

## **In search of the perfect geotextile/geocomposite filter for retro-fitting old embankment dams**

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**SYNOPSIS.** Increased use of quantitative risk assessment techniques to determine the probability of failure of the various threats posed to reservoir embankments has highlighted the potential risk of internal erosion occurring in many older embankment dams. In dams where an internal erosion threat has been identified retrofit filters are commonly incorporated into the downstream shoulder of the dam. The variability of the materials used in the construction of the dams makes conventional filter designs difficult. Locally sourcing and placing of consistent quality filter materials on slopes also poses difficulties. This paper investigates the potential of designing using geotextile filters to retrofit old embankment dams identified as being vulnerable to internal erosion.