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Award-winning paper in 2021.

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Announcement

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Award-winning paper in 2021

Papers published in *Environmental Geotechnics* are eligible for awards from the Institution of Civil Engineers. Papers from any of the ICE journals can be nominated for several awards. In addition, each journal has awards dedicated to their specific subject area.

On Friday 14 October 2022, ICE president Rachel Skinner presented awards to the following papers published in *Environmental Geotechnics* in 2020. The editorial panel nominated their best papers and an awards committee chaired by Tim Broyd allocated the awards.

Environmental Geotechnics Prize

The Environmental Geotechnics Prize, presented to the best paper published in *Environmental Geotechnics* was awarded to Pk *et al.* (2021).

Abstract

Soil embankments are an integral part of transportation networks and are vulnerable to climate change due to their continuous exposure to the environment. The direct and indirect costs associated with an embankment failure can be significant and it is critical to ensure against the adverse effects of a changing climate. This research aims to quantify the probable stability effects of regular and extreme climate change on a highway embankment in Southern Ontario, Canada. The impact of climate change was quantified for two different embankment fills (sand and silt) by comparing the stability results of historical climate with a 90-year future climate data set. This analysis was accomplished by coupling changes in pore-water pressures (using a two-dimensional (2D) transient unsaturated seepage finite-element model) with a 2D limit equilibrium unsaturated slope stability model. The results indicate that future climate could increase the cumulative annual net infiltration by as much as 41%, which would decrease the embankments' factor of safety by as much as 30%. It was also found that hydraulic properties play a critical role in embankment stability for different climate scenarios and suitable fill material based on the geographic region should be selected to ensure the safety of the embankments against climate change.

REFERENCE

Pk S, Bashir R and Beddoe R (2021) Effect of climate change on earthen embankments in Southern Ontario, Canada. *Environmental Geotechnics* **8(2)**: 148–169, <https://doi.org/10.1680/jenge.18.00068>.

