IWRM2018-153
8th International Water Resources Management Conference of ICWRS


# The application of Mike Urban model in drainage and waterlogging in Lincheng county

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Recently, the water disaster in Chinese cities especially in Chinese mountainous cities is more serious, due to the coupling influences of waterlogging and regional floods. It is necessary to study the surface runoff process of mountainous cities and examine the regional drainage pipe network. In this study, the processes of Lincheng county (locates in Hebei province, China) in different scenarios were simulated through Mike Urban model. The results show that in the original city and the new urban area with larger slope, all of the runoff process is significant and full flow exists in the part of the drainage pipe network; and the overflow exists in part of the drainage pipe network when the return period is ten years or twenty years, which illuminate that the waterlogging risk in this zone of Lincheng is higher. Therefore, the alternation construction of drainage pipe network in the original city and the related countermeasures to the waterlogging in new urban areas were suggested. This research provides both technical support and decision-making reference to local storm flood management, also give the experiences for the study on the runoff process of similar cities.
Keywords: Urban waterlogging MikeUrban Surface runoff Drainage network