



A Study on Estimation on Flood Warning Trigger Rainfall in medium and small Stream Affected by Urban Effects

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As extreme floods occur frequently in recent years due to global climate changes, an in sudden local flooding of great volume and short duration is becoming the significant danger and loss of life and property in the Korean Peninsula as well as most parts of the world. The desire for living without hazardous damages grows these days, the city strategy to make the safer community has become an issue.

Previously most of flood prevention efforts have been made for relatively large watersheds near to channel flow. However, as economical development and the expansion of city near medium and small stream, human casualty and property by flood occurs frequently. Therefore, to reduce the damage of human lives and property by flood, we develop an assessment method for flood warning trigger rainfall considering urban effect.

Considering complex land use, HEC-HMS is used for rural area and SWMM is adopted for sewer networks runoff. And relationship between runoff and stream water level, HEC-RAS is accompanied with runoff results. Proposed flood warning trigger rainfall assessment method shows good agreement with gauged data and could be used for another case to mitigate damage.

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