

Development of a New Reservoir Simulation Scheme

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This paper develops a reservoir simulation scheme for a multiyear and multipurpose reservoir at a daily time step. In the new scheme, four operation purposes are considered. They are flood control, hydropower generation, downstream water supply and water storage. In the scheme, three related decision-based parameters are used. The new scheme is then integrated into SWAT (Soil and Water Assessment Tool), a macro-scale hydrological model. The Xinfengjiang Reservoir in southern China is used to examine the new scheme. The result of the study reveals that the new scheme gives a consistent simulation of reservoir storage and outflow.

Keywords: SWAT, Xinfengjiang Reservoir, hydrological models