FishPass Monthly Update



Dear partners and stakeholders:

On behalf of the FishPass team, I am pleased to provide the May 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 intensively sampled Boardman Lake in 2019 to compare estimates of fish community composition between traditional (i.e., nets) and environmental DNA (eDNA) sampling methods. They found eDNA methods to be more efficient than traditional gear for estimating fish community composition. The recently published article is freely available at the journal *Environmental DNA*: https://doi.org/10.1002/edn3.197
- Energy and Nutrient Dynamics in the Boardman River Watershed: Researchers from Cornell University conducted fieldwork in the Boardman River this May. They are investigating whether fish currently blocked by the Union Street Dam could contribute a beneficial pulse of nutrients to the upper Boardman River if they were allowed to pass. Large aggregations of spawning, migratory fish, such as suckers, excrete waste and gametes (eggs and sperm) that can fertilize stream ecosystems. Preliminary results suggest that Boardman River tributaries vary in which nutrients limit algae growth, which in turn influences the ability of these migratory fish aggregations to fertilize the river. In the coming months, the Cornell team will investigate the chemical composition of migrating fishes currently blocked by the Union Street Dam for comparison with stream insect tissues, water samples, and ecosystem response measures from upper Boardman River tributary streams. These comparisons may allow us to predict whether and how nutrient subsidies from future restored fish migrations might benefit the Boardman River ecosystem. Work will continue this summer in collaboration with researchers from the University of Windsor, Ontario who will characterize the fish community and predator-prey (food web) interactions in the upper Boardman River and how migratory fishes may influence them.

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 12 May 2021. This survey is one of four surveys completed annually which are used as an index of relative abundance at different times of the year. A summary of the survey results is available in Table 1.

Table 1. Fish sampled during an electrofishing survey on 12 May 2021 including the number sampled (n), the number of Passive Integrated Transponders (PIT) tags implanted into fish, the number of acoustic tags (AT) implanted and the average length of each species sampled in the surveys.

Species	n	PIT	AT	Ave. Length (in)
brown trout	3	0	0	13.6
coho salmon	27	0	0	7.2
common white sucker	76	0	0	18.3
lake sturgeon	1	1	1	68.0
lake trout	1	1	3	27.4
longnose sucker	75	31	0	17.1
northern pike	1	0	0	32.2
rainbow trout	25	6	0	23.7
smallmouth bass	2	2	2	16.1
walleye	6	6	0	22.5

Upcoming:

- GTB and GLFC staff will conduct an additional electrofishing survey in the lower Boardman River in June 2021 to implant additional small mouth bass with acoustic transmitters in support of ongoing fish movement research.
- FishPass staff will be providing a live interview, along the banks of the Boardman/Ottaway River, during the virtual 2021 International Fish Passage Conference.

In the News:

- Traverse City FishPass plan sets off fight on how to aid environment (Detroit News, 25 May 2021):
 - https://www.detroitnews.com/story/news/local/michigan/2021/05/25/traverse-city-fishpass-plan-sets-off-fight-how-aid-environment/5185870001/
- Budget, projects on DDA agenda (Record Eagle, 20 May 2021): https://www.record-eagle.com/news/business/budget-projects-on-dda-agenda/article_4034d318-b8c7-11eb-af46-8f7061155d23.html
- Traverse City commissioners vote to appeal FishPass lawsuit (Interlochen Public Radio, 18 May 2021): https://www.interlochenpublicradio.org/2021-05-18/traverse-city-commissioners-vote-to-appeal-fishpass-lawsuit

- Traverse City To Appeal Ruling In Fishpass Decision (9&10 News, 18 May 2021): https://www.9and10news.com/2021/05/18/traverse-city-to-appeal-ruling-in-fishpass-decision/
- Traverse City to Appeal FishPass Ruling (Record Eagle, 18 May 2021): https://www.record-eagle.com/news/local_news/traverse-city-to-appeal-fishpass-ruling/article_fd12e31c-b769-11eb-96c3-6b8502ec03bf.html
- City Commissioners Approve Fireworks Permit, FishPass Appeal, Bridge Contract (The Ticker, 18 May 2021): https://www.traverseticker.com/news/city-commissioners-approve-fireworks-permit-fishpass-appeal-bridge-contract/
- City could decide on FishPass appeal (Record Eagle, 15 May 2021): https://www.record-eagle.com/news/local_news/city-could-decide-on-fishpass-appeal/article_cd353a28-b4da-11eb-9f1b-cb3e9f292a63.html
- City could decide next move on FishPass (Record Eagle, 08 May 2021): https://www.record-eagle.com/news/city-could-decide-next-move-on-fishpass/article 0ee8aca6-af64-11eb-bf91-3b7ea53200e2.html
- Other options explored for Traverse City Fishpass Project (UpNorthLive, 02 May 2021): https://upnorthlive.com/news/local/other-options-explored-for-traverse-city-fishpass-project



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