

Talk title: Mathematical Modeling of salted bevel

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Abstract

In this talk we are interested in the mathematical modeling of the salted bevel. The salted bevel phenomenon, which is by definition the intrusion of salt water into a body of pure water, is a problem that interests many countries where drinking water is an increasingly scarce commodity. For these areas, the preservation of underground water tables against salted water intrusions is a major priority. This presentation aims to the modeling of this salted bevel phenomenon which consists of a coupling between an equation representing the piezometric load, an equation for the transport of the salted substance and an equation for the speed

Throughout this presentation we will show the considered model, we will talk about the mathematical analysis and finally we will investigate the numerical simulations showing the dynamics of the interface between fresh water and salt water.

This presentation is taken from a work in progress.