

Fish pass using baffle effects of water flow without plates

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1. Introduction

In this study, we propose a fish pass that uses the baffle effects of water flow without baffle plates (Water Flow Fish Pass, WFP).

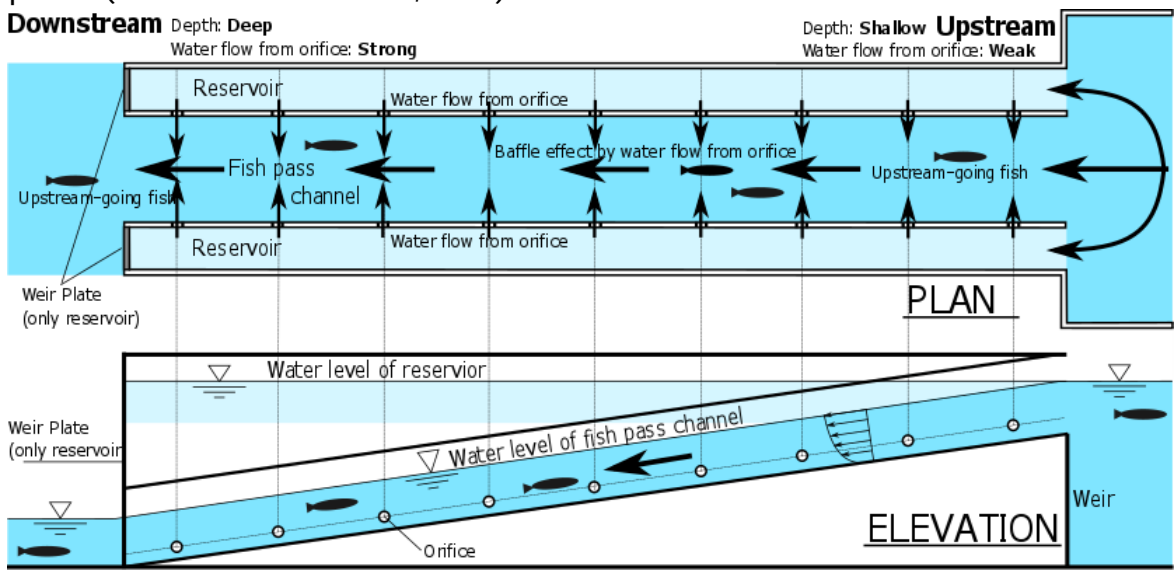


Fig. 1 Schematic diagram of the proposed water flow fish pass.

2. Materials and methods

We constructed a fish pass unit (L: 1.82 m, W: 0.42 m, H: 0.459 m).

Fig. 2 shows a 3D image of the fish pass unit. We measured the flow speed of the fish pass channel using a small propeller-type current meter.

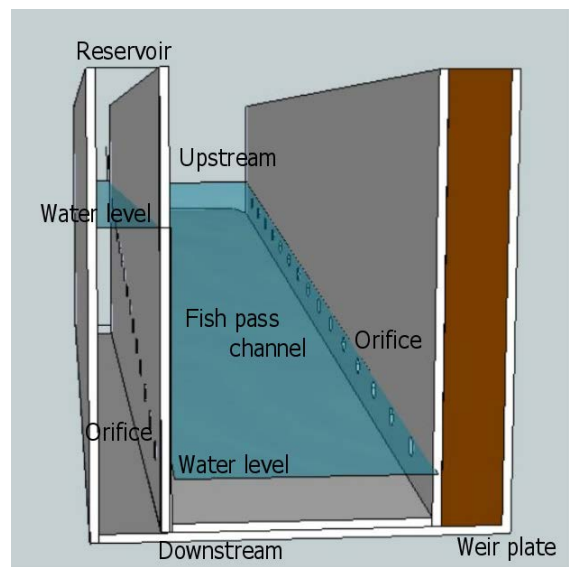


Fig. 2 Three-dimensional drawing of the water flow fish pass unit as viewed from downstream.

3. Results

Fig. 4 shows the cross-sectional water flow velocity. The results confirmed that the central flow velocity was relatively slow.

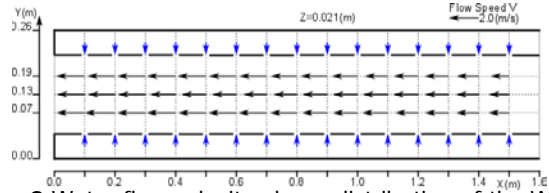


Fig. 3 Water flow velocity planar distribution of the WFP.

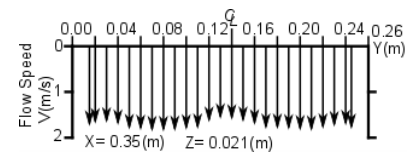


Fig. 4 Water flow velocity cross sectional distribution (X= 0.35 m).

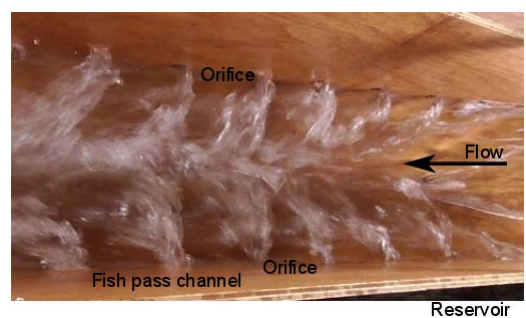


Photo 1 Flow condition of the fish pass channel of the WFP.