



Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Institute of Environmental Engineering

Prof. Dr. Paolo Burlando
Professor and Chair of Hydrology and Water Resources
Management

SEMINAR

Tuesday, May 28, 16:00 h, ETH Hönggerberg HIL D 60.1

Prof. Dr. Alfred Paul Blaschke

Vienna University of Technology, Vienna, Austria

The Danube: influence of riverbed clogging and renaturation measures on the adjacent aquifer

Abstract:

An important question in the study of alluvial aquifers is the quantification of stream-aquifer interactions. They affect the dynamics of the adjacent aquifer due to flood events in the stream and are also of fundamental importance to the study of natural groundwater recharge. Also, the exchange of contaminants from the river into the aquifer or from the aquifer into the river is a problem closely related to the hydraulics of the stream-aquifer system. The parameters that affect hydraulic exchange include aquifer geometry, water-groundwater pressure difference, hydraulic properties such as the hydraulic conductivity of the riverbed and others. Measures for the renaturation of river courses have a further possible influence on this exchange.

Several such measures have already been taken on the Austrian Danube and the effects have been investigated by interdisciplinary teams. On the basis of different measurement techniques and modelling results, the effects of clogging of the river bed and renaturation measures on accompanying groundwater bodies are shown.

For more information contact: Peter Molnar (molnar@ifu.baug.ethz.ch)