

# **KAJIAN ALTERNATIF PENGENDALIAN BANJIR DI TUKAD MATI**

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Telah dipertahankan di depan Dewan Penguji  
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## **ABSTRACT**

Tukad Mati is one of rivers in Bali that flow across two regional administrative boundaries which are Denpasar City and end at Kuta area which is part of Badung regency. The dominant issues in this region is inundation occurs every rainy season are related with drainage problems. Recently, several studies has been established to find solution for the problem and recommend alternatives such as normalization, retention ponds and diversion channel that connects Tukad Teba (tributary of Tukad Mati) with Tukad Badung.

The research simulate alternatives by performing hydrologic and hydraulic methods approach using the application program HEC-RAS 4.0 version. The simulation performed to the current river conditions and flood control alternatives based on the recommendations of previous studies and find the most appropriate alternative in reducing overflow.

The result shows that normalization decrease the water level in Tukad Mati but increase the water level in downstream. Diversion channel to Tukad Badung is only gives water level effect in Tukad Teba and none of that in Tukad Mati. Retention ponds only affect the water level in Tukad Mati. The best result gets from combination of normalization and diversion channel. It decrease the water level in all river sections with an average up to 28.7 percent.

**Keywords:** *normalization, diversion channel, retention pond.*