MEETING DATE: June 28, 2018									
TITLE: Authorization to Execute Contracts for Carp Removal in Six Mile Creek-Hal Subwatershed					Six Mile Creek-Halsted Bay				
RESOLU	RESOLUTION NUMBER: 18-060								
PREPAR	RED BY:	Anna	Brown						
E-MAIL:	abrown	@minneha	hacreek.org		TELE	EPHONE:	952-641-4522		
REVIEW	/ED BY:		trator Committee				n Mgr. (Name):		
WORKS	HOP AC	TION:							
□Adv	☐ Advance to Board mtg. Consent Agenda. ☐ Advance to Board meeting for discussion prior to action.								
□Refe	☐ Refer to a future workshop (date): ☐ Refer to taskforce or committee (date):								
□Ret	☐ Return to staff for additional work. ☐ No further action requested.								
⊠ Oth	er (specif	y): Approv	al at the Ju	ne 28 th Bo	oard Me	eting			
1									

PURPOSE or ACTION REQUESTED:

Approval of the scope of work for three (3) contracts for fish removal in accordance with the Lessard-Sams Outdoor Heritage Council Grant Accomplishment Plan, including:

- Contract for winter seining with Don Geyer Commercial Fishing
- Contract for winter and open water seining by Jeff Riedemann Commercial Fishing
- Contract for box net trapping and radio tag installation by Carp Solutions, LLC

PROJECT/PROGRAM LOCATION:

Six Mile Creek-Halsted Bay Subwatershed

PROJECT TIMELINE:

- Open water seining and box net trapping will occur in the summer and fall of 2018
- Winter seining will occur in the winter of 2018-2019
- Fish removal activities will occur throughout the Lessard Sams Outdoor Heritage Council Grant period

PROJECT/PROGRAM COST:

No funds are requested as these contracts will be fully funded through the Lessard Sams Grant

PAST BOARD ACTION:

17-036 Authorization to Request Funding from Lessard Sams Outdoor Heritage Council

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 will be 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 three separate contracts relating to fish removal services. Fish removal will be carried out using four methods. Seining, through under-ice removal and open water, is equipment intensive and is currently only carried out by commercial fisherman. 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. Stream trapping will be conducted opportunistically by District staff during carp spawning times using temporary and permanent barriers and aided by the backpack shocker.

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, staff were able to offer work to other known contractors in the area. In addition to these three contracts for 2018-2019, stream trapping will be complete by District staff, facilitated by the installation of barriers.

A summary of the contracts are as follows:

Don Geyer Commercial Fishing

As the commercial fisherman for all lakes in SMCHB except Halsted Bay, Don Geyer was given the right of first refusal for all fish removal in SMCHB. In his response, he indicated interest in winter seining Parley and Wassermann Lakes. The District only requires winter seining on Parley this winter, though in subsequent years may request seining services on both water bodies. The fee for service for Mr. Geyer is \$3,000/ attempt, and the District may request up to 3 attempts, for an amount not to exceed \$9,000.

Jeff Riedemann Commercial Fishing

Mr. Riedemann is the commercial fisherman for Halsted Bay. In addition to performing open water and winter seining on Halsted Bay, Mr. Riedemann will evaluate the feasibility of performing these services on Zumbra, Turbid, West Auburn and East Auburn Lakes. The fee for open water seining is \$3,000 per seine, with up to three attempts per lake, for an amount not to exceed \$45,000. The fee for winter seining is \$6,000 per seine, with up to three attempts per lake, for an amount not to exceed \$90,000.

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 Wassermann Lake and Steiger Lake, as well as the installation of radio tags in carp to be used for tracking. The total cost of these activities will not exceed \$56,636, with line item details available in the attached scope. This first season of box net removals will be used to gauge the effectiveness of this approach and it may be used more widely in subsequent years.

RESOLUTION

RESOLUTION NUMBER: 18-060

TITLE: Authorization to Execute Contracts for Carp Removal in Six Mile Creek-Halsted Bay Subwatershed

- 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 May of 2017, the MCWD Board of Managers authorized staff to apply for funding to the Lessard-Sams Outdoor Heritage Council to restore 2,488 acres of deep and shallow lake habitat through carp management;
- WHEREAS, at the February 22, 2018 MCWD Planning and Policy Committee meeting, staff presented the Lessard-Sams Outdoor Heritage Council approved accomplishment plan, under which the grant funds capital cost of barrier installation, utility installation for aeration, and the fish removal contracts; and the District match includes equipment for removal and monitoring, the aeration units, and design services for barriers;
- WHEREAS, Minnesota Statutes chapter 97C and associated rules provide for the issuance of commercial fishing licenses by the Minnesota Department of Natural Resources (MnDNR), and the conditions under which those other than the exclusive commercial licensee make take fish within the licensee's designated area;
- WHEREAS, the commercial licensee within the Six Mile Creek subwatershed is Don Geyer Commercial Fishing;
- WHEREAS, in consultation with the MnDNR and in conformance with its rules, the District offered its carp removal scopes of work to Don Geyer Commercial Fishing before soliciting assistance from other service providers;

NOW, THEREFORE, BE IT RESOLVED that the Minnehaha Creek Watershed District Board of Managers authorizes the District Administrator, on advice of counsel, to execute contracts 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:

- Not to exceed contract of \$9,000.00 with Don Geyer Commercial Fishing for up to three winter seines
- Not to exceed contract of \$135,000.00 with Jeff Riedemann Commercial Fishing for up to three winter seines and up to three open water seines for each of the following waterbodies across five waterbodies
- Not to exceed contract of \$56,636 with Carp Solutions, LLC for baited box net trapping on two lakes, and for implanting up to 80 radiotags

Resolution Number 18-060 was moved by Manager _	· · · · · · · · · · · · · · · · · · ·
Motion to adopt the resolution ayes, nays,	_abstentions. Date:
	Date:
Secretary	

Exhibit A - Scope of Work and Compensation for WINTER SEINING

Contracted Services Agreement, Minnehaha Creek Watershed District (MCWD) and Don Geyer Commercial Fishing (CONTRACTOR)

Description of Work: Common Carp Winter Seining

Location of work: Parley Lake

Timeline: January 1, 2019 - March 31, 2019

- 1. CONTRACTOR will seine for common carp (*Cyprinus carpio* herein referred to as "carp") in Parley Lake between January 1, 2019 and March 31, 2019, using commercial fishing seines. CONTRACTOR will seek to remove as many carp as possible. MCWD may assist CONTRACTOR by mapping the presence or absence of carp in certain areas using radio-telemetry or other means. CONTRACTOR will use best efforts whether or not such assistance is provided.
- 2. MCWD will authorize each seining attempt. MCWD will determine timing based on radio tag tracking of carp, identified carp aggregations, ice conditions and weather. **MCWD will not pay for work performed without MCWD authorization.**
- 3. On authorization, CONTRACTOR will have up to 10 days to conduct the seine, unless MCWD and CONTRACTOR agree on a longer time period. **This timing requirement is essential.**
- 4. CONTRACTOR will advise MCWD if in CONTRACTOR's judgment, conditions are not suited for seining. CONTRACTOR will select the means, methods and manner to perform the work; the MCWD will have no role in directing it. CONTRACTOR will advise MCWD when the work is to be performed, and MCWD may be present to observe it.
- 5. **CONTRACTOR will identify and release all radio tagged carp.** All other carp are owned by the CONTRACTOR.
- 6. MCWD may direct up to three (3) seining attempts.
- 7. CONTRACTOR is responsible to hold all required licenses and permits for the work and to provide all needed equipment. CONTRACTOR will use public access to Parley Lake.

Compensation

MCWD agrees to pay CONTRACTOR \$3,000 per successful winter seine, with up to three seining attempts as directed by MCWD, for a not-to-exceed amount of \$9,000. A successful winter seine can be described as a full deployment and retrieval of the seine, in a manner that will capture carp if they are present.

Exhibit A - Scope of Work and Compensation for WINTER SEINING

Contracted Services Agreement, Minnehaha Creek Watershed District (MCWD) and Jeff Reidemann Commercial Fishing (CONTRACTOR)

Description of Work: Common Carp Winter Seining

Locations: Halsted Bay, Turbid, Zumbra, East Auburn and West Auburn

Timeline: January 1, 2019 - March 31, 2019

- 1. CONTRACTOR will seine for common carp (*Cyprinus carpio* herein referred to as "carp") in Halsted Bay, Turbid Lake, East Auburn and West Auburn between January 1, 2019 and March 31, 2019, using commercial fishing seines. CONTRACTOR will seek to remove as many carp as possible. MCWD may assist CONTRACTOR by mapping the presence or absence of carp in certain areas using radio-telemetry or other means. CONTRACTOR will use best efforts whether or not such assistance is provided.
- 2. MCWD will authorize each seining attempt. MCWD will determine timing based on radio tag tracking of carp, identified carp aggregations, ice conditions and weather. **MCWD will not pay for work performed without MCWD authorization.**
- 3. On authorization, CONTRACTOR will have up to 14 days to conduct the seine, unless MCWD and CONTRACTOR agree on a longer time period. MCWD and CONTRACTOR will coordinate throughout the project on timing of seine. **This timing requirement is essential.**
- 4. CONTRACTOR will advise MCWD if in CONTRACTOR's judgment, conditions are not suited for seining. CONTRACTOR will select the means, methods and manner to perform the work; the MCWD will have no role in directing it. CONTRACTOR will advise MCWD when the work is to be performed, and MCWD may be present to observe it.
- 5. **CONTRACTOR will identify and release all radio tagged carp.** All other carp are owned by the CONTRACTOR.
- 6. MCWD may direct up to three (3) seining attempts on each lake during a given season.
- 7. CONTRACTOR is responsible to hold all required licenses and permits for the work and to provide all needed equipment. CONTRACTOR will use public accesses for Halsted Bay, Zumbra Lake and West Auburn. MCWD will attempt to arrange private access to Turbid Lake and East Auburn Lake, if East Auburn is not accessible through a small channel from West Auburn. If MCWD cannot arrange private access for Turbid Lake or East Auburn Lake, or CONTRACTOR deems the access not suitable for their equipment, that lake will be excluded from the winter seining scope of work.

Compensation

MCWD agrees to pay CONTRACTOR \$6,000 per successful winter seine, with up to three seining attempts on each lake as directed by MCWD, for a not-to-exceed amount of \$90,000. A successful winter seine can be described as a full deployment and retrieval of the seine, in a manner that will capture carp if they are present.

Exhibit B - Scope of Work and Compensation for OPEN WATER SEINING

Contracted Services Agreement, Minnehaha Creek Watershed District (MCWD) and Jeff Riedemann Commercial Fishing (CONTRACTOR)

Description of Work: Common Carp Open Water Seining

Locations: Halsted Bay, Turbid Lake, Zumbra Lake, East Auburn and West Auburn

Timeline: November 1, 2018 - December 31, 2018

- 1. CONTRACTOR will seine for common carp (*Cyprinus carpio* herein referred to as "carp") in Halsted Bay, Turbid Lake, Zumbra Lake, East Auburn and West Auburn Lake between November 1, 2018 and December 31, 2018, using commercial fishing seines. CONTRACTOR will seek to remove as many carp as possible. MCWD may assist CONTRACTOR by mapping the presence or absence of carp in certain areas using radio-telemetry or other means. CONTRACTOR will use best efforts whether or not such assistance is provided.
- 2. MCWD will authorize each seining attempt. MCWD will determine timing based on radio tag tracking of carp, identified carp aggregations, and weather. **MCWD will not pay for work performed without MCWD authorization.**
- 3. On authorization, CONTRACTOR will have up to 14 days to conduct the seine, unless MCWD and CONTRACTOR agree on a longer time period. MCWD and CONTRACTOR will coordinate throughout the project on timing of seine. **This timing requirement is essential.**
- 4. CONTRACTOR will advise MCWD if in CONTRACTOR's judgment, conditions are not suited for seining. CONTRACTOR will select the means, methods and manner to perform the work; the MCWD will have no role in directing it. CONTRACTOR will advise MCWD when the work is to be performed, and MCWD may be present to observe it.
- 5. **CONTRACTOR will identify and release all radio tagged carp.** All other carp are owned by the CONTRACTOR.
- 6. MCWD may direct up to three (3) seining attempts on each lake during a given season.
- 7. CONTRACTOR is responsible to hold all required licenses and permits for the work and to provide all needed equipment. CONTRACTOR will use public accesses for Halsted Bay, Zumbra Lake and West Auburn Lake. MCWD will attempt to arrange private access to Turbid Lake and East Auburn, if East Auburn is not accessible through a small channel from West Auburn. If MCWD cannot arrange private access for Turbid Lake or East Auburn Lake, or CONTRACTOR deems the access not suitable to launch their watercraft, that lake will be excluded from the open water seining scope of work.

Compensation

MCWD agrees to pay CONTRACTOR \$3,000 per successful open water seine, with up to three seining attempts on each lake as directed by MCWD, for a not-to-exceed amount of \$45,000. A successful open

capture carp if they are present.		

water seine can be described as a full deployment and retrieval of the seine, in a manner that will



Baited box net removals and radiotransmitter surgeries

Jordan Wein, Przemek Bajer Carp Solutions (CS), LLC www.carpsolutionsmn.com

June 20, 2018

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 new strategy to control common carp (*Cyprinus carpio*) in Wasserman Lake, and Steiger Lake, Hennepin County, Minnesota. The work encompasses one year (July 1 – December 31, 2018) and will be performed on a time and materials basis, with cost not-to-exceed \$ 56,036 unless a written amendment is granted. This proposal includes the following objectives: 1. Employ selective carp removal schemes in Wasserman and Steiger Lake using baited "box nets", 2. Implant 75 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 2018 project.

Task 1: Employing selective carp removal schemes in Wasserman Lake and Steiger Lake 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.

We will install up to 10 box nets in Wasserman and up to 5 box nets in Steiger Lake and MCWD will be responsible for baiting them with corn for multiple days. We will handle operation of box nets and facilitate removal of carp from nets. We will conduct at least two rounds of removals with the box nets to maximize their effectiveness. We may conduct up to four rounds as time and budget allows. 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, measure for length and removed from the lake. Our goal for removal would be around 4,500 carp in Wasserman and 1,000 in Steiger. That would approach the goal of less than 100 kg/ha of carp biomass.

<u>Carp Solutions will obtain all permits from DNR for carp capture on Wasserman and Steiger</u> Lakes. We will also obtain permits for implant the radiotransmitters for Task 2.

Budget

Carp Solutions: Wasserman Lake

- Installation, setting of traps, springing of traps, removal of carp from traps to boat launch, disposal of carp carcasses, uninstallation and decontamination of nets, and cost of corn bait, as well as mileage and travel time = \$34,109
- Itemized budget table attached

Carp Solutions: Steiger Lake

- Installation, setting of traps, springing of traps, removal of carp from traps to boat launch, disposal of carp carcasses, uninstallation and decontamination of nets, and cost of corn bait, as well as mileage and travel time = \$14,965
- 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 August 14, 2018. The latest the task would conclude is October 31, 2018.

CS would plan to run box netting Tasks in both Wasserman and Steiger Lakes concurrently. MCWD staff will bait for approximately 7 days before net setting occurs. See sample weekly schedule below. This schedule would repeat between 2-4 times depending on catch rate.

7 days prior	MCWD staff bait area daily (number days approximate)
Monday	Bait heavily in nets 1-5.
	Set nets 1-5 in Wasserman. Bait heavy in 6-10 and
Tuesday	Steiger

	Raise nets 1-5 in Wasserman. Set nets 6-10 in		
Wednesday	Wasserman		
Thursday	Raise nets 6-10 in Wasserman. Set nets 1-5 in Steiger		
Friday	Raise nets 1-5 in Steiger.		

Task 2: Radiotransmitter implant surgeries for carp from East Auburn, West Auburn, Turbid, Parley, Mud, Zumbra, and Halsted's Bay.

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 each 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:

- One day of training on use and tactics of the electrofishing boat plus 75 surgeries at three surgeries per hour X \$150/hour plus travel time and mileage = \$5,802
- Itemized budget table attached

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 July 1, 2018. The latest the task would conclude is October 31, 2018.

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 current biomass estimate after removals are complete (using MCWD estimates of starting 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: 6 hours X \$100/hour = \$600
- Bajer final report preparations: 4 hours X \$140/hour = \$560

Timeline:

The earliest the task would begin is November 1, 2018. The latest the task would conclude is April 30, 2019.

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

Detailed Budget tables for each Task:

Task 1: Wasserman box netting	Units	Rate	Line item total
Step 1 Installation: Will take a crew of 4 people. Can install 3 traps per day at 8 hours/day.	24	\$250.00	\$6,000.00
Step 2: Baiting. Crew of 2 techs. 6 hours/day. 3 days/trapping day (MCWD staff handles this)	0	\$0.00	\$0.00
Step 3: Setting traps. Crew of 4 6 hours/trapping day	12	\$250.00	\$3,000.00
Step 4: Tripping at night. Crew of 2 3 hours/trapping day	6	\$150.00	\$900.00
Step 5: Removing carp from traps. Crew of 4 X 2 crews/trapping day. 8 hours per day	48	\$250.00	\$12,000.00
Step 6: Disposal. Crew of 2, ~7 hours/trapping day	14	\$150.00	\$2,100.00
Step 7: Uninstallation of traps and decontamination. Crew of 4 can U and D 3 traps/day.	24	\$250.00	\$6,000.00
Mileage (80 miles/trip/vehicle. ~20 trips needed)	960	\$0.53	\$508.80
Travel time (1.5 hours/trip/vehicle) ~20 trips needed for installs, trap setting/springing, trap emptying and			
unistalls/decontamination	30	\$100.00	\$3,000.00
Bait costs	80	\$7.50	\$600.00
Total			\$34,108.80

Task 1: Steiger box netting	Units	Rate	Line item total
Step 1 Installation: Will take a crew of 4 people. Can install			
3 traps per day at 8 hours/day.	14	\$250.00	\$3,500.00
Step 2: Baiting. MCWD staff can handle this	0	\$0.00	\$0.00
Step 3: Setting traps. Crew of 4 4 hours/trapping day	8	\$250.00	\$2,000.00
Step 4: Tripping at night. Crew of 2, 1.5 hours/trapping			
day	3	\$150.00	\$450.00

Step 5: Removing carp from traps. Crew of 4, 8 hours per			
day	16	\$250.00	\$4,000.00
Step 6: Disposal. Crew of 2 8 hours/trapping day	8	\$150.00	\$1,200.00
Step 7: Uninstallation of traps and decontamination. Crew			
of 4 can U and D 3 traps/day.	12	\$250.00	\$3,000.00
Mileage (80 miles/trip/vehicle. ~10 trips needed)	800	\$0.55	\$440.00
Bait costs	50	\$7.50	\$375.00
Total			\$14,965.00

Task 2: Wastershed-wide radiotransmitter surgeries	Units	Cost per unit	Line item total
Radiotransmitter implants; surgery supplies included (3 surgeries per hour)	25	\$150.00	\$3,750.00
Training of electrofishing boat use and tactics	8	\$100.00	\$800.00
Travel time (1.5 hours/trip)	12	\$75.00	\$900.00
Mileage (80 miles/trip, 8 trips needed)	640	\$0.55	\$352.00
Total			\$5,802.00

	Units		Line item
Task 3: Data analysis and report preparations	needed	Unit cost	cost
Analysis of box netting results and radiotransmitter surgeries (Wein and Claus)	6	\$100.00	\$600.00
Final report preparations (Bajer)	4	\$140.00	\$560.00
Total			\$1,160.00

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.