



Table of Contents

IN PRESS

RAE 2013

RAE 2012

RAE 2011

RAE 2010

RAE 2009

RAE 2008

RAE 2007

RAE 2006

RAE 2005

RAE 2004

RAE 2003

RAE Home

Editorial

Board

For Authors

- **Authors Declaration**
- **Instruction to Authors**
- **Guide for Authors**
- **Copyright Statement**
- **Submission**

For Reviewers

- **Guide for Reviewers**
- **Reviewers Login**

Subscription

Res. Agr. Eng.

Umeda S., Yang W.-J.:
A study on applications of intersecting flows in

water reservoir for improvement of water environment problems

Res. Agr. Eng., 54 (2008): 68-79

This paper deals with the applications of intersecting flows for the improvement of water environments in water reservoirs. First, the present authors' research results are summarised for flow characteristics in intersecting channels placed in horizontal or vertical positions. All physical phenomena involved are identified and their mechanisms are explained. Subsequently, appropriate methods are obtained for solving the problems of stratified water and eutrophication in water reservoirs. A novel drainage system is developed and a particle ejection experiment for sediment flushing is investigated utilising a reservoir model with glass beads replacing sands. Flow visualisation and measurements are used in each experiment. The study has concluded that intersecting flows are suitable for solving water environment problems in water

Keywords:

intersecting flow; water reservoir; water environment problem; drainage system; sediment flushing

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