

Surachai Kasianthadanon, 2010: The Mitigation of Flash Flood in Hatyai Municipality Area.
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Hatyai Municipality area, Hatyai District, Songkhla Province is located in low land at the end of U-tapao canal. There are many canals converge in this area and very easy to have flood for example in 1988 and 2000. Causes of flooding in Hatyai Municipality area can be divided into 3 characters such as local flooding, flooding from heavy rained in sub-basins and flooding from overflow water of U-tapao canal. The Royal Irrigation Department and Hatyai Municipality had solved problems of flooding in U-tapao river basin and municipal area by building the diversion canal and polder systems on the left and the right side of U-tapao canal. But still lacked the study to analyze the guidelines to solve the flash flood problem from Klong Riean and Klong Pel sub-basins flowed into the right side of U-tapao canal.

This research studied on guidelines to solve the flash flood problem from Klong Riean and Klong Pel sub basins by using InfoWorks CS mathematic model and used raining events occurred in 2000 from Kaset Korhong Meteorological Station as sample and the present land using. Results of model comparing found that , if determined direct runoff coefficient (C) of area between 0.15 to 0.70, determined n of pipe and drainage canal at 0.016 and determined n of canal between 0.016 to 0.025 would appeared the flooding areas followed the flooding data recorded by local agency. Study results on the guidelines to solve the flash flood problem from Klong Riean and Klong Pel sub-basins when 5 years return period of rainfall for land using in future could be summarized that improvement and construction of drain pipes in community area to drain water to Klong Tey canal including construction of diversion canal from Klong Riean to Klong Wa canal and diversion pipes from Kanjanawanich to water way besides railway to Songkhla or co-operate to Kamling construction in area of either Klong Riean or Klong Pel sub-basins can solve problem of flash flood in Hatyai Municipality area and neighborhood area located on east side of the rail way to Padang Besar.

Student's signature

Thesis Advisor's signature