



Analysis of the alternative water conservation schemes in the Jiangsu Province

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ABSTRACT

Fresh water is a vital resource of the modern civilization but comprises less than 3% of the world's water. It is recognized that the next decades are likely to see a considerable rise of world population and as a result, the water supply will need to increase, thus raising concerns of an imminent shortage. Water conservation methods, such as the recycling and reuse of water, can improve the water quality and reduce both the stress on water supplies and the human impact on the freshwater ecosystems. This paper provides a comprehensive analysis of the water recycling process applied to the Jiangsu Province by the use of representative simulations. Each model considers different processes of wastewater treatment along with various requisites for improving water quality and cost of facility. A case scenario of recycled water indicates that this advanced model is cost-effective and could play a leading role in Jiangsu Province. Furthermore, we believe that our model might be useful for solving the water scarcity of other urban developments.

Keywords: Utilization model; Recycled water; Jiangsu Province; Miscellaneous use; Case study

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