MINNEHAHA CREEK
WATERSHED DISTRICT
QUALITY OF WATER, QUALITY OF LIFE

Meeting: Board of Managers
Meeting date: 3/24/2022
Agenda Item #: 11.2
Request for Board Action

Title:	Authorization to Execute Spring Carp Removal Contracts with WSB
Resolution number:	22-016
Prepared by:	Name: Jill Sweet Phone: (952) 930-1976 jsweet@minnehahacreek.org
Reviewed by:	Name/Title: Anna Brown, Planner-Project Manager
Recommended action:	Approve three contracts with WSB for the management and removal of common carp in the Six Mile Creek-Halsted Bay subwatershed.
Schedule:	All removal work under contract will occur between March and June of 2022
Budget considerations:	Fund name and code: SMCHB Carp Management 5-5007 Fund budget: $567,000 Expenditures to date: $503,000 Requested amount of funding: $56,682

Summary:
In September 2017, the Lessard Sams Outdoor Heritage Council awarded the Minnehaha Creek Watershed District (MCWD) $567,000 for the Six Mile Creek-Halsted Bay (SMCHB) Habitat Restoration Project.

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

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 MCWD match includes equipment for removal and monitoring, the aeration units, and design services for barriers.

Since 2018, staff made significant progress implementing each of the carp management strategies. Barrier installation is complete at all four locations, aeration sites have become operational, and removal efforts have carried through the last three years of implementation. Carp removal will be the primary focus for the remainder of grant implementation.

To-date, MCWD has successfully implemented box netting, winter seining, and stream trapping removal methods. In total we have removed approximately 28,330 carp totaling 269,424 pounds from the subwatershed.

District staff consulted with WSB in Q1 of 2022 to develop a removal plan within SMCHB subwatershed utilizing the remaining LSOHC grant dollars intended for carp removals. Approximately $63,000 of grant funding remains for carp removals with plans to target four waterbodies with carp densities still exceeding 100 kg/ha utilizing strategies appropriate for each waterbody. Under this plan, staff is proposing spring removal activities on East & West Auburn, Pierson, and Steiger Lakes.

Steiger Lake Spring Seine
Steiger Lake currently has an estimated carp density of approximately 185 kg/ha and requires the removal of 1,036 carp to meet removal goals. In 2018, MCWD removed 296 carp via baited box net trapping. While carp responded well to baiting on the lake, the removal via box net had limited success due to excessive vegetation and soft substrates. In the fall of 2021, a bait and seine approach was attempted to attract carp to an area of the lake where a net could be landed but no carp were attracted to the bait and the seine did not proceed.

This spring, a modified netting approach will be attempted that utilizes side-scan sonar, seine nets, and electrofishing. Many times in early spring, prior to spawning, carp will remain in small aggregations that can be targeted. These carp aggregations will be identified using side-scan sonar and once located, a net will be deployed encircling the area. WSB and MCWD would then deploy their respective electrofishing boats within the net area to remove carp captured within. This eliminates the need to land the net along a wetland edge with poor substrate. The total cost for this work will has a maximum budget of $21,152 depending on the number of removal attempts, the amount of carp caught, and the subsequent disposal options. As with all our removal contracts, MCWD with have approval authority prior to moving into each task, ensuring that we attempt the removal only if we determine that the observed lake conditions and carp behavior will maximize likelihood of a successful removal.

Auburn-Lundsten Stream Trapping Removal
East and West Auburn Lakes have a net carp density of 230 kg/ha and require the removal of approximately 1,200 individuals to achieve the target density of 100 kg/ha. MCWD has previously attempted removal in these two lakes through both baited box net trapping and stream trapping at the outlet with some success. A winter seine on East Auburn was attempted in January of 2022 but the carp aggregation moved to an unsuitable seining location. An open-water seine attempt may occur immediately following ice out on East Auburn if carp aggregations look favorable. This contract has already been authorized.

If open-water seining does not meet our goals, an improved stream push-trap will be installed in the stream channel at the outlet of West Auburn to catch carp as they migrate into Lundsten Lake to spawn. The cost for the stream trapping removal has a gradient of options for WSB to assist MCWD staff as needed, ranging from simply installing the push-trap, to assisting with removals and carp disposal. Each option is laid out in the scope and has a maximum budget of $18,089.

Pierson-Marsh Stream Trapping Removal
Pierson Lake has a carp density of 170 kg/ha and require the removal of approximately 2,400 individuals to achieve the target density of 100 kg/ha. The Pierson Lake Association has previously completed stream trapping removal at the Pierson outlet with great success and only in the past year has the carp density increased to a level that prompts further carp removal.

This spring, a push-trap will be installed in the stream channel at the outlet of Pierson to catch carp as they migrate into the Marsh Lake to spawn. The cost for the stream trapping removal has a gradient of options for WSB to assist MCWD staff as needed, ranging from simply installing the push-trap, to assisting with removals and carp disposal. Each option is laid out in the scope and has a maximum budget of $17,441.

Supporting documents (list attachments):
- Steiger Lake Removal Scope
- Auburn-Lundsten Removal Scope
- Pierson-Marsh Removal Scope

MINNEHAHA CREEK
WATERSHED DISTRICT
QUALITY OF WATER, QUALITY OF LIFE

RESOLUTION

Resolution number: 22-016
Title: Authorization to Execute Spring Carp Removal Contracts with WSB

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;

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 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, MCWD has established a goal of achieving carp densities of 100 kg/ha system wide, and Pierson, Steiger, and East and West Auburn Lakes remain above that target density;

WHEREAS, WSB & Associates has developed proposals for carp removal on Pierson, Stieger, and Auburn Lakes, that District staff finds responsive to the 2022 program at a not to exceed fee that staff, in its experience, considers competitive;

WHEREAS, WSB & Associates, is the only contractor providing open water seining services and stream push-trap removals, and therefore is uniquely qualified to perform this work.

NOW, THEREFORE, BE IT RESOLVED that on the basis of the specific experience of WSB & Associates and the finding of District staff that the contract fee is competitive, the Minnehaha Creek Watershed District Board of Managers finds it appropriate to authorize a professional services contract with that firm without competitive process;

BE IT FURTHER RESOLVED that the District Administrator is authorized, on advice of counsel, to execute a contract with WSB & Associates, for services to remove common carp in Stieger Lake within the Six Mile Creek-Halsted Bay Subwatershed, consistent with the Lessard-Sams Outdoor Heritage Council Grant Accomplishment Plan, in an amount not to exceed $21,152.00;

BE IT FURTHER RESOLVED that the District Administrator is authorized, on advice of counsel, to execute a contract with WSB & Associates, for services to remove common carp in Auburn Lake in an amount not to exceed $18,089.00;

BE IT FINALLY RESOLVED that the District Administrator is authorized, on advice of counsel, to execute a contract with WSB & Associates, for services to remove common carp in Pierson Lake in an amount not to exceed $17,441.00;

Resolution Number 22- **016** was moved by Manager _____, seconded by Manager _____. Motion to adopt the resolution ___ ayes, ___ nays, ___abstentions. Date: 3/24/2022

_____ Date: _____
Secretary

Scope of Work: Carp Removal for Stieger Lake-Spring/Summer 2022

This statement of work applies to the effort to reduce carp biomass in Steiger Lake to meet Minnehaha Creek Watershed District (MCWD) carp management goals to improve water quality and ecological integrity.

The current carp biomass estimate for Stieger Lake (provided by MCWD) shows the lake supports 6,927 pounds of carp biomass (~1,000 individuals).

Under this statement of work, WSB will work collaboratively the MCWD to identify aggregations of carp in open water using side scan sonar and capture using a combination of seines and electrofishing. This will also include removal and disposal of carp.

A detailed description of tasks, as well as a budget and project schedule are provided below.

Task 1. Project Management

Project management includes reviewing and ensuring scope items are being completed and tracking budget, as well as miscellaneous administrative items that need to be addressed during the course of the project.

Task 2. Permitting

Carp removal will require a separate permit from the current Class B permit that MCWD holds since the techniques proposed under this scope vary from those described in MCWD's permit. WSB will apply for a Class B or C permit (as dictated by MN DNR) to allow for removal of carp in Stieger.

Task 3. Capture and Removal

Previous attempts have been made to remove carp from Stieger using baited box nets and a planned bait and siene. Neither technique has proven effective in removing carp from Steiger.

Large scale seining either under the ice or in open water has not been attempted as a lack of acceptable shoreline landing spots, the potential for under water obstructions, small amount of biomass, and the propensity of carp to not aggregate.

To address the need for carp removal and mitigate the factors listed above, we propose to use a "seek and destroy" approach that utilizes side scan sonar, seine nets, and electrofishing. To implement this, we would begin by identifying smaller carp aggregations along the shoreline using side scan sonar. Many times, in early spring, prior to spawning, carp will remain in small aggregations that can be targeted. MCWD staff will be present during sonar scanning and will decide whether to proceed with seining.

Once an aggregation has been identified, a seine would be deployed to surround the aggregation and keep the carp confined. The seine could then be pulled in towards shore to decrease the size of the area that the net is encircling. The ends of the sine would be anchored to shore and webbing would be pulled in to where any carp within the net area are shallow enough to electrofish. Once this has been accomplished, WSB and MCWD would deploy their respective electrofishing boat within the net area to remove carp captured within. Using electrofishing boats eliminates the need to land the net along a wetland edge would be difficult, does not require the nets to be completely pulled in and therefore reduces the potential of the net being snagged, and allows for multiple deployments within a single day of effort (targets multiple smaller aggregations). The techniques proposed should minimize the capture of non-target species since the net would not be landed or pulled tight and care will be taken with electrofishing so as not to negatively impact native fish.

Task 4. Disposal

Captured carp would then be disposed of by WSB staff either within a predetermined site in the metro area or by freight truck.

Schedule

Task	April	May
Task 1		
Task 2		
Task 3		
Task 4		

This project is time sensitive. The project cannot begin until authorization by the MCWD board; based on this the project is anticipated to begin in April and conclude by May 13, 2022, based on permitting.

Project Budget

Task/Activity	Cost-Option 1	Cost-Option 2
Task 1.	$486	$486
Task 2.	$648	$648
Task 3	$13,424	$13,424
Task 4.	$1,795	$6,594
Project Total	**$16,353**	**$21,152**

WSB fees are calculated on an hour hourly basis. Additional WSB staff time will be billed at an hourly rate according to the attached rate sheet, and only under approval by MCWD.

The budget table above provides a cost estimate for two (2) options. Option 1 and 2 are similar for all tasks except for task 4-Disposal. Under Option 1, task 4 includes a total of 15 hours for three (3) WSB staff to dispose of carp in a location yet to be determined (includes travel) estimated using 1 removal event at 5 hours per event to travel and dispose of carp. Option 2 includes WSB coordinating a refrigerated trailer unit to pick carp up and haul off site. The budget reflects one (1) event for the truck to be available for pick up. The total cost includes time for coordination by WSB staff and freight costs calculated at $4.00/mile (from Saginaw, MI to Victoria, MN to Algoma, WI, and back to Saginaw, MI).

Task 3 assumes three (3) WSB staff for a maximum of three (3) 12-hour days along with a rental fee for the siene net. The proposed budget reflects a maximum, not-to-exceed amount, and does not require MCWD to complete any task in its entirety. Rather, since MCWD staff will be present, the amount of effort on any given day will be dictated by the presumed success based on 1.) the presence of an aggregation of carp that can be targeted, 2.) the ability of the net to be deployed around the aggregation successfully, 3.) the number of carp captured in the initial net deployment being significant (as determined by MCWD), and 4.) the probability of success being repeatable during the same day or subsequent days.

Scope of Work: Carp Removal within Connecting Stream Channel Between West Auburn and Lundsten Lake-Spring/Summer 2022

This statement of work applies to the effort to reduce carp biomass on the Auburn Lakes only to meet Minnehaha Creek Watershed District (MCWD) carp management goals to improve water quality and ecological integrity.

The current carp biomass estimate for Auburn Lakes (provided by MCWD) shows the lake supports 30,175 pounds of carp biomass (4,460 individuals) and requires a reduction of 7,940 pounds or 1,200 individual carp to reach a density of 100 kg/ha (critical threshold).

Under this statement of work, WSB will work collaboratively the MCWD to install and operate a push-trap device in the connecting channel between West Auburn Lake and Lundsten Lake. This will also include removal and disposal of carp.

A detailed description of tasks, as well as a budget and project schedule are provided below.

Task 1. Project Management

Project management includes reviewing and ensuring scope items are being completed and tracking budget, as well as miscellaneous administrative items that need to be addressed during the course of the project.

Task 2. Permitting

MCWD currently holds a Class B permit that allows for the removal of carp from the system until May 13th. If MCWD would prefer that carp removal is not completed under the existing permit due to timing constraints, WSB will apply for a Class B or C permit to allow for removal. There is no fee for the permit, but obtaining the permit would require coordination between WSB, MN DNR, and the licensed commercial fisherman, Don Geyer.

Task 3. Site Visit

A site visit will be required to measure for and gather dimensions to construct the push trap to the site-specific dimension as well as select the site for trap install in consultation with MCWD staff. During the site visit, WSB staff will inspect the substrate to ensure that drive rods will be able to be installed for the front support and determine how much if any fencing will be required to guide the fish into the trap. The Auburn to Lundsten stream trapping site is located on Three Rivers Park District property. MCWD will handle coordination with Three Rivers staff for access to the site.

Task 4. Push Trap Construction and Installation

Using site data obtained during the site visit under task 3, WSB staff will gather the necessary supplies for installation of the push trap and construct the push trap on site to the site-specific dimensions in a location mutually selected by MCWD and WSB staff.

Task 5. Push Trap Operation, Support, and Carp Removal Operations

Under this task, WSB will work collaboratively to operate and provide support to MCWD while the trap is deployed. Previous experience shows that the push trap requires little operation and support as it is designed to be a passive removal technique. However, WSB can be available for any operational issues that arise during deployment. Support may be provided as needed and may be limited to consulting with MCWD staff remotely on timing of carp removal from within the trap. MCWD will remotely monitor the condition of the trap and track carp and other fish that may enter the trap using remote viewing technology. WSB and MCWD can consult while

viewing images provided by MCWD staff and MCWD will make the decision whether to proceed with removal of carp from the trap.

On-site removal of carp by WSB staff in cooperation with MCWD staff is also provided under this task. WSB staff will be available to assist with physical removal of captured carp from the trap for disposal if requested by MCWD. This will be coordinated by MCWD staff daily through the course of the project. Project cost option 1 reflects cost if WSB assistance is NOT requested and option 2 reflects WSB scientists requested to be onsite a total of 25 hours that could be five (5) hours per week for five (5) weeks. All options include a fee for WSB technical support during the operation of the Push Trap.

Task 6. Carp Disposal

Captured carp must be disposed of according to permit conditions. Typically, they may be offered to the licensed commercial fisherman or disposed of through burial or incineration. Three options exist for this task. 1.) MCWD handles disposal. 2.) WSB staff will identify a disposal site and transport captured carp from the trap on the day of removal. 3.) WSB staff will coordinate with FisH2o to load and haul captured carp from the trap site using either a refrigerated trailer or live haul truck.

Task 7. Trap Deconstruction and Removal

At the conclusion of the trapping period (assumed to be the end of the carp spawning period), WSB will deconstruct and remove the trap.

Schedule

Task	April	May	June
Task 1			
Task 2			
Task 3			
Task 4			
Task 5			
Task 6			
Task 7			

This project is time sensitive. The project cannot begin until authorization by the MCWD board; based on this the project is anticipated to begin in April and conclude sometime in June based on the level of carp movement.

Project Budget

Task/Activity	Cost-Option 1	Cost-Option 2	Cost -Option 3
Task 1. Project Management	$486	$486	$486
Task 2. Permitting	$648	$648	$648
Task 3. Site Visit	$1,584	$1,584	$1,584
Task 4. Push Trap Construction and Installation	$4,108	$4,108	$4,108
Task 5. Push Trap Operation and removal	$1,260	$3,198	$3198
Task 6. Carp Disposal	$0	$1,530	$6,918
Task 7. Trap Deconstruction and Removal	$1,147	$1,147	$1,147
Project Total	$9,233	$12,701	$18,089

WSB fees are calculated on an hour hourly basis. Additional WSB staff time will be billed at an hourly rate according to the attached rate sheet, and only under approval by MCWD.

The budget table above provides a cost estimate for three (3) options. Option 1,2, and 3 are similar for all tasks except for task 6 Push Trap Operation and Removal and task 7-Disposal. Under Option 1, task 6 MCWD handles the operation and removal of carp with only technical support from WSB. Under Option 2 and 3 Task 6, WSB staff can be on call at the discretion of MCWD to help with the operation and removal from the trap up to 25 hours throughout the project period. Under Option 1, Task 7 MCWD handles disposal with no fees from WSB. Under Option 2, task 7 includes a total of 15 hours for one (1) WSB staff to dispose of carp in a location yet to be determined (includes travel) estimated using five removal events at 3 hours per event to travel and dispose of carp. Option 3 includes WSB coordinating a refrigerated trailer unit to pick carp up and haul off site. The budget reflects two (2) events for the truck to be available for pick up. If there are multiple periods where carp are captured, the freight option would require that fish be held in a crib between pick up days. This would be available twice during the project period and fish from other waterbodies could be loaded onto this truck (maximum load is 35,000 pounds). The line item amount of $6,918 assumes that we would be picking fish up at the Auburn push trap and Piersons push trap and we have therefore broken the aggregate cost of having a truck available in half, with one half of the total cost ($13,836) going to Auburn and the other half attributed to Piersons. The total cost includes time for coordination by WSB staff freight costs calculated at $4.00/mile (from Saginaw, MI to Victoria, MN to Algoma, WI, and back to Saginaw, MI).

Push trap construction and install under Task 4 includes time to gather materials and build on site based on dimensions gathered during the site visit. We anticipate this to be a 1-day effort (8 hours). A rental fee of $750 for the entire project period is included in this line item.

Task 5 assumes that there would be five (5) separate removal events (where carp are physically removed from the trap) over a period of 5 weeks. We have budgeted 5 hours of WSB staff time as well a small number of hours to consult between removal periods on trap operation and other needs from MCWD.

The final task, push trap deconstruction and removal, includes a one-half day effort to deconstruct and remove the trap from the site.

Scope of Work: Carp Removal within Stream Outlet Channel Between Pierson Lake and Marsh Lake-Spring/Summer 2022

This statement of work applies to the effort to reduce carp biomass from Pierson Lake only to meet Minnehaha Creek Watershed District (MCWD) carp management goals to improve water quality and ecological integrity.

The current carp biomass estimate for Pierson Lake (provided by MCWD) shows the lake supports 3,912 pounds of carp biomass (~6,000 individuals) and requires a reduction of 15,343 pounds or 2,400 individual carp to reach a density of 100 kg/ha (critical threshold).

Under this statement of work, WSB will work collaboratively the MCWD to install and operate a push-trap device in the connecting channel between Pierson and Marsh Lakes. This will also include removal and disposal of carp.

A detailed description of tasks, as well as a budget and project schedule are provided below.

Task 1. Project Management

Project management includes reviewing and ensuring scope items are being completed and tracking budget, as well as miscellaneous administrative items that need to be addressed during the project.

Task 2. Permitting

MCWD currently holds a Class B permit that allows for the removal of carp from the system until May 13th. If MCWD would prefer that carp removal is not completed under the existing permit due to timing constraints, WSB will apply for a Class B or C permit to allow for removal. There is no fee for the permit, but obtaining the permit would require coordination between WSB, MN DNR, and the licensed commercial fisherman, Don Geyer. The fee for this coordination from WSB is included in the Auburn SOW as both lakes would be coordinated as part of the same effort.

Task 3. Site Visit

A site visit will be required to measure for and gather dimensions to construct the push trap to the site-specific dimension as well as select the site for trap install in consultation with MCWD staff. During the site visit, WSB staff will inspect the substrate to ensure that drive rods will be able to be installed for the front support and determine how much, if any, fencing will be required to guide the fish into the trap. The Pierson-Marsh stream trapping site is located on private property. MCWD will handle coordination with homeowners for access to the site.

Task 4. Push Trap Construction and Installation

Using site data obtained during the site visit under task 3, WSB staff will gather the necessary supplies for installation of the push trap and construct the push trap on site to the site-specific dimensions in a location mutually selected by MCWD and WSB staff.

Task 5. Push Trap Operation, Support, and Carp Removal Operations

Under this task, WSB will work collaboratively to operate and provide support to MCWD while the trap is deployed. Previous experience shows that the push trap requires little operation and support as it is designed to be a passive removal technique. However, WSB can be available for any operational issues that arise during deployment. Support may be provided as needed and may be limited to consulting with MCWD staff remotely on timing of carp removal from within the trap. MCWD will remotely monitor the condition of the trap and track carp and other fish that may enter the trap using remote viewing technology. WSB and MCWD can consult while

viewing images provided by MCWD staff and MCWD will decide whether to proceed with removal of carp from the trap.

On-site removal of carp by WSB staff in cooperation with MCWD staff is also provided under this task. WSB will be available to assist with physical removal of captured carp from trap if requested by MCWD. This will be coordinated by MCWD staff daily through the course of the project. Project costs option 1 reflects cost if WSB assistance is NOT requested and option 2 and 3 reflects WSB scientists requested to be onside a total of 25 hours that could be five (5) hours per week for five (5) weeks. All options include a fee for WSB technical support during the operation of the Push Trap.

Task 6. Carp Disposal

Captured carp must be disposed of according to permit conditions. Typically, they may be offered to the licensed commercial fisherman or disposed of through burial or incineration. Three options exist for this task. 1.) MCWD handles disposal 2.) WSB staff will identify a disposal site and transport captured carp from the trap on the day of removal. 3.) WSB staff will coordinate with FisH2o to load and haul captured carp from the trap site using either a refrigerated trailer or live haul truck.

Task 7. Trap Deconstruction and Removal

At the conclusion of the trapping period (assumed to be the end of the carp spawning period), WSB will deconstruct and remove the trap.

Schedule

Task	April	May	June
Task 1			
Task 2			
Task 3			
Task 4			
Task 5			
Task 6			
Task 7			

This project is time sensitive. The project cannot begin until authorization by the MCWD board; based on this the project is anticipated to begin in April and conclude sometime in June based on the level of carp movement.

Project Budget

Task/Activity	Cost-Option 1	Cost–Option 2	Cost-Option 3
Task 1. Project Management	$486	$486	$486
Task 2. Permitting	$0	$0	$0
Task 3. Site Visit	$1,584	$1,584	$1,584
Task 4. Push Trap Construction and Installation	$4,108	$4,108	$4,108
Task 5. Push Trap Operation and removal	$1,260	$3,198	$3,198
Task 6. Carp Disposal	$0	$1,530	$6,918
Task 7. Trap Deconstruction and Removal	$1,147	$1,147	$1,147
Project Total	$8,585	$12,053	$17,441

WSB fees are calculated on an hour hourly basis. Additional WSB staff time will be billed at an hourly rate according to the attached rate sheet, and only under approval by MCWD.

The budget table above provides a cost estimate for three (3) options. Option 1, 2 and 3 are similar for all tasks except for task 5 Push Trap Operation and Removal and task 6-Disposal. Under Option 1, task 5 MCWD handles the operation and removal of carp with only technical support from WSB. Under Option 2 and 3 Task 5, WSB staff can be on call at the discretion of MCWD to help with the operation and removal from the trap up to 25 hours throughout the project period. Under Option 1, task 6 MCWD handles disposal with no assistance or fees from WSB. Under option 2, task 6 includes a total of 15 hours for one (1) WSB staff to dispose of carp in a location yet to be determined (includes travel) estimated using five removal events at 3 hours per event to travel and dispose of carp. Option 3 includes WSB coordinating a refrigerated trailer unit to pick carp up and haul off site. The budget reflects two (2) events for the truck to be available for pick up. If there are multiple periods where carp are captured, the freight option would require that fish be held in a crib between pick up days. This would be available twice during the project period and fish from other waterbodies could be loaded onto this truck (maximum load is 35,000 pounds). The line item amount of $6,918 assumes that we would be picking fish up at the Auburn push trap and we have therefore broken the aggregate cost of having a truck available in half, with one half of the total cost ($13,836) going to Auburn and the other half attributed to Pierson. The total cost includes time for coordination by WSB staff freight costs calculated at $4.00/mile (from Saginaw, MI to Victoria, MN to Algoma, WI, and back to Saginaw, MI) plus an allowance for fuel surcharge

Push trap construction and install includes time to gather materials and build on site based on dimensions gathered during the site visit. We anticipate this to be a 1-day effort (8 hours). A rental fee of $750 for the entire project period is included in this line item.

Task 5 assumes that there would be five (5) separate removal events (where carp are physically removed from the trap) over a period of 5 weeks. We have budgeted 5 hours of WSB staff time as well a small number of hours to consult between removal periods on trap operation and other needs from MCWD.

Task 2 costs are $0, since permitting costs would be included in the Auburn-Lundsten Removal budget if approved.

The final task, push trap deconstruction and removal includes a one-half day effort to deconstruct and remove the trap from the site.