations are based on water permeability, water velocity, pipe diameter and slope. Hydraulic calculations of closed horizontal drains to lower the groundwater level were performed. The Bernoulli equation was constructed for a siphon pipe, and the vacuum at the highest point was determined by applying the continuity equation to this equation. The maximum height of the siphon was found using the given equations.

KEYWORDS: *Horizontal Drainage, Ground Water Level, Siphon Pipe, flow Rate, a Depression Curve, Perfect Drainage, Imperfect Drainage, Groundwater, Radius of Depression, Coefficient Filtration*

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