



Muskegon Environmental Research & Education Society

Business Plan (2014-2018)



The Muskegon Environmental Research & Education Society inspires individuals of all ages, abilities, and backgrounds to enjoy, discover, and cherish the natural environment.

Meres, Box 5038, N. Muskegon, MI 49445

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Muskegon Environmental Research & Education Society

Business Plan

1. Executive Summary

The Muskegon Environmental Research & Education Society (MERES) was established in 1997 by members of the Muskegon Conservation Club to restore and create a place where the citizens of the area could learn about the environment and experience the joy of being in nature. The Muskegon Lake Nature Preserve (the Preserve; MLNP) provides visitors with barrier free opportunities to experience, discover, and enjoy all that our local environment has to offer. Visitors of all ages and abilities gain an appreciation of their natural surroundings and a better understanding of ways in which they relate to the natural world. In doing so, we foster environmental stewardship through education and nature discovery.

Numerous people access the many services and programs offered each year. Many children engage in staff facilitated programs, and the preserve is a popular destination for individuals to access the many recreational activities including fishing, cycling, walking, and bird watching. Our greatest strengths include diverse recreational and environmental opportunities, a dedicated, volunteer base; strong links within the community; highly consistent levels of public usage; and innovative educational programming. We have paved barrier free design that provide fishing access to the Muskegon River, overlooks of riverine, terrestrial and wetland ecosystems, an outdoor education pavilion, and trail system that is accessible by individuals of all ages and abilities. Over the past 5 years, our greatest challenges have been the repair of the River Walk and absence of an educational facility, which have limited the Preserve's ability to meet the needs of our community. This plan has two phases. Phase one covers restoration of the River Walk, and the development of expanded educational programming that serves underserved children and individuals with special needs, and the enhancement of our organization to meet the needs of the Preserve and community. This phase will take approximately four years to complete. Phase two will cover the building of an education center on the Muskegon Lake Nature Preserve and will start in 2-3 years. We have a financial plan that will get us to a point where we will have sustainable operating funds and an endowment that will cover future expenses.

2. Mission and Values

Mission:

The Muskegon Environmental Research & Education Society inspires individuals of all ages, abilities, and backgrounds to enjoy, discover, and cherish the natural environment.

Values:

Environmental Stewardship

We must inspire others to realize that in nature, we are all part of one another. We recognize the interdependence of all living things and strive to maintain the web of life by preserving, restoring, and protecting our land. We make choices that are environmentally responsible, economically viable, and socially equitable for the long-term stability of our organization, our region, and the earth. We actively manage our lands to provide diverse habitats for visitor experience, education, and recreation. We strive to maintain healthy ecosystems by enhancing, restoring, and preserving native biodiversity.

Outdoor Education

There is no substitute for being IN nature. We maintain the Preserve for maximum biodiversity to provide unique personal experiences and education. Frequent experiences in nature are critical to the physical, emotional, intellectual, and spiritual health of all people. We provide the best possible experience for each visitor by creating a welcoming atmosphere, maintaining a safe and natural environment, and respecting the individual's abilities.

Community

We believe in the importance of building and maintaining relationships among the families, schools, volunteers, businesses, and individuals with whom we interact. We encourage people to see themselves as part of a community of nature enthusiasts within the community of nature.

Inclusiveness

We believe in embracing people of all ages, cultures, abilities, and, backgrounds. We strive to create an environment where each person feels engaged, connected, accepted and respected.

Collaboration

We believe we will be better able to achieve our mission through the power, effectiveness and creativity of teamwork and community. We seek opportunities to build relationships in order to strengthen our community. Internally, we embrace a spirit of teamwork and mutual support with staff, volunteers, members, and visitors. Externally, we seek to partner with other organizations that have common objectives.

3. MERES: an Organization for the Community

The Muskegon Environmental Research & Education Society (MERES) was established as a 501(C3) non-profit organization 1997 by members of the Muskegon Conservation Club. The goal of the organization was to provide a location where the citizens of the area could learn about the environment and simply enjoy nature by walking or biking. With the donation of a 17 acre parcel of land at the mouth of the Muskegon River, MERES began the restoration and development of the Muskegon Lake Nature Preserve. The Preserve is bordered by the Muskegon River on the south side, a full view of Muskegon Lake to the west, and is situated along the Veterans Memorial Causeway which connects the cities of Muskegon and North Muskegon. Historically, the site was used as the city dump, and later a depository for tons of broken concrete, asphalt, foundry fill and industrial scrap.



Through partnerships with many businesses and organization, philanthropy, and thousands of hours of volunteer labor, MERES coordinated the removal of debris and the restoration of the site into a beautiful nature preserve. By 2014 the MLNP is home to handicap accessible trail systems, a wetland walkway, paved bike paths, an outdoor pavilion classroom, and a ¼ mile Wilder River Walk for enjoyment by the public. The Preserve is one of the main access points to

the Muskegon Lakeshore Trail which connects Muskegon Lake to Lake Michigan and serves as a biking and hiking destination for many citizens and visitors of the area.

As the restoration of the site progressed over the course of 15 years, school children began to utilize the preserve as an outdoor learning laboratory. Thousands of people of all ages enjoy the relaxing setting in an urban area for hiking, fishing, and biking through the diverse and unique ecosystems. The Preserve offers wetland, riverine, forested ecosystems that are accessible to individuals of all ages and physical abilities and we are proud to offer the community with outdoor recreation and education experiences that promote environmental stewardship. The Muskegon Lake Nature Preserve facilities currently include:

1. Outdoor Classroom- The Outdoor Classroom was built in 2001 at a cost of approximately \$10,000 that it received in grants from Alcoa, the Community Foundation for Muskegon County, Herman Miller Foundation, Ray & Alma Foundation, Muskegon Conservation Club and the Muskegon Area Conservation District, and was built by volunteers from the Muskegon Conservation Club.



2. Observation Tower- The observation Tower was built in 2003 from donations from the Dana Corporation and The Herman Miller Foundation. It was built by volunteers. The Fred Wilder Tower is one of the educational stations and looks out over the Preserve and the Muskegon River.



3. The Al Bell Wetland Trail – A boardwalk through the wetland. The meandering boardwalk also has four sections that transverse the pond for closer interactions with the ecosystem. Built in 2005, this trail was funded through generous donations made to the Muskegon Conservation District. Al Bell was very much involved in the environmental organizations of the area and was one of the original Trustees of MERES.



4. Bike Path -The paved bike path leads from the parking lot, wanders through the Preserve and connects to the Wilder River Walk. The trail offers a nice ride on a bicycle or just a leisurely walk among the various plants and animals that inhabit the Preserve. On this trail one enjoys many peeks through the foliage to views of the wetlands, river and lake systems.



5. Wilder River Walk – The Wilder River Walk was built in 2007 and connects to the Muskegon Lake Shore trail. The Wilder River Walk has 7 barrier free fishing platforms along the way, giving fishermen access to the Muskegon River. At the west end of the Wilder River Walk, is the Peter and Sophia Wege Observation Tower with the Robert C. Johnson handicapped ramp leading up to it. From this vantage point people, and particularly students, will be able to view and study one of Michigan’s largest river deltas. Fund raising for the Wilder River Walk concluded with over \$500,000 raised. Thirty foundations and corporations along with 135 individuals made the Wilder River Walk possible.



4. Community Need

Richard Louv (2005) defined the term "nature deficit disorder" to describe the negative consequences that have resulted from more children having less contact with the natural world--including attention disorders, obesity and depression. He cites many positive benefits of frequent outdoor experiences that can foster happier, healthier, smarter, and better adjusted children and can create future stewards of the environment. Rachel and Stephen Kaplan (1989) have linked contact with nature to restored attention, recovery from mental fatigue, and enhanced mental focus. Similarly, older adults who spend longer durations of time in natural settings show reduced blood pressure (Orsega-Smith et al., 2004) and walkable green space is associated with greater longevity (Takano et al., 2002). In 2013, the American Public Health Association (APHA), adopted a policy statement titled “Improving Health and Wellness through Access to Nature.” To aid in promoting healthy and active lifestyles, the APHA encourages access to natural areas for residents of all ages, abilities and income levels. They also call on public health, medical and other health professionals to raise awareness among patients and the public at-large about the health benefits of spending time in nature and of nature-based play and recreation.

The Muskegon Lake Nature Preserve recognizes the importance of the connection to nature and its health benefits, for young and old alike. We strive to provide more opportunities and inspiration for people to experience the healing wonder and beauty of natural environments in meaningful ways. The societal trend away from outdoor recreation was documented in the Proceedings of the National Academy of Sciences (Pergams and Zaradic, 2008) showing an overall downward trend in nature-based recreation by Americans over the last several decades. This disconnection from nature, and prevalence of screen-based technology, may be negatively shaping broad environmental attitudes and legitimate concerns and efforts for conservation.

Many of our schools serve families and communities that are impoverished, with children who have dramatically decreased their time spent outdoors engaged in unstructured, non-technology based play. Many children in our communities, which are robust with unique natural areas, are growing up with very little interactions with the outdoor world, missing extensive health and learning benefits and without an understanding of the interrelationships and their impact upon these areas that define our community.

MERES believes exposure to the outdoors is key to the health and enjoyment of people of all ages, abilities, and backgrounds and an essential resource to our community. Our mission is based on the knowledge that early and often exposure to the outdoor world is key to ensuring that citizens are engaged and active stewards of the natural resources that are the fabric of our communities. Through increased programming for both young and old alike, we can take part in a growing movement to expand outdoor education. Please review Appendix A to see personal stories from visitors to the Preserve for a preview of the impact of our programming.

5. Muskegon Environmental History

For many centuries people have been drawn to the abundance of water surrounding West Michigan to live and build communities. The Muskegon Lake Nature Preserve lies in the urban heart of an area characterized by coastal plains and wetlands, expansive forests, immense sand dunes, miles of Lake Michigan lakeshore, inland rolling hills, and extensive river systems. Interwoven with these unique natural features are the building blocks for the way of life in West Michigan with abundant agriculture, vibrant urban communities, robust industry and manufacturing, rich recreation and tourism opportunities, and one of the Great Lakes important inland deep water ports for goods and materials.

Historically, the site of MLNP and the surrounding area has undergone a series of devastating blows to the quality and quantity of its natural areas. The booming local lumbering era in the mid-1800's and industrial and manufacturing in the 1900's resulted in robust economic development in West Michigan, however the environmental impact on local natural resources

was dramatic. The lumbering trade impacted local waters by creating accelerated stream bank erosion and sedimentation, smothering aquatic habitats. Also contributing to significant loss of wetlands and shallow water habitat was the routine dumping of byproducts of the 47 sawmills that surrounded Muskegon Lake, one of which was located on the site of the Muskegon Lake Nature Preserve. The industrial revolution in the early 1900's made further use of the area's natural resources, including sand for foundries, timber for furniture and paper, and surface water for industrial waste disposal and easy access for transportation. The dumping of industrial waste and manufacturing debris to fill shallow waters and wetlands lasted for decades and left our county an environmental legacy of pollution and degraded waterways. The MLNP was the dumping site for foundry slag, and later was site of the City dump.

These practices eventually resulted in Muskegon Lake being designated as a Great Lakes Areas of Concerns (AOC). The AOC designations occurred in 1985 as a result of guidance contained in the Great Lakes Water Quality Agreement between the United States and Canada. During the 1990's and early 2000's, economic enhancement turned to developing tourism and recreation as well as attracting sustainable businesses. Also at this time, the Muskegon communities developed plans for restoration and set measurable targets for eventual delisting of the AOC.

Through recent collaboration of many organizations at the local, state, and national level, Muskegon Lake is on its way to being taken off the list of most polluted places in the Great Lakes. Multi-million dollar projects including removal of contaminated sediments, restoration and preservation of riparian areas, remediation of storm water related issues, and continued education of community members will help lead the area to a more sustainable future. MERES is excited to take part in this positive trend for the area's natural resources by continuing to engage citizens in the understanding of, appreciation for, and interconnections with the outdoor world.

6. Market Analysis

1. The primary audience for the Muskegon Lake Nature Preserve is the residents of the Muskegon County and visiting tourists.
2. There are 12 public school districts 3 charter and 9 nonpublic districts in Muskegon County serving the school children of the Muskegon ISD. Title 1 schools comprise most of the districts, indicating a large underserved student population in the area.

3. Muskegon County ranks 78th for health behaviors out of 82 Michigan counties surveyed. Public Health Muskegon County and the Rotary Club have a goal for Muskegon County to be Number One by '2021. Outdoor recreation and education can play an important role in achieving this goal.
4. Muskegon County is well served with parks, however none offer barrier free access to riverine, terrestrial, and wetland environments on an urban 17 acre parcel and provide outdoor education programs for individuals of all ages, backgrounds, and abilities.
5. There are numerous Senior Living Centers and homes in Muskegon and there is no coordinated program to provide outdoor recreation and education to this group. Given the physical and mental health benefits of outdoor activities to this group, the Muskegon Lake Nature Preserve provides a unique environment for relaxation and low impact activities for people of all abilities and ages

7. Competition

1. Grand Valley State University's (GVSU) Lake Michigan Center is located in Muskegon and they offer environmental education programs for grades 4-12. GVSU takes school children out on Muskegon Lake and Lake Michigan on a 60 ft. research vessel to study water quality. The GVSU program is handicap accessible but physical activity is limited to the boat deck.
2. The Gillette Visitor Center at P.J. Hoffmaster State Park has indoor and outdoor nature programs available to children and adults. They have limited barrier free trails and provided programming for sand dune environments.
3. Hemlock Crossing Park and the Outdoor Discovery Center are in Ottawa County and provide barrier free trails and a nature center. These parks are 35-45 miles from the City of Muskegon and are suitable for weekend visits. Travel time and costs are prohibitive of Muskegon school districts.

8. Competitive Advantage

1. The Muskegon Lake Nature Preserve is a unique example of three different ecosystems at a single location; Wetland Ecosystems, Terrestrial Forest Ecosystems, and River Ecosystems. Our facilities encourage active exploration and recreational play.
2. The Muskegon Lake Nature Preserve is barrier free and all ecosystems are within a 5 min walk from the parking lot. The preserve is accessible for people of all ages and abilities and offers hiking, bicycling, fishing, nature photography, and bird watching.
3. The Wilder River Walk provides panoramic views of the Muskegon River, fringing wetlands, and Muskegon Lake in addition to handicapped accessible fishing platforms. It is directly connected to the Muskegon Lake bike path and offers numerous opportunities for photography, migratory bird watching, and enjoying the sunset.
4. The Outdoor Classroom and Al Bell Wetland Trail offer an ideal environment for both structured and unstructured discovery of terrestrial and wetland ecosystems. The environments provide sufficient diversity for college level instruction while the barrier free access enables children of all ages to discover and explore nature according to their own abilities and desires. The Muskegon Lake Nature Preserve is entirely barrier free and provides a more diverse outdoor education program that covers aquatic and terrestrial ecosystems.
5. The Muskegon Lake Nature Preserve is ideally located in the heart of the Muskegon Counties population.

9. Current Programing

Currently MERES contracts with an individual who serves as a part time Educational Coordinator. Student programming is conducted by the Educational Coordinator and a host of dedicated volunteers. Programming support and curriculum development was implemented through collaboration with MERES long time community partner, the Muskegon Conservation District. Student field trips are geared towards elementary students. In April and May and again in September and October, groups of 50 students participate in three learning stations that highlight the three on-site ecosystems.

1. Wetland Ecosystems – learning focus is on macroinvertebrates, their niche in the food web, adaptations and life cycles, and their use for determining water quality.

2. Upland Forest Ecosystems – learning focus on plant diversity, observations in nature, adaptations and migration of birds, relationships between abiotic and biotic features of the different ecosystems at MLNP, and native and invasive species.
3. River Ecosystems – learning focus on river inhabitants, the concept of watersheds, human use, conservation and preservation of freshwater resources. There are a few school groups who utilize this riparian area to release salmon fry that they have raised in their classrooms.

During these field trips, there is also often the opportunity to view and learn about the migratory bird research that takes place in the early spring and fall at the Preserve. The bird research has been an ongoing project for several years and a substantial database has been developed.

MERES also hosts the Michigan Environmental Hall of Fame. The Michigan Environmental Hall of Fame honors Michigan individuals (living and legacy), nonprofits, colleges and schools, and business organizations that have made a contribution to improving or preserving the environment. An annual awards ceremony is held to recognize new inductees and their accomplishments and information are summarized on the Michigan Environmental Hall of Fame's web site.

Educational Outlook - Phase One & Two

Despite our location in a rich and diverse environment, there are many students and community members who do not have interactions with or understanding of the interrelationships of citizens with the outdoor world. Without an invitation or encouragement to stray off the main paths and discover the wonder that waits beyond a planned bike ride or stroll along the boardwalk, the likelihood of participants to enhance their visit to include an enriching meaningful nature experience is likely not going to occur. Similarly, many teachers, unless they have a deep and profound understanding and interest in the outdoors, will underutilize the preserve unless there is a provided educational program for their students to participate in.

We envision educational opportunities which will leave visitors with an enhanced appreciation of the environment where they live and new ideas of how to interact with and protect it. We strive to increase opportunities at MLNP to the level that it will become a community destination and a resource for lifelong learning and recreation in the outdoor world. The current status and phased goals for the education program are summarized below:

From this...	To this... By 2017 Phase One	And this... By Year 2019 Phase Two
Student field trips in April-May	Student field trips 3-4 days per week in April-May, Sept.-Oct	Student field trip opportunities throughout the school year
Minimal summer student programming	Creation of 2-3 weeks of summer day camp programming	Diverse summer programs including recreation, family friendly events, and social gatherings centered on connections with and care for the natural world.
Minimal adult programs	Guided explorations in the summer for adults including bird watching, plant ecology, nature photography	Year-round adult workshop opportunities, teacher trainings, guided recreation, citizen monitoring opportunities, and higher level learning
Volunteer participation in leading student learning stations	Creation of a volunteer database and training program for volunteer led student learning stations	Meaningful connections with volunteer community organizations utilizing volunteers and student interns for all facets of operation
No signage, displays, or exhibits at Muskegon Lake Nature Preserve	Ecosystem information signage project to engage visitors concerning the ecosystems found at MLNP and its history	A wide variety of “invitations” into nature, including natural play areas, interactive exhibits, and facilitated learning opportunities encouraging people to become connected to nature through multiple avenues
Limited year round capabilities	Expanded programming for adults and youth summer-fall	A centralized, year-round building for education during any season
No in-classroom programs	Creation of an indoor classroom presentation to be brought into the schools to enhance visits to the MLNP	Year-round opportunities in a state-of the art learning laboratory in the Education Center facility and programs available for bringing to local classrooms
Kindergarten – 5 th grade learning opportunities	Create MLNP specific lessons for multiple grade levels	Target stewardship, learning, and recreation opportunities to all grade levels as well as adults
Minimal youth stewardship opportunities	Connection with students to implement signage, address invasive species, and participate in native planting projects	Integrate into local school curriculum the opportunity for students to participate in all aspects of the MLNP, including preservation, restoration, recreation, and education

From this...	To this... By 2017 Phase One	And this... By Year 2019 Phase Two
Part time education coordinator for 25% of the year	Part time education coordinator year round	Full time executive director, Full-time education coordinator, paid interns, and a diverse volunteer network
No programs designated to special needs students	Offer programming during the school year specific to special needs groups	Collaborate to offer weekly outdoor experiences into programming for special needs centers / schools
No programs specific for senior citizens	Collaborate with senior citizens to facilitate programming to correlate with specific needs.	Collaborate with assisted living centers to integrate weekly visits to the preserve for workshops or outdoor programs

10. Strategic Plan

Goal 1

Our vision is that the Muskegon Lake Nature Preserve will be recognized as a model urban environmental resource that welcomes all and opens the wonders of nature to people of all physical abilities through outdoor education and recreation, innovative programs, and community involvement. We will accomplish this by networking with local community health groups, senior citizen organizations, and school districts to innovative outdoor education and recreation programs that serve the needs of their target audiences.

- Create a new name brand that captures the spirit of our new vision. With this new name and focus we will begin networking with local community health groups, senior citizen organizations, and school districts to provide innovative outdoor education and recreation programs that serve the needs of their target audiences (constituencies).
- Build formal relationships with existing community organizations to open new doors for partnership.
- Develop and carry out a marketing plan for Muskegon Lake Nature Preserve.

Goal 2

MERES will develop a long- term master site plan to include repairs on existing structures, expansions for community use, as well as enhancement of natural features within the restrictions of the conservation easement.

- Create a fiscal and implementation plan to repair the Wilder River Walk to regain full use. The Muskegon River has eroded the river bank during the last 2-3 years to the point that the pilings in the center section of the Wilder River Walk, on the river side, are not holding up the walkway in a significant manner. This section of the walkway has been closed. The current estimate to fix the problem is around \$430,000. Fund raising has just started.
- Develop a fiscal and implementation plan for the construction of an Education Center on the Muskegon Lake Nature Preserve property. The center will offer year around educational programming and provide indoor space for laboratory and classrooms. The fiscal plan will include an endowment fund for operation and maintenance and a separate fund for construction.
- Create a vegetation plan to include addressing invasive plants to be removed and areas to be enhanced with native plantings to benefit existing wildlife and increase diversity of species.
- Create a water resources plan including erosion control, water flow, and public access to waterways for further education and recreation opportunities.

Goal 3

Increase the diversity of the board members.

- Continue to identify potential board members from the community with varying backgrounds.

Goal 4

Increase the funding for a restricted (endowment) fund.

- A percentage of all funds will be allocated to the restricted fund. The amount of this percentage will be determined by the Board. Fund rising specifically for a restricted fund will also be held.

Goal 5

Increase the funding for the annual operating costs.

- We will speak with potential donors and funding agencies to seek grants for projects.
- We will seek out business to sponsor specific activities

Goal 6

Develop and carry out a marketing plan for the MLP.

- We will work closely with RCP Marketing to develop a plan following their research into what MERES needs and develop focused marketing activities.
- The marketing and public relations will vary according to the group. School groups will be handled by letters and direct personal contact. A brochure will be developed specifically for the school program. It will detail the types of programs offered as well as any costs that may be associated with them.
- The Marketing Plan is included in Appendix B.

10.1 Collaboration Plan

MERES will continue its current collaboration with Muskegon Conservation District to provide field trip opportunities for local school children. MERES Education Coordinator will continue to offer field trip opportunities for local school children and will plan and implements additional activities for adults and in the summer months. MCD will work with MERES to increase advertising and enrichment of programming offered. MERES also will continue a partnership with the MAISD Regional Mathematics and Science Center. They have utilized the ideal location and offerings of the MLNP for, and MERES has participated in, annual teacher professional development trainings focused on environmental and natural resource topic integration into local curriculum.

MERES will pursue collaborations with the Muskegon River Watershed Assembly and Muskegon Lake Watershed Partnership when planning activities and programs. MERES will also form partnerships with local volunteer organizations as well as local college educator prep programs to continue to expand our volunteer database for student field trip station leaders. Volunteers who are interested and committed to the education of our young people are integral to successful MLNP student programming. This group of individuals participates in a yearly—a

training program with MERES staff to ensure their understanding of educational materials as well as leadership skills when working with children.

10.2. Personnel Plan

Current Staffing and Volunteers

Currently we have one contract person working as an Education Coordinator. This person has contacts with the local schools and other environmental groups in the area. This person also has a teaching degree in science. Our greatest strengths include a dedicated, vibrant volunteer base; strong links within the community; highly consistent levels of public usage; and dynamic, diverse programming. There are two categories of volunteers. The first involves leadership in the educational programs where, once trained, they are responsible for the various stations that the students revolve through during a field trip experience. The second involves volunteers who work on days when we have trail clean up or boardwalk repair. This generally varies from 10 to 30 on any given day. MERES maintains a list of people who have shown an interest in the Preserve and it is those people who help meet the maintenance needs. These opportunities are posted around the Preserve and are sent out to our email list. The volunteer list continues to grow with these efforts.

We use independent contractors and consultants for special projects. We have used independent contractors to design and build some of the structures on the Preserve. We are presently using three, one to help with this report, one to help us devise a marketing plan, and one to assist us in evaluating and recommend repairs to the damaged Wilder River Walk.

Future Staffing and Volunteers

Once the Education Center is built, we will develop a Membership Action Plan to include promotional items, media outreach products, promotional programs, and other activities to increase membership, active involvement, and community support. Volunteer opportunities will be promoted through all available methods, including online and promotional signage and a formalize Friends of the Preserve program.

10.3. Facilities Plan for the Education Center

An Education Center facility, with an indoor classroom, laboratory, exhibits, and meeting space would further expand the range, depth, and availability of programming MERES could offer at MLNP. Focus on outdoor education concerning the 3 on-site ecosystems could be expanded to include more extensive investigations that would encapsulate the characteristics of these

ecosystems as they exist differently throughout the region. The programs and exhibits will be designed to support local schools by aligning to the current Core Curriculum and a focus will be placed on engaging students in STEM related learning (Science, Technology, Engineering, and Math.) Education, for both children and adults, will continue to focus on the 3 main ecosystems found at the Preserve, with specific emphasis on human influences on the unique features of the Great Lakes region. Exhibits will focus on topics such as native and invasive plant and animal species and an underlying message will be to encourage students and adults to take an active role as stewards of the land and water.

Preliminary research concerning the construction of an Education Center at MLNP has been conducted with the Muskegon Intermediate School District, Grand Valley State University's Lake Michigan Center, The Macatawa Outdoor Discovery Center, Hemlock Crossing-Ottawa County Park, Little Traverse Conservancy, The Muskegon Conservation District, and the Blandford Nature Center. Questions included their interest in an Education Center at MLNP, details of their own facilities, programming and funding, as well as ways that MERES could potentially partner with them to provide mutual benefit. We received positive support for the need for natural resources Education Center in Muskegon. When asked about funding for overhead expenses vs. operating expenses, there was a little variation in responses from similar community organizations. Generally for overhead expenses, the non-profits researched had an endowment or restricted fund. To cover basic operating expenses they charged fees for various services and programming that they provided the community in addition to receiving donations and some grant funding.

Through personal interviews and survey's to teachers and other organizations, MERES was able to determine preference for half day student field trip programming following similar topics as currently offered with a cost of no more than \$4 per student. Survey's found that bussing costs were the biggest hurdle to providing quality field trip experiences for their students. Bussing costs per district for an entire class to participate ranged from \$200 to \$550

Based on the positive feedback and the local need for Education Center facility, we will review the current concept for the facility. Were necessary, the concept will be modified to meet the current and emerging needs. We will develop a fund raising plan based on current and projected needs. Fund raising for the center will be focused on external grant funds, individuals, and corporations.

11. Organization Structure/Governance

MERES is governed by a Board of Trustees consisting of 10 individuals. The officers are selected from this board and are; President, Vice President, Secretary, and Treasurer. The Board functions in a way to ensure that the Mission and Vision of MERES is followed in every decision and is responsible for determining policies of and developing a strategic plan for both MERES and MLNP. The Board is also a working Board in the sense that the Board members are the main caretakers and can be found working alongside volunteers in every aspect of maintenance of the Muskegon Lake Nature Preserve. The Board also is the governing group for the Michigan Environmental Hall of Fame. There is an advisory group that reviews the policy of the Hall and makes recommendations as to the winners each year. When the Education Center gets built, it will house the Michigan Environmental Hall of Fame. At present there are two vacancies on the Board. We will fill these positions with people who can bring a more business outlook to the Board and will work to establish a sound endowment or restricted fund.

Ron Brown, President: Ron is retired first from the Amway Corporation where he served a Manager of Communications and second from Grand Valley State University where he served as Captain of their research vessels. He has a B.S. from Ithaca College in Television/Radio production and a Master's degree in Education from Temple University. He has served as President of various organizations.

George Brewer, Treasurer: George was born in Muskegon and retired from the United States Navy in 1976 after 26 years of service. He currently works in the aviation industry as an aircraft mechanic and joined MERES in 2011.

David Wally, Secretary: David is a self-employed court reporter. He has served in this position from the beginning of MERES in 1997.

Dr. Rick Rediske: Rick is a professor at Grand Valley State University's Annis Water Institute at the Lake Michigan Center.

Rachel Kent: Rachel is a science school teacher and very active in other environmental groups in the area.

Clair Verway: Clair is a retired school teacher who also is teaching part time at Baker College in Muskegon.

Karen Verway: Karen is a retired teacher from the Muskegon Heights School District.

Sarah Coleman: Sarah is a teacher in the math/science area of the Muskegon ISD

12. Financials

Phase One Revenue

Muskegon Conservation Club yearly donation	\$ 4,000
Average per year donations	\$12,527
Michigan Environmental Hall of Fame	\$ 3,000
Grants	\$15,000
<i>Total average revenue for 8 years is \$21,378.</i>	

Summer camps \$75 per child, 3 camps, 15 students per camp	\$3,375
Adult workshops \$15 per attendee, 2 workshops, 17 adults per workshop	\$ 510
Student fees \$50 per group, 25 groups per year	\$1,250
Corporate sponsorships camp \$900 each,5 sponsors	\$4,500
In school programs @ \$125, 5 Programs	\$ 625
Muskegon Conservation Club yearly donation	\$ 4,000
Average per year donations	\$12,527
Michigan Environmental Hall of Fame	\$ 3,000
Grants	\$15,000
<i>Total average revenue for 8 years is \$21,378.</i>	

Summer camps \$75 per child, 3 camps, 15 students per camp	\$3,375
Adult workshops \$15 per attendee, 2 workshops, 17 adults per workshop	\$ 510
Student fees \$50 per group, 25 groups per year	\$1,250
Corporate sponsorships camp \$900 each,5 sponsors	\$4,500
In school programs @ \$125, 5 Programs	\$ 625
Total Per Year Phase-One Revenue	\$40,287

Phase One Expenses Per Year

Administration	\$ 2,500
Professional Services. (Insurance, marketing Etc.)	\$ 10,000
General Improvement/Maintenance	\$ 15,000
New Project Expenses	\$ 5,000
Restricted Fund	\$ 4,000
Total Per Year Phase-One Expenses	\$36,500
Balance Forward from previous year(Est.)	\$45,000

Year End Report 2013-2014 (Date June 30,2014)

	To Date
<u>Revenue</u>	
Individual donations	\$100,140.25*
Corporate donations	\$3,000.00
Foundations	\$0.00
Interest	\$933.53
Other	\$0.00
<u>TOTAL REVENUE</u>	\$104,073.78
<u>Expenses</u>	
Administration	\$1,921.70

Muskegon Environmental Research & Education Society

Business Plan: 2014-2018

Professional Services	\$5,751.12
General Improvement	\$860.86
Bank	\$0.00
Project	\$93,666.60*
<u>TOTAL GENERAL EXPENSES</u>	\$102,200.28
Balance Forward 7/1/14	\$44,598.29
Revenue – Expenses	\$1,873.50
<u>GEN. FUND BALANCE</u>	\$46,471.79
<u>SPECIAL FUNDS</u>	
Building Fund-Community Foundation	
Balance Fwd.	\$46,297.27
Revenue	\$0.00
Expense	\$0.00
Balance	\$46,297.27
	Balance not included in Total Cash Assets
Educational Endowment	
Balance Fwd.	\$5,088.02
Revenue	\$0.00
Expense	\$0.00
Balance	\$5,088.02
Educational Center	
Balance Forward	\$5,000.00
Revenue	\$0.00
Expenses	\$0.00
Balance	\$5,000.00
Hall of Fame	
Balance Forward	\$0.00
Revenue	\$0.00
Expense	\$600.00
Balance	-\$600.00
Total Cash Assets	\$55,959.81

*Includes \$92,000 from one donor for land purchase. This will total \$292,000 over three years.

Pro- Forma Statement of Activities

Prepared January 2015

Receipts	2014	2015	2016	2017	2018
Individual Donations	\$100,140.00	\$105,000.00	\$25,000.00	\$30,000.00	\$50,000.00
Corporate Donations	\$3,000.00	\$4,000.00	\$6,000.00	\$6,500.00	\$7,000.00
Foundations	\$0.00	\$15,000.00	\$75,000.00	\$125,000.00	\$200,000.00
Fees	\$0.00	\$5,760.00	\$6,000.00	\$7,500.00	\$8,000.00
Other	\$933.53	\$500.00	\$500.00	\$500.00	\$500.00
Total Receipts	\$106,087.53	\$132,275.00	\$114,516.00	\$171,517.00	\$267,518.00
Expenses					
Administration	\$28.00	\$200.00	\$700.00	\$1,200.00	\$2,000.00
Insurance	\$4,389.00	\$4,500.00	\$5,000.00	\$5,500.00	\$6,000.00
Maintenance	\$860.86	\$1,200.00	\$2,000.00	\$2,500.00	\$3,000.00
Professional Svcs.	\$1,362.12	\$6,000.00	\$6,500.00	\$7,000.00	\$10,000.00
Project(land purchase, etc.	\$93,666.60	\$102,000.00	\$64,000.00	\$70,000.00	\$80,000.00
Transferred to Spec. Fund	\$0.00	\$3,000.00	\$3,000.00	\$3,500.00	\$5,000.00
Total Expenses	\$100,306.58	\$116,900.00	\$81,200.00	\$89,700.00	\$106,000.00
Current Yr. increase,(Decrease)	\$5,780.95	\$11,500.00	\$33,316.00	\$81,817.00	\$161,518.00
Balance Fwd.	\$44,598.29	\$50,379.24	\$61,879.24	\$92,395.24	\$177,712.24
General Fund Balance	\$50,379.24	\$61,879.24	\$95,195.24	\$174,212.24	\$339,230.24
Special Funds					
Community Foundation					
Balance Fwd.	\$46,297.27	\$46,297.00	\$46,297.00	\$49,297.00	\$52,297.00
Receipts	\$0.00	\$0.00	\$3,000.00	\$3,000.00	\$3,100.00
Expenses	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Balance	\$46,297.27	\$46,297.00	\$49,297.00	\$52,297.00	\$55,397.00
Restricted Fund					
Balance Fwd.	\$5,088.02	\$5,088.02	\$5,088.02	\$6,088.02	\$6,488.02
Receipts	\$0.00	\$3,000.00	\$4,000.00	\$4,500.00	\$6,500.00
Expenses	\$0.00	\$0.00	\$0.00	-\$600.00	-\$700.00
Balance	\$5,088.02	\$8,088.02	\$9,088.02	\$9,988.02	\$12,288.02
Education Ct.					
Balance Fwd.	\$5,000.00	\$5,000.00	\$10,000.00	\$16,000.00	\$22,000.00
Receipts	\$0.00	\$5,000.00	\$6,000.00	\$6,000.00	\$6,000.00
Expenses	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Balance	\$5,000.00	\$10,000.00	\$16,000.00	\$22,000.00	\$28,000.00
Hall of Fame					
Balance Fwd.	\$0.00	\$1,029.76	\$3,029.76	\$5,329.76	\$7,829.76
Receipts	\$3,000.00	\$5,000.00	\$5,500.00	\$6,000.00	\$6,300.00
Expenses	\$1,970.24	-\$3,000.00	-\$3,200.00	-\$3,500.00	-\$3,700.00
Balance	\$1,029.76	\$3,029.76	\$5,329.76	\$7,829.76	\$10,429.76
Total Cash Assets	\$107,794.29	\$129,294.02	\$174,910.02	\$266,327.02	\$445,345.02

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APPENDIX A: Stories from the Preserve

Stories of the preserve - 1

Boy - "Um, thank you for doing this. This was the best day of the entire school year."

Me - (Glancing up from packing up supplies with my typical line) "Oh, ok, well, that's great, I am really glad you enjoyed it. Remember, this is a public preserve so you could come here with your family anytime and show them how neat it is" ...and went back to my packing project.

Boy - "Well, I don't really have anyone who can bring me here because my uncle died this year and he was basically like a dad to me and now I am alone a lot and today was really great because it feels really good to be outside. It is kind of the only thing that helps."

Me - (Wiping away the threatening tears in my eyes, dropping what I was doing and thinking, um, wow...) "Wow, that must be really hard for you...do you have anywhere you can go outside and go for a walk where you live when you are feeling down?"

Boy - "No, I just live in an apartment and it kind of sucks there. There isn't anything cool like this place, but maybe I could ride my bike down here...but no, it's probably way too far and my aunt wouldn't let me anyways."

Me - "Well, I wonder if you could even just go sit out on the front step when you are having a tough day."

Boy - "Yeah, I think that could help when I am feeling sad and alone. I just really like being outside and I really liked this today and will remember it as the best day of this school year."

I walked away with tears in my eyes, bluntly reminded that most of the time it is not the lesson plan for the group of fifty that is important, it's the one kid who really needed an outlet that day laying in the sun on the boardwalk feeling the breeze off the lake blowing across his or her young face that may just have lifelong impact.

Stories of the preserve - 2

Polliwogs...

The kids clamor off the bus, huddle into small groups, exclaim in wonder tinged with disgust at the immediate fragrant smells. They stay close to the center of the trail as not to get too close to the bushes in which they can hear the skittering of small critters and the wind rustling the leaves. They have a frightened air about them as they answer questions of “what might we see” with thoughts of dolphins and flamingo’s and have named the city across the water as possibly China or New York.

Their shoes tossed in a pile, their pants rolled up wet and muddied, and their cheeks rosy with the glow of sunshine. One would hardly recognize this group of youngsters as the same who arrived on the bus 3 hours earlier! A group of girls excitedly tears down the path with their prized buckets of polliwogs that they found and caught all by themselves. They are racing for the table of exploratory tools so they can take a further look at their new friends. The skittering in the bushes has increased tremendously as there is now a gaggle of small boys traversing the hidey holes and pathways of the critters on hands and knees in a game of chase. Another group of little ones sits quietly in a patch of sunshine and one would have to look very closely to notice that they are enthralled with watching the slow travels of the tiny turtle that they have found.

.A field trip that will likely provide a lifetime of memories!

APPENDIX B: Marketing Plan

Flight Plan Process & Goal

GOAL: Increase visibility and awareness of MERES, its facilities and program offerings among potential users, donors and influencers.



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Market Research: *Test Community Awareness of Facility and Brand*

Survey Topics included the following:

- > Were respondents aware of the Muskegon Lake Preserve
 - > Had respondents ever visited the Preserve
 - > Could respondents describe activities at the Preserve
 - > Had respondents attended an event/activity at the Preserve
 - > How interested are respondents in learning more about the programs and activities offered at the Preserve
 - > How important is the availability to natural resources educational programming to the community; to junior high and high school students
 - > Does the availability of natural resources education programming and activities add to the quality of life in the community
- > Are respondents aware that the cost of operating the Nature Preserve come is solely derived from grants and private donations (no tax funds used)
 - > What type of natural resources education projects or programs would prompt respondents to visit the Nature Preserve
 - > Would respondents be willing to lead a student group through a tour of the Preserve (if sufficient training is provided to prospective leaders)
 - > What are the preferred sources of information for events and activities occurring in the Muskegon area (where do respondents learn about events/activities)
 - > Demographic characteristics of respondents (age, gender, income, ethnicity, school district)

MERES Survey Results

- > **61%** of respondents have heard of the Muskegon Lake Nature Preserve (MLNP)
- > **48%** of respondents have visited the MLNP
- > **69%** of respondents did not know that MERES owns/operates MLNP
- > **66%** of respondents had visited the observation deck along the bike trail on east end of Muskegon Lake near the BC Cobb Plant
- > **25%** of respondents can describe some of the activities offered at MLNP
- > **72%** of respondents have not experienced any of the activities offered at MLNP
- > **90%** of respondents have not attended an event at MLNP
- > **93%** of respondents are “somewhat” or “very” interested in learning about programs and activities offered at MLNP
- > **98%** of respondents felt that having natural resources educational programming available in the community was “somewhat” or “very” important

MERES Survey Results

- > **86%** of respondents felt that the availability of natural resources educational programming and activities adds to the quality of life in the community
- > Only **17%** of respondents are fully aware that the majority of funding needed to operate the MLNP comes from grants and private contributions (64% were not aware and 22% were “somewhat” aware)
- > **Respondents were most interested in visiting the MLNP if the following activities were offered:** walking on the trails, Great Lakes history, bird-watching and identification, programs for children, and nature photography; respondents were least interested in participating in summer camp programs and in working on interpretative projects along the trails
- > **98%** of respondents felt that it is “somewhat” or “very” important to have natural resources educational programming and activities available to junior high and high school students from community high schools



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MERES Survey Results

- > **35%** of respondents were “somewhat” or “very” interested in volunteering to lead a student group through the various stations at the MLNP in Spring or Fall
- > Respondents listed the following media outlets as those they were most likely to view or read to find out about activities in the Muskegon area: M-Live, Chronicle (hard copy), WZZM-TV13, WOTV-8, WGTV radio, and various on-line resources
- > **48%** of respondents would recommend that a friend take the time to complete this survey

Persons who completed this survey were most likely to be Caucasian, ages 40-59 or 60-69 with household incomes ranging from \$50,000 - \$99,000; slightly more likely to be female; and reside in the Muskegon Public Schools, Reeths-Puffer, Mona Shores or Muskegon Catholic school districts.

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Communications Plan for MERES

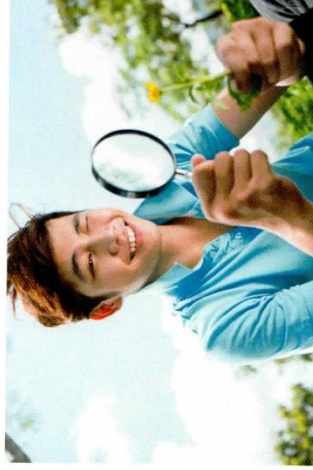
- > **Recommended Goals:**
 - Increase the level of awareness of the Muskegon Lake Preserve (and the role played by MERES) among key community leaders whose influence is valued
 - Attract more volunteers to assist with programs and to further develop the Preserve's resources (increase the number of volunteers by **15%** in year 1 of plan)
 - Position the organization to attract more donors (increase # of donors by **25%** in year 1 of plan)
 - Increase the number of visitors to the Preserve by **10%** average for a 3-year period

Communications Plan for MERES Strategies

- > **Increase awareness of the Preserve by hosting a series of events/regular meetings for service clubs, Chamber of Commerce, and “young leader” groups; be prepared to discuss potential service projects with the groups who attend.**
 - Plan, schedule and host “visitor days” (regular meetings and/or special events) for major service clubs in Muskegon at the Preserve: Rotary, Lions (multiple clubs), Kiwanis, AMBUCS, etc., during summer, 2015; at each event, Preserve would serve lunch or breakfast, provide a presentation, and allow time to tour the grounds and facility; try to schedule one event every two weeks; offer attendees an opportunity to work on Preserve projects
 - Host a Chamber of Commerce “After Hours” event at the Preserve during the spring or summer of 2015
 - Schedule and host an event for one or more of the following groups: Young Urban Professionals, Jaycees, “40 under 40” (have a potential project at the Preserve available for them to pursue)
 - Invite United Way of the Lakeshore to hold a “campaign” event at the Preserve in Fall 2015

Communications Plan for MERES Strategies

- > **Increase awareness of the Preserve and its educational resources among key educational groups during the summer months:**
 - Conduct "Muskegon Lake" nature workshops for junior high and high school science teachers from Muskegon Public, Reeths-Puffer, Mona Shores, North Muskegon, Muskegon Catholic, and Orchard View districts during summer of 2015 (try to schedule 3-4 workshops in summer 2015); also work with Muskegon Area Intermediate School District to host science workshops for other teachers
 - Invite the Board of Directors of WMSRDC and Muskegon Conservation District to hold a Board meeting at the Preserve during the summer/early fall of 2015



Communications Plan for MERES Strategies

> **Increase awareness of the Preserve and seek Volunteer Support for Work Projects from among College and High School Service Organizations:**

- Muskegon Community College: Geography Club, Hispanic Student Organization, Nature Club, Student Veteran Club, and Gay-Straight Alliance

- Implement internship opportunity structure during Spring 2015 to enable college students to develop, plan and promote events at the Nature Preserve.

