## Relationship between Accumulated Precipitation and Water Level Variation at Sum-jin River Dam

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The maximum amount of water, as indicated by the maximum water level, stored in a dam's reservoir and the time taken to reach the maximum water level after a heavy rainfall were examined using the theoretically estimated amount sourced from the available water resources index (AWRI). The daily AWRI is calculated from precipitation data observed at Imsil station from 1975 to 2008. The data of dam water level measured at Seomjin River Dam were used.

The amount of accumulated water resources indicated by AWRI was in good agreement with that represented by the data of dam water level. Further, the variations in the maximums indicated by AWRI and those obtained from dam water level data during the wet period (June–September) were in-phase with regard to annual and intra-seasonal variations. It was also found that the dam water level reached the maximum level after about 3 days from the day showing the maximum AWRI.

However, the relationship between AWRI and dam water level data was found to be weak during the dry period (March–May). This could be attributed to the fact that most precipitation that occurs over dry land is absorbed by soil, and thus, does not runoff into the Seomjin River and reach the dam.

Keywords: AWRI; Dam water level; Wet period; Dry period