

## FishPass Monthly Update



Dear partners and stakeholders:

On behalf of the FishPass team, I am pleased to provide the June 2021 update. Please distribute the update as you see fit.

### *Engineering Design / Construction:*

- While on-site work remains on hold pending results of the ongoing legal process, the prime contractor, Spence Brothers Construction, has continued to prepare and submit contract submittals for review by the U.S. Army Corps of Engineers and AECOM (Designer of Record).

### *Research*

- Dr. Wes Larson and his master's student, Becky Gehri sampled individuals from five native fish species with varying life histories above and below Union Street Dam and used RADseq to investigate processes influencing genetic structure in this system. The genetic structure of yellow perch and walleye coincided with an “above dam” and “below dam” population; however, more complex dynamics were apparent in the genetic structure of rock bass, white suckers, and smallmouth bass. These species separated into Great Lakes and Boardman River populations that appeared to have formed prior to the construction of Union Street Dam. The recently published article is freely available at the journal *Evolutionary Applications*: <https://doi.org/10.1111/eva.13268>
- GLFC staff collected the remaining samples from the upper Boardman watershed in support of the *Energy and Nutrient Dynamics Project* (see May update) and delivered them to the appropriate laboratories for further analysis.

### *Assessment:*

- Staff from the Grand Traverse Band of Chippewa and Ottawa Indians (GTB) and GLFC completed an electrofishing survey in the lower Boardman River (below Union St. Dam) on 15 June 2021. This survey targeted smallmouth bass *Micropterus dolomieu* for acoustic tag implantation. The team was able to successfully tag 15 smallmouth bass as part of this effort. To date the team has tagged 22 of the 40-smallmouth targets for this effort. A summary of acoustic tagging progress including fish tagged last fall is available in Table 1. The goal of this project was to tag 40 common white sucker *Catostomus commersonii*, longnose sucker *Catostomus catostomus*, smallmouth bass, rainbow trout *Oncorhynchus mykiss*, and lake trout *Salvelinus namaycush* to understand their movement and behavioral patterns throughout the year. Tagging will continue into fall to capture the remaining smallmouth bass (n=18) and lake trout (n=13).
- GLFC staff conducted a survey of the “small-bodied” fish community (i.e., minnows) on 9 and 10 June 2021 using both baited minnow traps and backpack electrofishing of the

wadable edges of the river downstream of Union Street dam. A summary of fish captured and their average length is available in Table 2. The predominate species captured during the small-bodied fish survey included non-native round goby *Neogobius melanostomus* and rock bass *Ambloplites rupestris*. The FishPass Advisory Board will evaluate and possibly expand upon this methodology in the fall to provide a more complete understanding of the small-bodied fish community.

- GLFC and GTB staff also sampled the Boardman River Estuary using Fyke nets (Figure 1) on 23 and 24 June 2021 to survey the fish community in this habitat and also increase smallmouth bass captures for tagging. A summary of fish captured and their average length is available in Table 3.

**Table 1.** The number of acoustic transmitters implanted (AT) and the associated average length and weight of the individuals tagged by species.

Species	AT	Ave. Length (in.)	Ave. Weight (lbs.)
common white sucker	41	18.2	2.6
lake sturgeon	1	68.0	NA
lake trout	27	27.2	6.9
longnose sucker	40	17.9	2.4
rainbow trout	40	26.2	7.6
smallmouth bass	22	15.6	2.1

**Table 2.** Average length and number of fish (n) sampled in minnow traps and backpack electrofishing in the lower Boardman River on 9 and 10 June 2021.

Species	n	Ave. Length (in)
coho salmon	3	3.1
common shiner	1	2.9*
green sunfish	2	4.1
rock bass	59	2.8
round goby	129	2.9
smallmouth bass	4	3.4

\* Denotes sample size of 1

**Table 3.** Average length and number of fish (n) sampled with Fyke nets in the Boardman River Estuary on 23 and 24 June 2021.

Species	n	Ave. Length (in.)
alewife	5	6.4
black bullhead	1	6.1*
common white sucker	10	12.8
lake trout	1	26.9*
rock bass	154	4.7
smallmouth bass	19	6.8
yellow perch	3	5.8

\* Denotes sample size of 1



**Figure 1.** A photo of two Fyke nets, indicated by the white arrows, set in the Boardman River Estuary on 23 June 2021.

*Upcoming:*

- GTB and GLFC staff will conduct an additional electrofishing survey in the lower Boardman River in July 2021 to implant additional smallmouth bass with acoustic transmitters in support of ongoing fish movement research.
- GLFC and U.S. Geological Survey staff will retrieve, download data, and re-deploy acoustic receivers in Grand Traverse Bay in July 2021.
- GLFC staff will conduct an additional electrofishing survey in the upper watershed near the Forks Campground in July 2021 as part of the ongoing long-term monitoring of upstream fisheries communities.

*In the News:*

- Traverse City's FishPass project hit with legal setback (UpNorthLive, 27 June 2021): <https://upnorthlive.com/news/local/traverse-citys-fishpass-project-hit-with-legal-setback>
- FishPass motions denied (Record Eagle, 24 June 2021): [https://www.record-eagle.com/news/local\\_news/fishpass-motions-denied/article\\_8d91be0c-d369-11eb-9b1a-2b3552ae3ca9.html](https://www.record-eagle.com/news/local_news/fishpass-motions-denied/article_8d91be0c-d369-11eb-9b1a-2b3552ae3ca9.html)
- Boardman plan draft nearly done (Record Eagle, 02 June 2021): [https://www.record-eagle.com/news/local\\_news/boardman-plan-draft-nearly-done/article\\_af3072c0-c332-11eb-93dc-73140752ebb1.html](https://www.record-eagle.com/news/local_news/boardman-plan-draft-nearly-done/article_af3072c0-c332-11eb-93dc-73140752ebb1.html)



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