FishPass Monthly Update



Dear partners and stakeholders:

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

Engineering Design / Construction:

 While on-site work is still 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:

• Drs. Dan Zielinski, Andrew Muir, and Marc Gaden led a special topic in the Journal Aquaculture and Fisheries on global fish passage issues. The special topic contains studies from around the world and their unique solutions to provide fish passage at dams and barriers. All articles are freely available at: https://www.sciencedirect.com/journal/aquaculture-and-fisheries/vol/6/issue/2.

Assessment:

• The Dual Frequencies Identification Sonar (DIDSON) was re-installed on 17 March at the DNR fish weir to further expand a hydroacoustic data set passively documenting fish entry in the river. This system has been operated during 20 March to 1 June from 2017 to present. Telemetry systems monitoring fish movement and surveys of fish movement behavior continue as usual. In depth analysis of fish movement data has been ongoing with a recent emphasis by Assessment Biologist, Reid Swanson to analyze movement patterns and timing of movements in the lower river. An example detection history of a tagged white sucker *Catostomus commersonii* is provided below in Figure 1.

Upcoming:

• Numerous sampling efforts are planned for this spring to account for COVID-19 related delays to the 2020 research schedule. Of particular importance is the implantation of acoustic transmitters in smallmouth bass *Micropterus dolomieu*, longnose sucker *Catostomus* catostomus, and white suckers. A total of 120 transmitter tags will be surgically implanted into these fishes allowing researchers to track movements of fish into and out of the Boardman River, Grand Traverse Bay, and greater Lake Michigan. The project team will also be collecting additional samples for isotope analysis in support of ongoing research projects investigating both contaminate transfer and nutrient subsides from fish spawning migrations.

In the News:

- Last dam standing: Traverse City fish restoration project on the ropes (Great Lakes Now, 23 March 2021): https://www.greatlakesnow.org/2021/03/dam-traverse-city-fish-restoration-project/
- Pets In Parks, Airport Clean-Up Top City Agenda (The Ticker, 15 March 2021): https://www.traverseticker.com/news/pets-in-parks-airport-clean-up-top-city-agenda/
- Opinion: FishPass would mark turning point in healing our river (Record Eagle, 3 March 2021): https://www.record-eagle.com/opinion/opinion-fishpass-would-mark-turning-point-in-healing-our-river/article_ab2e3e12-7875-11eb-94a7-6fff5470bac6.html
- Respecting the River (Northern Express, 27 February 2021): https://www.northernexpress.com/news/opinion/respecting-the-river/

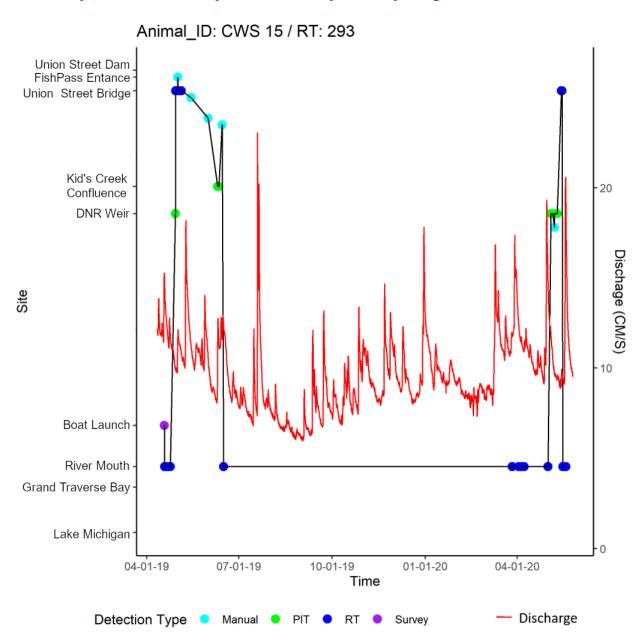


Figure 1. This plot shows one individual white sucker *Catostomus commersonii* that was captured in the river during April 2019 near the boat launch, tagged and released. It spent several weeks in the river, moved out into the bay as detected at the river mouth receiver at the end of June and then spent the remainder of the year out in the bay before returning to the river at the end of April 2020 as water discharge increased during spring. The individual spent a few weeks in the river moving as far upstream as the Union Street Bridge, where it presumably spawned, and then left shortly thereafter when water discharge began to decline. The red line shows the water discharge at Union St. Dam in cubic meters per second. The colored dots represent the source of a true detection: light blue = manually located with radio receiver, green= detected on a passive integrated transponder (PIT) array, dark blue = detected on a radio telemetry array, and magenta = physically detected during a survey. The black lines connecting known fish detections are inferred movement patterns of the individual.



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