

Site 8: Magarge Dam

Site Information

Magarge Dam is located approximately 4.5 miles above the confluence of Wissahickon Creek with the Schuylkill River, and on the creek's mainstem.



Problems, Opportunities & Constraints

Magarge Dam forms a barrier restricting resident fish passage and the movement of aquatic organisms and causing the collection of sediment, alteration of aquatic habitat, and the impoundment of water behind the dam. This project site presents an opportunity for improving fish passage, reducing sedimentation, improving aquatic habitat and restoring natural stream channel characteristics and function to the mainstem of Wissahickon Creek. However, site conditions such as a narrow valley and the presence of rock outcrops may act as constraints for these opportunities. In addition, further evaluation of the quantity and quality of the sediment behind the dam would be needed prior to any disturbance.

Major Problems	Opportunities	Constraints
Siltation Impediment to resident fish passage	Restore natural stream channel characteristics and function Improve resident fish passage	Dam is a historical feature The land adjacent to the creek has steep slopes and the creek is confined by the valley wall

Alternatives

Alternative	Overview
1: No action	The dam would remain an impassable barrier to fish movement and continue to trap sediment and poor habitat conditions would persist. The structure will likely exceed its design life within 50 years and require structural repair or replacement
2: Dam removal	Alternative #2 consists of removal of the existing dam and accumulated sediment upstream, thereby improving fish passage and promoting the most significant improvements to aquatic habitat.
3: Partial dam removal & addition of rock ramp	Alternative #3 would lower the crest of the existing dam, and install a rough-channel, pool pass fish ramp to allow fish passage, locally improve aquatic habitat, and maintain some sensitivity to historic/cultural resources.
4: Addition of naturalized passageway	Alternative #4 would expand the existing breach to create a naturalized fish passageway. The installation of the fish passageway would achieve the goal of allowing fish migration over the dam and allow for sensitivity to historic/cultural resources, but would not improve the upstream backwater and poor habitat conditions. Alternative #4 is the simplest of the action alternatives since it modifies an already-existing feature.

