The Study on the Development of Flood Forecasting and Warning System in On-cheon Stream

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Abstract. As prevention of disasters concerning flooding in coastal urban area, this study has developed the flood forecasting and warning system aimed at the On-cheon stream in Busan. For development of flood forecasting and warning system, the basis was a selection of various geological data based on the numerical map and computation of hydrologic GIS data. Thiessen polygon method was used to analyze rainfall on this site. And regression equation of 6th degree and Huff's Type Ⅱ was used for investigating time-distribution of rainfall. To evaluate the deployment of flood forecasting and warning system, risk depth was selected on Sebyeong Brigde site. Flood depth and threshold runoff considering the effect of tidal water level was estimated for hydraulic analysis using HEC-RAS and urban flash flood rainfall were evaluated using PCSWMM 2002. Consequently, this study decided the standard of flood forecasting and warning system using ArcView GIS, HEC-RAS and SWMM on the study area. In the future, flood forecasting and warning system should be considered and developed to various basin cases to reduce natural flood disasters in coastal urban area.

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