

Study on Water Level Management Criteria of Reservoir Failure Alert System

Authors : B. Lee, B. H. Choi

Abstract : The loss of safety for reservoirs brought about by climate change and facility aging leads to reservoir failures, which results in the loss of lives and property damage in downstream areas. Therefore, it is necessary to provide a reservoir failure alert system for downstream residents to detect the early signs of failure (with sensors) in real-time and perform safety management to prevent and minimize possible damage. 10 case studies were carried out to verify the water level management criteria of four levels (attention, caution, alert, serious). Peak changes in water level data were analysed. The results showed that 'Caution' and 'Alert' were closed to 33% and 66% of difference in level between flood water level and full water level. Therefore, it is adequate to use initial water level management criteria of reservoir failure alert system for the first year.

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