

**Proposal for the Implementation of the MiddFoil®
Process of Eurasian Water Milfoil Control
at Long Lake Hale, MI**



Prepared for:

Plainfield Township

Prepared by:

**EnviroScience, Inc.
3781 Darrow Rd.
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Project Number: 1295-2692

December 24, 2009

Project Description

Long Lake has been undergoing a rapid expansion of EWM in the past several years. This problem became significantly worse in 2009, due to a combination of factors including improved water clarity due to zebra mussels. Milfoil expanded tremendously during the summer of 2009, and nearly half of the broad shallow areas of the lake which support plant life are now dominated by milfoil. Because of this, EWM poses a considerable long-term threat to the recreational potential and ecological health of the lake.

Plainfield Township and the Long Lake Association had evaluated several alternatives for dealing with this problem, and in 2009 began a multi-year program involving stocking the Eurasian watermilfoil (EWM) weevil *E. lecontei* which is the active biological control agent in the **MiddFoil**[®] process. In addition to being an environmentally safe and cost-effective approach, milfoil weevils can provide long-term permanent control as opposed to chemical application which will need to be reapplied indefinitely.

Recommendations for the stocking program begun in 2009 were based on site conditions observed during an August 2008 review of the lake. The significant expansion of the milfoil between the time of the 2008 review and the 2009 stocking of 22,000 weevils warrants re-evaluation of the original stocking program and the level of funding that supported it.

Although every lake responds somewhat differently and there are few hard and fast guidelines for application, it is clear that the length of time needed for the weevils to achieve lake-wide control is proportional to the number that are stocked. Given the rapid expansion of the milfoil observed in 2009, we believe that the original stocking program will no longer provide the desired level of control in a reasonable period of time. For this reason, Plainfield Township has requested that EnviroScience provide recommendations and several different options for a revised treatment program. These options include a chemical-only approach, an integrated program involving spot herbicide application with weevil stocking, and a program involving stocking larger numbers of weevils.

Plainfield Township has received and reviewed proposals for the first two approaches and this proposal outlines the third, biological control-only, approach. We believe that this stocking program will provide cost-effective control much faster than would have occurred under the previous program.

In addition to stocking weevils in each of the next three years, the project involves establishing baseline conditions and charting the progress of the project using detailed field surveys and laboratory analysis. This provides for the continuous monitoring of the MiddFoil[®] program and the evaluation of its progress. The data collected during the surveys helps to provide the necessary information for making future adjustments to the program. It also provides the client with an annual report detailing the status of the MiddFoil[®] program.



Three general tasks will be accomplished each year as part of the Long Lake MiddFoil® program.

Task 1: Initial survey, mapping of sites, and weevil stocking

An initial survey is conducted prior to each stocking event during the growing season (June – August). Beds of EWM-dominated aquatic vegetation are marked using Global Positioning System (GPS) technology, surveyed to establish baseline conditions and document the future progress of the program, and finally stocked with *E. lecontei* weevils. In addition to stocked sites, one or more monitoring sites not stocked with weevils, are established to gauge the progression of the program in other parts of the lake. The detailed surveys conducted at each of the project sites gather both qualitative and quantitative data to evaluate and measure the plant community, the density of the weevil population and the density of the EWM.

Project sites are selected, in part, by input from the client, and in part by the presence of conditions in and around the site that would contribute to a successful propagation and overwintering of the weevil population. Three to eight units (1,000 weevils per unit) of weevils are generally stocked per site.

Task 2: Follow-up Survey

A follow-up survey will be conducted at the end of the growing season (August-September). Follow-up surveys are conducted each year after a stocking event and a final follow-up survey is conducted one year after the final stocking event. The surveys gather qualitative and quantitative data using the same protocols that are used during the initial surveys.

Task 3: Reporting

Reports summarizing the progress of the MiddFoil program are generated at the end of each stocking year (September – December) and pursuant to the final follow-up survey. The reports include the evaluation of the data collected from the surveys and a detailed map of the project sites

Pricing for Long Lake

First Year Project Expenses 2010

Task 1: Initial survey, mapping of sites, and weevil stocking	
Labor	\$1,650.00
Other Direct Cost (GPS Rental, travel, per diem)	\$459.70
Total Cost of Task 1	\$2,109.70
Task 2: Follow-up Survey	
Labor	\$700.00
Other Direct Cost (GPS Rental, travel, per diem)	\$459.70
Total Cost Task 2	\$1,159.70



Task 3: Report				
First year interim report with map - Total Cost Task 3				\$750.00
Weevils				
Year	Unit	# Of Units	Unit Cost	Total
2010	1,000 eggs & larvae	95	\$800.00	\$76,000.00
Total First Year Cost				\$80,019.40

Second Year Project Expenses 2011

Task 1: Initial survey, mapping of sites, and weevil stocking				
Labor				\$945.00
Other Direct Cost (GPS Rental, travel, per diem)				\$459.70
Total Cost of Task 1				\$1,404.70
Task 2: Follow-up Survey				
Labor				\$1,351.50
Other Direct Cost (GPS Rental, travel, per diem)				\$459.70
Total Cost Task 2				\$1,811.20
Task 3: Report				
Second year interim report with map - Total Cost Task 3				\$787.50
Weevils				
Year	Unit	# Of Units	Unit Cost	Total
2011	1,000 eggs & larvae	60	\$800.00	\$48,000.00
Total Second Year Cost				\$52,003.40

Third Year Project Expense 2012

Task 1: Initial survey, mapping of sites, and weevil stocking				
Labor				\$1,946.70
Other Direct Cost (GPS Rental, travel, per diem)				\$459.70
Total Cost of Task 1				\$2,406.40
Task 2: Follow-up Survey				
Labor				\$1,514.10



Other Direct Cost (GPS Rental, travel, per diem)				\$459.70
Total Cost Task 2				\$1,973.80
Task 3: Report				
Third year interim report with map - Total Cost Task 3				\$909.48
Weevils				
Year	Unit	# Of Units	Unit Cost	Total
2012	1,000 eggs & larvae	40	\$800.00	\$32,000.00
Total Third Year Cost				\$37,289.68

Forth Year Project Expense 2013

Task 1: Final Follow-up Survey	
Labor	\$1,589.84
Other Direct Cost (GPS Rental, travel, per diem)	\$459.70
Total Cost of Task 1	\$2,049.54
Task2: Report	
Final Report with map - Total Cost Task 2	\$1,041.84
Total Fourth Year Cost	\$3,091.38

Yearly Summary of Expenses

Year	Survey Cost	Report Cost	Number of Weevils	Weevil Cost	Total Cost
2010	\$3,269.40	\$750.00	95,000	\$76,000.00	\$80,019.40
2011	\$3,215.90	\$787.50	60,000	\$48,000.00	\$52,003.40
2012	\$4,380.20	\$909.48	40,000	\$32,000.00	\$37,289.68
2013	\$2,049.54	\$1,041.84	0	0	\$3,091.38
Total	\$12,915.04	\$3,488.82	195,000	\$156,000.00	
Total Cost of the Project-					\$172,403.86



Terms and Agreement

EnviroScience, Inc. will provide services and organisms for application of the MiddFoil® process to Long Lake as outlined in the attached proposal. The following paragraphs outline terms of payment and cancelation.

Payment- Payments for each year's costs are due in accordance with the following schedule:

- 20% at the time of contract submittal. Please note: Stocking priority is determined by the date we receive a signed contract and deposit;
- an additional 20% of first year costs is due by May 1, 2010. For multi-year stocking programs: 40% of the annual project cost is due by May 1st;
- 60% (remaining balance of annual cost) is due at the time of the initial stocking event (or survey event if not stocking) each year.

Cancellation/ Postponement- Should Plainfield Township be dissatisfied with the progress of the project, the Association may, at its option, prematurely terminate this agreement for subsequent years by requesting the same in writing by December 31st of 2010, 2011, or 2012. Plainfield Township will only be financially responsible for services rendered up to that point.

Should the project be cancelled, delayed or otherwise postponed after May 1st of any year due to factors outside of the control of EnviroScience, Inc., 20% of the annual project cost for the year in question will be kept as a cancellation fee to defray costs associated with start up of the laboratory cultures. Any additional balance will be retained and applied to the project costs for the following year. Factors beyond EnviroScience's control may include, but are not limited to adverse weather, high water level, and actions of outside contractors hired by the client.

The price in this proposal is valid for 120 days from the date of issuance

Submitted by:



Martin Hilovsky
President

Accepted and Authorized to Proceed

Signature

Date



Standard Terms and Conditions

1. General

The following Standard Terms and Conditions, together with the attached Proposal and Fee Schedule constitute the Agreement between EnviroScience, Inc. ("ES") and the entity or person to whom the proposal is addressed ("Client") for the performance of professional services outlined in the proposal. The Standard Fee Schedule may be omitted for Lump Sum type Agreements.

2. Performance of Services

ES's services will be performed in accordance with generally accepted practices of engineers and/or scientists providing similar services at the same time, in the same locale, and under like circumstances. No warranty, express or implied, except as specified in Section 9 below, is included or intended by this Agreement.

3. Invoices, Payments

Payments will be due in accordance with the Terms and Agreements section of this proposal and ES will generally not submit invoices to Client, except upon request. Should payment be delayed following a stocking or survey event, Client agrees to pay a service charge of one (1) percent per month (12% per annum) on past due payments. If an invoice remains unpaid for a period in excess of sixty (60) days, ES reserves the right to pursue all appropriate remedies including stopping work and retaining all drawings and information without recourse. In the event ES must engage counsel to enforce overdue payments, Client will reimburse ES for all reasonable attorney's fees and court costs.

4. Insurance

ES is protected by Workers' Compensation Insurance, Commercial General Liability Insurance, Professional Liability and Automobile Liability Insurance coverages. ES will furnish certificates of insurance upon Client's request. Client agrees that ES will not be liable or responsible for any loss or damage beyond the amounts, limits, exclusions, and conditions of such insurance.

5. Disclosure of Hazards

ES will take reasonable precautions for the health and safety of ES's employees while at the Client's Site with consideration for the available information regarding existing hazards. Client will furnish to ES at the time of the Client's authorization to proceed, all information known to the Client, Client's Counsel, or Site Owner concerning physical hazards, oil, hazardous, toxic, radioactive or asbestos material in, on or near the site. If hazards are known to exist and the Client fails to advise ES of such substance or condition, and during the course of the work they are discovered, and such discovery in ES's opinion results or may result in injury or a health risk to persons, whether ES's employees or others, Client agrees to assume full responsibility and liability and shall hold ES harmless for any and all claims, demands, suits, or liabilities for personal injury including disease, medical expenses, including but not limited to, continued health monitoring, and/or

death, or property damage, and for economic loss, including consequential damages.

6. Confidentiality

ES will hold confidential all business and technical information obtained or generated in performance of services under this Agreement. ES will not disclose such information without Client's written and/or verbal consent except to the extent required for: 1) performance of services under this Agreement; 2) compliance with professional standards of conduct for the preservation of public safety, health, and welfare; 3) compliance with any court order, statute or law, or governmental directive; and/or 4) protection of ES against claims or liabilities arising from the performance of services under this Agreement. ES's obligations hereunder shall not apply to information in the public domain or lawfully obtained on a non-confidential basis from others.

7. Ownership of Documents and Processes

All documents (including drawings, specifications, estimates, field notes, and other data) and all processes (including scientific, technological, software, and other concepts, whether or not patentable), created, prepared or furnished under this Agreement by ES or ES's independent contractors and consultants pursuant to this Agreement, are instruments of service in respect of the project and shall remain the property of ES whether or not the Project is completed. ES shall retain ownership of all documents, drawings, specifications, estimates, field notes, other data, and developed technology or processes and any copyright or right to patent thereto. Client may make and retain copies thereof as is necessary; however, such documents are not intended or represented to be suitable for additions, extension, alterations, or completion of the project by others, or use in any other project. Any reuse without written verification or adaptation by ES for the specific purpose intended is at Client's sole risk without liability or legal exposure to ES or its independent contractors or consultants. Client shall indemnify, defend, and hold harmless ES and its independent contractors, and consultants from all claims, damages, losses, and expenses, including attorney's fees arising out of or resulting therefrom. Any such verification or adaptation will entitle ES to further compensation.

8. Trade Secrets and Proprietary Information

Client acknowledges that ES has developed a number of protocols, techniques, and procedures, as well as specialized equipment for performing and ensuring the quality of laboratory and field services that it provides. Further, the Client acknowledges that ES regards this technical information as being its trade secrets. Client agrees not to use or disclose, directly or indirectly, any such trade secret to any person or organization, unless expressly authorized by ES.

9. MiddFoil® Process-specific Terms, Conditions and Warranty

a). Any written or verbal information, other than published scientific studies or written ES sales literature, transferred by ES to the Client concerning the methodology used to rear and stock organisms used in the MiddFoil® process are considered

proprietary by ES, and are specifically considered to be trade secrets. In addition to the conditions set forth in Section 8, to protect these trade secrets and comply with state and federal regulations, the Client agrees not to remove, transfer, culture, or otherwise use MiddFoil® organisms supplied by ES in any other location or for any other purpose.

b). Client hereby agrees to allow ES access to the waterbody for a period ten years from the date of this contract for the purposes of continued research. Client also authorizes ES to collect limited numbers of adult MiddFoil® organisms from the waterbody for culturing purposes. In the event that ES collects organisms for this purpose, ES agrees to provide a written report detailing its activities, and furthermore agrees to restock within the same season two times the number of organisms removed.

10. References

Client agrees that ES has authority to utilize Client's name and general descriptions of the project work or service performed as references to other clients.

11. Limitation of Liability/Dispute

To the fullest extent permitted by law, the total liability of ES to Client, and anyone claiming by, through, or under Client, for any and all injuries, claims, losses, expenses, or damages whatsoever arising out of or in any way related to ES's services, from any cause or causes whatsoever, including, but not limited to, negligence, errors, omissions, strict liability, breach of contract, or breach of warranty, shall be limited to an amount of \$50,000 or ES's fee, whichever is greater.

If Client prefers not to limit ES's liability to this sum, ES may increase this limitation upon Client's written request.

12. Dispute Resolution

All claims, disputes or controversies arising out of or in relation to the interpretation, application or enforcement of this Agreement shall be first submitted to non-binding mediation pursuant to the Rules for Commercial Mediation of the American Arbitration Association.

13. Legal Action

All legal actions by either party against the other for any cause or causes, including but not limited to breach of this Agreement, negligence, misrepresentation, breach of warranty or failure to perform in accordance with the standard of care, however denominated, shall be barred five (5) years from the day after completion of ES's services or the time that the party knew or should have known of this claim, whichever is sooner. In the event that Client institutes a suit against ES, and if such suit is not successfully prosecuted, or if it is dismissed, or if a verdict is rendered for ES, Client agrees to pay ES any and all costs of defenses, including attorney's fees, expert witnesses' fees, and court costs and any and all other expenses of defense which may be reasonably necessary, immediately following dismissal of the case or immediately upon judgment being rendered in favor of ES.

14. Precedence

These Terms and Conditions shall take precedence over any inconsistent or contradictory provisions contained in any proposal, contract, purchase order, requisition, notice to proceed, or like document.

15. Severability

If any of the Terms and Conditions are finally determined to be invalid or unenforceable in whole or part, the remaining provision shall remain in full force and effect and be binding upon the parties. The parties agree to reform these Terms and Conditions to replace any such invalid or unenforceable provision with a valid and enforceable provision that comes as close as possible to the intention of the stricken provision.

16. Survival

These conditions shall survive the completion of ES's services on this project and the termination of services for any cause.

17. Governing Law

This Agreement shall be governed and construed in accordance with the laws of the state of Ohio.

