CERTIFICATION OF APPROVAL

RAINFALL-RUNOFF SIMULATIONS FOR SUNGAI KURAU, PERAK

By

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This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the references and acknowledgements, and that the original work contained herein have not been undertaken or done by unspecified sources or persons.

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ABSTRACT

Flood risks can be reduced by either reducing the probability or the causes of a flooding. These causes can be quantified with rainfall-runoff models. The calibration process was carried out by using the available data in Kerian district. This project was conducted in order to develop Hydrologic Model for Sungai Kurau and analyze the precipitation-runoff processes from year 2005 to 2010. The impact of northeast monsoon was causes the Bukit Merah Dam release the excess water when reaches dangerous level, therefore it was released to Sungai Kurau and low-lying areas. To achieve the project objectives, the hydrological modeling is a common practice tool to estimate the basin's hydrological response due to precipitation. In this project, Hydrologic Engineering Centre-Hydrologic Modelling System (HEC-HMS) is used to simulate rainfall-runoff process at Sungai Kurau, Kerian for year 2005 to 2010 whereby the HEC-HMS are suitable model to predict the hydrologic changes in Sungai Kurau.

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ABBREVIATIONS AND NOMENCLATURES

No	Abbreviation	Abbreviated Term
1	HEC-HMS	Hydrologic Engineering Center's Hydrologic modeling system.
2	DID	Drainage and Irrigation Department
3	CN	Curve Number
4	HSG	Hydrologic Soil Group

5	ARC	Antecedent runoff condition
6	GIS	Geographic information system