Analisis debit dan muka air banjir sungai Simpang Aur - Lemau dengan adanya PLTA Musi Kabupaten Bengkulu utara = Analysis of water discharge and flood level of Simpang Aur-Lemau river with the presence of PLTA of Musi in North Bengkulu district

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Abstrak

Beroperasinya Pembangkit Listrik Tenaga Air (PLTA) Musi akan semakin memperkuat pasokan listrik di wilayah Sumatera, khususnya wilayah Sumatera bagian Selatan dan Tengah sekitar 60% pasokan listriknya dipenuhi dari PLTA Musi. PLTA Musi memiliki kapasitas energi sebesar 210 MW (3 x 70 MW). Kegiatan operasi PLTA Musi dari outletnya memberikan dampak penambahan debit air secara menerus, sesuai dengan pengoperasian pintu Re-Regulating Dam (RRD) PLTA Musi sebagai pembuangan akhir ke Sungai Simpang Aur-Lemau sebesar 15.50 m3/detik sehingga menimbulkan persoalan banjir di bagian hilir PLTA Musi, maka diperlukan langkah-langkah untuk mengatasi keterbatasan kapasitas Sungai Simpang Aur-Lemau. Pemodelan Sungai Simpang Aur-Lemau sepanjang 54 km dari arah muara dan analisis simulasi menggunakan software HEC-RAS versi 3.1.3. Skenario reduksi muka air banjir salah satunya dengan menggunakan tanggul sebagai alternatif pengendalian banjir.
<hr>By Operating of Hydroelectric Generator (PLTA) of Musi will more strengthen electric supply in the Sumatera region, particularly in part of south and middle Sumatera. It is about 60% of electric supply obtained from Hydroelectric Generator (PLTA) of Musi. PLTA of Musi has energy capacity as much as 210 MW (3 x 70 MW). Impact of this outlet operation adds water discharge continually, because the operational of Basin Re-Regulating (RRD) of dam of Musi PLTA as a place of final drainage to Simpang Aur-Lemau River as much as 15.50 m3/seconds causing flooding problem in PLTA Musi downstream, as a result of it needs to be implemented kind of solutions to overcome capacity limitation of Simpang Aur-Lemau River. Modeling of Simpang Aur-Lemau River as far as 54 km from outfall direction and simulation analysis using HEC-RAS version 3.1.3 software. One of scenario of flood reduction using dike as an alternative of flood controlling.