

# 강우사상과 침수 실측자료를 이용한 도시침수 양상 관계분석

## Analysis of the urban flood pattern using rainfall data and measurement flood data

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### Abstract

Urban flooding occurs in the form of internal-water inundation on roads and lowlands due to heavy rainfall. Unlike in the case of rivers, inundation in urban areas there is lacking in research on predicting and warning through measurement data. In order to analyze urban flood patterns and prevent damage, it is necessary to analyze flooding measurement data for various rainfalls.

In this study, the pattern of urban flooding caused by rainfall was analyzed by utilizing the urban flooding measuring sensor, which is being test-run in the flood prone zone for urban flooding management. For analysis, 2019 rainfall data, surface water depth data, and water level data of a street inlet (storm water pipeline) were used. The analysis showed that the amount of rainfall that causes flooding in the target area was identified, and the timing of inundation varies depending on the rainfall pattern.

The results of the analysis can be used as verification data for the urban inundation limit rainfall under development. In addition, by using rainfall intensity and rainfall patterns that affect the flooding, it can be used as data for establishing rainfall criteria of urban flooding and predicting that may occur in the future.

*Key words:* Urban flood, Measurement data, Flood measuring sensor, Limit rainfall

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