Abstract:

Dams are structures used to store large amounts of water. Increasing reliability of water availability in downstream of these structures, various activities will be developed and formed at Downstream over the time. Like other structures constructed by human kind, dams are under risk of performance failure. This means, dam break can threats downstream areas potentially; so they are sensitive military during the wars. In this research, evaluation of events and risks of dam break for Rudbar Lorestan Dam would be an effort to reduce the risk by determination the hazards. Suitable tool for water flow hydraulic modeling in rivers is HEC-RAS. The ability of this software to analyze concrete and soil dams has been proved. Rudbar Lorestan Dam is located on the Rudbar River, one of the East contributions of Dez River, about 100 kilometers in the south of Aligudarz. To simulate flood dam break of Rudbar Lorestan dam, RAS-HEC was used in unsteady state, then flood zoning maps were prepared with GIS for various scenarios of dam break. According to the scenarios, water height and water entrance location to the downstream villages were analyzed along the Dez River.

Key words: Dam failure, HEC-RAS, GIS, Rudbar dam, Lorestan

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Impacts of Rudbar Lorestan Dam's failure on downstream using HEC-RAS and GIS

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