Analysis of Flood Resilience of the Stormwater Management Using SWMM Model

SWMM 모델을 이용한 우수 관리 홍수 탄력성 분석

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Abstract

Stormwater reduction plays an important role in the safety and resilience to flooding in urban areas. Due to rapid climate change, the world is experiencing abnormal climate phenomena, and sudden floods and concentrated torrential rains are frequently occurring in urban basins and the amount of outflow due to stormwater increases. In addition, the damage caused by urban flooding and inundation due to extreme rainfall exceeding the events that occurred in the past increases. To solve this problem, water supply, drainage, and water supply for sustainable urban development, the water management paradigm is shifting from sewage maintenance to water circulation and water-sensitive cities. So, in this study, The purpose of this study is to examine measures to increase the resilience of urban ecosystem systems for urban excellence reduction by analyzing the effects of green infra structures and LID techniques and evaluating changes in resilience. In this study, for simulating and analysis of runoff for various stormwater patterns and LID applications, Storm Water Management Model (SWMM) was used.

Keywords : Flood Resilience, Flood Resilience Index, Stormwater, Low Impact Development (LID), Storm Water Management Model (SWMM)

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