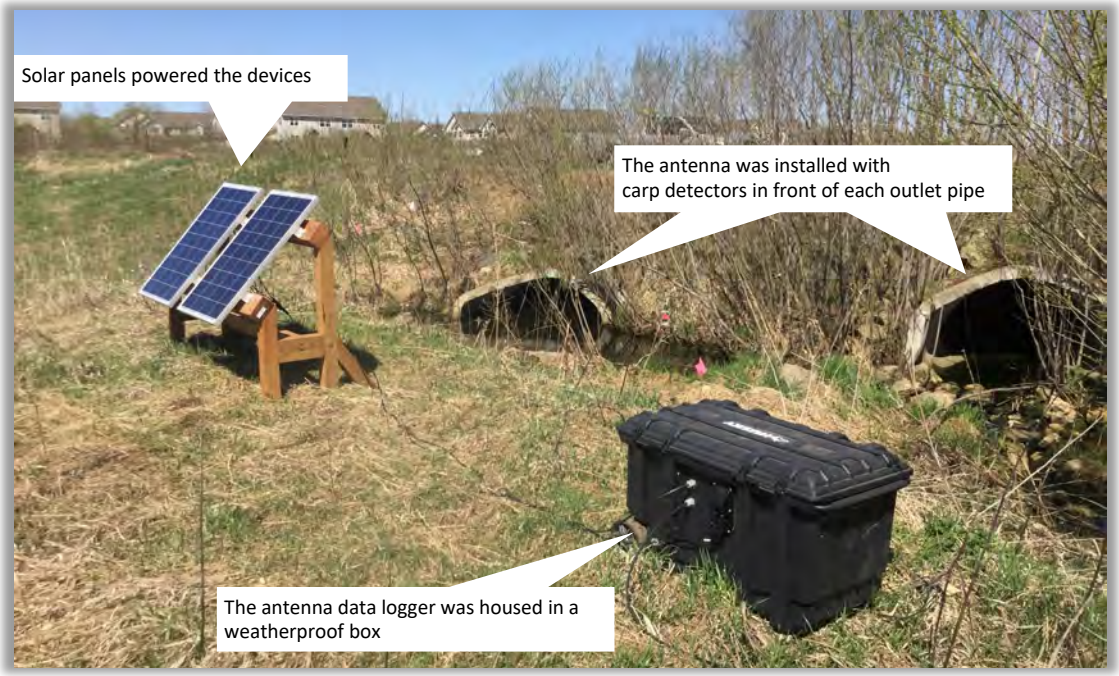
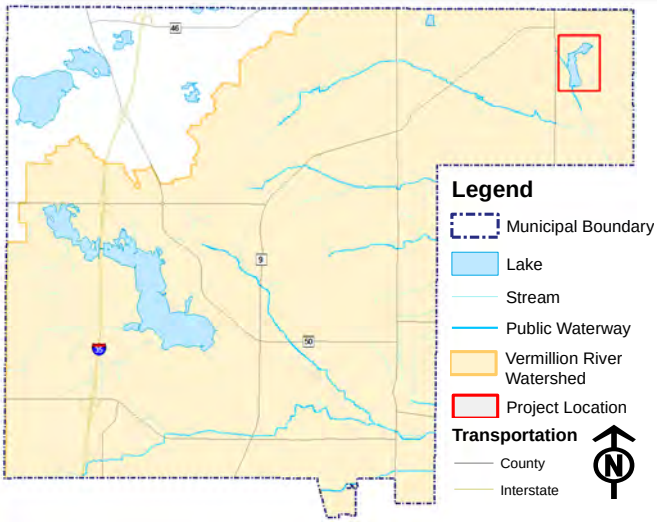
2019 East Lake Carp Assessment

Overview

Common carp, an aquatic invasive species (AIS), are often associated with poor water quality in lakes (when biomass is >100 kg/ha). In 2018, the City and Vermillion River Watershed Joint Powers Organization (VRWJPO) began tracking carp abundance and movement within East Lake. Carp biomass was found to be 155 kg/ha; however, results were inconclusive regarding migration patterns.

In 2019, radio tags were implanted in 114 carp and an antenna (able to detect tagged carp) was installed at the lake outlet. Results found that 54% of tagged carp moved from East Lake into the downstream North Creek (tributary to the Vermillion River), with most movement taking place between mid-May to early June. Due to this finding, the City is reviewing possible management strategies of the AIS population. Potential management strategies may include: selective carp removal, installation of a fish barrier (electric or other), or a combination of both practices.





Funding

Grant Funding: $7,372

VRWJPO: $2,700

City of Lakeville: $4,672

Project Cost: $14,744

Practices

- AIS tracking and population analysis
- Fisheries research

Project Benefits

- Informed fisheries management
- Informed water quality initiatives

Partners

- Vermillion River Watershed Joint Powers Organization
- Dakota County

Contractor

- Carp Solutions, LLC

Timeline

- Electrofishing and PIT implantation—April
- Carp tracking—May—December

Bluegills (and other game fish) keep carp populations low by eating carp eggs and larvae

Goldfish (known to negatively affect water quality) are also found in East Lake

(*Above*) Carp Solutions staff conducted electrofishing in order to implant carp with PIT tags.

(*Above*) The antenna detects those fish implanted with PIT tags, allowing staff to deduce a migration habit.

(*Below*) A total of 2,730 carp were caught during electrofishing. Goldfish were also observed.

(*Left*) A PIT tag is installed in a carp. Each PIT tag contains a unique identification number.

(*Above*) A map of the study area. Carp able to migrate into North Creek are also free to migrate to the downstream Vermillion River.