

MEETING DATE: March 28, 2019

TITLE: Authorization to contract with Carp Solutions for carp tracking services as part of the Long Lake Creek Subwatershed Assessment

RESOLUTION NUMBER: 19-040

PREPARED BY: Eric Fieldseth

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REVIEWED BY: Administrator Counsel Program Mgr. (Name): Brian Beck
 Board Committee Engineer Other

WORKSHOP ACTION:

<input type="checkbox"/> Advance to Board mtg. Consent Agenda.	<input type="checkbox"/> Advance to Board meeting for discussion prior to action.
<input type="checkbox"/> Refer to a future workshop (date):_____	<input type="checkbox"/> Refer to taskforce or committee (date):_____
<input type="checkbox"/> Return to staff for additional work.	<input type="checkbox"/> No further action requested.
<input checked="" type="checkbox"/> Other (specify): Requesting approval at March 28, 2019 Board Meeting	

PURPOSE or ACTION REQUESTED:

Authorization to contract with Carp Solutions for carp tracking services as part of the Long Lake Creek Subwatershed Assessment. Carp Solutions is uniquely qualified for this task as the only company offering rental of PIT antenna systems designed specifically for carp. Contracted services include the following:

- Rental of PIT antenna systems for three locations
- Assembly, install, maintenance and troubleshooting of system
- Data Analysis & Reporting

PROJECT/PROGRAM LOCATION:

Long Lake outlet
Co. Rd. 6 Pond outlet
Deer Hill Pond outlet

PROJECT TIMELINE:

April 2019 – June 2020

PROJECT/PROGRAM COST:

Authorized grant amounts:

- Long Lake Creek Subwatershed Assessment - \$112,000

PAST BOARD ACTION:

March 9, 2017 – Res. 17-019: Authorization to partner with the Cities of Long Lake, Medina and Orono, and the Long Lake Waters Association, to pursue Hennepin County Natural Resource Opportunity Grant funds, and to provide an in-kind contribution to advance a Long Lake Creek Subwatershed Carp Assessment (*Note – Grant funds were not awarded*)

April 26, 2018 – Res. 18-043: Authorization to execute an agreement with the Cities of Long Lake, Medina and Orono, and the Long Lake Waters Association, to partner on a carp assessment in Long Lake. MCWD's participation is contingent upon all the partners contributing and partnering on the project.

July 12, 2018 – Res. 18-066: Resolution of Support for the Long Lake Creek Subwatershed Partnership. MCWD will act as a technical resource, synthesizing water quality data with carp data to more specifically diagnose issues and drivers within the subwatershed, and to regularly convene partners to identify, recommend and prioritize implementation efforts.

August 23, 2018 – Res. 18-084: Authorization to Apply for BWSR CWF Competitive Grant Funding for Long Lake Creek Subwatershed Assessment. MCWD staff to apply for FY 2019 BWSR CWF Competitive Grant Funding for Long Lake Creek Subwatershed Assessment.

February 28, 2019 – Res. 19-xxx: Authorization to execute contract with University of Wisconsin – Stout to measure phosphorus release from sediments in Long, Wolsfeld, Holy Name, and School Lake to inform lake management strategies.

SUMMARY:

Five lakes within the Long Lake Creek Subwatershed are impaired for excess nutrients including Holy Name, School, Wolsfeld, Long, and Tanager. In 2014, the Upper Minnehaha Creek Watershed TMDL identified watershed phosphorus loading, internal phosphorus loading, and common carp as potential drivers for poor water quality and ecological integrity within these lakes. However, there has been little diagnostic work completed in this watershed, which makes it difficult to identify cost effective nutrient reduction projects.

In 2018, a system-wide partnership has formed among the Cities of Medina, Long Lake, and Orono, the Long Lake Waters Association, and the MCWD to pursue water quality improvements in the Long Lake Creek Subwatershed. Work under this partnership was initiated earlier in 2018 by the Cities of Medina and Long Lake, and the Long Lake Waters Association to conduct a small scale carp assessment to begin understanding the impacts carp may be having on Long Lake. Additionally, over the last two years, MCWD has been focusing diagnostic monitoring in the Long Lake Creek Subwatershed to fill data gaps and begin identifying problem areas that may be driving nutrient impairments.

In August 2018, MCWD, in coordination with the Cities of Medina, Long Lake and Orono, and Long Lake Waters Association, applied for an accelerated implementation grant from the Board of Water and Soil Resources (BWSR) in the amount of \$112,000 for the Long Lake Creek Subwatershed Assessment. The application was successful, resulting in the District being awarded the full grant request.

The purpose of the grant is to accelerate the development of a comprehensive implementation plan by building a detailed watershed model, strengthening our understanding of carp, and identifying cost-effective best management practices (BMPs). The implementation plan developed using the BWSR grant funding will provide MCWD and its partners a detailed roadmap to improve ecological and water quality conditions in the Long Lake Creek Subwatershed.

There are three major components to the subwatershed assessment:

1. Watershed and In-Lake Project Outcomes
MCWD will utilize watershed models, in-lake models, and wetland assessments to develop cost-effective projects to reduce watershed and in-lake nutrient loading to impaired lakes.
2. Carp Assessment Project Outcomes
Carp management implementation strategies will be developed by understanding carp abundance, seasonal movements and migration patterns and identifying potential carp nurseries and recruitment patterns across the subwatershed.
3. Comprehensive Watershed Roadmap
The final report will integrate the watershed, in-lake, and carp management strategies into a cohesive roadmap for project implementation.

CARP ASSESSMENT

The carp assessment has three main objectives that will be used to inform identification of management strategies to control carp in the system. The objectives include:

- Determining carp abundance
- Understanding seasonal movement and migration patterns of carp
- Identifying potential carp nurseries and recruitment patterns

MCWD will lead the carp assessment, with MCWD staff being responsible for completing several of the tasks. A consultant selected through an RFP process will complete additional tasks in coordination with MCWD.

One task within the carp assessment used to understand seasonal movements and migration patterns of carp is the use of Passive Integrated Transponder (PIT) tags and PIT antennas to track carp movement through discrete areas within the subwatershed. PIT tags are small radio transponders with a unique ID number that is implanted into a subsample of carp in each waterbody. Any time a tagged carp passes over the PIT antenna, it records the movement into the data logger that can be downloaded throughout the study and analyzed with computer software to assess carp movement through the system. PIT tags are “passive” and do not require a battery, thus can transmit a signal through the lifespan of the fish. They are also very inexpensive, allowing for a greater sample size of carp to be tagged.

Through grant funds, MCWD will purchase the PIT tags and capture the carp to implant the tags. Carp Solutions is currently the only consultant we are aware of that offers rental of PIT antenna systems, making them uniquely qualified to contract directly for this service outside the RFP process. Carp Solutions has provided a quote of \$26,176.40 to assemble, install, maintain and troubleshoot their PIT antenna systems throughout the open water season of 2019 and the spring of 2020. Time is of the essence with this task, as Carp Solutions requires some lead time to order the parts and assemble and test the antenna systems prior to installing them at our designated locations. Our goal is to have these systems installed prior to carp migration, which typically occurs between May and early June.

RESOLUTION

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WHEREAS, Long Lake Creek Subwatershed has several waterbodies that are impaired for excess nutrients, and the Upper Minnehaha Creek TMDL lists watershed phosphorus loading, in-lake sediment phosphorus release, and carp as drivers of poor water quality in Long Lake Creek waterbodies; and

WHEREAS, a regional partnership was formed in 2016 among the Cities of Medina, Long Lake and Orono, and the Long Lake Waters Association, to pursue water quality improvements in the Long Lake Creek Subwatershed; and

WHEREAS, the District's watershed management plan acknowledges this regional partnership, with the partnership leveraging the skills and resources of each entity, by collaborating and identifying shared priorities for the implementation of projects and programs to improve water quality in the Long Lake Creek Subwatershed; and

WHEREAS, carp management was identified as an initial target of the partners, with the Cities of Medina and Long Lake, and Long Lake Waters Association completing a small scale carp assessment that identified carp abundance in Long Lake to be over five times the ecologically damaging threshold; and

WHEREAS, MCWD has committed to serving as a convener and technical resource for the partnership, synthesizing data to identify issues and drivers within the subwatershed to inform implementation; and

WHEREAS, MCWD has applied for and been selected for funding for a BWSR Accelerated Implementation Grant of \$112,000 to identify best management practices and develop a comprehensive implementation plan for the Long Lake Creek Subwatershed; and

WHEREAS, MCWD will be releasing an RFP as a competitive approach to retain a consultant for assistance in completing the subwatershed assessment,

WHEREAS, MCWD governance policies (Executive Limitations, Policy #6) provide that the District Administrator will not purchase a professional service in excess of \$25,000 without using a competitive process, however, one of the tasks for the carp assessment is the use of PIT tags and antennas to track carp movement and is a service currently only offered by one consultant, therefore making this consultant uniquely qualified to be contracted with for this task outside the RFP process; and

NOW, THEREFORE, BE IT RESOLVED that the Minnehaha Creek Watershed District Board of Managers hereby authorizes the District Administrator, on advice of counsel, to execute a contract with Carp Solutions for carp tracking services using PIT antenna systems for a not-to-exceed amount of \$26,177.

Resolution Number 19-040 was moved by Manager _____, seconded by Manager _____.
Motion to adopt the resolution ___ ayes, ___ nays, ___ abstentions. Date: _____.

Date: _____

**DRAFT for discussion purposes only and subject to Board approval and the availability of funds.
Resolutions are not final until approved by the Board and signed by the Board Secretary.**

Secretary



Quote for PIT Services in Long Lake Subwatershed

Aaron Claus
Carp Solutions (CS), LLC
1380 Pike Lake Court
New Brighton, MN 55112
www.carpsolutionsmn.com

Feb 27, 2019

ATTN: Eric Fieldseth (Minnehaha Creek Watershed District)

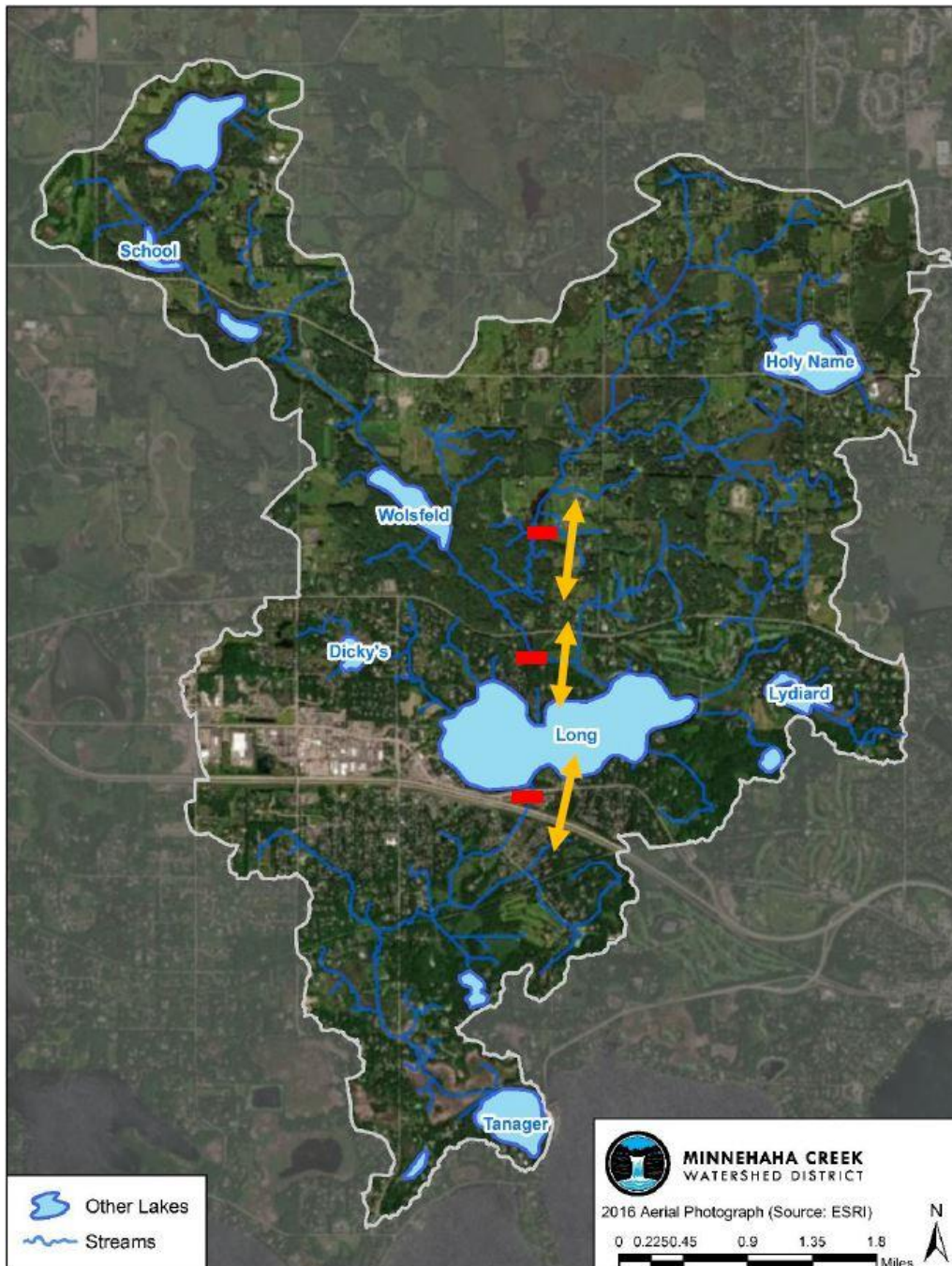
Summary

This document presents a scope of work for services proposed by CS at the direction of MCWD facilitating the collection of movement data on common carp at three locations in the Long Lake subwatershed via passive integrated transponder technology (PIT). Custom built PIT antenna systems will be rented from CS and deployed at three sites; to be operational from April 2019 through June 2020. Additional data analysis service brings the total cost for the scope of work to **\$26,176.40**. This quote does not include costs of PIT tags or capture of common carp and PIT tag implantation. CS suggests that a minimum of 1000 PIT tags be implanted in common carp throughout the sub watershed in order for the rented PIT antenna system to capture movement patterns with high resolution.

In order to complete our scope of work, CS will rely on MCWD to secure access rights/permissions from appropriate governing units for CS to deploy equipment and work at these sites. This includes permissions to secure antennas to existing water control structures if necessary (determined after preliminary site visit).

Site Information

A map showing three sites within the Long Lake subwatershed (provided by MCWD, below) delineates where PIT arrays will be installed for monitoring tagged common carp passage. Study design and site selection was predetermined by MCWD. MCWD has confirmed that each site is <30 feet stream span width and has clear southern solar exposure necessary for implementation of solar powered PIT antenna arrays.



Scope of Work

Under direction of MCWD, CS will provide equipment rental and associated services for implementation of PIT technology (considered intellectual property by CS) within a common carp movement study being conducted by MCWD. At each of three sites a PIT antennas will be setup that will continuously log tagged fish passage, powered by a small photovoltaic (PV) system.

The equipment rental rate for these three PIT systems is \$900/month for the first 12 months, then \$600 per month after the first 12 months. This rate reflects an assumed 20% value depreciation per year on the PIT and PV equipment and covers the potential costs of loss/damage incurred while it is in the field.

The monthly maintenance cost is \$380. At this time manual checks are needed to ensure that these systems are functioning properly in order to guarantee data quality. This task includes debris cleanup from antennas and backup of antenna log data.

Additional costs for an initial pre-install site visit (\$700), building the system off site (\$2,400), and installation/configuration activities on site (\$2100). The SOW also includes the service of using CS' proprietary workflow to analyze tag detection data twice throughout the project's timeline and report results (\$500 each, see scope of work table below).

CS Scope of Work Table

Service	Description	Units needed	Unit cost	Line item total
Pre-Install Site Assessment – March 2019	Visit 3 sites, re-check suitability, take specific site measurements, and learn access routes. (7 hrs)	7	\$100.00	\$700.00
PIT system Off Site Construction for 3 Sites – April 2019	PV system construction (crew of 2, 6 hrs)	6	\$200.00	\$1,200.00
	Preliminary PIT antenna construction (crew of 2, 6 hrs)	6	\$200.00	\$1,200.00
PIT system On Site Installation at 3 Sites – April 2019	PIT antenna installation, tuning, testing (crew of 2, 7 hrs per site)	21	\$200.00	\$4,200.00
April 2019 - June 2020 PIT Equipment Rental	Term equipment rental cost for 3 sites (1 st 12 months @ \$900, \$600 thereafter)	14	\$900.00 /\$600.00	\$12,000.00
April 2019 - June 2020 PIT Maintenance	Monthly maintenance (14 checks, 3 hrs)	42	\$100.00	\$4,200.00
Analysis and Report – June 2020	PIT data analysis and report (Intermediary-Dec 2019, Final-June 2020)	10	\$100.00	\$1,000.00
Miscellaneous costs	Travel time rate	15	\$50.00	\$750.00
	Travel time rate for crew of 2	3	\$100.00	\$300.00
	Mileage	1080	\$0.58	\$626.40
			Total	\$26,176.40