

**MEETING DATE:** April 25, 2019

**TITLE:** Authorization to Execute Contract with Carp Solutions for Carp Removal Services in Six Mile Creek – Halsted Bay Subwatershed

**RESOLUTION NUMBER:** 19-049

**PREPARED BY:** Eric Fieldseth

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

**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): <b>Approval at the April 25<sup>th</sup> Board Meeting</b>	

**PURPOSE or ACTION REQUESTED:**

Authorization to execute a contract with Carp Solutions for carp removal in accordance with the Lessard-Sams Outdoor Heritage Council Grant Accomplishment Plan, including:

- Contract for baited-box net trapping on 3 lakes
- Implanting 6 remaining radio tags in Turbid Lake

**PROJECT/PROGRAM LOCATION:**

Six Mile Creek-Halsted Bay Subwatershed

**PROJECT TIMELINE:**

- Box net trapping will occur in the summer and fall of 2019
- Radio tag implanting will occur spring 2019

**PROJECT/PROGRAM COST:**

Contracts will be fully funded through the Lessard Sams Grant

Fund name and number: 500-5007 SMCHB Carp Management

Budget: \$567,000

Requested amount of funding: \$107,575 (Reimbursable)

Is a budget amendment requested? No

## **PAST BOARD ACTION:**

- 17-036 Authorization to Request Funding from Lessard Sams Outdoor Heritage Council  
18-060 Authorization to Execute Contracts for Carp Removal in Six Mile Creek-Halsted Bay Subwatershed

## **SUMMARY:**

In September of 2017, the Lessard Sams Outdoor Heritage Council recommended the Six Mile Creek-Halsted Bay (SMCHB) Habitat Restoration Project for \$567,000 to the Minnesota State Legislature. The funding bill was approved by the legislature and funds became available July 1, 2018 for project implementation.

The program takes a holistic and comprehensive approach to managing common carp in the SMCHB Subwatershed, consisting primarily of three management strategies:

- Adult biomass removal
- Aeration of shallow lakes to prevent successful carp reproduction
- Barriers to prevent carp movement between waterbodies and assist with removal

Consistent with the accomplishment plan approved by the Lessard Sams Outdoor Heritage Council, the grant funds will be used to pay for the capital cost of barrier installation, utility installation for aeration, and the fish removal contracts. The District match includes equipment for removal and monitoring, the aeration units, and design services for barriers.

Staff are seeking authorization to execute a contract with Carp Solutions for baited box-net trapping in 3 lakes this season at a not-to-exceed amount of \$107,575. Candidate lakes for removal include Auburn, Parley, Mud and Halsted Bay. Lakes will be chosen this spring with MCWD coordinating with Carp Solutions on optimal locations in each lake for the baited box-net traps. Each of the three lakes selected will have 2 to 3 box-net traps set up, and up to 5 rounds of trapping and removal will occur. Carp Solutions would also be implanting 6 remaining radio-tags in Turbid Lake that were not able to be implanted last season.

Box-net trapping is a newer method that involves baiting large nets over multiple days, then, once they determine enough fish are congregating in the area, they are corralled and removed. Carp Solutions has refined this method and has the capacity to offer this large of scale of baited box-net removal, and therefore is uniquely qualified to perform the work.

In order to comply with commercial fishing licensure requirements and on advice of the MN Department of Natural Resources, all carp removal activities – winter seining, open water seining, box net removal, and stream trapping – were offered first to Don Geyer, the area's commercial fisherman. After his response and refusal of the work, staff were able to offer work to other known contractors in the area. MCWD currently holds a permit to remove carp via multiple methods, including box-netting, in the Six Mile Creek – Halsted Bay Subwatershed.

### Update on Carp Removal Efforts from 2018:

Lessard Sams Outdoor Heritage Council funds became available on July 1, 2018. The following are updates on carp removal activities that have occurred since funds became available.

- **2018 Baited Box-Net Trapping:** MCWD contracted with Carp Solutions for baited box-net trapping on Steiger Lake, Auburn Lake and Wassermann Lake. Table 1 summarizes the results from those removal attempts. Total contract awarded to Carp Solutions in 2018 was \$56,036, and also included implanting 80 radio-tags in lakes across SMCHB. Due to cool weather at the end of the season, they were only able to implant 74 of the tags, with the 6 remaining tags to be implanted in 2019. Total expenditures from this contract came in under budget, at \$43,472.

**Table 1. 2018 Baited-Box Net Removal Results**

<b>Lake</b>	<b>Estimated Starting Carp Biomass (lbs)</b>	<b>Biomass Removal Goal</b>	<b>Total Biomass Removed</b>
Steiger	23,030 lbs	8,237 lbs	3,049 lbs (37% of goal)
Auburn	62,746 lbs	37,150 lbs	10,168 lbs (27% of goal)
Wassermann	76,074 lbs	60,995 lbs	Goal was achieved through other methods – see explanation below

- Wassermann Lake has had the longest history of carp removal in the SMCHB, starting with a pilot winter seining attempt in 2017 that was part of the U of M Carp Assessment. 18,580 lbs of carp were removed during that seining event. In 2018, MCWD contracted with a commercial fisherman for another winter seining attempt, which resulted in 9,039 lbs of carp removed. The two seining events have contributed towards 45% of our removal goal. Additionally, MCWD has taken advantage of carp migration patterns in Wassermann by installing a temporary barrier at the outlet of Wassermann Lake each spring since 2016 following spring carp migration. A varying number of carp in Wassermann migrate downstream each spring, and MCWD staff has been able to keep these carp from returning to Wassermann by installing the barrier, thus helping us achieve our removal goals for Wassermann Lake. A permanent barrier is now in place at the outlet of Wassermann. Updated surveys in Wassermann thus far have indicated we have reached our goals for carp removal in the lake, further surveys will be conducted in 2019 to verify.

**Summary of the 2019 removal contract:**

Carp Solutions, LLC

Carp Solutions is a company specializing in carp management run by a professor and carp researcher at the University of Minnesota's AIS research center. Their scope of work includes box netting on up to three lakes in the SMCHB, as well as the installation of 6 radio tags in carp to be used for tracking. Likely candidate lakes for removal include Parley, Auburn, Mud or Halsted Bay. The total cost of these activities will not exceed \$107,575.

**RESOLUTION**

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**RESOLUTION NUMBER:**    19-049

**TITLE:**            **Authorization to Execute Contract with Carp Solutions for Carp Management Services**

WHEREAS, pursuant to Resolution 14-047 the MCWD Board of Managers has identified the Six Mile Creek-Halsted Bay (SMCHB) subwatershed as a priority area for focusing District planning activities and coordination efforts with subwatershed partners; and

WHEREAS, on October 10, 2013, the MCWD Board of Managers authorized the execution of a contract with Dr. Peter Sorenson and the University of Minnesota to conduct a three-year carp assessment of the SMCHB subwatershed to identify recruitment, carp census, and management strategies;

WHEREAS, in September 2017, the Lessard Sams Outdoor Heritage Council recommended the SMCHB Habitat Restoration project for \$567,000 in funding, and the funding was approved by the MN Legislature in May of 2018;

WHEREAS, The District has outlined a carp removal strategy utilizing commercial seining, baited box-net trapping and trapping within stream channels during carp migration;

WHEREAS, The District holds necessary authority and DNR approval to enter into a contract for baited box-net trapping, and that this method of trapping is determined by the District to be appropriate at this time;

WHEREAS, District policy specifies that professional services in excess of \$25,000 will not be secured without competitive procurement;

WHEREAS, Carp Solutions, LLC is the only contractor providing large-scale baited box net trapping services, and therefore is uniquely qualified to perform this work, and accordingly an exception to this policy is warranted.

**NOW, THEREFORE, BE IT RESOLVED** that the Minnehaha Creek Watershed District Board of Managers authorizes the District Administrator, on advice of counsel, to execute a contract with Carp Solutions, LLC to aid in the removal of common carp in the Six Mile Creek-Halsted Bay Subwatershed consistent with the Lessard-Sams Outdoor Heritage Council Grant Accomplishment Plan in an amount not to exceed \$107,575.

Resolution Number 19-049 was moved by Manager \_\_\_\_\_, seconded by Manager \_\_\_\_\_.  
Motion to adopt the resolution \_\_\_ ayes, \_\_\_ nays, \_\_\_ abstentions. Date: \_\_\_\_\_.

\_\_\_\_\_  
Secretary



## Baited box net removals and radiotransmitter surgeries

Jordan Wein, Przemek Bajer  
Carp Solutions (CS), LLC  
[www.carpsolutionsmn.com](http://www.carpsolutionsmn.com)

January 14, 2019

Prepared for Minnehaha Creek Watershed District (MCWD)

This document presents the work that will be conducted by Carp Solutions, LLC. to engage in baited box net removals as a strategy to control common carp (*Cyprinus carpio*) in the Six Mile Creek – Halsted Bay Subwatershed (SMCHB). The work encompasses one year (April 29 – December 31, 2019) and will be a unit price with cost not-to-exceed **\$107,575** unless a written amendment is granted. This proposal includes the following objectives: 1. Employ selective carp removal schemes in up to 3 waterbodies in SMCHB as selected by MCWD and Carp Solutions using baited “box nets”, 2. Implant 6 radiotransmitters into live carp for telemetry purposes and 3. Data analysis and report preparations.

We will present a written evaluation at the conclusion of the 2019 project.

### **Task 1: Employing selective carp removal schemes in SMCHB using baited “box nets”.**

We would use a strategy which exploits the fact that carp can be trained to aggregate in areas baited with cracked corn (Bajer et al. 2010). These fish can then be selectively and effectively removed using a “box net” placed at the baited site. A box net is a square net with mesh bottom and mesh sides lined with weighted line around each side causing it to lay flat on the bottom of the lake. While the net normally lies on the bottom of the lake (i.e. it does not cause non-target fish entanglement), its sides can be quickly lifted above the surface of the water to trap the carp that aggregate at the bait. The net is usually lifted at daybreak when most carp aggregate at the bait (Bajer et al. 2010). This net is approximately 30 x 60 feet and is placed near shore in secluded areas. All nets will be supplied by Carp Solutions.

First, we will assess the current carp population and the lake itself for areas where box nets are best-suited. Once spots are chosen, we will install up to 3 (a minimum of 2) box nets in each

lake that is selected for removal. Likely candidate lakes include Parley Lake, Auburn and either Mud or Halsted Bay. The number of nets may be moved around between lakes with MCWD's approval. MCWD will be responsible for baiting them with corn for multiple days. Carp Solutions will handle operation of box nets and facilitate removal of carp from nets. We will conduct at least 5 rounds of removals with the box nets to maximize their effectiveness. We may conduct more rounds as time and budget allows. MCWD staff will receive training on baiting the box nets between removal events by Carp Solutions staff.

All fish captured while box netting will be counted, measured for length and removed from the lake. We will attempt to remove as many fish as we can, within the budget of the contract. Carp Solutions is responsible for disposal of all carp captured.

Carp Solutions will obtain all permits from DNR for carp capture on selected lakes. MCWD also has a Class B removal permit that includes baited box nets.

### **Budget**

#### **Carp Solutions: Box-Net Removal**

- Site assessment, installation, setting of traps, springing of traps, removal of carp from traps to boat launch, **disposal of carp carcasses**, uninstallation and decontamination of nets, as well as mileage and travel time = \$35,000/lake
- 3 lakes @ \$35,000/lake = \$105,000
- **Itemized budget table attached**

### **MCWD:**

In-kind: MCWD staff would be responsible for baiting sites with corn for 5-10 days under advisement from Carp Solutions (~4-5 h each day)

### **Timeline:**

The earliest the task would begin is June 1, 2019. The latest the task would conclude is October 31, 2019.

***CS would plan to run box netting tasks in each selected lake concurrently. MCWD staff will bait for approximately 7 days before net setting occurs.***

### **Task 2: Radiotransmitter implant surgeries for carp from Turbid Lake**

Carp Solutions is highly experienced (over 300 hundred surgeries) in radiotransmitter implant surgeries with carp. Once MCWD has obtained the needed number of carp from Turbid Lake, Carp Solutions will anesthetize, implant, and release carp that have recovered sufficiently from the implant. Carp Solutions is not responsible for the capture of the carp. Carp Solutions will provide all surgery supplies for this task including sterile sutures, bandages, operation table, clove oil, and recovery tanks. Carp Solutions will ID and release all radio tagged fish. MCWD is responsible for the purchase of all radiotransmitters to be implanted.

## **Budget**

### **Carp Solutions:**

- 6 surgeries at three surgeries per hour plus 1 hour for set up and clean up X \$150/hour plus travel time and mileage = \$655

### **MCWD:**

- Staff will be responsible for the capture of all carp to be operated on.
- All telemetry will be conducted by MCWD

### **Timeline:**

The earliest the task would begin is April 29, 2019. The latest the task would conclude is October 31, 2019.

### **Task 3: Analysis and report:**

Carp Solutions will analyze all data including mean size of carp captured (length, mass, histograms of size structure), total mass removed, total number of carp removed, average catch per net, and percent of population removed. Finally, we will recalculate the latest biomass estimate after removals are complete (using mark and recapture estimates of the population) and how much is left to remove to meet goals (if any). We would use that analysis to suggest next management steps for the lakes and what monitoring should be done to confirm our anticipations of the effect of the removals. We will also provide all information concerning the radiotransmitter implants including frequencies and size of carp that are tagged.

## **Budget**

### **Carp Solutions:**

- Wein and Claus analysis: 8 hours X \$100/hour = \$800
- Bajer final report draft preparations: 4 hours X \$140/hour = \$560
- Bajer revisions of draft into final report: 4 hours X \$140/hour = \$560

### **Timeline:**

The earliest the task would begin is November 1, 2019. The latest the task would conclude is April 30, 2020.

### **Notes:**

- Invoicing from Carp Solutions to MCWD will happen on a monthly basis for work completed. We require that payment to be made within 30 days of delivery of the invoice

Since MCWD works on a board meeting schedule for approval of invoices, we will work within those timelines for our invoices.

**Detailed Budget tables:**

<b>Task 1: Carp Removal with Box-Net/Lake</b>	<b>Units</b>	<b>Rate</b>	<b>Line item total</b>
Step 1 Installation: Crew of 4	12	\$280.00	\$3,360.00
Step 2: Baiting.	0	\$0.00	\$0.00
Step 3: Setting traps. Crew of 4	20	\$280.00	\$5,600.00
Step 4: Tripping at night. Crew of 2	10	\$160.00	\$1,600.00
Step 5: Removing carp from traps. Crew of 4	40	\$280.00	\$11,200.00
Step 6: Disposal. Crew of 4	10	\$280.00	\$2,800.00
Step 7: Uninstallation of traps	8	\$280.00	\$2,240.00
Step 8: Decontamination of traps	12	\$120.00	\$1,440.00
Mileage	2000	\$0.58	\$1,160.00
Travel time	40	\$140.00	\$5,600.00
<b>Total</b>			<b><u>\$35,000.00</u></b>
<b>3 Lakes Total</b>			<b><u>\$105,000.00</u></b>

<b>Budget summary 2019</b>	<b>Line Item total</b>
Task 1: Box netting in 3 lakes	\$105,000
Task 2: Radiotrigger surgeries	\$655
Task 3: Data analysis and report preparation	\$1,920
	<b><u>\$107,575</u></b>

**References.**

Bajer, P. G., H. Lim, M. J. Travaline, B. D. Miller, and P. W. Sorensen. 2010. Cognitive aspects of food searching behavior in free-ranging wild Common Carp. *Environmental Biology of Fishes* **88**:295-300.