

FLOOD SIMULATION OF DONGTING LAKE DRAINAGES

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On the studying of Dongting Lake floods during recent decades, this article presents a water-balance equation of Dongting Lake drainages , and gives a flood simulation of the flood height level and its evolution. According to a preliminary estimation of its outflow coefficient FO, storage coefficient FR and retardance coefficient FS in whole drainage basin ,it has found a daily flood height incrementation (m) within Dongting Lake relating to a variation of amount precipitation.

As water-storage only in Dongting Lake is quite limited, to store water in whole drainage basins by visible storage (such as water-storage reservoirs) and invisible storage(such as water-and-soil conservation) can be concerned as the fundamental direction for management floods of Dongting Lake. But, for some years of neglecting in environment management, the capacity of water-storage reservoirs are damaged by some of factors, such as, the serious water loss and soil erosion; the speed sediment deposit, the dam incipient faults increasing, the reservoir pollution and the poverty-stricken tendency in water-storage reservoir areas etc. It is imperative that we need to concern the invisible water storage methods, which are to increase artificially the retardance coefficient of amount precipitation, such as the method of water storing in irrigated fields, arid fields, meadow fields and woodland fields etc is more potential.