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Variation of Water Depth and Velocity at a Channel Junction by Installing Sewerage Outlet

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The rainfall in a city flows into interception channel and it discharges through sewerage outlet to channel. But these kinds of sewerage outlet are designed and installed by designers or constructers without any rules or guidelines, The rainfall which is flowed from indiscreetly installed sewerage outlet is influenced on the flow characteristics like water depth and velocity then, it is caused to flood. So, it was necessary to check the variations of water depth and velocity by experiment. In this paper, it was analyzed water depth and velocity through variation of discharge, installed location and length of projecting part of sewerage outlet by experiment with channel which is having 120 degree channel junction. And the sewerage outlet was installed at upstream, downstream, or upstream and downstream dispersed from channel junction. At the result of experiment by the variation of installed location, the case which sewerage outlet is installed at upstream or downstream from channel junction are more affected at water depth and velocity than the case which is discharged by dispersed to upsteam and downstream. So, it is recommended dispersed installation when the sewerage outlet is installed at a junction. As increasing the length of projecting part of sewerage outlet, the velocity at near the outlet is rapidly increasing and also the velocity of main flow zone is increasing. Therefore, when it is designed a sewerage outlet, it should be carefully considered the location and the length of projecting part, and also it is required to make a guideline of installing sewerage outlet for being prevented flood at a city.