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Modelling dynamic behavior of an infiltration trenches system

Wednesday, 2 June 2021 14:30 (15 minutes)

This study takes a cue from the research and monitoring activities held in an infiltration trenches cluster downstream of a wastewater treatment plant in Castellana Grotte (Puglia).
Simply using mass balance arguments and Darcy's law, we model the variation in time of hydraulic head in the infiltration trenches: as a result of this modelling, the saturated hydraulic conductivities are estimated. Such head levels are also monitored, together with the total daily water inflow to the trenches; the water flowing through the permeable septa that separate adjacent trenches, as well as infiltration towards external walls of the trenches cluster are modelled by a ODEs system: such model takes into account both anisotropy factors and differences in altitude among the trenches.

Time Block Preference

Time Block B (14:00-17:00 CET)

References

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