**Trends in fish passage in Canada and a case study on redhorse (*Moxostoma sp.*) passage at a vertical slot fishway**

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Abstract

Barriers resulting from anthropogenic activities (e.g., hydropower development, irrigation,

flood control, low flow augmentation) can prevent the upstream migration of fish, reducing the

connectivity of river systems. As a result, great efforts have been devoted to the design and installation of engineered fishways to enable the movement of fishes across barriers. In 2009 we created a national database, CanFishPass, designed to act as a national repository for upstream fishway-related information. We evaluated the information gathered in the CanFishPass database to identify trends concerning fishways and fish passage in Canada. In addition to the evaluation of CanFishPass, a comprehensive examination of fish passage at a vertical slot fishway by three redhorse species is being carried out. Fish are being studied for their time to exhaustion and recovery rate as well as for their attraction and passage efficiency at the fishway. Through this research we hope to both describe the state of fishways in Canada as well as interpret the ability and success of passage for species of interest at a vertical slot fishway.