



CITY of NOVI CITY COUNCIL

Agenda Item 2
February 8, 2010

SUBJECT: Consideration of financial participation in the Walled Lake Improvement Board project in the amount of \$45,000 for the estimated portion of the total five-year cost of the project attributable to the Landings, Lakeshore Park and 15 other parcels that are either owned by the City of Novi or that have unknown ownership.

SUBMITTING DEPARTMENT: Department of Public Services, Engineering Division *BTC*
Assessing *RMS*

CITY MANAGER APPROVAL: *[Signature]*

EXPENDITURE REQUIRED	\$45,000
AMOUNT BUDGETED	\$0
APPROPRIATION REQUIRED	\$45,000 (To be included in a future budget amendment from Drain Fund—Fund Balance)
LINE ITEM NUMBER	To be determined (Drain Fund)

BACKGROUND INFORMATION:

The Walled Lake Improvement Board was formed by resolutions from the City of Walled Lake City Council on November 18, 2008 and the City of Novi City Council on January 12, 2009. The Lake Board is a separate statutory public agency that is charged with the responsibility of carrying out desired improvements for a specific lake as governed by Public Act 451 of 1994, Part 309, as amended. The Walled Lake Improvement Board has met several times since February 2009 to develop a project, which began with an engineering study. The engineering study was required under the statute to determine, among other requirements, the condition of the lake, existing problems with the lake and to recommend a project to improve the lake. The Lake Board passed the enclosed resolution on November 5, 2009 to proceed with a project that includes mechanical weed harvesting and chemical treatment for weeds, and to direct the Assessors for the Cities of Walled Lake and Novi to prepare a special assessment roll to fund the project. The project costs are estimated to be \$130,615 for the first year and \$97,000 for each of the four subsequent years of the assessment, for a total cost of \$518,615. (An excerpt of the Lake Improvement Study for Walled Lake and the Resolution are attached—the entire document is available at cityofnovi.org/lakeboard).

The City Assessors have begun the development of the special assessment roll for the Lake Board. Preliminary costs per unit of benefit have been developed, but have not yet been finalized. Property that is owned by each city is exempt from assessment under the statute. However, each city can 1) choose to adopt a resolution to be included in the assessment roll for each parcel, 2) choose to financially participate at a level determined by the City, or 3) choose to maintain an exempt status and not participate in the project cost. The Novi City Council had a special meeting on January 12, 2009 during which the resolution to proceed with the Lake Board was approved. Based on the discussion at this meeting, during which Council entertained the idea of financial participation in the project, an estimate of the city's portion of the assessment has been developed for consideration by the City Council. The final cost per unit of benefit will be determined after each City pledges a project participation amount, if any.

The City's participation amount was determined based on the methodology described in the attached January 27, 2010 memo from Glenn Lemmon and Brian Coburn in which several parcels that are either owned by the City or have indeterminate ownership were used to calculate the amount of the financial participation. The enclosed map illustrates the parcels that were included in the calculation. If the City Council were to financially participate in the project at level that is consistent with the assessment of the other parcels in the district, Novi's financial participation for the five year assessment would be approximately \$45,000.

The estimated assessment is being presented to each City for consideration prior to finalizing the assessment roll. If the cities decide to financially participate in the cost of the project, this amount would then be deducted from the total amount to be assessed against the properties receiving a benefit from the project.

RECOMMENDED ACTION: Consideration of financial participation in the Walled Lake Improvement Board project in the amount of \$45,000 for the estimated portion of the total five-year cost of the project attributable to the Landings, Lakeshore Park and 15 other parcels that are either owned by the City of Novi or that have unknown ownership.

	1	2	Y	N
Mayor Landry				
Mayor Pro Tem Gatt				
Council Member Crawford				
Council Member Fischer				

	1	2	Y	N
Council Member Margolis				
Council Member Mutch				
Council Member Staudt				

MEMORANDUM



TO: CLAY PEARSON, CITY MANAGER
FROM: GLENN LEMMON, CITY ASSESSOR
BRIAN COBURN, P.E.; SENIOR CIVIL ENGINEER
SUBJECT: LAKE IMPROVEMENT BOARD—CITY CONTRIBUTION
DATE: JANUARY 27, 2010

1/27/10
To: Mayor & City Council
FYI

The Walled Lake Improvement Board passed a resolution on November 5, 2009 approving a lake improvement project consisting of mechanical weed harvesting and chemical treatment for weeds. The resolution also directed the City Assessors for Walled Lake and Novi to prepare an assessment roll for the approved project. The resolution states that the total project costs for the first year are \$130,615, with an estimated budget of \$97,000 for each of the four subsequent years of the assessment, for a total cost of \$518,615.

Work has begun on the development of a special assessment roll in preparation for a future Lake Board public hearing. Preliminary costs per unit of benefit have been developed, but have not yet been finalized. Property that is owned by each city is exempt from assessment under the statute. However, each city can choose to adopt a resolution to be included in the assessment, can choose to make a contribution, or choose to maintain an exempt status. The Novi City Council met on January 12, 2009 during a special meeting during which the resolution to proceed with the Lake Board was approved. Based on the discussion at this meeting, during which Council entertained the idea of making a financial contribution toward the project, an estimate of the city's portion of the assessment has been developed for consideration by the City Council. The final cost per unit of benefit will be determined after each City pledges a contribution amount to the project, if any.

The method to determine the City's contribution was based on the relative size of the city owned property to the other lakefront lots. The contribution for large parcels such as Lakeshore Park and the Landings property was determined based on the total lake frontage of each large city parcel compared to the average lake frontage of a typical lake parcel, calculated to be approximately 63 feet of lake frontage. Small parcels were assigned one unit of benefit, similar to other privately owned lakefront parcels. There are seven parcels fronting on Walled Lake that are listed on the tax rolls under the City of Novi. There are an additional eight parcels without assigned ownership, of which one is the canal between Walled Lake and Shawood Lake, five are lake access lots along South Lake Drive and two are lake access lots (one on West Lake Drive and one on East Lake Drive). If use of the lake access parcels is deeded to the backlot owners, the backlot owners could be assessed; however determining the deeded rights for these parcels is a time-consuming and potentially expensive process. Rather than dedicating resources to research the ownership of parcels that may have been platted in the early 1900s, staff recommends including these parcels be included in the city's contribution for a total of 15 units of benefit.

Based on the calculation above, the City of Novi's contribution for the five year assessment would be approximately \$45,000. The estimated assessment is being presented to each City for consideration prior to finalizing the assessment roll. If the cities decide to provide a contribution, this amount would then be deducted from the total amount to be assessed against the properties receiving a benefit from the project.

We plan to prepare this item for consideration by the City Council on an upcoming agenda.

cc: Kathy Smith-Roy, Finance Director
Rob Hayes, PE; Director of Public Services

Location of Parcels Included in Novi Contribution Calculation

Walled Lake Improvement Board



Map Legend



Novi Contribution Parcels

-  CITY OWNED
-  LAKE ACCESS
-  LAKESHORE PARK
-  THE LANDINGS



1 inch = 800 feet



City of Novi
Engineering Division
Department of Public Services
45175 W Ten Mile Rd
Novi, MI 48375
cityofnovi.org

Map Author: Brian Coburn, PE
Date: 1/29/10
Project: Walled Lake Improvement Board
Version #: 1.0

MAP INTERPRETATION NOTICE

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.

STATE OF MICHIGAN

COUNTY OF OAKLAND

WALLED LAKE IMPROVEMENT BOARD

RESOLUTION APPROVING PROJECT AND PROPERTIES
TO BE INCLUDED IN DISTRICT

RECITATIONS:

The Walled Lake Improvement Board, pursuant to the authority given in MCL §324.30908, determined to consider weed harvesting and/or chemical weed control measures as a lake improvement authorized under MCL §324.30902(1) and having retained Spalding DeDecker Associates, Inc. to prepare the engineering study and economic report as required by MCL §324.30909, and received the study and scheduled a public hearing as required by MCL §324.30910, and following the public hearing finds;

1. As required by MCL §324.30909(3), a tentative Special Assessment District has been described in the engineering study and economic report, namely, the property to be referenced as the Lake Board District, which includes all lake front parcels and all parcels with deeded access rights to the waters of the lake to be benefited by The Project.
2. The plan for The Project which excludes the self-help program, waterfowl management program, and lake management fees; and an estimate of the costs of The Project in the amount of \$130,615.00 have been prepared and notice has been published according to law to the owners of property within the Lake Board District with respect to a hearing for the purpose of presenting any objections to the engineering study and economic report regarding The Project.
3. The hearing was conducted consistent with the Notice, following which the Lake Board determined to proceed with The Project and to authorize the preparation of a special assessment roll.

NOW THEREFORE, BE IT RESOLVED AS FOLLOWS:

1. That the engineering study and economic report is determined to be sufficient.
2. That the Lake Board shall proceed with The Project as described in the engineer's study, excluding the self help, waterfowl management and the lake management fee aspects of The Project.
3. The plans prepared for modified The Project and the modified cost estimate are approved.
4. The Special Assessment District shall consist of the Lake Board District, described above, against which 100 percent of the cost of The Project shall be assessed.
5. The duration of the Special Assessment District shall be five (5) years.
6. The Assessors for the Cities of Walled Lake and for Novi shall prepare a special assessment roll which shall include all parcels of land to be assessed with the names of the respective record owners of each parcel, if known, and also including the total amount to be assessed against each of the parcels of land. The amount to be assessed against each parcel of land shall represent the relative portion of the whole sum to be levied against all parcels of land in the District as the benefit to the parcel bears to the total benefit of all parcels of land in the District.
7. When the Assessors complete the assessment roll, the Assessors shall affix their certificates to the roll stating that the roll has been made pursuant to a resolution of the Lake Board adopted on this date and that, in making the assessment roll, the Assessors according to their best judgment have conformed in all respects to the directions contained in this resolution and in the statutes of the State of Michigan.

AYES: Galloway, Burke, Coburn, Warren
NAYS: none
ABSTENTIONS: none
ABSENT: Potter

CERTIFICATION

It is hereby certified that the foregoing Resolution is a true and accurate copy of the Resolution adopted by the Walled Lake Improvement Board at a meeting duly called and held on the 5th day of November, 2009.

Walled Lake Improvement Board

BY: 
Brian Coburn, Secretary-Treasurer

Approved Lake Management Budget

At the November 5, 2009 meeting of the Walled Lake Improvement Board, a *Resolution Approving Project and Properties to be Included in the District* was approved setting the costs of the project at \$130,615. This amount varies from the recommended budget in Section 5 of the *Lake Improvement Study for Walled Lake*. The summary below is intended to provide a summary of the changes made by the Lake Improvement Board upon approval of the resolution.

Year 1

A.	Herbicide Treatment (40 acres)	\$ 16,500	
B.	Mechanical Weed Harvesting (120 acres)	\$ 78,000	
C.	Waterfowl Management Program	\$ 2,000	(Recommended in study, but excluded from approved resolution)
D.	Self Help Program (year 1)	\$ 2,000	(Recommended in study, but excluded from approved resolution)
E.	Lake Improvement Study	\$16,115	
F.	Administrative/Legal Fees	\$20,000	
G.	Lake Management Fees	\$1,500	(Recommended in study, but excluded from approved resolution)
	Year 1 Total	\$ 136,115	\$130,615 (Budget amount approved in the resolution)

Subsequent Years

A.	Herbicide Treatment (20 acres)	\$ 9,000	
B.	Mechanical Weed Harvesting (120 acres)	\$ 78,000	
D.	Waterfowl Management Program	\$ 2,000	(Recommended in study, but excluded from approved resolution)
D.	Self Help Program	\$ 500	(Recommended in study, but excluded from approved resolution)
E.	Administrative/Legal Fees	\$ 10,000	
F.	Lake Management Fees	\$ 1,500	(Recommended in study, but excluded from approved resolution)
	Subsequent Year Annual	\$101,000	\$97,000

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LAKE IMPROVEMENT RECOMMENDATIONS

A. GOALS AND OBJECTIVES DISCUSSION

The research performed with this study bears out the fact that Walled Lake functions as a thriving, viable water body. As with any viable lake, an ecological balance must be maintained in order for the lake to survive. The resources utilized behind the research performed have been varied but all necessary to accurately assess Walled Lake's current condition and improvements to the lake that are necessary in order for it to survive and thrive.

In addition to research detailed in prior sections, discussions with the Walled Lake Board identified overall goals and objectives for lake improvement. These included:

- Reduction in aquatic weed growth
- Reduce/eliminate closing of E.V. Mercer Beach due to high E.coli levels

The primary objective for this section of our report is to summarize deficiencies within the Lake and provide practical and economical lake improvement recommendations given the stated goals and objectives of the Lake Board. As with most Lake Improvement Boards, funding for construction improvements is limited. Therefore, a thoughtful approach to remediate the identified lake problems is necessary. Our recommendations are therefore categorized into Short Term and Long Term Lake Management plans.

Short Term Improvements constitute those activities which can be performed with minimal cost and construction impacts to the Lake. These improvements require little if any design or regulatory effort (permits, approvals, etc.). These improvements are intended to be implemented on a yearly basis for the most part.

Long Term Improvements include those activities which will typically require more expense and longer construction timing and which may pose complicated access issues to the lake. The lead time necessary to raise funding for these types of improvements can extend well beyond 1 year. For these reasons we consider Long Term Improvements to be those implemented for year 3 and beyond of the Lake Management Plan.

The Lake Management Plan (Short and Long Term Improvements) timing and costs should constitute the basis behind a Lake Area Special Assessment District for Walled Lake.

Our research on Walled Lake has found that the following conditions exist:

- Low Nutrient Levels

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LAKE IMPROVEMENT RECOMMENDATIONS

- Greater weed growths in depth of 5 to 16 feet in depth and silty and marly bottom substrates
- Abundant Zebra Mussels, which is an invasive specie

Our Lake Management recommendations include detailed descriptions of the treatment, estimated costs to implement, and the initial frequency recommended for the treatment. Finally, implementation options and procedures for the management plans are outlined.

B. LAKE MANAGEMENT PLAN

OVERVIEW - Discussion with the Walled Lake Board indicates that the majority of residents of Walled Lake would like to eradicate or reduce the growth of aquatic weeds in Walled Lake. Short term recommended actions include:

Herbicide Treatment Program - We recommend that an herbicide treatment program be implemented annually. Applications may have to be performed two to three times annually as needed.

The MDEQ Water Bureau has produced a table containing information about the herbicides permitted for aquatic plant and algae control in Michigan (see Appendix I). Considering the August 3rd and 5th vegetation survey results, it appears that an annual application of herbicides may be needed at Walled Lake to control early and mid season growth of Eurasian water-milfoil.

It is important to note that complete eradication of all aquatic plants in a lake is not the objective of an herbicide treatment program. Most plants play a very important role as part of the ecological health of a lake system. Therefore, the purpose of an aquatic plant management program is to manage the growth and proliferation of aquatic nuisance plants from only selected areas. The areas that are to be managed should be based upon those parcels that have existing homes and those areas that need to be cleared for access to the lake.

It is recommended that a product such as 2,4-D, Fluridone, or Diquat Dibromide be used to control the Eurasian Water Milfoil in the areas identified as densely populated. It is estimated that the densely populated encompasses 30 acres of the Lake. The application should be performed in the spring (mid-May), while the Milfoil is still relatively small and won't leave as much decaying plant matter on the bottom of the lake. Approximately 30 days, after the initial application, a second application should be applied as needed to follow up and to control any remaining Milfoil growth. The process will probably have to be applied on an annual basis but the overall treatment area may decrease based

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LAKE IMPROVEMENT RECOMMENDATIONS

on the effectiveness of the previous year's application, thereby resulting in a reduction of yearly management costs.

The use of contact herbicides should be avoided when using 2,4-D to control the growth of Eurasian Milfoil. The main reason for this concern is that 2,4-D acts as a systemic control method, whereas contact herbicides may kill the tops of the plants and interfere with the systemic action of 2,4-D.

Please refer to Figure 2.6, 2.7 and 2.8 which illustrates the Aquatic Plant densities for Walled Lake, based upon the August 3, 2009, plant survey. The licensed herbicide applicator should conduct a pretreatment survey with a representative as designated by the Lake Board, in order to confirm the general limits of the plant growth and finalize the treatment plans.

In addition to recommended herbicide treatment modifications an annual aquatic plant survey should be performed, at least for the first three treatment seasons, in order that a plant response can be observed and recorded. These observations will allow the herbicide treatment program to be further modified as needed and may provide an early indication as to the success of the program. A state licensed herbicide applicator can perform this task once the program begins, and can include these observations along with the permit application to the MDEQ.

ESTIMATED COST:

Aquatic Herbicide Treatment Program (Milfoil) – Initial Application

\$375/Acre x 30 Acres	\$11,250
Permit Fee	<u>\$ 1,500</u>
	\$12,750

Aquatic Herbicide Treatment Program (Milfoil) – Follow Up Application

\$375/Acre x 10 Acres	\$ 3,750
Project Total (Annual Cost)	\$16,500

APPLICATION FREQUENCY - Annually

Mechanical Weed Harvesting – The implementation of a mechanical weed harvesting program would assist in providing aquatic weed control near the top 5 to 6 feet of the lake. This method would not eradicate the invasive plants, such as Eurasian Milfoil, but would have a similar effect as mowing a lawn. It is anticipated that it would be necessary to have a minimum of two subsequent follow up harvestings to manage the aquatic weeds due to regrowth. The level and speed of regrowth will be affected by climatic conditions and can vary from year to year. It should be noted that if the harvesting operation distributes fragmented pieces of Eurasian Milfoil that the Lake may experience new growth from the fragments. Careful selection of the harvester should be made to address this issue.

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LAKE IMPROVEMENT RECOMMENDATIONS

It is recommended that a weed harvesting program is implemented to control excessive weed growth for areas that are not treated by the herbicide program. It is estimated that this area encompasses 120 acres. The initial harvesting program should be conducted two times annually to further evaluate the aquatic weeds response and should be conducted in June and July.

ESTIMATED COST:

Mechanical Weed Harvesting (Approximately 120 acres)
\$325.00/Acre x 120 Acres \$39,000

Assume 2 times per year

Project Total (Annual Cost) \$78,000

FREQUENCY – Annually

Waterfowl Management Program - We recommend that a waterfowl management program be implemented annually to assist in controlling E.coli levels within Walled Lake. A spring and summer program may need to be implemented.

A waterfowl management program is permitted through the Michigan Department of Natural Resources (MDNR). Currently there is not a permit fee but it is anticipated that a fee of approximately \$200 will be required in the future. A waterfowl management company can assist in controlling waterfowl populations. These practices typically include a spring time swan and goose nest removal. These activities can be performed by residents according to the MDNR parameters and permit.

A follow up goose round up may be required during the summer. (Swans are not controlled in this manner.) The geese are collected during the summer before the young geese are able to fly and when the adult geese have lost their flight feathers. Geese are relocated to swamps, ponds, and lakes throughout Michigan as directed by the MDNR.

This program is recommended on an annual basis but may be re-evaluated annually upon the effectiveness of the waterfowl removal in preceding years.

A waterfowl management program will reduce the E.coli level contributions from waterfowl, though they may not be the only source of E.coli contributions to the lake. Existing programs, as required through the National Pollutant Discharge Elimination Program, are in effect that require Municipalities to identify and correct sources of E.coli from illicit connections.

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LAKE IMPROVEMENT RECOMMENDATIONS

ESTIMATED COST:

Spring Nest Removal

Permit Fee	\$ 200
Contractor Appearance Fee (for Geese)	\$ 100
Contractor Appearance Fee (for Swans)	\$ 200
\$30/nest x 10 nests	<u>\$ 300</u>
	\$ 800

Summer Goose Round Up

Appearance Fee	\$ 100
100 geese	<u>\$1,100</u>
Project Total (Annual Cost)	\$2,000

Self-Help Program - The MDEQ has developed a program that has been entitled the Cooperative Lakes Monitoring Program http://www.michigan.gov/deq/1,1607,7-135-3313_3686_3731-14766--,00.html. It is recommended that the Lake Improvement Board for Walled Lake, begin such a program on the lake. The data that is collected by the residents of Walled Lake will assist in developing a historical data, by which future projects may be based upon. Several of the items that can be included in such a program are: Secchi disks observations, lake level water observations, temperature, pH, and dissolved oxygen levels, among others. Self imposed restrictions may also be developed that will benefit the lake water quality such as: limited use of phosphorus based fertilizers, encourage the raking of leaves adjacent to shoreline (to prevent the leaves from being blown into the lake), restricted yard waste burning, irrigation schedules and the development of neighborhood environmental awareness programs. A vegetative buffer zone, or lake-scaping program, should also be considered as a Best Management Practice (BMP).

These programs also offer the most important aspect that can be available to any organization that share common goals, and that is networking. The association will be able to make contact with other associations and lake improvement boards that have already implemented some of the programs and projects that the residents may be in the process of considering, such as the Michigan Lake and Stream Association.

ESTIMATED COST – Costs to develop this program can vary. If performed by residents, it is recommended that a budget of \$2,000 be established for year 1 and \$500 for subsequent years.

FREQUENCY – Year 1, updated annually.

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LAKE IMPROVEMENT RECOMMENDATIONS

C. BUDGETS AND FINANCING OPTIONS

The budgets that are developed below are to be used for estimating purposes only. As one begins the process of planning, designing, construction and maintenance phases of projects involving lakes, a word of advice would be to proceed, prudently.

If the projects are to be financed for a period of several years, then interest cost would need to be accounted for and added to the cost shown below.

Lake Management Budget

	<u>Year 1</u>	
A.	Herbicide Treatment (40 acres)	\$ 16,500
B.	Mechanical Weed Harvesting (120 acres)	\$ 78,000
C.	Waterfowl Management Program	\$ 2,000
D.	Self Help Program (year 1)	\$ 2,000
E.	Lake Improvement Study	\$ 16,115
F.	Administrative/Legal Fees	\$ 20,000
G.	Lake Management Fees	\$ 1,500
	Year 1 Total	\$ 136,115
	<u>Subsequent Years</u>	
A.	Herbicide Treatment (20 acres)	\$ 9,000
B.	Mechanical Weed Harvesting (120 acres)	\$ 78,000
D.	Waterfowl Management Program	\$ 2,000
D.	Self Help Program (year 1)	\$ 500
E.	Administrative/Legal Fees	\$ 10,000
F.	Lake Management Fees	\$ 1,500
	Subsequent Year Annual	\$101,000

D. IMPLEMENTATION

Since it is unknown how the Walled Lake Improvement Board will develop the special assessment district (SAD), at the time of writing of this report, a cost distribution per riparian parcel will be used to assist in planning purposes. If the cost is distributed equally amongst the riparian parcels each parcel would be assessed approximately \$375 for year 1 and \$275 for subsequent years.

In order to implement any one of the above outlined projects, the Lake Improvement Board will need to take the following actions:

1. Adopt a project or program and its initial estimated budget.
2. Set a date for the Hearing of Practicability. During this meeting, the Lake Improvement Board for Walled Lake approves the proposed improvement projects and their associated estimated budgets.

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3. Set a date for the Assessment Hearing. During this meeting, the Board approves the assessment formula, and the associated Assessment Roll. Once approved, the roll is forwarded to the City Clerk with authorization to spread the approved assessments.
4. Contract Documents are usually prepared next. The contract documents generally include the plans and specifications for the approved project.
5. A bid opening date is set and the project is then advertised.
6. The bids received are opened and the bids are evaluated.
7. The project is awarded.
8. The project begins.

Items 1 - 8, listed above are but a simple summary of all of the tasks and events that generally need to take place when proceeding with project associated with lake improvements.

When the project implementation process has been completed for a particular project or program, the above noted items will generally need to be repeated on an annual basis.

F. CLOSING REMARKS

The SDA Project Team would like to thank the Walled Lake Improvement Board for having given us the opportunity to prepare this report.

Walled Lake is a beautiful Lake. The fact that its residents have made a commitment to take the initial steps to preserve the lake and its water quality is a clear indication that Walled Lake is in good hands. We wish you all the best of times.