

## ABSTRAK

Secara administratif, Sungai Bringin berada di Kecamatan Semarang Barat dan melintas di kawasan padat penduduk, jalur lintas pantai utara (Pantura), serta kawasan pertanian dan pertambakan. Sungai Bringin merupakan salah satu sungai yang masuk dalam Sistem Drainase Semarang Barat, yang hampir setiap terjadi hujan dengan curah hujan tinggi mengalami limpasan.

Mitigasi bencana banjir di Sungai Bringin sebagai upaya dalam penurunan risiko bencana banjir didasarkan pada hasil analisis debit aliran kala ulang 50 tahun dengan metode Nakayasu sebesar 429,606 m<sup>3</sup>/detik. Pembuatan kolam retensi dengan tujuan menunda laju aliran sementara dan normalisasi alur sungai menjadi alternatif penanganan di daerah yang sering mengalami limpasan manakala curah hujan terlampau tinggi. Dengan menggunakan program HEC-RAS, perencanaan kolam retensi dilakukan dengan memanfaatkan lahan di hilir Sungai Bringin, sedangkan penampang normalisasi sungai dengan lebar 32 meter dan 30 meter dirancang sepanjang ±3560 meter dari muara sungai.

Dari hasil penelitian, daerah yang paling terdampak berada di Kelurahan Mangkang Wetan, tepatnya di ruas hilir Sungai Bringin. Upaya pengurangan risiko banjir dengan metode struktural dan metode non struktural. Metode struktural dengan membuat kolam retensi belum sepenuhnya efektif untuk mengurangi limpasan dari debit Sungai Bringin. Pengurangan risiko bencana lebih efektif dilakukan dengan normalisasi alur sungai sepanjang ±3560 meter. Metode non struktural adalah dengan membuat kegiatan-kegiatan normatif untuk mencegah dampak dari banjir akibat limpasan sungai.

**Kata Kunci :** *Pengendalian Banjir, Mitigasi Bencana, Sungai Bringin .*

## ***ABSTRACT***

*The Bringin River is one of the rivers included in the West Semarang Drainage System, which almost runoff every rain occurs with high rainfall. Administratively, the Bringin River is located in West Semarang Subdistrict and passes through densely populated areas, north coast crossing (Pantura), agricultural and aquaculture areas.*

*The flood disaster mitigation plan in the Bringin River as an effort to reduce the risk of flooding is based on the results of a 50-year return flow analysis analysis using the Nakayasu method by 429.606 m<sup>3</sup>/second. Making a retention pond with the aim of delaying the temporary flow rate and normalizing the river flow into an alternative handler in areas that often experience runoff when the rainfall is too high. With the use of the HEC-RAS software, design for retention ponds is nudertaken by utilizing land in the lower reaches of the Bringin River, while the normalization section of the river with a width of 32 meters and 30 meters is designed for ± 3560 meters along the river from the estuary.*

*From the results of the study, the most affected areas were in the Mangkang Wetan Village, precisely in the lower reaches of the Bringin River. Efforts to reduce flood risk using structural and non-structural methods. The structural method by designing retention pond has not been fully effective to reduce runoff from the Bringin River discharge. Disaster risk reduction is more effective by normalizing ±3560 meters of river flow. The non-structural method is to make normative activities to prevent the effects of flooding due to river runoff.*

***Keywords :*** *Pengendalian Banjir, Disaster Mitigation, Bringin River*