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PROTECTION OF THE BRIDGE AND RIVER BED TRAINING ON THE RIVER TRIPUŠNICA IN BOSILEGRAD MUNICIPALITY IN SERBIA

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ABSTRACT

Bridges and their piers in the river bed change the streamflow and cause local erosion. Therefore, it is necessary to design the downstream stabilizing structure that will enable bridge protection, establishing a balance between water and sediment regime.

In this paper example of the bridge on the mountain river Tripušnica stability in Radovnica, Southeastern Serbia is shown. The bridge is endangered due to inappropriate river bed training. Downstream of the bridge cascade system was constructed, but ruined by the strong stream forces due to the lack of structures for energy dissipation. The design for reconstruction of minor and major riverbeds and cascade system is adopted in order to provide the bridge and the river bed stability. By hydraulic modelling, the streamflow and river depths are optimized. Downstream of the bridge new cascade system is designed with soothing pool for energy dissipation and putting the riverstream back in the natural conditions.

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