UNIVERSITI TEKNOLOGI MARA

THE IMPACT OF URBANIZATION ON FLOOD IN KLANG VALLEY

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Thesis submitted in fulfillment
of the requirements for the degree of
Bachelor of Surveying Science and Geomatics

Faculty of Architecture, Planning and Surveying

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AUTHOR'S DECLARATION

I declare that the work in this dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

Changes in land use associated with urban development affect flooding in many ways. Removing vegetation and soil, grading the land surface, and constructing drainage networks increase runoff to streams from rainfall and snowmelt. Flash foods are common phenomena in the capital city of Malaysia. Every year, the city experiences several flash floods and Klang Valley is one of the worst-hit flash flood district affected by the flood. This research aimed at determine the impact of urbanization and land changes on flood in Klang Valley which focused at the Mass Rapid Transit (MRT) area, three MRT station that were chosen is MRT Batu Sebelas Cheras (SBK 30), MRT Bukit Dukung (SBK 31), MRT Sungai Jernih (SBK 33). The data set that was used in this study is Landsat 5 (TM) and Landsat 8 (OLI) satellite image, this image is used in land classification for year 2010, 2014 and 2018 as this study starts at the pre development of MRT, during development of MRT and post development of MRT. Rainfall data is also used in order to calculate the surface runoff, rational method was used in calculating the runoff by using other parameter such as runoff coefficient and catchment area. The Land changes analysis and Rainfall-runoff analysis were done in this research study.

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