## Minnehaha Creek Watershed District — *REQUEST FOR BOARD ACTION*

**MEETING DATE:** April 26, 2018

**TITLE:** 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.

**RESOLUTION NUMBER:** **18-043**

**PREPARED BY:** Eric Fieldseth, Aquatic Ecologist

**E-MAIL:** efieldseth@minnehahacreek.org **TELEPHONE:** 952-471-7873

**REVIEWED BY:** ☐Administrator ☒ Counsel ☒ Program Manager: Kelly Dooley
☐ Board Committee ☐ Engineer ☒ Other: Becky Christopher

**BOARD ACTION:**

☐ Advance to Board mtg. Consent Agenda. ☐ Advance to Board meeting for discussion prior to action.

☐ Refer to a future workshop (date):_____ ☐ Refer to taskforce or committee (date):_____

☐ Return to staff for additional work. ☐ No further action requested.

☒ Other (specify): Final action at the April 26, 2018 Board Meeting

**PURPOSE or ACTION REQUESTED:**
Authorization to execute an agreement with the Cities of Long Lake, Medina and Orono, and the Long Lake Waters Association to partner and contribute $7,000 for a carp assessment in Long Lake.

**PROJECT/PROGRAM LOCATION:**
Long Lake Creek Subwatershed

**PROJECT TIMELINE:**
Spring 2018 – Spring 2019

**PROJECT/PROGRAM COST:**
Total Project Cost: Not to exceed $37,530

- City of Orono: $10,000
- City of Medina: $10,000
- City of Long Lake: $5,000
- Long Lake Waters Association: $5,530
- Minnehaha Creek Watershed District: $7,000

Fund Name and Number: Research and Monitoring, 5001
Current Fund Balance: $958,318
Requested amount of funding: $7,000

**PAST BOARD ACTIONS**

- 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*
- March 22, 2018 — PPC Committee - Update on the Long Lake Partnership and proposed carp assessment

**SUMMARY:**

**Background**

In 2016, three cities in the Long Lake Creek Subwatershed, Medina, Long Lake and Orono, all passed resolutions agreeing to a larger system-wide partnership. The partners would pursue water quality improvement grant funding in the Long Lake Creek Subwatershed. The partnership among the Cities outlined potential projects to pursue, which include regional infiltration projects, wetland/stream restoration, and carp management. During that same timeframe, a citizen-led group formed called the Long Lake Waters Association (LLWA) that is composed of residents from all three cities and across the subwatershed.

As the Minnehaha Creek Watershed District (District) worked on completing its watershed management plan, the District worked to coordinate with the cities and newly-formed association to ensure all of our short-term plans and long-range goals are in sync.

Carp management has been an initial target of the partners. Carp are listed in the Upper Watershed TMDL for several waterbodies in the Long Lake Creek subwatershed as a driver of poor water quality and ecological integrity, but little is understood about their exact impact relative to other water quality drivers and their contribution towards the degraded system.

In 2017, Hennepin County Natural Resource Opportunity Grant funds were targeted by the group as a potential funding source for a 3-year comprehensive carp assessment, similar to what the District completed in the Six Mile Creek – Halsted Bay Subwatershed. Total project cost was estimated at $205,000. MCWD committed to providing an in-kind contribution that included $10,000 to purchase trap-nets, and District staff hours to perform the trap-net survey portion of the work (Res 17-019). The District's contribution effectively reduced the total project cost to $159,000, with the three cities proposing to cost-share $59,000 over three years and a grant request to Hennepin County for $100,000. The grant request was not successful. Hennepin County staff informed the group that funding requests are typically ranked higher if there is an implementation, rather than assessment, focus.

Most recently, LLWA has been requesting partner support to implement a smaller scale carp assessment that can provide some initial data to both inform future implementation and better position the group for future grant funds. The Cities of Orono, Medina and Long Lake have all offered their support and financial contributions to the project.

This proposal aligns with the District's established top priority for involvement in aquatic invasive species management, by (1) addressing a high impact species in a landscape with numerous regionally significant resources, while being (2) coordinated closely with emerging priorities identified by Planning and Projects, and (3) has support from local community partners.

The Long Lake subwatershed implementation plan, in the District's watershed management plan, identifies carp management as an element to address water quality and ecological issues within the subwatershed. It

references the proposed partnership as a framework within which the District may contribute funding or technical resources.

**Partnership Roles**

The District brings value to this partnership in three ways: (1) through its coordinating role as an agency that spans all three cities, (2) its focused, systems approach to managing water resources, (3) and expertise in carp management, which is becoming an emerging in-lake implementation tool to improve system water quality and ecological conditions.

The District reviewed the initial scope of work LLWA obtained from consultants, and provided value in refining and focusing the scope. The District wanted to ensure the right information will be collected to (1) assess the impact carp may be having on Long Lake, (2) provide initial data on carp movement, and (3) provide insights on carp recruitment frequency (new carp being born into the system). These pieces of information will be critical for the District and its partners in evaluating the role carp are playing in the system versus other potential water quality drivers.

After discussions with various partners, the District drafted a short partnership agreement for this project. Under the agreement, the City of Long Lake will provide $5,000, receive the contributions of the other parties, manage the contract for the work, and be responsible for its competent completion. Orono and Medina will contribute $10,000, MCWD $7,000 and LLWA $5,530. Monthly updates will be provided to all the partners from the consultant.

**Project Summary**

The carp assessment project will determine carp biomass in Long Lake and compare to known thresholds where ecological damage can occur. Additionally, several carp will be implanted with radio tags and tracked through the season to provide information on carp movement patterns. An aging study will also be completed on a subset of carp in Long Lake to determine how frequent carp recruitment may be occurring. Finally, one carp removal attempt will be performed to provide additional data collection to help determine carp biomass, as well as begin reduction in overall carp biomass.

To facilitate carp removal, the commercial fisherman for Long Lake has indicated there are several obstructions in the lake that currently prevent successful seining. Part of this project will be to identify where those obstructions occur, and possibly remove those obstructions based on what they are and where they are located relative to typical carp aggregation areas.

The data obtained from this study will be coupled with other diagnostic monitoring the District's Research and Monitoring (R/M) Program is conducting in the system. R/M's assessment will determine the major drivers of water quality within the subwatershed to help inform potential future projects to improve water quality and ecological conditions. Current diagnostic assessment has been focused on determining major sources of phosphorus loading to Long Lake and other upstream waterbodies, which affect downstream Tanager Lake and Lake Minnetonka. 2018 is the second year of diagnostic assessment.

**Project Deliverables**

- Contractor obtains MN DNR Fisheries Permit to conduct the work defined in the scope
- Contractor will make every effort to identify obstructions for seining, and the City of Long Lake will provide an opportunity to the partners to provide input on, which, if any, obstructions to remove prior to the City of Long Lake making the final determination in accordance with the approved budget for that activity.

- Contractor will provide a technical report upon completion of the project detailing the following: carp biomass and population estimates based on three fall electrofishing surveys and mark-recapture data, maps from each telemetry survey, aging study findings, removal metrics and residual carp biomass estimates after any removals. This is the element of the work in which the District chiefly is interested.

- Good faith effort to make one seine netting attempt by Spring 2019. Good faith effort can be defined as full deployment and retrieval of the seine, in a manner that will capture carp, if they are present.

Attachments:

1. Partnership Agreement
2. Scope of Work

## RESOLUTION

**RESOLUTION NUMBER: 18-043**

**TITLE:** Authorization to execute an agreement with the Cities of Long Lake, Orono and Medina, and the Long Lake Waters Association for a carp assessment in Long Lake.

WHEREAS, the District's mission is to collaborate with public and private partners to protect and improve land and water for current and future generations; and

WHEREAS, Long Lake Creek Subwatershed has several waterbodies that are impaired for excess nutrients, and the Upper Minnehaha Creek Total Maximum Daily Load Study lists carp as providing an unknown level of impact on these waterbodies; and

WHEREAS, the District's watershed management plan, Long Lake Creek Subwatershed, identifies carp as a driver of water quality and reduced ecological integrity; and

WHEREAS, a regional partnership has been established between the Cities of Medina, Long Lake and Orono, and the newly formed citizens group Long Lake Waters Association to pursue water quality improvements in the Long Lake Creek Subwatershed; and

WHEREAS, carp assessment and management has been identified as an initial target of the group, and the partners support a smaller scale carp assessment that could provide some initial data collection to inform future implementation and better position the group for future grant funds; and

WHEREAS, this proposal aligns with the District's established top priority for involvement in aquatic invasive species management, in that it (1) addresses a high impact species in a landscape with numerous regionally significant resources, (2) is coordinated closely with emerging priorities identified by Planning and Projects, and (3) having support from local community partners; and

WHEREAS, the MCWD can serve an effective technical and coordinating role in this partnership as a regional unit of government with expertise in water resources and carp management; and

WHERAS, an agreement for carp assessment work has been drafted, providing for the City of Long Lake to employ a contractor for the work and the partners, including the District, to contribute funding;

**NOW, THEREFORE, BE IT RESOLVED** that the Minnehaha Creek Watershed District Board of Managers hereby authorizes the District Administrator to enter into an agreement with the Cities of Long Lake, Medina and Orono, and the Long Lake Waters Association, on advice of counsel and without substantive change, to contribute up to $7,000 to conduct carp assessment work in Long Lake.

Resolution Number 18-043 was moved by Manager _____, seconded by Manager _____.
Motion to adopt the resolution ___ ayes, ___ nays, ___abstentions. Date: _____.

Secretary_____ Date:_____

**AGREEMENT**

**LONG LAKE OBSTRUCTION REMOVAL and CARP MANAGEMENT**

This Agreement is entered into among the Long Lake Waters Association (LLWA), a 501(c)(3) lake association; the Cities of Long Lake, Medina and Orono, each a Minnesota municipal corporation; and the Minnehaha Creek Watershed District, a political subdivision of the State of Minnesota (MCWD), (collectively the "parties").

The parties share the goal of improving water quality and ecological integrity in the Long Lake Creek subwatershed. The parties have identified the need to understand specific drivers of this system to target implementation, and have identified common carp as a potential driver of poor water quality and degraded ecological integrity. This Agreement is to provide for work to assess how common carp may be affecting Long Lake and to collect initial data to inform decision making and actions to improve water resources in the Long Lake Creek subwatershed.

**Terms**

1. Long Lake may contract with a service provider ("Contractor" herein) to perform the following actions in Long Lake for the purpose of carp management: bed obstruction removal; electrofishing surveys; radio tag implants; telemetry surveys; carp aging study; and carp removal (the "Services"). Contractor will prepare a draft scope of work (to be attached hereto as Attachment A) and Contractor may subcontract with a subcontractor for any portion thereof. The parties will cooperate to finalize the scope. Long Lake will not direct Contractor to proceed until each party's representative has approved the final scope, in writing.

2. Each party will contribute the following to the cost of the Services:

| | |
|---|---|
| Long Lake | $ 5,000 |
| Medina | $10,000 |
| Orono | $10,000 |
| MCWD | $ 7,000 |
| LLWA | $ 5,530 |

Long Lake may not increase the contract price beyond $37,530 without written approval from all parties.

3. Each party shall provide its corresponding contribution set forth in paragraph 2 of this Agreement, in full, to the City of Long Lake within 30 days of full execution of this Agreement. Long Lake shall pay all Contractor invoices for performance of the Services from these contributions. Upon completion of the Services and payment of all related invoices, any excess funds shall be divided proportionally based on each party's contribution and reimbursed among the parties.

If the Services are not completed in accordance with the approved scope, each party has a right to the return of any portion paid. The partners will deem the scope complete when the contractor meets the deliverables laid out in this agreement and attached scope of work, in a competent and reasonable manner. The approved scope and deliverables can be defined as the following:

- Contractor obtains MN DNR Fisheries Permit to conduct the work defined in the scope

- Contractor will make every effort to identify obstructions for seining, and City of Long Lake will provide an opportunity to the partners to provide input on, which, if any, obstructions to remove prior to the City of Long Lake making the final determination in accordance with the approved budget for that activity.

- Contractor will provide a technical report upon completion of the project detailing carp biomass and population estimates based on three fall electrofishing surveys and mark-recapture data, maps from each telemetry survey, aging study findings, removal metrics and residual carp biomass estimates after any removals.

- Good faith effort to make one seine netting attempt by spring 2019. Good faith effort can be defined as full deployment and retrieval of the seine, in a manner that will capture carp if they are present.

4. Only Long Lake, as the contracting party, may manage the contract and direct Contractor. However, the other parties will have such consultation rights as the approved scope specifies.

5. All deliverables and other work product are in the public domain and may not be copyrighted, patented, trademarked or designated as trade secret by any party. Long Lake will provide for the contract to be consistent with this paragraph.

5. Long Lake will include in the contract terms at least equivalent to the following:

a. Until the Services are complete, Contractor will keep in force the following insurance coverages:

- General: $1.5 million or Contractor's actual coverage, whichever greater, each occurrence and aggregate, covering both Contractor's work and completed operations on an occurrence basis and including contractual liability.
- Professional liability: $1.5 million each claim and aggregate. Any deductible will be Contractor's sole responsibility and may not exceed $50,000. Coverage may be on a claims-made basis, in which case Contractor must maintain the policy for, or obtain extended reporting period coverage extending, at least three (3) years from completion of the Services.
- Automobile liability: $1.5 million or Contractor's actual coverage, whichever greater, combined single limit each occurrence coverage for bodily injury and property damage covering all vehicles on an occurrence basis.
- Workers' compensation: in accordance with legal requirements applicable to Contractor.

Contractor will name each party as an additional insured for general liability, for Contractor's work and completed operations as primary coverage on a noncontributory basis.

b. Contractor will perform the Services with due and professional care and will hold each party, its council and board members, and its employees harmless as to, and indemnify them from, any and all actions, costs, damages and liabilities of any nature arising from: (a) Contractor's negligent or otherwise wrongful act or omission, or breach of a specific contractual duty; or (b) a subcontractor's negligent or otherwise wrongful act or omission, or breach of a specific contractual duty owed by Contractor. For any claim by an employee of Contractor or a subcontractor, the indemnification obligation is not limited by a limitation on the amount or type of damages, compensation or benefits payable by or for Contractor or a subcontractor under workers' compensation acts, disability acts or other employee benefit acts.

6. The following are party representatives for the purpose of this Agreement:

LLWA – Cassy Ordway, President
Long Lake – Scott Weske, City Administrator
Orono – Adam Edwards, Director of Public Works/City Engineer
Medina – Dusty Finke, City Planner
MCWD – Eric Fieldseth, Aquatic Ecologist

A party may change its representative by written notice to the others.

7. This Agreement may be executed in counterparts. It is effective on execution by all parties and will remain in effect until the Services are completed in accordance with the approved scope, or until Long Lake advises the parties in writing that the Services will not be completed. This Agreement may not be amended except in a writing duly authorized by all parties.

8. The parties agree to abide by the applicable provisions of the Minnesota Government Data Practices Act, Minnesota Statutes, Chapter 13, and all other applicable state or federal rules, regulations, or orders pertaining to privacy or confidentiality. The parties understand that all data created, collected, received, stored, used, maintained, or disseminated by the parties in performance of those functions that a public entity would perform is subject to the requirements of Chapter 13, and the parties must comply with those requirements as though they are public entities.

**IN WITNESS WHEREOF,** the parties execute this Agreement by their duly authorized representatives, intending it to be legally binding.

178 East 9th Street, Suite 200 | St. Paul, MN 55101 | (651) 286-8450

April 19, 2018

Ms. Cassy Ordway, President
Long Lake Waters Association
PO BOX 195
Long Lake, MN 55356

Re: Proposal to Provide Obstruction Removal and Carp Management Services – Long Lake
Long Lake Creek Subwatershed Partnership

Dear Ms. Ordway:

I am pleased to offer this proposal to provide lake bottom obstruction removal, carp removal, and carp management services to the Long Lake Creek Subwatershed Partnership, which includes the City of Long Lake, City of Medina, City of Orono, Long Lake Waters Association, and the Minnehaha Creek Watershed District.

Carp management is identified in the Long Lake Total Maximum Daily Load (TMDL), and other planning documents, as an implementation activity to improve water quality in Long Lake and the greater subwatershed.

To address the issue of an overabundant carp population in Long Lake and the greater subwatershed, WSB will partner with JR Commercial Fish to:

1) Remove items that may be obstacles when netting Long Lake,
2) Quantify the carp population,
3) Track and identify carp aggregations,
4) Remove a portion of the carp population,
5) Complete ageing of a subsample of the carp population.

This proposal combines two (2) previous proposals dated December 12, 2017 and March 1, 2018 and adds an ageing component as well as one additional fall electrofishing survey.

## SCOPE OF SERVICES

This proposal provides a basic approach that blends data collection with project implementation. Discussion with commercial fishing crews, that would be tasked with carp removal operations, indicate that collecting data on carp abundance and location is critical to successful project implementation.

Prior to beginning any field work, WSB staff will secure a MN DNR fisheries research permit.

Anecdotal information suggests that carp biomass is elevated in Long Lake and the greater watershed. To definitively confirm this, we propose to complete both an electrofishing catch per unit effort (CPUE), and a mark-recapture population estimate. These activities can be completed simultaneously and will provide both project partners and the commercial fishing crews with an estimate of the amount of carp biomass in Long Lake. To develop the mark-recapture estimate, carp captured during the spring and fall electrofishing surveys will be fin clipped and released for recapture.

One (1) electrofishing survey will be completed in the spring of 2018. During this survey, we will measure and weigh a subsample of carp to be used for calculating biomass and length-frequency. Seven (7) carp will be implanted with high frequency radio transmitters. The reaming carp will be marked with a fin clip for developing the mark-recapture population estimate.

Radio tagged carp will be tracked ~1-2 weeks after surgical implant via telemetry surveys to document position within the subwatershed. We anticipate completing four (4) spring/summer telemetry surveys. Radio tag locations will be recorded and added to an internal geodatabase used to produce survey maps for each telemetry survey.

Long Lake has a number of obstructions on the bottom of the lake that currently prevent the lake from being seined. To address this, JR Commercial Fish proposes to remove the obstructions. This will involve pulling a net through the areas where carp are assumed to aggregate. The net will allow commercial fishing crews to locate the obstructions. Once obstructions are located, a diver will attach a line to each of the obstructions and the obstruction will be pulled from the lake. WSB will provide an update to the partnership on where, what type, and how many obstructions were located before being removed. Under this proposal, it is assumed that the City of Long Lake will dispose of the obstructions. We anticipate this work being completed in late spring/early summer 2018.

Starting in late summer/fall 2018, we will complete three (3) electrofishing surveys on Long Lake. These surveys will allow us to create a catch per unit effort (CPUE) model to calculate the number of individual adult carp per acre, carp biomass per acre, and total biomass for Long Lake. Additional carp will be measured for length, weighed, fin clipped, released, and the remaining three (3) radio tags implanted. Three surveys should provide a reliable estimate over a range of environmental conditions and calendar period.

Telemetry surveys will be resumed in late fall/early winter 2018 to identify carp aggregations. This data will be provided to commercial fishing crews to facilitate a removal of a portion of the carp biomass.

After obstructions are removed, the carp population quantified, and carp are surgically implanted, WSB staff will work with JR Commercial Fish to identify when and where carp aggregations occur. This will be accomplished through a series of telemetry surveys.

Under this proposal, JR Commercial Fish will complete one under ice or open water removal attempt using a large seine net.

Additional carp removals may be completed based on the percentage of biomass removed in the first removal. This percentage will be calculated using the population estimate developed as part of this proposal. We will require authorization from the City of Long Lake and the Long Lake Creek Subwatershed Partnership for additional removals.

Carp ageing has been added to provide additional data on carp population metrics and develop an initial understanding of the carp age structure in Long Lake. Budgetary constraints limit the ability to collect a large enough subsample to develop a holistic age structure for the Long Lake carp population, but under this proposal we will collect ageing structures (otoliths) from a subsample of 60 adult carp. This samples will be cross sectioned, mounted, and read. To reduce gear bias and provide a more representative sample, we may collect portions of the subsample during spring electrofishing, fall electrofishing, and netting operations. This ageing data can be paired with length frequency data to determine recruitment intervals and specific age classes associated with peaks identified in length-frequency data.

A final report will be drafted and submitted after carp removals and subsequent data collection have been completed. The report will include data from 2018 telemetry surveys, carp metric data, population/biomass estimates, biomass removal totals, and recommendations.

## DELIVERABLES

- MN DNR Fisheries Research Permit
- Obstruction removal
- Technical Report of Carp biomass and population estimate, removal metrics, and residual biomass
- Map for each telemetry survey date in standardized format
- Seine netting attempt
- Long Lake carp ageing data

## SCHEDULE AND FEES FOR PROFESSIONAL SERVICES

### Schedule for Long Lake Carp Management

| Task | 2018 | | | | | | | 2019 |
|---|---|---|---|---|---|---|---|---|
| | April | May | June | August | September | November | December | January |
| Secure MN DNR Permit | | | | | | | | |
| Obstruction Removal | | | | | | | | |
| Electrofishing Surveys | | | | | | | | |
| Radio Tag implants | | | | | | | | |
| Telemetry Surveys | | | | | | | | |
| Carp Removal | | | | | | | | |
| Report | | | | | | | | |

This timeline assumes that the permit is issued in April 2018, aggregations form in winter 2018/2019, and ice is safe for vehicle traffic by January 2019. Commercial fishermen have reported that an increase in ice spearing activity may limit the ability of seine netting in winter months. This will have to be addressed or monitored to facilitate removal operations. If spearing blocks and markers interfere, removals may need to be delayed until spring 2019.

### Long Lake Carp Management Budget (WSB Fees)

| Task | Total |
|---|---|
| Project Management | **$1,040** |
| Secure MN DNR Fisheries Permit | **$430** |
| Spring Electrofishing Survey (1) | **$2,030** |
| Radio Tag Implants | **Included above** |
| Telemetry Surveys (spring and winter, 40 hours) | **$3,440** |
| Fall Electrofishing Surveys (3) | **$3,498** |
| Data Management/GIS | **$820** |
| Removal Supervision | **$1,720** |
| Reporting | **$903** |
| High Frequency Radio Tags (10 @$200) | **$2,000** |
| Surgical Supplies | **$75** |
| Ageing (structure extraction, prep, and reading; assumes 60 adults) | **$2,075** |
| Total | **$18,031** |

**Long Lake Carp Management Budget (JR Commercial Fish Fees)**

| Task | Total |
|---|---|
| Base Diving Fee | $2,500 |
| Obstruction Removal ($3,000/day) | $12,000 |
| Under Ice Seining Contingency Fee | $5,000 |
| **Total** | **$19,500** |

The under-ice seining contingency fee may not be charged if a commercial amount of carp biomass is captured (35,000 pounds). This project is to be billed monthly and charged on an hourly basis; not to exceed the amount specified in the WSB and JR Commercial Fish fee tables above.

Monthly updates will be provided to the partnership in written form.

If you wish to authorize this work, please sign below and return a copy to WSB. We are prepared to begin work in April 2018. Please contact me with any questions you may have at (612) 246-9346 or thavranek@wsbeng.com or Jeff Riedemann at (763)244-4122 or jnriedemann01@live.com.

Sincerely,

***WSB & Associates, Inc.***

Tony Havranek
Sr. Ecologist

***JR Commercial Fish***

Jeff Riedemann
Owner/Commercial Fisherman

**ACCEPTED BY:**

Entity_____

Signature_____

Printed Name_____

Date: _____