Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Laboratory of Hydraulics,
Hydrology and Glaciology

Project Work or Master's Thesis
FS 2024

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Nuova Biaschina HPP
Lavorgo intake rehabilitation

The Lavorgo intake, an integral part of the Nuova Biaschina HPP, consists of a concrete weir surmounted by four flap gates interspaced by pillars. The overall span is approx. 54 m, with a chute height of approx. 5.5 m. On the right bank, there are: hydraulic devices for regulating the weir and the diversion, a trash rack, a desander and a regulation basin.

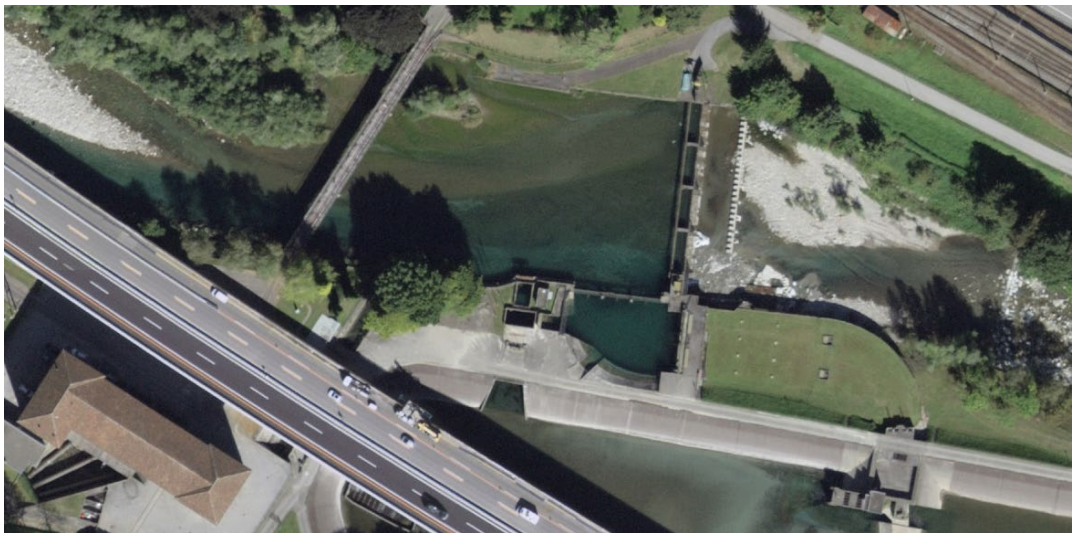

Fig. 1: Lavorgo Intake (Source: © swisstopo)

Recent amendments to the Water Protection Act have introduced new rehabilitation principles resulting in four Cantonal strategic plans:

- re-establishment of free fish migration;
- remediation of discontinuous outflows;
- restoration of the balance of solid bedding material;
- renaturation of watercourses and bodies of water.

Within the framework of this thesis, possible rehabilitation scenarios will be elaborated at a preliminary design level.

The work will be carried out in close cooperation with the engineering consultants firm Lombardi SA under the supervision of AET.

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Remarks: Project-oriented thesis that is supervised externally; 1 student for master's thesis or up to 2 students for project thesis;
Topic can be distributed more than once; Report in German or English, communication in German, English, Italian or French