Great Lakes Fishery Trust
Special Project

PROJECT PROFILE

Synopsis

- **Project Title:** *Next Steps - MRWA Action Plan for the Muskegon River Watershed*
- **Grantee Organization:** *Muskegon River Watershed Assembly (MRWA)*
- **Project Team:** *Gary Noble (MRWA Executive Director), Terry Stilson (MRWA Program Director), Karen Buck (Conservation Impact), Steve Coverly (Muskegon Conservation District), Cindy Fitzwilliams-Heck (Ferris State University), MRWA Education Committee*
- **Contact Person:** *Gary Noble (MRWA Executive Director)*
- **Grant Amount:** *$100,000.00*
- **Time Frame:** *11/3/2009 - 12/31/2012*
- **Focus Areas:** *Special Project*
- **Brief Project Summary:** *This project enabled the MRWA to 1) develop an organizational sustainability plan (using a professional consultant), 2) provide match against MRWA's 2012 Great Lakes Restoration Initiative (GLRI) grant award, 3) provide match against MRWA's 2010-12 Fremont Area Community Foundation (FACF) grant award, 4) offset a portion of MRWA's 2010-12 base programs and operation expenses, and 5) support several on-the-ground projects in high priority sub-watersheds. A "MRWA Sustainability Plan" was published in October 2010 and accepted by the MRWA Executive Board in December 2010.*

Project in Context

In 2001, the GLFT and Wege Foundation awarded a 3-year joint grant to the MRWA to hire 2 full-time staff and accelerate implementation of the MRWA's Strategic Plan. At the same time, the GLFT and Wege Foundation (and other funders) funded significant, collaborative research to better understand how the Muskegon River functions and responds to human influences (Muskegon River Initiative). The Muskegon River was selected for this important research due to its "priority watershed" designation by the GLFT. Initial funding for the MRWA was intended, in part, to build MRWA capacity to utilize and implement research results to better protect the Muskegon River long-term. In November 2009, the GLFT awarded additional funds to the MRWA for this project to help plan for the MRWA's long-term organizational sustainability, continue building MRWA capacity, and to support a variety of on-the-ground projects guided by major research findings.

Goals of the Effort

A primary goal of this project was to support the development of a "MRWA Sustainability Plan" using a professional consultant to help guide MRWA's long-term organizational sustainability. Another project goal was to give the MRWA discretionary authority on how best to utilize remaining GLFT funds to support the MRWA and MRWA projects.

The MRWA elected (with GLFT approval) to utilize GLFT funds for this project as follows:

- $10,000 towards development of an organizational "MRWA Sustainability Plan" using a professional consultant
- $20,000 as match against MRWA's 2012 Great Lakes Restoration Initiative grant award of $798,270
- $20,000 as match against MRWA's 2010-12 Fremont Area Community Foundation grant award of $75,000
- $20,000 to offset part of MRWA 2010-12 base programs and operation expenses
- $30,000 toward several on-the-ground projects in high priority sub-watersheds.

Results

This project produced a "MRWA Sustainability Plan", published in October 2010 by Conservation Impact (consultant), within budget, and was accepted by the MRWA Executive Board in December 2010. GLFT cash matches were applied to the MRWA's Great Lakes Restoration Initiative grant award and the MRWA's Fremont Area Community Foundation grant award as budgeted. GLFT matching funds were instrumental in helping the MRWA secure both of these grant awards. GLFT funds also helped support MRWA base programs and operational activities during 2010-12, helping to sustain existing staff and essential programs. MRWA spent $629 in GLFT funds above the budgeted amount for MRWA base programs and operations. The same amount ($629) was underspent (against budget) to accomplish / complete several on-the-ground projects with the help of GLFT funds, including:

- Ferris State University rain garden (Big Rapids campus) ($7,163 GLFT share)
- Cedar Creek Stream Habitat Restoration/Riparian Forestation (Muskegon County) ($19,279 GLFT share)
- Tamarack Creek & Cadillac Tree Planting / Education (Montcalm and Wexford Counties) ($1,789 GLFT share)
- Houghton Lake Shoreline Buffer (Roscommon County) ($1,140 GLFT share)

Products and Resources

The MRWA website (www.mrwa.org), under "Projects", contains more detailed information about most of the on-the-ground projects listed above, as well as the Great Lakes Restoration Initiative (GLRI) funded project, that the GLFT helped support. The MRWA website project descriptions mention GLFT as providing matching funds. Below, is a list of MRWA project names to reference when searching for their descriptions on the MRWA website:

- Ferris Rain Garden was covered through the MRWA website, several newsletter articles, and media coverage through the Big Rapids *Pioneer*.
- Cedar Creek Projects, then click on "Cedar Creek Stream Habitat Restoration and Riparian Forestation 2011-2013"
- Tree Planting – Tri County High School Ecology students planted tamarack along Tamarack Creek and was featured on our website and in a newsletter article. Trees were purchased using GLFT funds for a Cadillac project where elementary students planted red pine. This event is featured on our website and in a newsletter article.

- A Natural Shoreline Workshop was held in Houghton Lake and funded through GLFT funds. A *Houghton Lake Resorter* news article and an article in an MRWA newsletter were featured.
- Restoration of Riparian Areas in the Muskegon River Watershed (GLRI).

FINAL NARRATIVE REPORT

Project Title: Next Steps – MRWA Action Plan for the Muskegon River Watershed
Time Frame: 11/3/2009 – 12/31/2012

Background/Overview

1. *Briefly summarize the project description as outlined in the original proposal.*

In November 2009, the GLFT awarded the MRWA a $100,000 grant to develop an organizational sustainability plan for the MRWA and use remaining GLFT funds at the MRWA's discretion. The MRWA elected (with GLFT approval) to utilize GLFT funds for the following scope of work (from grant agreement):

- $10,000 towards development of an organizational "MRWA Sustainability Plan" using a professional consultant
- $20,000 as match against MRWA's 2012 Great Lakes Restoration Initiative grant award of $798,270
- $20,000 as match against MRWA's 2010-12 Fremont Area Community Foundation grant award of $75,000
- $20,000 to offset part of MRWA 2010-12 base programs and operation expenses
- $30,000 for on-the-ground projects in high priority sub-watersheds.

2. *Was the project completed as originally intended? If not, indicate how the final outcome(s) differed from what was anticipated. Does your experience suggest that original expectations were realistic? What factors hindered or helped progress?*

Aside from the extended project end date, the MRWA completed all scope of work activities as originally intended and within the overall project budget. Originally, the end date for this project was 12/31/11. However, the MRWA requested and the GLFT granted a 1-year no cost extension resulting in a revised end date of 12/31/12. The only budget variation from the original scope of work involved the MRWA spending $629 more on MRWA base programs and operations, while spending a corresponding $629 less to complete several on-the-ground projects. These results suggest our original expectations were realistic in scope. Having the discretionary scope of work broken out with budgeted amounts helped guide scope of work activities to meet grant agreement objectives.

Outcomes

3. What activities were pursued in relationship to intended outcomes, and to what extent did you achieve the following intended outcomes listed in your proposal? (Merge intended outcomes from proposal.)

This project produced the following outcomes:

a. A "MRWA Sustainability Plan" was published in October 2010 by Conservation Impact (Denver, CO consultant) and it was accepted by the MRWA Executive Board in December 2010. This Sustainability Plan provides a blueprint that defines strategies for the MRWA's long-term sustainability and designs the most appropriate structure, systems, staffing, leadership, and revenue model to achieve that vision. This scope of work activity achieved the intended outcome of producing an organizational sustainability plan using a professional consultant costing $10,000.

b. Applying $20,000 in GLFT matching funds was instrumental in helping the MRWA secure a 2012 Great Lakes Restoration Initiative (GLRI) grant award ($798,270) from the U.S. EPA for "Restoration of Riparian Areas in the Muskegon River Watershed". The GLFT match is part of a $141,201 non-federal cost share to supplement federal funding, equating to a total GLRI project budget of $939,471. A major focus of the GLRI project is to reforest over 400 acres in high-priority sub-watersheds, following major research findings/recommendations funded by the GLFT from 2001-2007. This (matching fund) scope of work activity achieved the intended outcome of securing a significant grant award and will enhance implementation efforts.

c. Applying $20,000 in GLFT matching funds was key to the MRWA securing a 2010-12 Fremont Area Community Foundation (FACF) grant award ($75,000) to "Support MRWA Staffing and Projects in Newaygo County". GLFT matching funds increased the overall budget to $95,000 (over 3-years) that was used to support numerous watershed activities that benefitted Newaygo County and the watershed. This (matching fund) scope of work activity achieved the intended outcome of securing a continuing FACF grant award and enhanced implementation efforts.

d. $20,629 of GLFT funds were used to offset part of MRWA's 2010-12 base programs and operation expenses. This offset helped sustain existing MRWA staff and essential programs, which was the intended outcome of this scope of work activity.

e. $29,371 of GLFT funds were used to support implementation of 4 on-the-ground projects in high priority sub-watersheds, as follows:

   i. Ferris State Univ. Rain Garden (Big Rapids campus) ($7,163 GLFT share)

   ii. Cedar Creek Stream Habitat Restoration / Riparian Forestation (Muskegon County) ($19,279 GLFT share)

   iii. Tamarack Creek & Cadillac Tree Planting / Education (Montcalm and Wexford Counties) ($1,789 GLFT share)

   iv. Houghton Lake Shoreline Buffer (Roscommon County) ($1,140 GLFT share)

Use of GLFT funds toward the above on-the-ground projects achieved the intended outcome for this scope of work activity by enhancing project implementation results.

4. *What audience(s) were you particularly hopeful of reaching? To what extent did you reach them? Did you receive any feedback?*

The "MRWA Sustainability Plan" is intended for MRWA internal guidance and use with select funders when fundraising. The MRWA has secured some fundraising lead gifts / grants from funders who received a copy of our Sustainability Plan. Further, the MRWA committed GLFT matching funds in 2 grant applications, which were both approved resulting in a major federal (GLRI) grant award and a continuing FACF grant award.

Education is an important focus for the MRWA, particularly reaching young people. The Ferris Rain Garden project integrated project activities within college curriculum and taught college students about watersheds, storm water, and ways to project water quality. Many of these students responded that they had never thought much about water quality before they worked on this project. High school and grade school students in the Tri-County and Cadillac school systems learned about Michigan native trees and planted trees. The Natural Shoreline workshop was designed by the MRWA Education Committee targeting landowners and landscaping businesses. The final workshop evaluations indicated that, after completing the workshop, participants knew more about natural shorelines than they did before the workshop.

5. *What relationships or opportunities were developed or strengthened through the work?*

The MRWA used the opportunity to develop a much needed organizational sustainability plan working with a professional consultant experienced in helping environmental/conservation non-profit organizations. The sustainability planning process also enabled the MRWA Board and staff to develop 3 strategic focus areas to target short-term efforts toward a more sustainable path. GLFT funds (for matching grants and on-the-ground projects) also contributed to strengthened MRWA relationships with several vested watershed partners, including the Conservation Resource Alliance, Grand Valley State University-Annis Water Resources Institute, Huron Pines, Land Conservancy of West Michigan, Muskegon Conservation District, Cadillac/Fremont/Muskegon/Newaygo area schools/teachers, Camp Newaygo staff, Ferris State University personnel, and Houghton Lake area groups, to name several.

6. *Was an evaluation included as part of this project? If so, what were the key findings? (Please attach a copy of the evaluation report).*

There was no evaluation included as part of this project, other than providing a final report. However, some MRWA projects that were supported by GLFT matching / contributing funds involved evaluation reports for those projects. For example, the MRWA's Fremont Area Community Foundation (FACF) continuing 3-year grant required an annual evaluation (progress) report. A copy of MRWA's 2010, 2011, and 2012 FACF Evaluation Reports were provided to the GLFT since GLFT matching funds contributed toward our FACF grant efforts.

7. *Whether they were intended or unintended, what do you consider the most important benefits or outcomes of this special project?*

A key outcome of this special project was the development of a "MRWA Sustainability Plan" that will help guide MRWA's long-term organizational sustainability. Another very important outcome was the MRWA's success in securing significant grant awards (using GLFT matching funds) from the U.S. EPA/Great Lakes Restoration Initiative Program ($798,270) and from the

Fremont Area Community Foundation ($75,000). Both grant awards helped elevate the MRWA's credibility and presence in the watershed and strengthened MRWA relationships with many watershed partners.

On-the-ground project benefits and outcomes:

i) Better relationship with Ferris St. Univ. through the Ferris Rain Garden project
   (1) Students will take what they've learned from the project and promote good practices through their future positions
   (2) Rain garden sign educates the public as they enter Ferris from parking lot 2
   (3) Rain garden will capture and filter storm water before it enters the Muskegon River
   (4) New relationship formed with the Mecosta Osceola ISD due to rain garden publicity

ii) Better relationship with Tri-County Schools through the Tamarack Tree Planting
   (1) Students gained knowledge about native trees and their importance
   (2) More native Tamarack trees have taken root in the watershed
   (3) A new relationship was also formed with several landowners in the Tamarack Watershed

iii) New relationship with Cadillac Lions through the Cadillac Tree Planting project
   (1) Elementary students gained knowledge about native trees and their importance
   (2) Trees were planted in an open field around a pond to help shade the area and filter storm water

iv) Landowners in Roscommon County gained knowledge about natural shorelines at the Natural Shoreline Workshop
   (1) MRWA was recognized as an authority in promoting natural shorelines
   (2) MRWA was asked to provide a workshop at Michigan Chapter, North American Lake Management Society conference

Related Efforts

8. *Was this project a stand-alone effort or was there a broader effort beyond the part funded by the GLFT? Have other funders been involved either during the time of your GLFT grant or subsequently?*

For the most part, this special project was part of broader efforts beyond the part funded by the GLFT. The only exception to this was the development of the "MRWA Sustainability Plan", where the GLFT funded the entire $10,000 cost. All other scope of work activities involved other (primary) funders, including the Wege Foundation, U.S. EPA/Great Lakes Restoration Program, Fremont Area Community Foundation, Sustain Our Great Lakes Program/National Fish & Wildlife Foundation, and others.

9. *Has there been any spin-off work or follow-on work related to this project?*

No, however, it's worth noting that the MRWA received renewed financial commitments over 3-years (2013-15) from the Wege Foundation ($180,000) and the Fremont Area Community Foundation ($120,000) that relate to MRWA efforts funded, in part, by this special project.

Communication/Dissemination

10. List publications, presentations, websites, and other forms of formal dissemination of the project deliverables, tools, or results, including those that are planned or in process.

Publications (see attachments)

1) MRWA Sustainability Plan (October 2010)
2) Ferris State University Rain Garden newsletter articles
3) Ferris State University Rain Garden brochure
4) Tri-County High School Ecology students' tree planting event newsletter article
5) Cadillac tree planting event newsletter article
6) Houghton Lake shoreline workshop brochure and newsletter article

Presentations (not all attached)

1) Cedar Creek Stream Habitat Restoration/Riparian Forestation presentation to Sustain Our Great Lakes / National Fish & Wildlife Foundation webinar (Midwest audience)
2) Presentations to Ferris State University Physical Plant officials
3) Ferris State University students' project presentations
4) Tree planting presentations for Tri-County and Cadillac students
5) Shoreline workshop presentations

Websites

1) MRWA website (www.mrwa.org)

11. Please characterize your efforts to distribute and encourage use of products, processes, programs, etc. developed through this grant.

a. The MRWA uses its "MRWA Sustainability Plan" with select funders to fundraise for MRWA programs and operations.
b. The Ferris Rain Garden project was a unique project involving curriculum building activities for college students. As a result of the project publicity, the Mecosta Osceola ISD Career Center principal asked if a similar project could be accomplished at their facility.
c. The shoreline workshop presentations have been developed to continue education for riparian owners. Notices have been sent to all lake associations in the watershed expressing our interest to provide these presentations at their meetings. Several associations have expressed an interest in future workshops.
d. The MRWA continues to work with schools to help reforest our watershed. Two tree planting projects with students are being planned that will use some of the processes developed through this grant.

Reflections

12. Please describe any unanticipated benefits, challenges or surprises, and/or important lessons learned over the course of the project.

This special project reinforced the importance of having access to discretionary funds to support non-profit organizational and program/project needs. GLFT funds were effectively used to 1) facilitate an organizational sustainability vision, 2) leverage over $870,000 in additional MRWA program and project grants, 3) offset essential base program and operation expenses, and 4) enhance implementation efforts with existing on-the-ground projects. The above successes helped advance the MRWA in the eyes of other funders and stakeholder partners, resulting in a

lead (fundraising) gift, two continuing operational/program support grants (2013-15), and stronger strategic partnerships that will benefit the MRWA and the Muskegon River Watershed.

Every project has its challenges, surprises, and lessons learned. The Ferris Rain Garden challenges involved the coordination of professors planning and conducting their specific elements of the project. Some of these project elements built on others so timing was important. At times, the project was redesigned because professors or students did not have their elements completed. Then, just two months after the planting took place, Big Rapids had one of the largest rain events in years resulting in the breakage of a water main next to the garden. Water marks on the light pole next to the garden indicated the water had been two feet or more above the garden. We were surprised the plants had taken root so quickly and few were lost.

13. *What recommendations (if any) would you make to other project directors working on similar efforts or to the GLFT?*

For the reasons and benefits outlined in 12 above, the MRWA recommends that the GLFT provide/award discretionary funds to worthy non-profit entities (whose missions align with GLFT objectives) through a non-special project annual GLFT grant application opportunity. As was done for this special project, the GLFT would approve proposed discretionary expenditures.

Attachments

14. Please attach any reports or materials developed through the grant.

See "attachment file" (pdf. format) for the following items:

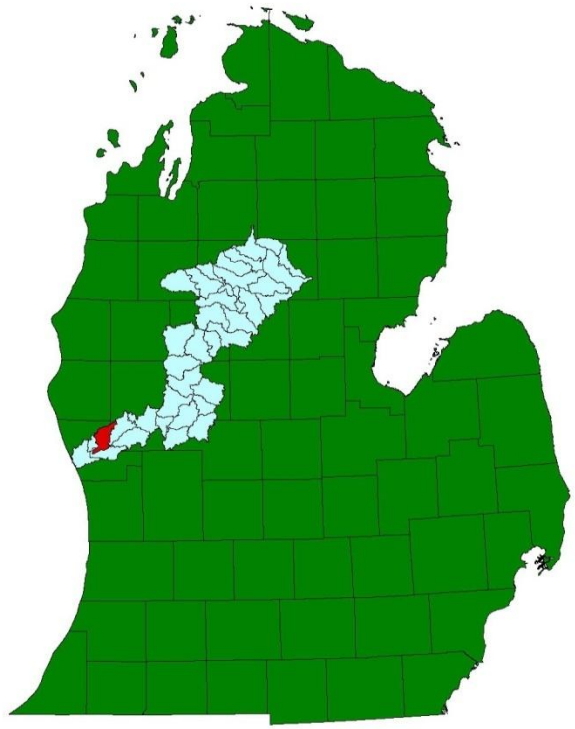
- Cedar Creek Stream Habitat Restoration/Riparian Forestation presentation
- Ferris Rain Garden brochure
- MRWA Annual Reports (2010-2011)
- MRWA Sustainability Plan (October 2010)
- Natural Shoreline Workshop brochure
- Newaygo FACF 2010-2012 project reports – already sent to GLFT
- Newsletters with articles pertaining to the projects
- Newspaper articles pertaining to the project
- Picture collage of project activities

SUSTAIN OUR GREAT LAKES

Cedar Creek Stream Habitat Restoration /Riparian Forestation

Presenter: Gary Noble, Muskegon River Watershed Assembly

Muskegon River Watershed
(over 2,700 square miles)



- **Cedar Creek Watershed** is located in NE Muskegon & SW Newaygo Counties, MI (upstream of Muskegon Lake AOC)
- Incl. large portions of Manistee National Forest
- One of few remaining designated trout streams in Muskegon Co. & one of few coldwater streams below Croton Dam (on Muskegon Rr. mainstem)
- Cedar Creek provides irreplaceable stream access to fish migrating from L. Michigan & Muskegon L.
- Cedar Creek has long suffered from historical human impacts related to erosion, sedimentation, & loss of native vegetation

Cedar Creek Stream Habitat Restoration/Riparian Forestation

- **$28,400** grant in 2011 to Muskegon River Watershed Assembly (MI)
  - ✓ $32,822 in matching contributions ($19,278-GLFT, $3,500-MSFA, $10,044-MCD)
- **Goal**: restore in-stream coldwater habitat & mitigate alterations in stream corridor that occurred due to human & natural impacts
- Installed **860 lineal feet** of woody in-stream fish habitat structures (target was 800 feet) at **27 sites**, **enhancing 7,892 feet** of coldwater stream (met target)

Carson Property - Site #1

Lascko Property – Site #21

Cedar Creek Stream Habitat Restoration/Riparian Forestation

- Reforested **11 acres** (target) of riparian buffer on public & private lands, re-establishing native tree canopy, understory species, & habitat diversity

- Over **9,000** native tree seedlings were planted within 100 feet of creek edge (White Pine, Canadian Hemlock, Sugar Maple, Red osier Dogwood, Ninebark, & Spicebush)

Forest Service Property - Reforestation

Forest Service Property - Reforestation

Cedar Creek Stream Habitat Restoration/Riparian Forestation

Graff Property - Site #5

- **In-stream habitat installations** followed prescribed improvements outlined in the **"Cedar Creek Habitat Assessment & Improvement Plan"** (Timberland RC&D, 2004)
  - ✓ Targeted priority stream reach 5 involving 5 private landowners

Forest Service Property - Reforestation

- **Reforestation efforts** followed recommendations from major research indicating Cedar Creek as a high-priority sub-basin where reforestation can help protect the Muskegon River long-term & mitigate hydrologic changes
  - ✓ Targeted priority stream reaches 4 & 5 on public & private land (encompasses 19% of total stream length)

Cedar Creek Stream Habitat Restoration/Riparian Forestation

- **Species Benefitting from Project** (by restoring native habitat & key micro-habitats):
  - ✓ Brook trout (DNR goal to manage stream as self-sustaining Brook trout fishery)
  - ✓ Steelhead (rainbow trout)
  - ✓ White sucker, Sculpins, Central mudminnow, Bullhead, & Blacknose dace
  - ✓ Eastern Massasauga Rattlesnake (MI Species of Concern)
  - ✓ Wood Turtle (MI Species of Concern)

- **Monitoring & Evaluation:**
  - ✓ In-stream habitat structures – Before (baseline) & After fish surveys using electro-shocking technology ("After" fish survey conducted 3 yrs. after installation)
  - ✓ Reforested riparian buffer – evaluated 1 yr. after planting & future yrs. for tree survivability rate

- **Project Partners:**
  - ✓ **Muskegon Conservation District** – did in-stream & reforestation work
  - ✓ **U.S. Forest Service** – provided before (baseline) fish survey & will conduct after installation fish survey (using electro-shocking technology)

Cedar Creek Stream Habitat Restoration/Riparian Forestation

Contact Information

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Our Goals

The Problem

When rain water or other runoff from hills hits impermeable surfaces like concrete, it gathers contaminants. The contaminated runoff flows into drains and then into water bodies. Eighty percent of campus runoff flows into a stream off Ives Avenue which then flows into the Muskegon River.

The Solution

The MRWA and Ferris State collaboratively created a rain garden to reduce runoff from reaching the Muskegon River. With the project in place, storm water runoff is reduced and Ferris gained an environmentally friendly aesthetically-pleasing landscape feature. The garden also serves as a teaching tool for students at the university and public and private schools around the area.

Why Use Native Plants?

Native plants are deep-rooted perennial plants that make deep channels in the soil to absorb runoff. Natives are accustomed to Michigan's unique climate, and once they are established need little irrigation or fertilizer. Native plants also provide food for native insects which in turn help with pollination, and attract other native wildlife.

Location of rain garden

The rain garden on FSU's campus is located on the west side of parking lot 2 off of Ives Avenue.

FERRIS STATE UNIVERSITY

FSU Depts./Professors Involved

Nature Study—Cindy Fitzwilliams-Heck
Sign and brochure design

Instructional Design—Connie Morcom
Video production

Built Environment—John Schmidt
Rain garden construction design

Integrated Ecology—Scott Herron
Curriculum and plant propagation

GIS Surveying—Robert Burtch
Surveying and mapping

Physical Plant—Will Gasper/Michael Hughes
Construction equipment/garden materials

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Big Rapids HS Earth Science—Jean LaLonde

Terry Stilson, Program Coordinator
Muskegon River Watershed Assembly
@Ferris State University
1009 Campus Drive JOH303
Big Rapids, MI 49307-2280
Phone: 231-591-2324 Email: mrwa@ferris.edu
Website: www.mrwa.org

Project funding provided with grants from the Ferris Foundation, Consumers Energy Foundation, and MRWA discretionary funds from the Great Lakes Fishery Trust; material and plant donations by Morgan Composting, FSU Physical Plant, Mecosta Conservation District, St. Peter's Lutheran School, and Karen Motawi.

Muskegon River Watershed Assembly & Ferris State University in collaboration

FERRIS STATE UNIVERSITY

Ferris Rain Garden

A Bio-friendly Approach to a Storm Water Problem

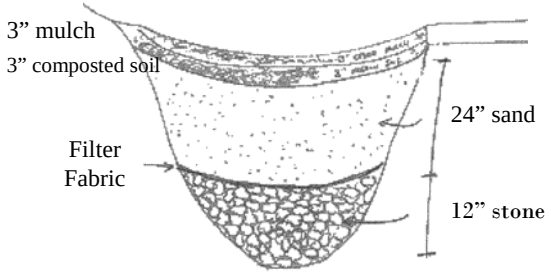
What is a rain garden?

A rain garden is a depression in the landscape, designed, and planted with native plants to trap, absorb, and filter storm water runoff and improve water quality in our streams and lakes.

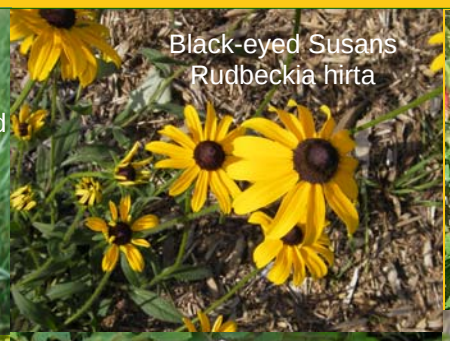
Benefits of a Rain Garden

- Provides a solution to storm water pollution
- Contributes to groundwater recharge, allowing water to seep into the ground instead of flowing into the nearest drain
- Creates habitat for butterflies, birds, and other wildlife
- Offers an aesthetically-pleasing landscape feature
- Gives a low maintenance alternative to irrigation
- Furnishes an outdoor classroom to study plants and wildlife

FSU's Built Environment Soil Design




Common Milkweed
Asclepias syriaca


Black-eyed Susans
Rudbeckia hirta


Columbine
Aquilegia canadensis


Golden Alexanders
Zizia aurea


Swamp Milkweed
Asclepias incarnata


New England Aster
Aster novae-angliae


Blue Lobelia
Lobelia siphilitica


Bergamot
Monarda fistulosa


Big Leaf Aster
Aster macrophyllus


Nodding Wild Onion
Allium cernuum


Sand Coreopsis
Coreopsis lanceolata


Joe Pye Weed
Eupatorium maculatum

Some of the Native Plants in the Garden

Lake Shoreline Protection

"Voluntary Shoreline Restoration Programs" were conducted in 2010 on Hess, Brooks, and Fremont Lakes in Newaygo County in an effort to improve water quality and increase shoreline vegetation.

Executive Director Gary Noble and the Muskegon Conservation District (MCD) first held educational sessions for the lakes' residents to increase awareness about the negative impacts traditional lawns have on water quality and the benefits of installing native plants to absorb nutrients and to create greater infiltration of storm water runoff. Through the project, interested residents were provided assistance with garden designs, choosing plant types, and were given free native plants.

Hess and Brooks Lakes' property owners participated in the program in the spring and Fremont Lake property owners in fall 2010.

Funding for this program was provided through MRWA discretionary funds from the Fremont Area Community Foundation and Great Lakes Fishery Trust (GLFT).

Pictured right: Students, MCD and MRWA staff plant along the shoreline.

FSU Cistern Rain Garden

The MRWA began a unique storm water project in 2010 with FSU. Eighty percent of storm water from the Big Rapids campus drains into a stream off Ives Avenue, and then to the Muskegon River. Much erosion is taking place along the stream as it enters into the river.

FSU instructor Cindy Fitzwilliams-Heck and Program Coordinator Terry Stilson designed a cistern/rain garden project that incorporated project tasks into college curriculum and coarse studies. Initial meetings with FSU Physical Plant personnel resulted in gaining permission to complete this project in an area behind Johnson Hall.

Project grant proposals were written to fund the project. The FSU Foundation awarded $4,000 toward this project and Consumers Energy Foundation $2,500. The MRWA Board allocated $14,500 from discretionary funds from the GLFT and Wege Foundation.

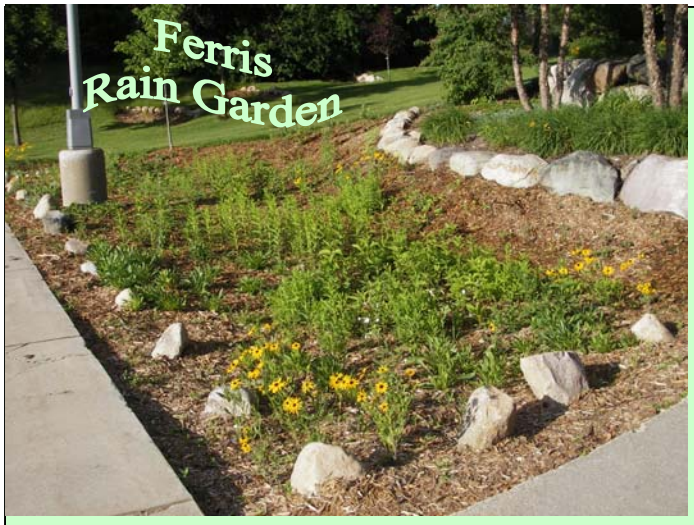
During the fall 2010 semester, the GIS/Surveying department surveyed the area and produced project mapping. The Biology department completed storm water projects and developed educational curriculum. The Television Production department videoed different professors, students and MRWA staff who were involved in the project and produced a project video. More departments will be involved in the winter semester.

Pictures: Above: site of future rain garden. Right: plume of sediment to the drain in the parking lot coming from the hill above the rain garden site.

A "Voluntary Shoreline Restoration/Protection Program" was continued in 2011 on Fremont Lake in Newaygo County in an effort to improve water quality and increase shoreline vegetation.

Executive Director Gary Noble, the Muskegon Conservation District and the Fremont Lake Association assisted 34 riparian owners in establishing native plant buffers on their waterfront properties along Fremont Lake. MRWA staff, Muskegon Area Intermediate School District personnel, and Muskegon Middle School students also planted and mulched native plants at Sheridan Township Hall property adjacent to Fremont Lake.

Funding for this program was provided through MRWA discretionary funds from the Fremont Area Community Foundation and Great Lakes Fishery Trust (GLFT).



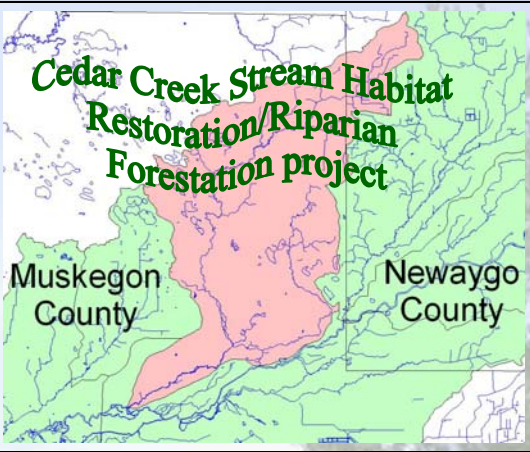
MRWA and Ferris State University began partnering on a unique storm water project in 2010. Eighty percent of storm water from the Big Rapids campus (Mecosta County) drains into a stream off Ives Avenue, and then to the Muskegon River. Much erosion is taking place along the stream as it enters into the river.

Ferris professor Cindy Fitzwilliams-Heck and MRWA Program Coordinator Terry Stilson worked with several Ferris departments including Biology, Surveying/ GIS, Built Environment, and TV Production, to develop plans and a video for the rain garden. The Ferris Physical Plant constructed the garden in May and the Big Rapids High School Earth Science class planted the garden on June 1.

Funding for the project was provided by the Ferris Foundation, Consumers Energy Foundation, and MRWA Board allocation from Great Lakes Fishery Trust discretionary funds. In-kind donations were supplied by Ferris, Morgan Composting, and others.

Pictured above: Construction of the rain garden, planting the rain garden, light pole showing the garden had been under 2 feet of water during the August 2 rain event (5—6 inches in an hour). The plants held firm.

Restoration



In 2011, the National Fish & Wildlife Foundation awarded the MRWA with a grant under the Sustain Our Great Lakes program. The Muskegon Conservation District is the primary project partner and will install in-stream shoreline habitat structures and reforest 11 acres of riparian buffer to reestablish native tree canopy and understory species in the Cedar Creek Watershed (Muskegon County). Additional funding for the project is provided through MRWA discretionary monies from the Great Lakes Fishery Trust, a Muskegon Sports Fishing group, and in-kind material from the Muskegon Conservation District.

According to extensive research completed in our watershed, protecting future biological integrity and water quality can be accomplished by increasing forest cover in high priority areas.

In April, Tri County High School Ecology students planted more than 200 Tamarack trees along Tamarack Creek in Montcalm County. MRWA Program Coordinator Terry Stilson and Tri County teacher Laura Readle organized the project where students plotted and mapped each property, conducted soil testing, and planted 14 tree structures. Funding for this project was provided through MRWA discretionary funds from the Great Lakes Fishery Trust.

Tree Planting

In September, students from Professor Fitzwilliams-Heck's Nature Study class planted mature maple trees along Milton Avenue in Big Rapids (Mecosta County).

Funding for this project was provided by Haworth Inc. The City of Big Rapids partnered on the project.

Muskegon River Watershed Assembly

Sustainability Plan

October 2010

CONSERVATION IMPACT

focus | mission

Table of Contents

Executive Summary

Background

In June 2010, the Muskegon River Watershed Assembly (MRWA) selected Conservation Impact to fulfill its sustainability planning needs as it seeks to diversify its revenue, develop leadership, and maximize impact in service to the watershed. The goal of the sustainability plan is to create a blueprint that defines strategies for long-term sustainability and designs the most appropriate structure, systems, staffing, leadership, and revenue model to achieve that vision. Interviews with thirty-five individuals, focus groups with nine members, extensive secondary research, and a retreat with staff and Executive Board members inform the creation of the plan.

Situation Analysis

MRWA has a track record of impactful conservation projects, fills a distinct niche, and has a unique watershed-wide perspective. External stakeholders speak about the organization's role as a leader and its ability to bring partners together. The critical issues facing MRWA are identity and capacity issues. It is time to tell the story of MRWA's watershed-wide impact and broaden its base of support.

A variety of trends and issues are taken into account as MRWA determines what areas of strategic focus are most critical. The economic downturn, increased fundraising competition, and changes within DNRE impact the overall operating environment. Issues such as fragmentation, thermal and nonpoint source pollution, hydraulic fracturing, and groundwater removal impact the health of the resource.

Organizational Description

MRWA's areas of strategic focus are:

- **Restore the Watershed:** preserve and restore the resource directly with on the ground projects
- **Increase Awareness and Appreciation of the Resource:** spread the message of the uniqueness of the resource, how choices impact it, and how to be good stewards
- **Improve Decision-Making in the Watershed:** individuals and local units of government make resource-friendly decisions that contribute to maintaining and improving the health of the resource.

These areas of focus inform the desired outcomes for which MRWA strives as well as the products and services it offers.

Constituencies

MRWA's core constituents are its members, local units of government, local champions, and riparian land owners. Each of these types of core constituents has distinct interests in relation to the resource and MRWA can meet their needs in highly customized, strategic, and impactful ways.

Strategic partners with whom MRWA works in order to accomplish common goals are another important constituency (i.e. environmentally-minded funders, DNRE, Ferris State University, Muskegon Watershed Research Partnership). Other partners help implement projects on a more local basis, such as K-12 educators and other non-governmental organizations. In addition, a number of target market segments are important constituencies MRWA must connect with in order to reach its desired outcomes.

Organizational Design and Development

MRWA will shift its organizational model from a project-focused nonprofit to a constituent-centered project and program-focused nonprofit. This change reflects the need for MRWA to adopt methods in addition to projects in order to achieve its desired impact. It also reflects a deliberate decision to more deeply engage members and partners.

Governance and Leadership

MRWA is governed by a Committee of the Whole, which in turn elects officers to the Executive Board which handles day-to-day operations. This structure is appropriate, but moving forward the Committee of the Whole will become more robust and the Executive Board will become more strategic in its focus. The creation of a new Development Committee will help coordinate and expand capacity for a more diverse approach to fundraising.

Management and Staff

A three-phase staffing plan will first realign and then grow staff capacity as resources become available. Hiring contractors will free up staff capacity initially and eventually the staff will grow from two to four fulltime positions (an Executive Director, two Project Managers, and a Development / Marketing Assistant).

Structures and Systems

MRWA will develop and maintain sufficient data repository, volunteer / member / donor information management, human resources, and financial / accounting systems to accomplish its goals.

Revenue Model

Expense Projections

Expense projections for the first two phases of the staffing plan are outlined. The budget will increase by approximately $80,000 to accommodate one new staff position, the hiring of contractors, and additional programmatic costs over the next 1 ½ to 2 years.

Revenue Model

MRWA's revenue model assumes the majority of project expenses will continue to be covered by grant funds. New more programmatic (non-project) efforts will find support through more traditional philanthropic fundraising strategies. Overall, revenue raising strategies include:

- Customizing and growing membership
- Building and marketing fee for service products
- Exploring affinity / revenue-raising programs with complimentary partners
- Cultivating foundation and government funders as strategic partners.

Conclusion

MRWA fills a critically important role in preserving a unique and environmentally significant resource. By growing staff capacity, broadening its base of support, and telling the story of the resource, it will become more sustainable and meet the challenge of protecting, restoring, and preserving the watershed for future generations.

Introduction

The Muskegon River Watershed Assembly (MRWA) was founded in 1998 to preserve, protect, and restore one of Michigan's most unique, largest, and environmentally significant watersheds. MRWA's watershed-wide perspective is unique in the region.

During its twelve years of operation, MRWA has hired two professional staff, built numerous partnerships with local and statewide organizations, and completed over 100 projects in pursuit of its mission. Its conservation projects have made a significant impact on the health of the watershed. MRWA has also contributed to the base of scientific information regarding the watershed by supporting research efforts.

At this point of its development, MRWA wants to take stock and plan more deliberately for the future. It has chosen a sustainability planning process to help the organization diversify its revenue mix, develop organizational leadership, and ensure that it maximizes its impact in service to the watershed resource.

Background

Current Situation

The majority of MRWA's efforts and resources have been devoted to the completion of strategic conservation and education projects throughout the watershed. This focus has served to improve the health of the resource and develop the organization's reputation as a strong, effective partner.

This project-focus has also led to an organizational structure where staff and board spend the majority of their time and energy on project selection, management, and reporting; leaving little to address other organization-building needs. In addition, nearly 75% of MRWA's revenue is grant based with the majority tied to specific projects.

As MRWA enters the next phase of its organizational development, it seeks to strengthen and increase the sustainability of its operations and organization. In June 2010, MRWA selected Conservation Impact to fulfill its sustainability planning needs in order to build a more sustainable and impactful organization.

Sustainability Plan Purpose

The goal of the sustainability plan is to create a blueprint that defines strategies for long-term sustainability and aligns the organization to support those strategies. The plan also designs the most appropriate structure, systems, staffing, leadership, and revenue model.

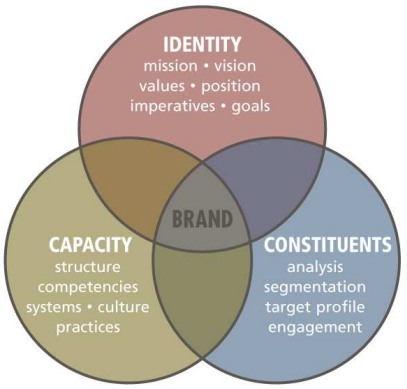
Methods and Planning Process

The sustainability plan is informed by phone interviews with all nine MRWA Executive Board members, MRWA's Executive Director and Program Coordinator, and twenty-four external stakeholders and conference call focus groups with nine MRWA individual members. In addition, extensive secondary research was conducted and organizational materials were reviewed. Conservation Impact also brings 14 years of experience with hundreds of conservation nonprofits and natural resource agencies as a backdrop for the analysis.

MRWA's Executive Board and staff met in person in August 2010 to review the situation analysis, make decisions regarding strategic issues, and give input to inform the sustainability plan.

Framework

Conservation Impact uses its Integrated Strategy framework to understand what makes organizations sustainable: a strong, clear identity; a solid base of engaged constituents; and sufficient organizational capacity to deliver results toward mission. Only when all three components are fully developed and in alignment with one another can an organization be stable and create a solid brand.



Integrated Strategy for Success and Sustainability © 2010 Conservation Impact

The sustainability plan considers MRWA's ability to achieve results within this framework and articulates an organizational model that develops and aligns these three critical components for the maximum organizational sustainability.

Situation Analysis

Analysis Summary

MRWA has many strengths upon which to build towards increased sustainability:

- A track record of impactful conservation projects
- A unique niche as caretaker and advocate with a watershed-wide perspective
- Strong project management and relationship management skills
- Access to high-quality scientific data and technical expertise
- Ability to locate and secure funding in support of conservation projects.

External stakeholders consider MRWA a leader that plays a critical role as catalyst, convener, and "go-between" helping to connect local efforts and larger scale concerns, efforts, and funders. The organization enjoys support from a few key funders and a small membership base, but the base of support is very narrow.

The critical issues currently facing MRWA are identity and capacity issues. MRWA uses science-based criteria to select those projects that will contribute most highly to the health of the watershed resource and internally it is very project focused. This combination of strategically selected projects and an internal project focus has created a MRWA that is "walking the walk" but not "talking the talk" of its watershed-wide perspective to the degree needed to build long-term sustainability.

It is time for MRWA to once again embrace its uniqueness, operate from a truly watershed-wide perspective in all that it does, and address its inherent structure / sustainability disconnect in order to deepen impact and organizational strength.

Context and Trends

The recession and economic downturn have hit the State of Michigan especially hard. In June 2010, the state's unemployment rate was 13.1%, higher than the national rate of 9.6%. In addition, local units of government in the state have been severely impacted. State government has cut its revenue sharing with local governments and property taxes revenue is down. (www.senate.michigan.gov/sfa/publications/issues/localgovfin/localgovfin.pdf)

The nonprofit sector in Michigan is growing quickly. The number of 501c3 organizations in the state increased 64% between 1998 and 2008 – from 18,419 to 30,203

(nccs.urban.org). Meanwhile, nationally private charitable giving fell around 2% in 2008, and 3.6% in 2009, the first declines in giving since 1987 (Giving USA, 2008 and Giving USA, 2009). These facts point to an increasingly competitive fundraising environment.

Michigan's fresh water resources are key to the state's economy and support a variety of industries. In the Muskegon River Watershed, tourism is one such example. The Muskegon River attracts non-commercial fisherman to its unique cool-water ecosystem and other recreationists, such as the United States Canoe Association which recently selected the Muskegon River as the site for the 2011 National Championship.

Pre-Existing and Emerging Issues

Compared to other rivers and watersheds in Michigan, the Muskegon River Watershed is seen as being in "good shape" according to many interviewees. This perception of the health can make working to preserve, protect, and restore the watershed feel less urgent. However, the Muskegon River's cool-water ecosystem is very unique and quite fragile. Constant vigilance is required to maintain this precious resource.

Some challenges to preserving and protecting the resource are pre-existing. The Muskegon River is the second longest river in Michigan and is broken up by over 100 dams. This high level of fragmentation of the river system has led to build up of sediment behind many dam structures and subsequent thermal pollution. In addition, nonpoint source pollution (i.e. from agriculture and urban and residential developments) and a variety of invasive species threaten the health of the resource.

Land use in the watershed has a direct impact on the health of the resource. While land use has remained relatively stable in the Northern Lower Peninsula region of Michigan, the increase in development in critical riparian areas is an ongoing concern. Indeed, Michigan is a leader in "Coastal Seasonal Housing" with 230,000 seasonal housing units in 2000 (oceanservice.noaa.gov/programs/mb/pdfs/2_national_overview.pdf)

Year	Urban or Built-up	Agriculture	Forest	Nonforest Wetlands	Open Water	Barren
1980	1%	25%	70%	1%	3%	1%
2000	2%	20%	74%	1%	3%	1%

Percent of Ecoregions by Land Cover, 1980 and 2000 - Northern Lower Peninsula
(Social and Economic Assessment for Michigan's State Forests, MDNRE, 2006, michigan.gov)

And additional threats to the watershed are emerging. Hydraulic fracturing (oil and gas development fracking) is a growing trend within the watershed and has unknown impacts on the quality of groundwater. In May 2010, oil and gas companies spent $178 million on state mineral leases to carry out such operations. Three counties within the watershed are part of the Collingwood shale area and are of great interest to oil and gas developers (Missaukee, Crawford, Kalkaska) (www.circleofblue.org).

Another emerging issue affecting the watershed is that of groundwater extraction, particularly for water bottling. A water bottling plant in Mecosta County extracts ~313,000 gallons a day. Local residents are split on this issue and court cases have wrestled with the topic and its implications (www.circleofblue.org). An additional water bottling plant is under consideration within the watershed.

Institutional / Regional Landscape

MRWA has a large roster of partners. Key among these is the Michigan Department of Natural Resources and Environment (DNRE) which has served as a funder of many MRWA projects. DNRE has looked to MRWA as a reliable implementer in the watershed. As a government agency, DNRE is affected by the political environment and due to reduced funding recently adopted an increasing focus on regulation.

Many institutions of higher education that conduct watershed-related research exist within the watershed (e.g. GVSU-Annis Water Resources Institute). This means that a great deal of relevant scientific expertise exists in the watershed. Some of the research produced is readily applied, but some is not easily accessible.

Some water-related organizations exist at the sub-watershed or county levels within the watershed. Lake associations, sub-watershed entities, and resource conservation districts are examples. MRWA often partners with these local entities to implement projects.

The Muskegon River Watershed covers 2,700 square miles across 12 counties and includes 151 separate units of government. These local units of government are under significant economic and regulatory pressures. Decision-making processes, levels of enforcement, and resource-related policies vary widely and turnover among staff and elected and appointed officials is high. Demographics and environmental issues vary across the watershed. Two-thirds of the watershed's population live in the lower four

counties (Muskegon, Newaygo, Montcalm and Mecosta). In the upper watershed, second homes are more common and incomes tend to be lower.

Organizational Description

Mission, Vision, and Position

MRWA is dedicated to the preservation, protection, restoration, and sustainable use of the Muskegon River, the land it drains, and the life it supports, through educational, scientific, and conservation initiatives.

It envisions a future where:

- All those who live, work, and play in the watershed understand how their actions affect the resource and those downstream
- A full suite of native species is supported in abundance
- Dams and barriers that disrupt the flow of the river have been removed
- Public policies, private practices, and committed partnerships are in place to preserve the resource for future generations.

To ensure that this future is realized, MRWA deliberately positions itself as the leader, caretaker, and advocate for the Muskegon River Watershed.

Guiding Principles

MRWA embodies a set of guiding principles that inform how it is structured, measures success, and works with its members, partners, and constituents:

- **Science-Based Stewardship Culture:** MRWA puts scientific information into action in service to the resource and uses that information to educate its constituents and infuse a stewardship culture throughout the watershed
- **On the Ground, Watershed-Wide:** MRWA is committed to creating real, tangible improvements at the local level, within the context of a watershed-wide perspective
- **Proactive:** MRWA is dedicated to remaining vigilant and works proactively to ensure that the resource gains in health and sustainability
- **Partnership:** MRWA understands that it cannot meet its goals working in isolation and actively engages appropriate partners at local, regional, and state levels
- **Sense of Place and Connection to the Resource:** MRWA was founded by individuals who felt a personal connection to the resource; it seeks to foster this personal connection among others so that they become more inclined to make decisions that benefit the resource.

Strategic Focus Areas, Desired Outcomes, and Role

MRWA has identified three areas of strategic focus and corresponding desired outcomes:

Strategic Focus Area	Definition	Desired Outcome
Restore the Watershed	Preserve and restore the resource directly with on the ground projects	▪ The health of the watershed's cool water ecosystem is maintained and improved
Increase Awareness and Appreciation of the Resource	Spread the message of the uniqueness of the resource, how choices impact it, and how to be good stewards	▪ Those who live, work, and play in the watershed understand its uniqueness and environmental value ▪ Those who grow up in the watershed have a basic understanding of its workings and adopt a stewardship ethic
Improve Decision-Making in the Watershed	Individuals and local units of government make resource-friendly decisions that contribute to maintaining and improving the health of the resource	▪ Local units of government see MRWA as a resource and use its expertise to inform planning and policy ▪ Those who live, work, and play in the watershed make resource-friendly decisions on a daily basis

MRWA's history is one of working successfully in partnership with others to maximize impact. With this in mind, MRWA will concentrate on fulfilling the following roles within each area of strategic focus:

Strategic Focus Area	MRWA's Role
Restoring the Watershed	Identifier and prioritizer of projects; securer of resources; identifier and convener of partners; and project manager
Increasing Awareness and Appreciation of the Resource	Generator of message; ambassador; and engager and coordinator of supporters / volunteers / members
Improving Decision-Making in the Watershed	Technical expert / resource; synthesizer and translator of information for the layperson; and catalyst and advocate

Products and Services

MRWA's products and services can be categorized within its three strategic focus areas. Examples of products and services are outlined below in a way that is intended to be representative of work in each area, rather than a comprehensive catalog of all efforts.

Restoring the Watershed

- Selecting and completing MRWA-driven (in concert with partners) strategic conservation and restoration projects such as improved fish passage, riparian buffers, and watershed projects
- Providing fee-for-service project consultation and management services for riparian land owners and local units of government.

Increasing awareness / appreciation of resource

- Volunteer projects such as water monitoring efforts, adopt-a-stream groups, and river clean up days
- Providing "Train the Trainers" conference for K-12 teachers
- Developing curriculum for various age groups and audiences
- Implementing of customized marketing / educational plans to elicit desired behavior from target market segments (e.g. riparian land owners)
- Placing of signage throughout the watershed (watershed identification, etc.)
- Building MRWA membership program.

Improving decision-making in the watershed

- Giving educational presentations to groups such as local units of government, community groups, and sub-watershed groups
- Encouraging and implementing best management practices and model ordinances for local units of government
- Providing technical assistance / content area expertise to inform decision making
- Providing a comprehensive and up-to-date data repository.

Constituencies

Constituents are those groups or individuals who are so integral to an organization that without them, it cannot succeed. MRWA's core constituents include its local units of government, local champions, members, and riparian landowners. In addition to these core constituents, MRWA has strategic partners with whom it shares goals, other implementation partners, and key target market segments with whom it seeks to encourage specific actions.

Core Constituents

Local Units of Government

There are 151 local units of government located within the watershed (counties, cities, townships, villages, etc.). Resource-related policies and ordinances vary widely and high levels of turnover among officials exacerbate this uneven approach. The interests of local units of government in relation to the resource include:

- Ability to respond to regulatory pressures
- Desire to promote tourism, local economic development, and quality of life
- Desire to improve / maintain community amenities
- Specific project needs (e.g. deteriorating dams).

The needs of local units of government that MRWA can meet include:

- Provision of scientific information and technical expertise to drive decision-making
- Provision of model ordinances and best management practices for easy adoption
- Project scoping and management services
- Technical assistance to assess needs, suggest funding, and interpret new regulations
- Partnering on funding opportunities.

Communication with local units of government is a significant task that will involve MRWA staff, board members, and local champions. This communication will be written, electronic, and in-person and the tone will be professional and reflect the deep expertise MRWA has to offer this core constituency.

Local Champions

Over 40 sub-watersheds exist within the watershed. A few of these sub-watersheds are served by local water-related organizations, but most are not. In some cases less formal groups or key individuals serve as informal leaders in service to the resource. Here the

term “local champion” is defined as including both formal organizations and informal leaders at the local (sub-watershed or county) level.

Local champions do not necessarily feel a connection to the watershed as a whole. The water-related issues they care about are also likely to be local (i.e. their lake or tributary). Some are already engaged with MRWA as members or project partners, but many are not. Their interest in relation to the resource is preserving, protecting, and restoring their local piece of the resource.

The needs of local champions that MRWA can meet include:

- Provision of scientific information and technical expertise to drive decision-making
- Provision of best management practices to drive local advocacy efforts
- Watershed-wide coordination so that local efforts best impact the resource as a whole
- Reinforcing a sense that local efforts add to a larger watershed-wide impact.

Communication with local champions will focus on the part of the resource the local champion cares about, but within the context of the watershed as a whole. MRWA will maintain regular communication with local champions (electronic, written, and in-person).

Staff is responsible for conducting more systematic communications such as newsletters and Board members are responsible for more face-to-face personal communications (e.g. at Committee of the Whole meetings or local / sub-watershed meetings and presentations). This is not to say that staff will not also have personal interaction with local champions, but that maintaining of the personal connection champions feel to MRWA lies with the Board.

MRWA Members

MRWA has had 500 members (past and present) and currently has ~150 paid members. Members tend to have lived in the watershed for some time and feel a personal connection to the resource. Many remember the founding of the organization and still think of it as a grassroots, volunteer-driven organization. Their interests in relation to the resource include:

- A desire to feel more connected to the resource and others who share their interests
- A desire to feel that they are part of something larger than themselves
- Opportunities to engage directly to benefit the resource

- Ensuring the health of the resource for future generations or for their own recreation.

The needs of MRWA members that MRWA can meet include:
- Completion of projects that improve the resource for use by local residents
- Provision of volunteer opportunities that allow direct participation and connection to others (e.g. river cleanups, monitoring projects, marketing, committee work)
- Provision of opportunities to participate and give input to MRWA priorities.

Communication with members will be "written for the layperson" (i.e. less technical) and focus on how individuals experience the resource. Newsletters and regular electronic communications from MRWA will foster members' ownership of the organization and collective responsibility for the health of the resource. In-person communication will occur during specific events such as Committee of the Whole meetings, presentations at watershed functions, mobile display exhibits, member activities and volunteer projects. Board members play a crucial role in reaching out to members at these functions to provide the sense of individual connection the membership desires.

Riparian Landowners

Riparian landowners (primary or secondary home owners, agriculture and businesses) are those constituents whose actions have the most direct impact upon the health of the resource. Their concerns in relation to the resource vary and include:
- Quality of life issues (water quality, habitat, views, access, etc.)
- Maintaining / improving property value and investment value
- Maintaining / improving land productivity
- Access to resource for recreation or to support business needs
- Understanding the resource-related laws and ordinances that affect their property
- Specific project needs (e.g. deteriorating dams).

The needs of riparian landowners that MRWA can meet include:
- Provision of information and best management practices that protect / enhance property value / investment and land productivity
- Provision of technical expertise and consulting
- Provision of referrals to trustworthy vendors and contractors

Communication to riparian landowners needs to position MRWA as the "go-to" resource for watershed-related questions and concerns. Attention will be paid to explaining how

taking specific desired actions, such as expanding buffer zones, connects to an issue the landowner values, such as property investments. Messages will be delivered through presentations, electronically, on the MRWA website, and in newsletters of local organizations the land owners know and trust (homeowners associations, chambers of commerce, etc.).

Strategic Partnerships

An organization's strategic partners are those partnerships where an explicit agreement is forged in order to achieve common goals and create new value. MRWA can most successfully realize its desired outcomes within the context of such partnerships. Additional strategic partnerships needed to implement future projects should be expected.

Four of MRWA's current strategic partners include:

- **Muskegon Watershed Research Partnership (MWRP):** Created to better understand how the Muskegon River functions and responds to human influence, this partnership includes MRWA and key researchers and academic institutions and is dedicated to creating new knowledge and ensuring that scientific information is applied to benefit the watershed. In particular, MWRP member Grand Valley State University – Annis Water Resources Institute (GVSU-AWRI) houses/coordinates the MWRP database and enhances MRWA's planning and implementation capabilities on projects and works closely with MRWA to implement Management Plan recommendations.
- **Michigan Department of Natural Resources and Environment:** MRWA's partnership with DNRE is longstanding and has resulted in the completion of numerous on the ground projects that have delivered significant conservation value.
- **Ferris State University:** FSU has provided a home base for MRWA as well as access to vital systems and infrastructure which provides stability and cost-savings.
- **Environmentally-Minded Private Funders:** MRWA has enjoyed partnerships with funders in the past (i.e. Wege Foundation, Great Lakes Fishery Trust, Fremont Area Community Foundation, Community Foundation for Muskegon County). Moving forward, MRWA expects to continue identifying ways it can work with the private funding community to meet common goals.

MRWA's staff (and to some extent the Board) actively engage strategic partners on an on-going basis. With these constituents, communication is highly customized, focused on a particular topic or area of concern, and one-on-one.

Implementation Partners

Historically, MRWA has implemented the majority of its work in partnership with a variety of organizations and agencies. It is expected that this method of operations will continue, especially in relation to specific projects. Two categories of these partnerships include:

- **Educators:** MRWA works in partnership with K-12 educators throughout the watershed. Educators are in a unique position to grow watershed awareness and instill a stewardship ethic among future generations.
- **Other Non-Governmental Organizations (NGO's):** NGO's throughout the watershed help facilitate MRWA's efforts at the sub-watershed / local levels. Examples of these types of partners include conservation districts, regional Resource Conservation & Development Councils, and Muskegon Lake Watershed Partnership.

Target Market Segments

In order to achieve certain desired outcomes related to increasing awareness and improving decision making, MRWA must connect with the target market segments listed below in order to encourage desired behaviors.

Recreationists

- *Interest:* that the resource be available to support their recreation interests
- *Desired Behavior:* treat resource respectfully; report needs / issues (eyes and ears); purchase memberships; give donations; volunteer for cleanups; support resource-friendly policies
- *Messages / Strategies:* the health of the watershed is critically important to your quality of life and your recreation options; information on projects and results that enhance recreational opportunities; how to be a low-impact recreationist; MRWA membership; volunteer opportunities; signage.

Tourists

- *Interest:* a unique, high-quality outdoor experience
- *Desired Behavior:* treat resource respectfully; financially support the resource
- *Messages / Strategies:* Muskegon River watershed has unique environmental value; how to be a low-impact tourist; percentage donation program for watershed protection (i.e. with outfitters who serve tourists).

Owners of Water-Dependent Businesses (outfitters, etc.)

- *Interest:* dependent on health / attractiveness of the resource for business success
- *Desired Behaviors:* become local champions; report needs / issues (eyes and ears); purchase memberships; give donations; support resource-friendly policies
- *Messages / Strategies:* MRWA is your partner in maintaining the resource upon which you depend; mechanism to report issues to MRWA; information on projects and results in their part of the watershed; "Friends of the Watershed".

In order to connect with target market segments MRWA will employ a variety of outreach, marketing, public relations, education, and programmatic strategies customized to each segment.

Organizational Design and Development

Overview

MRWA's current organizational model – a project-focused organization – will transition to a constituent-centered project *and program*-focused organization. Within this plan:

- A project is a set of tasks with a specific beginning and endpoint that results in the accomplishment of a specific result
- Programs are ongoing efforts that achieve measurable goals on an ongoing basis.

This transition reflects two key changes. First, it acknowledges that MRWA's desired outcomes cannot be realized solely through a project-based approach. Influencing decision-making and increasing awareness and appreciation of the resource are not finite needs. Government officials turn over and residents move in and out of the watershed continually. Thus, an ongoing programmatic approach is needed to achieve results.

Secondly, the structural transition reflects a deliberate strategic decision to become an Assembly in the true sense of the word. MRWA envisions a future where members and local champions are deeply engaged as active partners carrying key messages and adding capacity so that the organization can maximize its impact.

The structure of MRWA outlined here is scaled appropriately. The geography of the watershed is very large and MRWA has only two professional staff, and Executive Board of nine, and 150 current paid members. Maintaining focus on the best, highest use of all organizational resources is paramount, as is using existing relationship building skills to develop and engage an ever-broadening base of members and local champions.

Governance and Leadership

MRWA is governed by organizational bylaws adopted in 2002 and last amended in 2010. Per Article V, MRWA's Committee of the Whole (including all dues-paying members) is empowered to make decisions regarding, "policies and actions of the MRWA." An Executive Board is charged to, "carry out the business of the MRWA based upon general direction from Committee of the Whole." The governance structure outlined in the bylaws is appropriate but offers little detail. A more explicit definition of roles and responsibilities for the Committee of the Whole and Executive Board is offered here.

Committee of the Whole

Currently the Committee of the Whole is not very active. However it is anticipated that the Committee will become more robust as MRWA more deeply engages members and builds connections with local champions. In anticipation of that more robust Committee, its responsibilities will include:

- Providing local input and expertise to inform policy decisions and priority setting
- Serving as the connector between MRWA's watershed-wide efforts and messages and local constituents
- Collecting and sending information and input from the local level up to MRWA's Executive Board and staff (eyes and ears of the watershed)
- Serving as active MRWA ambassadors (recruiting members, advocating for policy change to local units of government, securing volunteers for hands-on projects, etc.)
- Providing local access and expertise, especially in regards to local units of government.

Executive Board

The Executive Board currently spends much time working on a tactical, project level. Moving forward, the Board's focus must shift to strategic, watershed-wide level and spend its time monitoring progress toward strategic goals, building the base of support, and becoming more involved in raising funds. Moving forward, the Executive Board's responsibilities will include:

- Setting strategic focus and goals in partnership with staff
- Monitoring progress toward strategic goals
- Hiring, supervising, and evaluating Executive Director
- Setting policy agenda and programmatic priorities in partnership with staff
- Providing input and approving annual budget, fundraising, and work plans
- Serving as organizational ambassadors, especially with local champions and members
- Securing sufficient resources to support the organization in partnership with staff
- Providing financial oversight and ensuring legal integrity
- Serving the best interests of MRWA and the resource.

Adding new types of expertise to the Executive Board will be helpful with this transition. Specifically, marketing, public relations, government relations, and fundraising expertise will be critically important. MRWA should also consider recruiting Executive Board members from its strategic partners and core constituencies (riparian landowners, local units of government, local champions, etc.).

Committees

It is recommended that a Development Committee be created to coordinate MRWA's fundraising planning and implementation. This Committee should include the Executive Director and be chaired by a member of the Executive Board. Committee membership should include additional board members, MRWA members, and other interested and qualified volunteers.

The Committee's purpose will be to coordinate and lead MRWA's fundraising efforts to meet annual and longer-term fundraising goals. The Committee will identify specific tasks to be accomplished and assign those tasks to specific Committee, Board, or staff members. The Chair of the Development Committee must be empowered to hold fellow Board members accountable for completion of fundraising-related tasks.

Management and Staffing

MRWA's staff capacity must be realigned and expanded over time in order to realize the organization's desired outcomes. MRWA currently has two full time staff positions – the Executive Director and the Program Coordinator. Both staff members spend the majority of their time planning, managing, reporting on, or writing grants to solicit support for specific projects.

Moving forward, staff capacity must expand beyond completing this important project work to include developing and maintaining programs and broadening the organization's base of support. It is anticipated that adding staff positions and realigning responsibilities of existing staff will take time and be completed only as resources become available. A phased approach to this transition is recommended.

Phase One

The first priority is to free up some capacity of the two current staff positions to allow new critical tasks to be completed. As an interim step to free up some capacity quickly, it is recommended that certain staff functions be contracted to outside skilled specialists. The three areas that could be most easily contracted out to skilled specialists are:

- Bookkeeping and payroll
- Grant writing and reporting
- Website maintenance and development.

The portion of staff capacity this strategy frees up should be directed toward identifying and securing investment to fully fund new positions.

Phase Two

Phase two of the staffing plan develops two Program Manager positions with different, but complimentary, areas of focus: Conservation Projects and Education / Volunteer Projects. Adding one full time Project Manager and upgrading the Program Coordinator position to the Project Manager level would relieve the Executive Director of the majority of that position's project-related work.

Position	Responsibilities	Competencies / Skills
PM – Conservation Projects	▪ Serve as project manager for majority of conservation projects ▪ Build and maintain relevant partner relationships ▪ Maintain relationships with scientific community and keep project selection criteria updated ▪ Write relevant grants and reports ▪ Work with relevant committees and partners	▪ Project management skills ▪ Relationship management skills ▪ Content area expertise ▪ Ability to travel as needed
PM – Education / Volunteer Projects	▪ Serve as project manager for majority of education / volunteer projects (e.g. clean ups) ▪ Provide content expertise in education and volunteer management ▪ Build and maintain relevant partner relationships ▪ Write relevant grants and reports ▪ Work with relevant committees and partners	▪ Project management skills ▪ Relationship management skills ▪ Content area expertise ▪ Ability to travel as needed

With a significant amount of the Executive Director's capacity newly available, this position must be realigned to focus on the following areas of responsibility:

- Building relationships with key decision makers in local units of government
- Providing content area expertise to decision makers
- Serving as the face of the organization throughout the watershed
- Working in partnership with the Executive Board and staff to engage members and local champions

- Leading the organization's fundraising efforts in partnership with Executive Board and Development Committee
- Maintaining focus on strategic goals and responsible for results toward those goals
- Building and maintaining strategic partner relationships.

Some, but not all, key competencies needed to be successful in this position include:
- Proven content area expertise
- High-level relationship maintenance skills (funders, strategic partners, etc.)
- Effective communicator (internal (members, core constituents, etc.) and external)
- Ability and willingness to travel extensively.

Phase Three

Over time as more volunteers and members become more deeply engaged in MRWA's work, additional administrative support will be required. A Development / Marketing Associate position would prove most helpful and could encompass the following responsibilities:
- Support the implementation of fundraising tasks (data entry, thank you letters, mailings, etc.)
- Support the implementation of marketing / member communications (newsletters, frontline response to calls, emails, etc.)
- Website update and maintenance
- Other duties as needed to support Project Managers and Executive Director.

Structures and Systems

Data Repository / Data Management Systems

MRWA currently houses the most comprehensive collection of scientific data related to the watershed available in its online data repository. Like any database, the data repository is at risk of becoming obsolete as data becomes dated or data users' needs change. A regular process of tracking of who is using the data, how well their needs are being met, and what gaps exist should be conducted annually.

In addition, relationships with key researchers must be maintained in order to ensure access to up-to-date scientific findings. MRWA's Executive Director is responsible for maintaining relations with the Muskegon Watershed Research Partnership and Project Managers are charged with managing relationships related to specific projects they are managing.

Lastly, MRWA has already encountered instances where data exists but it is not readily available or easily accessed (i.e. the Mega Model). MRWA must rely on its partners to find solutions and serve as the "voice of the lay person" to remind the scientific community of the ways in which the watershed's citizens and local units of government will use the data.

Human Resources

MRWA's day-to-day human resource needs (i.e. compliance issues, benefits, payroll) are currently completed in house and will be shifting to a qualified outside contractor. Additionally, MRWA staff must be held accountable to results towards strategic goals and rewarded in a way commensurate with those results.

Job descriptions for each staff position must be revised and approved by the Executive Board. The Board should outline expectations for the Executive Director and evaluate him / her against those expectations annually. The Executive Director will outline expectations and evaluate other staff positions annually.

Volunteer / Member / Donor Information Management Systems

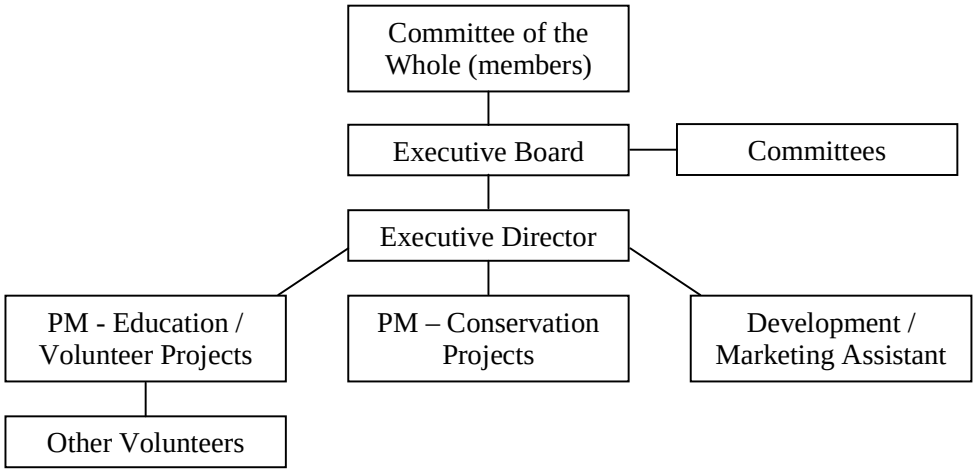
As MRWA's membership and volunteer rolls become more robust, the organization will need a volunteer / member information management system. A variety of products are available at all price points. For MRWA's purposes, it will require a system that allows, at a minimum, these functionalities:

- Tracking of contact information, including email
- Creation of mailing and email lists
- Tracking of volunteer hours, projects, and assignments
- Tracking and reminder functions to systematize member renewal processes
- Mail merge functions to systematize member and donor communications.

Financial / Accounting Systems

As an organization with a large number of grants and contracts, MRWA requires a financial / accounting system robust enough to track and report on all its funding streams accurately and efficiently. The present system appears to be sufficient to meet the organization's needs. Attention should be paid to ensuring that the system is updated regularly, technical support contracts are current, and all data is backed up and secure.

Organizational Chart



Projected Expenses

Expense projections are based upon a review of MRWA's 2010 budgeted expenses and projections for additional staff positions and programmatic costs. Phase One (hiring contractors) and Phase Two (one new full time staff) are included here. Both projections include increases in expense to support new programming and outreach efforts.

Line Item	2010 Budget	Projection Phase 1	Projection Phase 2
Office Expenses (rent, telecommunications, etc.)	In-kind	In-kind	In-kind
Office Equipment and Repair / Service	$1,000	$1,100	$1,500
Printing & Postage	$7,000	$7,500	$8,500
Website Hosting / Maintenance	$300	$1,000	$1,500
Office Supplies	$3,900	$4,250	$4,500
Audit	$3,500	$3,600	$3,700
Travel	$3,500	$4,000	$5,000
Program Supplies	$250	$1,000	$3,000
Meeting Costs	$200	$1,000	$2,000
Salaries and Benefits (existing staff)	$131,662	$137,000	$144,000
New position (salary and benefits)	-	-	$45,000
Contractors	-	$7,000	$5,000
Professional Development	$500	$1,000	$1,500
Fundraising Expenses	$100	$1,250	$2,500
Project-Related Expenses	$161,873	$150,000	$175,000
GLFT grant ($63,137)			
Restricted Discretionary fund ($16,367)			
Restricted project ($64,732)			
MRWA projects ($17,637)			
Misc Expenses	$800	$1,500	$2,000
Totals	**$314,585**	**$321,200**	**$404,700**

Revenue Model

Underlying Assumptions

Several assumptions inform the proposed revenue model:

- Project funding will continue to be primarily grant funded

- Programs will be funded by more traditional philanthropic fundraising strategies such as membership fees and donations
- MRWA's content area expertise makes the developing of fee for service revenue streams feasible, although perhaps not until the economy recovers from the recession.

MRWA's Story for Fundraising

As MRWA expands its fundraising strategies beyond grant writing, it must pay attention to the story it tells about the organization and the impact it has. It is imperative to consider this story from the perspective of the potential supporter: what do they care about and how does MRWA contribute to what they care about? In essence, fundraising efforts must describe what value MRWA creates to those who care about that value.

Some aspects of MRWA's story for fundraising may include:

- MRWA protects a precious, irreplaceable resource that you care about
- MRWA provides ways for you and others in the community to connect to the river in a meaningful way, and to connect to others who care
- MRWA is restoring the health of the resource for the benefit of you, your children, your community, your business, your enjoyment, etc.

Revenue Raising Strategies

The revenue raising strategies outlined here were selected based on the following criteria:

- Utilize existing relationship building skills
- Leverage MRWA's distinct competencies and unique approach (watershed-wide)
- Dovetail with the organization's efforts to expand its base of support (members, partners, and local champions).

Customize and Grow Membership

MRWA's membership is small but enthusiastic about the organization. Growing membership is a logical and necessary first step to increase unrestricted revenue and develop a broader base of support to meet strategic goals.

It is recommended that a menu of expanded membership levels be developed (e.g. basic, deluxe, and sustainer levels) and raising the base membership fee from $10 to $20 per year be considered. Becoming a member is the first step many will take to engage with MRWA. It is incumbent upon MRWA to find as many ways to offer the opportunity to

become a member, especially among core constituents and target market segments, and to make joining as easy as possible (i.e. online sign up).

Build Fee for Service Products and Market Them
Nonprofit organizations succeed in building fee for service revenue streams when they have excess capacity or expertise for which a market is willing to pay. MRWA is in such a position with a deep technical expertise and solid project management skills. The most likely markets willing to pay to access this expertise are local units of government and riparian land owners with means. Products likely include technical consultation, project scoping and development, and project management / general contracting.

Because of the current economic downturn realizing such revenue may not be possible in the near term. MRWA can use this time to conduct a market survey, examine how other watershed groups promote and price their fee for service products, develop relationships with potential markets, and develop products, fee structures, and marketing materials.

Explore Affinity Programs with Complimentary Partners
Businesses that cater to recreationists and tourists are secondary beneficiaries of MRWA's work – MRWA maintains the resource upon which their business depends. In addition, many of these hoteliers and outfitters seek ways to be perceived by their customers as a "green" business.

Many models exist in the environmental community for developing partnerships with these businesses. One is to create an exclusive, branded "Friends of the Watershed" membership level where certain visible benefits are provided (e.g. door decals or use of program logo on business materials) in exchange for a significantly higher than normal annual membership fee. Another model is a percentage for conservation program where businesses donate a percentage of sales to MRWA.

Cultivate Foundations and Government Funders as Strategic Partners
MRWA is stepping up and fulfilling the leadership role that its founding funding partners envisioned. This means it is the appropriate time to shift the tone of these funder relationships. MRWA can begin this shift by holding "discovery conversations" with the Wege Foundation, Great Lakes Fishery Trust, and the Fremont Area Community Foundation. The Executive Director and Development Committee members should share

the organization's sustainability plan with these funders and sincerely ask for input. Explore how MRWA's direction coincides with funders' goals and plans for the future and get a sense of their level of interest and support moving forward.

Approaching funders as true partners and engaging in thoughtful, two-way communication on a regular (at least annual) basis builds the potential for securing longer-term gifts that are true investments in the organization's work and results.

Structural Implications

Leadership

As was mentioned in the "Organizational Development and Design" section, responsibility for the completion of fundraising tasks will be shared by the Executive Director, Executive Board members, and a new Development Committee. Creating accurate job descriptions that outline each position's / group's fundraising responsibilities will help ensure coordination of efforts and accountability.

Policies and Management

A more robust fundraising operation requires certain policies and management practices be in place in order to ensure proper stewardship of donors and donations. Policies needed include: gift acceptance, gift acknowledgement, and donor privacy / bill of rights policies.

Conclusion

The Muskegon River Watershed Assembly fills a critically important role as leader, caretaker, and advocate for one of Michigan's most unique, largest, and environmentally significant watershed resources. The organization must build and align its internal capacity so that it is able to fulfill this role. The health and long-term security of the resource depends on it.

The path outlined in this sustainability plan is one that maximizes MRWA's impact on behalf of the resource in specific and strategic ways. By realigning and growing staff capacity, more deeply engaging with a broader base of members and supporters, and telling its story and the story of the resource to key markets, MRWA will become that more sustainable organization able to meet the challenge of preserving, protecting, and restoring the Muskegon River Watershed for generations to come.

Appendix 1: Interviewee and Focus Group Participant List

Interviewees

Staff

- Gary Noble, Executive Director
- Terry Stilson, Program Coordinator

Board of Directors

- Greg Davis
- Cris DeWolf
- Wayne Groesbeck
- Ken Johnson
- Denise Mitten
- Greg Mund
- Mark Pitzer
- Kurt Ray
- Doug Trembath

External Stakeholders

- Jeff Auch, Muskegon Conservation District
- Jack Bails, retired Great Lakes Fishery Trust Manager & former MDNRE Deputy Director
- Julie Bennett, Great Lakes Fishery Trust
- Amy Beyer, Conservation Resource Alliance
- Craig Cotterman, Denton Township Supervisor
- Pete DeBoer, Land Conservancy of West Michigan
- Kathy Evans, Muskegon Lake Watershed Partnership
- Dave Fisher, Muskegon County Drain Commissioner
- Greg Fox, Ice Mountain Bottled Water Plant Manager
- Chris Hall, Dalton Township Supervisor
- Jeff Jahr, Fremont Area Community Foundation
- John Koches, GVSU-Annis Water Resources Institute
- Andy Lofgren, Newaygo County Economic Development
- Terri McCarthy, Wege Foundation
- Jack Nehmer, Village of Marion President

- Rich O'Neal, MDNRE Fisheries Biologist
- Carl Paepke, Montcalm County Commissioner & Timberland RC&D Board of Directors
- Jim Rynberg, Mayor of City of Fremont & Chairperson of West Michigan Shoreline Regional Development Commission, former MRWA Board member
- Steve Sobers, Big Rapids City Manager
- Jennifer Taylor, US Department of Agriculture / Natural Resources Conservation Service
- Brad VanHaitsma, Clam Union Township Supervisor
- Janice Tompkins, MDNRE Water Bureau
- Tom Walter, US Forest Service
- Rick Westerhof, US Fish & Wildlife Service

Focus Group Participants

- Bruce Baker
- Bill Burmeister
- Nancy Burmeister
- Tanya Cabala
- Jason DaDay
- Ross Kittleman
- Robert Krueger
- Jim Maturen
- Larry Swisher

Appendix 2: Implementation Action Plan / Recommendations

Transition Approach

Many small nonprofits benefit from appointing a small transition team to assist and lead organizational change efforts. Such a team would meet over the course of a year and be charged with:

- Monitoring progress on implementation project plans
- Trouble shooting obstacles and making needed corrections
- Refining sequencing and timing of tasks
- Reporting to Executive Board
- Being the consistent voice for focus, progress, and alignment throughout the organization.

Delegating this responsibility to a small team allows the majority of the Executive Board to focus on completion of its assigned transition-related tasks, which are significant. It is recommended that MRWA adopt such an approach. An ideal transition team would include the Executive Director, a member of the Executive Board, and a MRWA member.

The Executive Board member on the transition team should not be the Chair. Instead, it is critical that the Chair focus on holding the organization and Executive Board members accountable for progress on tasks and toward goals. Indeed, no one is better positioned to carry out this essential function than an organization's Board Chair.

A Note Regarding Leadership Development / Succession

The issue of developing organizational leadership and succession planning is one that was mentioned in the early stages of this project. Expanding the areas of expertise on the Executive Board, systemizing member recruitment, and more deeply engaging MRWA members will all serve to improve the leadership development outlook at the Board level.

Realigning staff capacity in the ways outlined herein will improve the organization's ability to find qualified candidates when necessary. For example, if the ideal Executive Director candidate must be strong in five key areas rather than eight, then the position is more realistic and recruitment will be more successful.

The Executive Board may wish to spend time discussing the succession issue more deeply. There are no specific models recommended here, but it is helpful for Boards to discuss issues and make decisions regarding the following issues prior to losing a key staff member:

- Hiring of interim or temporary staff member
- Recruitment plans and strategies to employ
- How to communicate staff transitions to partners, members, and funders.

Implementation Action Plan

The following project plan goals and action plans should be customized to best reflect realistic timeframes, appropriate sequencing, and assignments for responsible parties. Responsible parties and deadlines must be assigned for all tasks and MRWA must determine how responsible parties will be held accountable.

Project Plan 1

- *Project Goal:* Create an updated MRWA strategic plan that aligns with the sustainability plan and identifies first year benchmarks
- *Project Completion Target: 4 months*
- *Project Plan*

Objectives (in bold) and Tasks	Responsible	Deadline
Complete modified strategic planning process	**Executive Board**	**3 months**
▪ Develop / agree to modified planning process	Executive Board	
▪ Propose role, outcomes, and target market(s) for MRWA education efforts	Education Committee	
▪ Review goal language developed during sustainability planning process	Executive Board	
▪ Complete process to develop three-year, measurable strategic goals	Executive Board and staff	
▪ Set first year benchmarks for all strategic goals	Executive Board and staff	
Develop and implement work plan / program development plans to meet first year benchmarks	**Relevant Board and staff members**	**Within one month of completion of strategic plan**
▪ Build out tasks and timelines that "add up to" accomplishment of benchmarks		
▪ Assign responsibility for all tasks		
▪ Decide how to hold responsible persons accountable		
▪ Monitor progress quarterly		
▪ Make mid-course adjustments as needed		

Project Plan 2

- *Project Goal:* Grow MRWA's human capacity sufficiently enough to meet year one benchmarks for all strategic goals
- *Project Completion Target:* varies by objective
- *Project Plan*

Objectives (in bold) and Tasks	Responsible	Deadline
Implement "phase 1" of staffing plan	**Executive Director**	**6 months**
▪ Identify, interview, hire, and train contractor(s)	ED	2 months
▪ Evaluate amount of staff time made available	ED	3 months
▪ Set year one expectations / desired outcomes for staff	ED (PC , contractor) Exec. Board (for ED)	3 months
▪ Begin operating based on realignment	ED and PC	6 months
▪ Monitor progress and evaluate using normal systems	ED (PC, contractor) Exec. Board (for ED)	ongoing
Recruit fundraising and marketing expertise to the Executive Board and Committees	**Executive Board**	**3 months**
▪ Solicit ideas / nominations widely (from colleagues, partners, members, etc.)	Exec. Board,ED and PC	
▪ Update / develop job descriptions for Executive Board and all Committees	HR Comm.	
▪ Draft more specific recruitment "ad" and distribute strategically	Exec. Board, ED and PC	
▪ Identify and interview candidates	Exec. Board, ED and PC	
▪ Offer position / to Executive Board for approval	Exec. Board	
▪ Orient new Board members	Exec. Board, ED and PC	
Found MRWA Development Committee	**Executive Board**	**5 months**
▪ Develop job description for Development Comm.	HR Comm.	
▪ Identify Board member to serve as Comm. Chair	Exec. Board	3 months
▪ Draft more specific committee member recruitment "ad" and distribute strategically	Exec. Board, ED and PC	4 months
▪ Hold kick off / inaugural Comm. meeting	Dev. Comm. Chair	5 months

Project Plan 3

- *Project Goal:* Create a fundraising plan that will raise sufficient funds to hire additional fulltime staff and meet strategic goal benchmarks within one year
- *Project Completion Target:* 6 months (for research and creation of plan)
- *Project Plan*

Objectives (in bold) and Tasks	Responsible	Deadline
Complete market research for fee for service strategy	**Executive Director**	**5 months**
▪ Complete competitive research (products, costs, etc.)	ED	
▪ Research market readiness, willingness, needs	ED	
▪ Develop products and price points to suit markets	ED	
▪ Set revenue goal	ED and Dev. Comm.	
▪ Develop and implement marketing plan	ED	
Conduct "discovery conversations" with key funders and potential partners	**Executive Director / Dev. Comm. Chair**	**5 months**
▪ Meet with Wege, GLFT, Fremont Foundations	ED and Dev. Chair	
▪ Meet with DNRE contacts	ED	
▪ Meet with representatives of potential partners (outfitters, hoteliers, etc.)	ED and some Board members	
▪ Debrief conversations to inform fundraising plan, strategies, and revenue goals	ED and Dev. Comm.	
Align membership program to position for growth	**Executive Board**	**3 months**
▪ Focus group members to ensure growth is constituent-centered	ED and PC	2 months
▪ Update membership materials	ED and PC	2 months
▪ Identify logical places / events for distribution	Dev. Comm.	
▪ Develop and implement recruitment strategies	ED, PC and Dev. Comm.	3 months
▪ Get materials out to Board, members, partners, etc.	ED, PC, and Dev. Comm.	
▪ Set distribution targets for Board members	Dev. Com. Chair	
▪ Monitor progress quarterly	Executive Board	ongoing
Develop MRWA fundraising plan	**Dev. Comm. Chair**	**6 months**
▪ Solidify budget projections	ED	
▪ Review all research and assign revenue targets for selected strategies (fundraising plan)	Dev. Comm.	
▪ Create project plan for implementation (inc. assigning of tasks to responsible parties)	Dev. Comm.	
▪ Monitor progress quarterly	Dev. Comm. Chair	

Project Plan 4

- *Project Goal:* Implement "quick fixes" to jumpstart organizational alignment and signal coming changes to constituents
- *Project Completion Target: 6 months*
- *Project Plan*

Objectives (in bold) and Tasks	Responsible	Deadline
Update MRWA website	**PC / Contractor**	
▪ Put strategic plan goals and first year benchmarks on website (link from front page)	PC	3 months
▪ Build online giving / membership sign-up functionality	Membership request is already there. No online giving-needs to be approved by Board. PC	3 months
▪ Refresh content / look from member perspective (i.e. volunteer / membership info up front)	PC	6 months
Launch updated newsletter	**ED and PC**	**January '11**
▪ Set targets for realignment (i.e. only 30% project specific stories; more about what's coming up than what we just did)	ED and PC	
▪ Communicate realignment expectations to all article authors	ED and PC	
▪ Ensure all project articles tie the project to watershed-wide impact / issues	ED, PC / authors	
▪ Draft "letter from Chair" that shares the story of where MRWA is going and what it means for the reader	Chair	
▪ Proofread to de-jargon language (less technical)	ED and PC	
Update / align job descriptions	**HR Committee**	**3 months**
▪ Update staff job descriptions to align with strategic goals and sustainability plan	ED and HR Comm.	
▪ Update / develop job descriptions for Executive Board and all Committees	HR Comm.	
▪ Set year one expectations / desired outcomes for all (staff, Board, Committees)	ED and HR Comm.	
▪ Decide how to hold responsible persons accountable	Executive Board	
▪ Monitor progress regularly	ED and HR Comm.	

Appendix 3: Strategic Partnerships

Definitions

- An agreement between two or more entities stating that the involved parties will act in a certain way in order to achieve a common goal. Strategic partnerships usually make sense when the parties involved have complementary strengths.

- One essential feature is that a strategic partnership is intended to move each partner towards achievement of some long-term strategic goal.

- Partnerships are formed to provide complementary goods and services or to allow new businesses to develop; or to synergistically create value resulting from the coming together of previously separate resources, position, skills and knowledge.

- It's about creating new value together, not simply an exchange.

- Successful partnerships require active collaboration. Active collaboration takes place when companies develop mechanisms – structures, processes, and skills – for bridging organization and interpersonal differences and achieving real value from the partnership. Successful partnerships achieve five levels of integration:
  - Strategic integration – continuous contact among top leaders to discuss broad goals or changes
  - Tactical integration – brings middle managers together to develop plans for specific projects or joint activities to identify organization or system changes that will make the companies better or transfer knowledge
  - Operational integration – provides ways for people carrying out the day to day work to have timely access to the information, resources or people they need to accomplish their talks, i.e. participation in each others training programs
  - Interpersonal integration – builds a necessary foundation for creating future value, requires that people know one another personally
  - Cultural integration – requires people involved in the relationship to have the communication skills and cultural awareness to bridge their differences.

From Collaborative Advantage: The Art of Alliances, Rosabeth Moss Kanter Harvard Business Review, July/ August 1994

Creating a Strategic Partnership: Considerations

- How do we develop and maintain strategic relationships?
  - How will you define contributions and results?
  - How will you identify real and potential cost and benefits?
  - How will we understand our partner's goals, culture, and activities?
  - Where are the potential areas of conflict?
  - What are the long-term opportunities and risks?
  - Does each partner have reasons to be equally committed to the partnership?

- What are the terms of the partnership?
  - Have you clearly identified goals and explicit desired results?
  - Have you clearly defined roles and responsibilities?
  - What is the scope, context, content and duration?
  - What are joint tasks or interface among tasks?
  - How will resources be allocated?

- How will we manage for success?
  - What are our measurements of success?
  - How will we monitor progress?
  - How will we address conflicts or tension?
  - How do we hold each other accountable?
  - How will we foster and maintain open, honest, ongoing communication?
  - Who are the decision makers?

Excerpted From: Alliance Advantage, The Art of Creating Value through Partnering, Yves L. Doz and Gary Hamel, Harvard Business Review Press, 1998

Appendix 4: Sample Job Description

Development Committee Job Description Example

Purpose:

- To participate in the creation, implementation, and evaluation of fundraising strategy and annual fundraising plan
- To oversee all fundraising activities in order to meet annual revenue goals
- To hold Executive Board members and other volunteers accountable for completion of fundraising related tasks and responsibilities.

Responsibilities:

- Regular attendance of committee meetings
- Manage relationships on behalf of MRWA
- Coach board members and other volunteers as needed
- Evaluate fundraising plan, strategies, and tactics annually
- Create fundraising plan annually in conjunction with Executive Director
- Oversee implementation of fundraising plan and activities
- Complete individually assigned fundraising tasks
- Follow up with board members regularly for status check-ins
- Update board on status of fundraising efforts quarterly
- Orient new board members to MRWA fundraising strategy and plan

Reports To:

- Development Committee Chair

Helpful qualifications (when recruiting additional members outside Board):

- Commitment to the mission of the Muskegon River Watershed Assembly
- Prior fundraising, sales, or marketing experience helpful, but not required

Registration form

***Deadline* (Please check):**

☐ ***March 16—Reed City***

☐ ***April 13—Prudenville***

Name_____

Address_____

City_____ Zip_____

Phone_____

Email_____

I am interested in the (please check):

☐ Homeowner track

☐ Landscaper track

Enclosed:

☐ $25—for non-MRWA members, or
☐ $10—MRWA members, or
☐ $20—includes membership and workshop fee

Above fee includes lunch and workshop materials.

Make checks payable to "MRWA" and send registration form/check to MRWA, 1009 Campus Dr. JOH303, Big Rapids, MI 49307.

Before: After:

Shorescaping strives to:

- Work with existing vegetation and topography
- Minimize soil disturbance
- Encourage infiltration
- Reduce runoff and erosion
- Improve water quality in lakes and streams
- Improve wildlife and fish habitat
- Decrease intensity of management in shoreline areas

Muskegon River Watershed Assembly
Education Committee

1009 Campus Drive JOH303
Big Rapids, MI 49307-2280
Phone: 231-591-2324 Email: mrwa@ferris.edu

Website: www.mrwa.org

"...dedicated to the preservation, protection, restoration, and sustainable use of the Muskegon River, the land it drains, and the life it supports, through educational, scientific and conservation initiatives"

The Muskegon River Watershed Assembly (MRWA) Education Committee presents:

Time: 8:45 am—4:15 pm

Date: March 24, 2012

GT Norman Elementary
338 Lincoln Avenue
Reed City MI

Date: April 21, 2012

Denton Township Hall
2565 S. Gladwin Road
Prudenville, MI

What is Natural Shorescaping?

- Protection by preventing erosion and pollutant runoff
- Preservation or restoration of natural shorelines
- Support of native plant and animal species for a healthy ecosystem

Photo provided by MI Natural Shoreline Partnership

What will you learn?

- The biggest problem with our nation's lakes
- General health of Michigan lakes
- Functions plants perform in keeping a lake healthy
- Negative effects of hard shoreline structures
- Potential causes of erosion

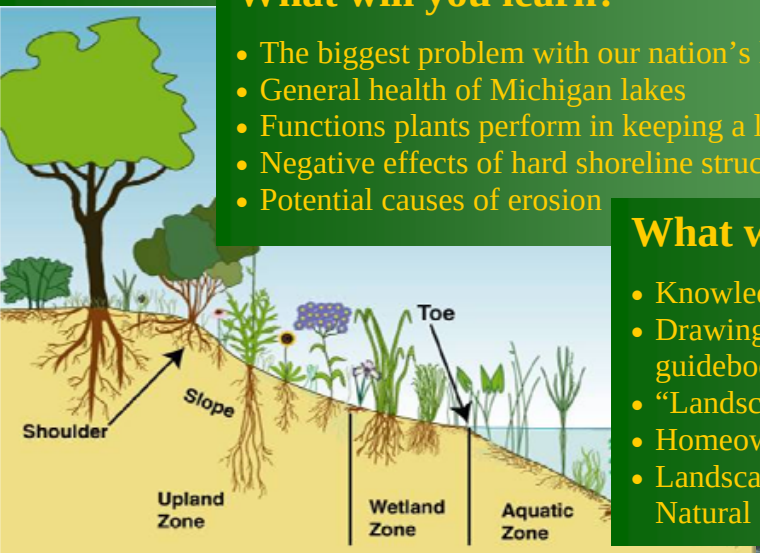


Illustration provided by MSU Extension

What will you take home?

- Knowledge about how to make shorelines more natural
- Drawing for free "Natural Shoreline Landscapes" guidebooks
- "Landscaping for Water Quality" booklets
- Homeowners only—native plant coupon (worth $20)
- Landscapers ONLY—drawing for one free Certified Natural Shoreline Professional program (worth $375)

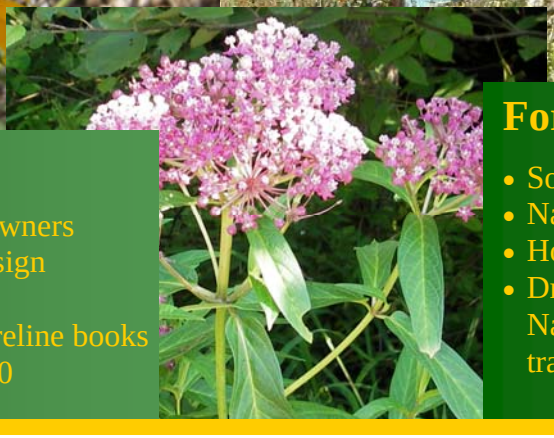


Photo provided by MI Natural Shoreline Partnership

For the homeowner—

- Home*A*Syst for shoreline owners
- Create a property map and design
- Assistance with native plants
- Drawing for free Natural Shoreline books
- Native plant coupon worth $20

For the landscaper—

- Softened shoreline benefits
- Natural shoreline examples
- How to promote with homeowners
- Drawing for one free Certified Natural Shoreline Professional training

Workshop Agenda

8:45-9:00 a.m. Registration

9:00 Welcome

9:15-10:00 Natural Shoreline Introduction

- Basics of natural shoreline ecosystems
- Purpose of natural shorelines
- Landscaping for Water Quality booklet

10:00-10:25 Natural Landscapes

- What's usually done?
- What can be done?
- Who can do it?

10:25-10:40 Break

10:40-11:30 Turf, Native Plants and Invasive Species

- Turf Management
- Lawn Care Tip Sheet
- Benefits of Native Plants
- Is this a Native?
- Invasive Species—what can you do?

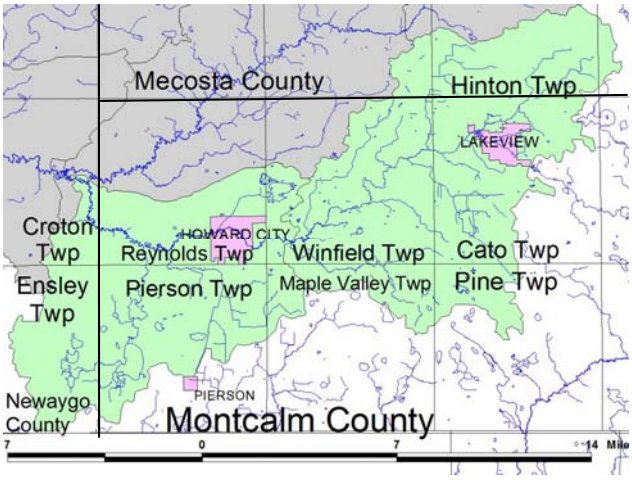
11:30-noon Permitting Requirements for Shoreline Work

Noon-12:45 p.m. Lunch (provided)

12:45-3:45 Homeowner and Landscaper Tracks

3:45-4:00 Reconvene entire group

4:00 p.m. Closing Remarks



Tamarack Creek Sub-basin

Planting Tamarack in the Tamarack Creek Watershed

According to Muskegon Watershed Research Partnership research, "decreasing sprawl rates and increasing rates of forest recovery will protect biological integrity and water quality in the future" in the Muskegon River Watershed (MRW). The research has pinpointed some high priority and highest priority sub-basins in the MRW to accomplish this forest recovery. The Tamarack Creek Watershed, contained for the most part in Montcalm County, is one of the highest priority sub-basins of the MRW.

For the past several months, Tri County High School teacher, Laura Readle, and MRWA Program Coordinator, Terry Stilson, have been planning a forest recovery activity for Readle's ecology students.

Because of the name of the sub-basin and the receptiveness of landowners, it was decided to only plant Tamarack in this project. Tamarack has one of the widest ranges in North America, and although it is a conifer, it is unique in that it sheds its needles every fall. It is also one of the fastest growing Michigan trees.

Before the activity, Soil Conservation Technician (Montcalm County), Bill Bartlett, visited the classroom and provided the students with information about Michigan trees. He showed students tree "cookies", slices of trees, and gave some characteristics of each.

On April 21, approximately 50 Tri County Ecology students (pictured below), planted Tamarack on five private landowners' properties. Because this is a study project for future ecology classes, students carefully plotted and mapped each piece of property they planted. Soil testing was conducted on each property, and 14 tree structures were built so students can make a comparison on how these factors affect the growth of the Tamarack. Students will also study the growth of trees in respect to the distance they were planted by the creek and the amount of shade each tree receives.

Students were able to plant more than 200 of the 350 Tamarack purchased for this project. Nine other landowners will plant the remainder of the trees on their property along Tamarack Creek.

Funding for this project was obtained through MRWA discretionary funds received from the Great Lakes Fishery Trust.

FSU Rain Garden

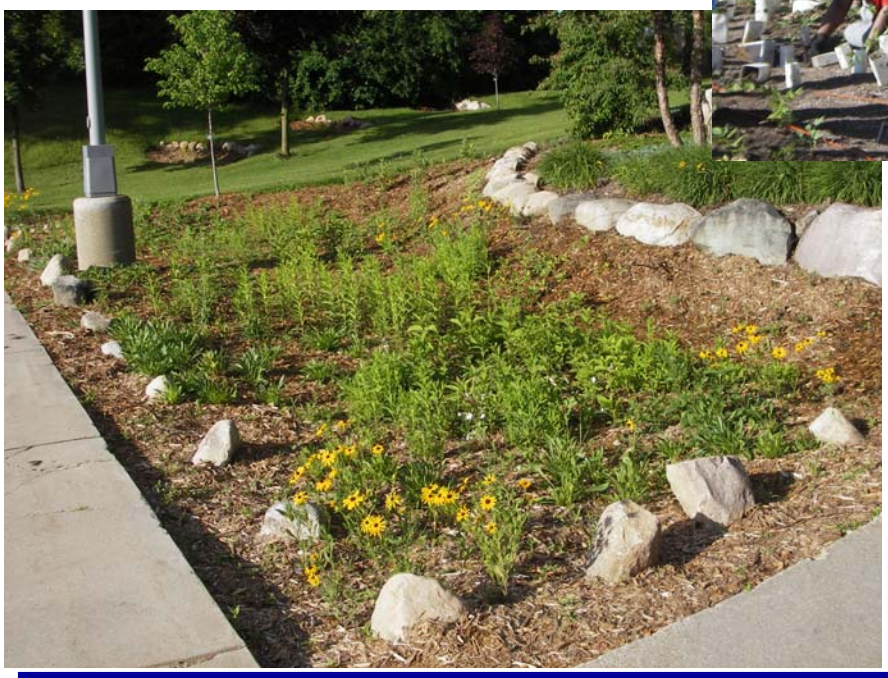
For the past two years, MRWA Program Coordinator Terry Stilson, and Ferris State University (FSU) Instructor Cindy Fitzwilliams-Heck have worked with different FSU departments in planning a storm water project for the campus.

Eighty percent of the campus's storm water drains to an Ives Avenue stream. This stream flows for approximately a quarter mile and enters into the Muskegon River. Storm water carries pollutants and contributes to the river's thermal pollution. Because of the fluctuating water level after storm events, erosion is taking place on the hill alongside the stream.

A storm water project was designed to retain some storm water on campus working with numerous FSU departments.

This spring marked the culminating activities of the FSU Rain Garden project. The FSU Physical Plant constructed the rain garden (pictured above) following plans from students in the Built Environment department. Three swales were also constructed on the hill above and to the side of the rain garden to channelize and decelerate the storm water flowing downhill to the garden.

On June 1, Jean LaLonde's Earth Science students from Big Rapids High School planted over 1,100 plants in the rain garden and swales (middle picture).



A video of the project is being created by students in FSU's Television Production department. Several Biology professors had their students propagate plants, design the rain garden sign and brochure, and create lesson plans. The garden was surveyed and a map was created by the Surveying Engineering department.

The project was funded through the Ferris Foundation, Consumers Energy Foundation, and the Great Lakes Fishery Trust.

Pictured left: the rain garden six weeks after planting.

MRWA Executive Director Gary Noble, working with the Muskegon Conservation District and Fremont Lake Association, facilitated 34 riparian owners in establishing native plant buffers on their waterfront properties this spring to improve water quality in Fremont Lake. Gary met with 2 Fremont School teachers and their students (5th and 8th graders) to review this program and prepare them to help riparian owners install their buffers. Students helped 6 riparian owners install their native plant buffers in May. In June, 10 Muskegon Middle School summer students assisted MRWA staff and Muskegon Area Intermediate School District (MAISD) staff in planting / mulching native plants on Sheridan Twp. Hall property adjacent to Fremont Lake. Fremont Lake is the 3rd lake to participate in MRWA's Voluntary Shoreline Restoration Program, joining Brooks and Hess Lakes. Funding came from MRWA discretionary funds provided by the Fremont Area Community Foundation with matching funds from the Great Lakes Fishery Trust.

Twin Lake Elementary Water Fair

MRWA Program Coordinator Terry Stilson organized the fifth annual Twin Lake Elementary Water Fair working with third grade teacher, Kevin Richards. Water quality sessions for the 55 students consisted of:

Macroinvertebrates in the Lake (pictured below)
By FSU Instructor Cindy Fitzwilliams-Heck

Enviroscape
By Dallas Goldberg, Muskegon Conservation Dist.

Groundwater Model
By Darcy Salinas, MRWA Admin. Assistant

Water Quality Game
By Troy Vos, MRWA Clerical Assistant

Yes, I would like to help the MRWA by contributing the following:

Membership fees (per year) are:
- ☐ $10.00—Individuals or organizations
- ☐ $50.00—Townships or Cities
- ☐ $100.00—Counties

Memberships & Donations payable to: MRWA
*Endowments payable to: CFFMC
@Ferris State University
1009 Campus Drive JOH303
Big Rapids, MI 49307-2280

☐ Donation in the amount of $_____

☐ Endowment Contribution in the amount of $_____
PLEASE MAKE ENDOWMENT CHECKS PAYBLE TO **CFFMC*

☐ Muskegon River Book—$23.00 ($18 + $5 shipping)

☐ MRWA Brochure—Free

Name:_____ Organization:_____

Street and Mailing Address:_____

City, State, Zip:_____

Phone:_____ Fax:_____ E-mail_____

Comments/Questions:_____

☐ *Please send me a copy of the 2010 MRWA Annual Report.*

Please return to: Muskegon River Watershed Assembly, @FSU, 1009 Campus Drive JOH303, Big Rapids, MI 49307-2280

The MRWA Education Committee presents a workshop targeting waterfront homeowners and landscapers who want to learn about natural shorelines. The workshops will be held in :

March 24, 2012—Reed City Schools
April 21, 2012—Denton Township Hall (Houghton Lake)
8:45 a.m.—4:15 p.m.

Cost: $25 for non-MRWA members OR $10 for MRWA members OR $20 for membership and workshop fee. Landscape companies may send two employees for the cost of one!
For more information—phone 231-591-2324 or email mrwa@ferris.edu.

What is Natural Shorescaping?

- Preservation or restoration of natural shorelines
- Support of native plant and animal species for a healthy ecosystem
- Protection by preventing erosion and pollutant runoff

Photo provided by MI Natural Shoreline Partnership

What will you learn?

- The biggest problem with our nation's lakes
- General health of Michigan lakes
- Functions plants perform in keeping a lake healthy
- Negative effects of hard shoreline structures
- Potential causes of erosion

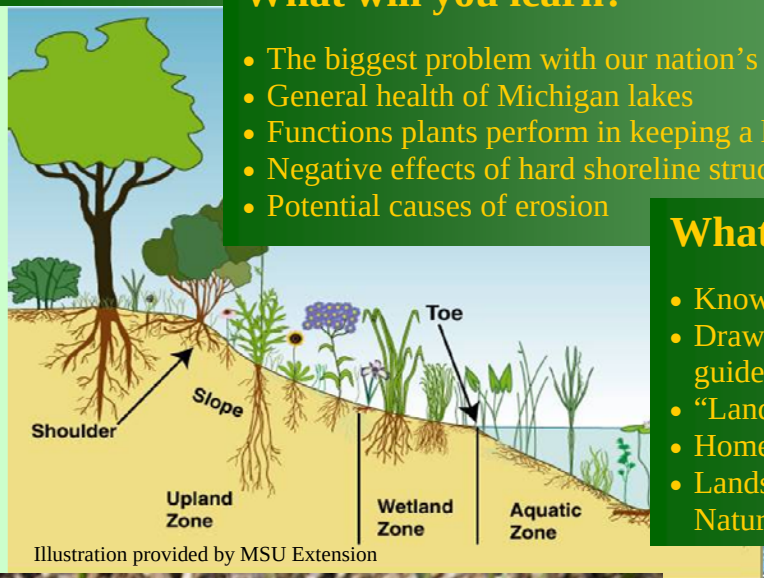


Illustration provided by MSU Extension

What will you take home?

- Knowledge about how to make shorelines more natural
- Drawing for free "Natural Shoreline Landscapes" guidebooks
- "Landscaping for Water Quality" booklets
- Homeowners—native plant coupon (worth $20)
- Landscapers ONLY—drawing for one free Certified Natural Shoreline Professional program (worth $375)

Photo provided by MI Natural Shoreline Partnership

For the homeowner—

- Home*A*Syst for shoreline owners
- Create a property map and design
- Assistance with native plants
- Invasive plant control
- Drawing for free Natural Shoreline books
- Native plant coupon

For the landscaper—

- Softened shoreline benefits
- Natural shoreline examples
- How to promote with homeowners
- Invasive plant control
- Drawing for one free Certified Natural Shoreline Professional training

Workshops

MRWA's Education Committee completed its third "Natural Shorescaping" workshop at Denton Township Hall (Roscommon County) on April 21. Eleven landowners attended.

Landowners learned that one of the biggest problems with our nation's lakes is the lack of natural shorelines. They learned how natural shorelines could not only benefit their lakes but also add to the aesthetics of their properties.

Facilitators included MRWA Education Committee members, Jean LaLonde, Bill and Nancy Burmeister, Cindy Fitzwilliams-Heck, Vicki Sawicki, and MRWA Program Coordinator Terry Stilson. Susan Conradson, MI Dept. of Environmental Quality, also participated by giving a presentation on Michigan regulations and permitting.

The next workshop will be held as the McNALMS pre-conference session (see page 7 for more details).

The Education Committee is also willing to provide a mini-workshop to lake and stream associations.

Tree Planting

Trees are the largest living organisms on earth. They not only keep our streams and rivers cool but they soak up storm water running off from parking lots, sidewalks, and other impervious surfaces and improve water quality. Trees also can prevent erosion.

The Cadillac Lions Club organized a "Green Team" to plant trees in the Cadillac area of Wexford County. The MRWA co-sponsored the event by purchasing the red pine trees the students planted.

On April 17, Lions Club members, Tim Anderson and Pete Buehler, along with MRWA Program Coordinator Terry Stilson discussed the project and the importance of trees with Franklin Elementary students.

On April 24, Franklin Elementary students and co-sponsors participated in the planting event near the Cadillac/Wexford Transit Center.

Funding for the trees was furnished to the MRWA by the Great Lakes Fishery Trust.

We want YOU!

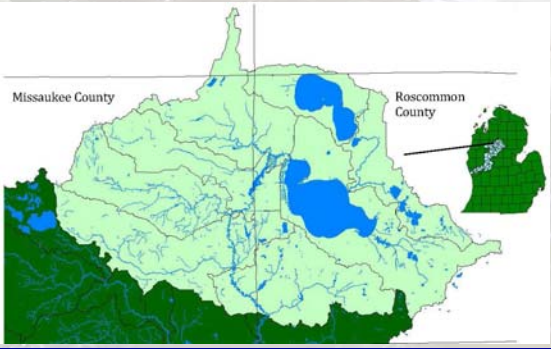
If you are interested in volunteering for the Muskegon River Watershed Assembly water monitoring program, you can be trained to collect macroinvertebrates (bugs in your creek). The next volunteer water monitoring training will be held on **Saturday, August 18, at the Morley Village Hall** (Mecosta County). For more details, visit our website at www.mrwa.org or call MRWA Program Coordinator Terry Stilson at 231-591-2324.

If you would also like to participate in our Adopt-a-Stream program, this training is mandatory.

Right, volunteers Jean LaLonde, and Doug Trembath, check the macroinvertebrates they collected.

Upper Watershed Survey

If you live in the upper portion of our watershed (see map below), you could be receiving a survey soon. The survey is being conducted to learn more about how people in the area view water quality. Information obtained through the survey will be used to help us develop information and education activities and provide data for the *Upper Muskegon River Watershed Management Plan* which is currently being written by Grand Valley State University's Annis Water Resources Institute.



If you receive a survey, please complete it and return it to us by the required date.

Pioneer
TUESDAY, Feb. 8, 2011 www.bigrapidsnews.com

Watershed Assembly awarded grant

FROM STAFF REPORTS

BIG RAPIDS — The Muskegon River Watershed Assembly was awarded a $2,500 grant from Consumers Energy Foundation for the Ferris Rain Garden and Cistern project.

Ferris State University and the MRWA are participating in an innovative student-driven project designed to demonstrate how a large volume of storm water can be collected in a rain garden and cistern to reduce the amount of storm water entering the Muskegon River.

Tony Nowlin of Consumers Energy presents Terry Stilson of the Muskegon River Watershed Assembly with a $2,500 check for the Ferris Rain Garden and Cistern project. (Courtesy photo)

The project was brainstormed by MRWA Program Coordinator Terry Stilson and Ferris biology instructor Cynthia Fitzwilliams-Heck. The pair realized the hills around the Big Rapids area quickly direct storm water to storm drains. They discovered that 80 percent of Ferris' storm water is routed to the Ives Avenue drain, then a quarter mile to the Muskegon River – where the Muskegon River has erosion problems with sediment polluting the river. Storm water carries pollutants from roofs, parking lots and other impermeable surfaces, and is also warmed on these surfaces before entering the drains, which is raising the temperature of the Muskegon River and tributaries. If the temperature is raised enough, some species in the river could die out.

Fitzwilliams-Heck and Stilson recruited Ferris professors to integrate different aspects of the project into their student fieldwork and curriculum. Students are able to get hands-on experience working on this prevalent environmental problem.

Additional funding for the project will be supplied through a Ferris Foundation grant of $4,000, and up to $14,500 is being supplied by the MRWA through Wege Foundation and Great Lakes Fishery Trust funding.

For more information about the MRWA, contact Terry Stilson at (231) 591-2324 or by e-mail at mrwa@ferris.edu.

)homore at Big Rapids High
den near Swan Hall on
)neer photos/Lauren Fitch)

Project comes to fruition

Muskegon River Watershed Assembly, Ferris, BRHS collaborate on first rain garden

By Lauren Fitch
Pioneer Staff Writer

BIG RAPIDS — Big Rapids High School students in Jean LaLonde's earth science class had the chance to leave the classroom and head outdoors for their lesson, as the group planted a rain garden on Ferris State University's campus.

The $20,000 project took two years of planning and collaboration between the Muskegon River Watershed Assembly, Ferris and BRHS. Grants from the Ferris Foundation, Consumers Energy Foundation and funding from the MRWA supported the project.

On Wednesday, a group of students and educators finally saw the results of their planning with the installation of a rain garden next to Swan Hall, located on Ives Street.

"This has been a really in-depth project. It's a big day for us that it's finally happening, and it's cool to have so many people involved," said Cindy Fitzwilliams-Heck, a biology instructor at Ferris.

Several university departments were involved in the project, including biology classes, the Physical Plant, Geographic Information Systems surveying, built environment program and the TV production program, which made a video explaining the project.

The goal of the rain garden is to reduce the amount of stormwater running into a creek near the parking lot at Swan Hall, where it eventually meets the Muskegon River. Eighty percent of the stormwater on Ferris' campus culminates in that area, said Terry Stilson, MRWA program coordinator.

Flooding in the area will be reduced and the likelihood of the run-off carrying contaminants into the river will be minimized thanks to the rain garden.

Ferris students planned the layout for the garden, dug out four feet of dirt and layered rock, sand and absorbent soil in the area. BRHS students planted native plants with long roots that will help control the water flow and filter the water before it reaches the creek.

"We're really appreciative to Ferris and MRWA for asking us to do this," said LaLonde, who is on the MRWA's education committee. "This is great for these kids to be able to come back and see it get bigger and better."

The freshmen through juniors in LaLonde's class had been studying the watershed. Stilson also gave a presentation last week explaining the rain garden before the students came to help install it.

"It might be hard work, but it's definitely worth it," said junior Annette Slate.

Three hours into the project, Slate said she was having fun.

"It's really cool, especially since I'm going to be going to school here. So I'll be able to come by here and see my class' work."

Troy Vos, a senior at Ferris studying public relations, works part-time for the MRWA, doing clerical work and assisting with projects. He supervised the high schoolers on Wednesday.

"My favorite part is working with the kids and getting them out of school," he said. "If we can get them involved in the community, that's better for them too."

EARTH SCIENCE: BRHS students spent Wednesday morning completing the final stage of a rain garden at Ferris. Organizers spent two years planning the project.

WATER CONTROL: BRHS sophomore Madeline Bucholtz (left) and junior Kourtney Currie put plants in the rain garden. The roots will help absorb and filter rain water to minimize how much pollution ends up in the Muskegon River.

FSU, MRWA collaborate on rain garden project

By Terry Stilson
MRWA Program Coordinator

Ferris State University and the Muskegon River Watershed Assembly (MRWA) collaborated on a unique rain garden project that involved professors, students, staff, and many others, on the FSU campus in Big Rapids.

FSU Instructor, Cindy Fitzwilliams-Heck, and MRWA Program Coordinator, Terry Stilson, planned the project for the last two years. Because the FSU campus is hilly and storm water is quickly directed into storm drains, they began by walking around campus and searching for areas that could possibly hold more storm water. They found some areas that could better hold water if merely left unmowed and natural.

They took their discoveries to Michael Hughes, Associate Vice-President (Physical Plant), and Will Gasper, Grounds Manager, where they learned that 80% of the campus storm water runoff drains to a creek that flows under campus to the east side of Ives Avenue. The creek then flows for approximately a quarter mile where it empties into the Muskegon River. Because the flow of the stream fluctuates greatly before and after rain events, a great amount of erosion is taking place along a hill where the stream enters the Muskegon River.

Fitzwilliams-Heck and Stilson drafted a plan to create a rain garden and cistern on campus using students and professors to accomplish the mapping, design, and other elements of the project. After several sites were considered, the project location was decided to be at the bottom of a hill in the back of Johnson Hall and the Swan Building, adjacent to parking lot #2 (the home of the osprey nest).

FSU professors from different departments joined the project. Robert Burtch (GIS/Surveying) had his students survey and map the area. Scott Herron had his biology students write rain garden curriculum and propagate plants. Fitzwilliams-Heck had her nature study students design a sign and brochure for the project. Connie Morcom and her video production students videoed the project and made a video. John Schmidt had his Built Environment students design the construction of the garden. The Built Environment students also felt there was no need to have a cistern at the designated location, since they felt the rain garden would handle the storm water.

GARDENS GROWS: (TOP) Big Rapids High School students planting the rain garden. (ABOVE) The rain garden six weeks after planting.

The rain garden and several swales were constructed by the FSU Physical Plant in mid-May 2011, and planted by Jean LaLonde's Big Rapids High School earth science class on June 1, with assistance from Fitzwilliams-Heck and MRWA staff. FSU also agreed not to mow a hillside adjacent to the garden and Fitzwilliams-Heck's nature study students and MRWA staff planted native shrubs on the hillside.

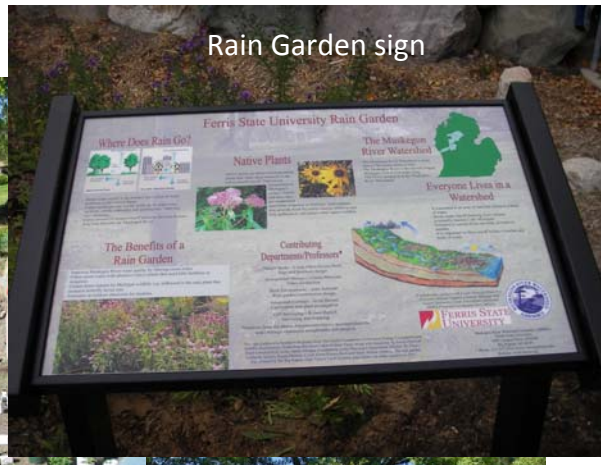
Native plants and shrubs are used for MRWA rain gardens because they are deep-rooted perennials that make deep channels in the soil to absorb the maximum runoff. Natives are also accustomed to Michigan's unique climate, and once they are established, need little irrigation or fertilizer. Native plants also provide food for native insects which in turn help with pollination, and attract other native wildlife.

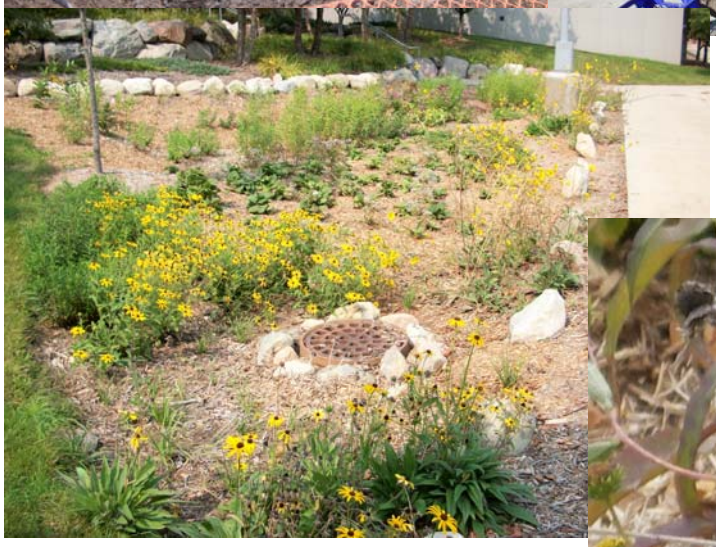
Funding for the project was provided by the Ferris Foundation, Consumers Energy Foundation, and MRWA discretionary funds from the Great Lakes Fishery Trust. Material and plant donations were provided by Morgan Composting, FSU Physical Plant, Mecosta Conservation District, St. Peter's Lutheran School, and Karen Motawi.

"The Muskegon River Watershed Assembly is dedicated to the preservation, protection, restoration, and sustainable use of the Muskegon River, the land it drains, and the life it supports, through educational, scientific and conservation initiatives." MRWA offices are located on the Ferris State University campus in Big Rapids.

If you would like more information about this program, contact Terry Stilson at 231-591-2324, e-mail her at mrwa@ferris.edu or visit the MRWA website at www.mrwa.org.

Ferris Rain Garden





Tree Planting with Cadillac Elementary below

Tree Planting with Tri-County High School below