

## Retentions basins as an environmentally flood control effort in deli river north sumatera / Rumilla Harahap

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### Abstrak

#### **ABSTRAK**

The retention basin is a tub or pond that can accommodate or absorb water while it is contained in it. retention basin is the most effective and efficient system in handling floods that occur in an area. an environmentally flood control effort needs to be done such as retention basin. this study aims to plan the dimensions of retention basins from the central region of the Deli river. planning the volume of retention basins made around Deli river is calculated using maximum daily rainfall data of Deli river area. maximum rainfall data can be obtained from Climatology Meteorology and Geophysics Agency (BMKG) Medan City or Dinas PSDA Medan. The maximum daily rainfall is calculated first then the volume, the retention basin construction can accommodate the excessive water discharge of the Deli River. from the results of 25 years rainfall period data processing with Nakayashu method obtained  $Q_{plan}$  of 229 m<sup>3</sup>/s is used to design drainage channel plan. The obtained the capacity of retention basin at the center of 6462288 m<sup>3</sup>. Then the retention basin dimension planned with area of 2154096 m<sup>2</sup> and depth of 3 m.