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FishPass Overview

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http://www.glfc.org/fishpass.php
GLFC is a 1955 treaty organization between Canada and the United States (www.glfc.int) charged with **sea lamprey control** and maintaining **healthy sustainable fisheries** in the Great Lakes.

**Sea Lamprey Biology**
- Attach to prey fish and feed on blood and other bodily fluids.
- A single sea lamprey is capable of killing 40 pounds of fish.
- Migrates up rivers and streams to spawn and females can lay ~100,000 eggs.

**Sea Lamprey Control**
- Barriers used to deny access to spawning grounds and lampricide used to kill larvae.
- Efforts have reduced population by over 90% of historic peak.
What is FishPass

An innovative project to enhance fish passage and connectivity between the Boardman (Ottaway) River and Lake Michigan while removing invasive or non-desirable fishes through controlled sorting.
Why Boardman?

- Selected via decision analysis among 12 sites
- Boardman River IT was seeking a solution to fish passage and sea lamprey control at Union Street Dam
- Union Street Dam is in disrepair and requires significant repair/replacement
- Aligns with Boardman River Restoration timeline
What will FishPass Do?

- **Replace** deteriorating Union Street Dam with an improved barrier featuring a fish-sorting channel and a nature-like river channel.

- Optimize various sorting technologies and techniques **below a barrier** to maximize efficiency of passing desirable fishes and removing invasive fishes.

- **Develop** into a living laboratory with a strong education & outreach center.

- **Convert** to permanent selective fishway completing the Boardman River Restoration Project.

FishPass = Barrier with selective capacity.
FishPass Design

Existing Conditions

Proposed Conditions
90% FishPass Design
**Environmental Improvements**

**Water quality**
- Stabilized water levels
- Improved instream habitat

**Revitalized tree canopy**
- Remove overgrown and invasive vegetation
- Net increase of 62 native trees
- Renewed riparian vegetation
- Erosion resistant shorelines

**Improved stormwater management**
- Permeable pavers
- Green roof on Research and Education building
- 1.5 acres drain into three raingardens
Research Plan - Eco-engineering approach

Sorting will occur during each stage: approach, entry, and passage.
Research Plan - Eco-engineering approach

**Approach**

**PHENOLOGY**
Run Timing; Species

**MORPHOLOGY**
Size, Shape

**BEHAVIOUR**
Guidance, Deterrence, Attraction

**PHYSIOLOGY**
Hydraulic Challenges; Leaping ability
Project Oversight

FishPass Advisory Board
Core members (voting) and Science team (non-voting)

Charter:
1) Provide guidance to project leaders to coordinate project activities (Core);
2) Manage facility usage schedule (Core);
3) Formulate and implement both an annual and long-term research program for FishPass in accordance with the Research Plan (Sci. team);
4) Annually review project assessment data and evaluate project efficacy with respect to social, economic, and biotic project metrics (Core & Sci. team).
Contact us

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