

## Estimation of the Effectiveness of Tasik Kemajuan and Tasik Inovasi as Flood Detention Pond at UTHM Campus

**Authors :** Noor Aliza Binti Ahmad, Azra Munirah Mat Daud, Sabariah Musa, Mohamad Azhar MK

**Abstract :** Flooding is a common natural disaster in Malaysia triggered by heavy rainfall. Urbanization that increases the construction of paved areas, subsequently raise surface runoff and reduce time of concentration. It increases flood magnitude and so that leads to greater flood problems as what has happened at Universiti Tun Hussein Onn Malaysia (UTHM) area in December 2006 and earlier 2007. Tasik Kemajuan and Tasik Inovasi were constructed as recreation ponds and have also functioned as flood ponds. Unfortunately, the flood problem still occurs persistently. Thus, the effectiveness of Tasik Kemajuan and Tasik Inovasi in reducing the flood problems need to be investigated and the causes of flood events at UTHM Campus need to be evaluated. The results from this study show that the conditions of Tasik Kemajuan and Tasik Inovasi are effective in reducing the flood water levels. It also can be concluded that increasing water level in both lakes in UTHM Campus are significantly influenced by presence of the grass and rubbish. During dry condition, the flow rates with three different days are 59.38m<sup>3</sup>/s, 60.71m<sup>3</sup>/s and 59.08m<sup>3</sup>/s and while for wet condition in two different days are 89.59 m<sup>3</sup>/s and 86.61m<sup>3</sup>/s. In conclusion, this system should be improved to prevent future flooding either widened or reduced drainage floor, and also perform maintenance on the plants that live around the lake.

**Keywords :** drainage system, flood detention, lakes, storm water

**Conference Title :** ICCGE 2015 : International Conference on Civil and Geological Engineering

**Conference Location :** Istanbul, Türkiye

**Conference Dates :** August 17-18, 2015