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近自然工法水理數值分析之研究—以多望溪為例

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摘　　要　近自然工法對於生態環境的復育有著正面的助益，但如何將之量化則是應該積極思考的課題。本文利用二維有限元素水理模式模擬多望溪河道中放置丁壩工，對魚類棲息地的影響，經模擬結果發現，在假設的七場暴雨情形下，河道中魚類棲息地面積均有增加（平均增加155%），顯見丁壩工對生態棲息地的正面影響。

關鍵詞：近自然工法、魚類棲地、二維模式、丁壩工。

On Hydraulic Modeling of Ecological Engineering Measures—With Application to Dou-Wang Creek

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ABSTRACT　Near-nature engineering works, or sometimes called ecological engineering measures, are very helpful in rehabitation of the ecological environment. Quantification of the impacts always bothers the ecological engineer. A two-dimensional finite element model is applied in this study to assess the impacts of the installation of the spur dikes on the fish habitation area. We took Dou-Wang Creek of Ilan county as our case study. Seven different storms were investigated. It is found that on the average installation of the spur dikes can increase 155% of the fish habitation area, and is a measure to be promoted in ecological engineering practice.

Key Words: ecological engineering, rehabitation, two-dimensional model, spur dikes.