



Desilting Efficiency due to Empty Flushing of Agongdian Reservoir

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ABSTRACT

Agongdian Reservoir at southern Taiwan was constructed in 1953 for irrigation, water supply and flood control. By 1991, the reservoir had lost 71% of its capacity and rising a serious risk to downstream. For these reasons, the reservoir renovation project allowed desilting empty flushing since in 2005. To examine and understand the relationship between reservoir operation and desilting efficiency, is the key point for the long-term operation of the reservoir, we collected the flow and sediment data of two gaging stations upstream of the reservoir, and at the spillway of the dam from 2010 to 2013, and further estimated the desilting efficiency of six selected hydrological events. By comparing with the results of earlier physical experiments and calculations of empirical formula, we proposed suggestions for the reservoir operation for sustainable reservoir management.