



CHARTER TOWNSHIP OF MERIDIAN

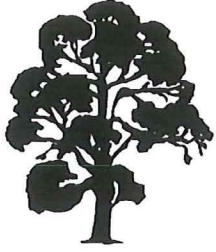
Land Preservation Advisory Board

Wednesday, February 8, 2017

Meridian Service Center

Meeting Agenda

1. Call Meeting to Order
2. Approve Agenda
3. Public Remarks
4. Orientation (pink)
 - a. Introduction of new member, Jamie Hiller
 - b. Binder review
5. Approve Minutes (blue)
 - a. December 14, 016
6. Communications (tan)
7. Old Business
8. New Business (orchid)
 - a. Forest Grove Flowage Easement
 - b. Vernal Pool Project Proposal
 - c. Support for the Stewardship Network/ MMSI
 - d. Election of Officers
9. Land Management and Stewardship Reports (green)
 - a. 2017 Management Plan
10. Public Comment
11. Other
12. Announcements
13. Closed Session (separate envelope)
14. Adjournment



**CHARTER TOWNSHIP OF MERIDIAN
LAND PRESERVATION PROGRAM**

MEETING OF THE LAND PRESERVATION ADVISORY BOARD
FEBRUARY 8, 2017

4. Orientation

- a. Introduction new member, Jamie Hiller
- b. Binder Review

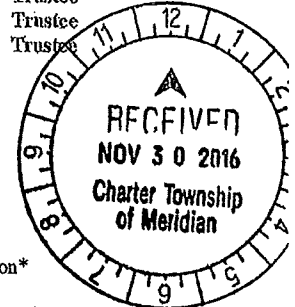
CHARTER TOWNSHIP OF MERIDIAN

Elizabeth Ann LeGoff Supervisor
 Brett Dreyfus Clerk
 Julie Brixie Treasurer
 Frank L. Walsh Manager



Milton L. Scales
 Ronald J. Styka
 John Veestra
 Angela Wilson

Trustee
 Trustee
 Trustee
 Trustee



APPLICATION FOR PUBLIC SERVICE

I am interested in service on one or more of the following public bodies as checked below:

- | | |
|---|---|
| <input type="checkbox"/> Assessing Board of Review* | <input type="checkbox"/> Elected Officials Compensation Commission* |
| <input type="checkbox"/> Board of Water and Light Representative* | <input checked="" type="checkbox"/> Environmental Commission |
| <input type="checkbox"/> Building and/or Fire Board of Appeals and Building Hearing Officer | <input type="checkbox"/> Lake Lansing Watershed Advisory Committee* |
| <input type="checkbox"/> Capital Area Transportation Authority (C.A.T.A.) | <input checked="" type="checkbox"/> Land Preservation Advisory Board |
| <input checked="" type="checkbox"/> Communications Commission* | <input checked="" type="checkbox"/> Park Commission (elected/appointed) |
| <input checked="" type="checkbox"/> Community Resources Commission | <input type="checkbox"/> Pension Trustees |
| <input type="checkbox"/> Corridor Improvement Authority* | <input type="checkbox"/> Planning Commission |
| <input checked="" type="checkbox"/> Downtown Development Authority* | <input checked="" type="checkbox"/> Township Board (elected/appointed) |
| <input type="checkbox"/> East Lansing-Meridian Water & Sewer Authority | <input type="checkbox"/> Transportation Commission* |
| <input checked="" type="checkbox"/> Economic Development Corporation | <input type="checkbox"/> Zoning Board of Appeals |
| | <input type="checkbox"/> Other |

(*Special conditions restrict eligibility for appointment)

Indicate areas not included above which may warrant special attention or study that are of interest to you:

Summarize your reasons for applying for this type of public service:

See attached letter

Describe education, experience or training which will assist you if appointed. (Attach resume if available)

See attached letter

Name: Jamie Hiller

Occupation: Field Organizer Place of Employment: Michigan Coordinated Campaign

Home Address: 5699 Woodmont Circle Haslett, Michigan 48840

Phone: (days) (517) 898-7810 (evenings) _____ E-mail hillerjw@gmail.com

Signature *[Signature]* Date 11/30/16

Other than the Downtown Development Authority Board and the Economic Development Corporation, persons appointed to Meridian Township boards and commissions must be a resident and elector (if of voting age) of the Township during the term of office. Excessive absences may be cause for review of appointment.

(PLEASE USE BACK IF NEEDED)

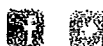
The policy for appointment of candidates to the various public service positions is based on the following criteria: desire to serve, experience, expertise, availability of time to serve, and maintenance of equitable geographic representation. In most instances it will be desirable to develop further information through a personal interview. This application will be retained in township files for two years. Please return this form to the Office of the Clerk, Charter Township of Meridian.

FOR OFFICE USE ONLY			
Date Received	<u>11.30.16</u>	Distro: <u>RS, FW, MK</u>	Application # <u>CC 1606 LPAB 1605</u>
Registered Voter:	<u>(Y)/N</u>	<u>JG DG DJ BM LM</u>	<u>CRC 1608 DDA 1606 PK 1605</u>
Date Appointed:		<u>BD MEMBERS</u>	<u>EPC 1611 EC 1607 TB 1604</u>

Revised - October 19, 2015

5151 MARSH ROAD, OKEMOS, MICHIGAN 48864-1198. (517) 853-4000

www.meridian.mi.us



Jamie Withers Hiller

5699 Woodmont Circle - Haslett, MI USA 48840 - 517.898.7610 - hillerljw@gmail.com

November 30th, 2016

Meridian Township Board
5151 Marsh Road
Okemos, MI 48864

Meridian Township Board:

I am responding to the application for Public Service for Meridian Township. This fall I had the amazing pleasure of working for the Michigan Coordinated Campaign in the 2016 Presidential election and through that process learned that as a young adult that I can make a difference in the community. Now, post election, it is my time to continue making a difference. I have lived in Haslett for almost my entire life and have had the distinct privilege of being raised not just in the community but by it as well. After all the things that I have received growing up here, it is my turn to give back.

During college I worked with the Alma Downtown Authority and Alma College in finding ways to integrate the college with the community as well as increase business along Superior Street. I was also involved with the Pine River Superfund Citizen Task Force in helping to analyze options of removing pollutants in the Pine River given by the EPA and other environmental protection groups.

Thank you for your time and consideration. I am available at by phone at (517)8987610 or email at hillerljw@gmail.com at any time.

Sincerely,

Jamie W. Hiller



**CHARTER TOWNSHIP OF MERIDIAN
LAND PRESERVATION PROGRAM**

MEETING OF THE LAND PRESERVATION ADVISORY BOARD
FEBRUARY 8, 2017

5. Minutes

a. December 14, 2016

CHARTER TOWNSHIP OF MERIDIAN
LAND PRESERVATION ADVISORY BOARD

MEETING MINUTES
WEDNESDAY, DECEMBER 14, 2016
6 PM – SERVICE CENTER

Members Present: Julie Brixie, Frank Hatfield, James Kielbaso, Yu Man Lee, Jon Mayes, Margo Smith, Mark Stephens

Members Absent: Roland Harmes,

Staff: Jane Greenway, Senior Parks and Land Management Coordinator;
Kelsey Dillon, Stewardship Coordinator

1. Call Meeting to Order

Chair Kielbaso called the meeting to order at 6:01 pm.

2. Approve Agenda

Add:

#6, Old Business, #a. Southwest Meridian Upland Site Visit Report
#7, New Business, #c. Lake Lansing North Management

COMMISSIONER STEPHENS MOVED, COMMISSIONER MAYES
SECONDED, TO APPROVE THE AGENDA AS AMENDED. Voice vote. Motion
passed.

3. Public Remarks

None

4. Approve Minutes

a. September 14 – regular meeting

b. October 12 - regular meeting, page 1, item #4, Discussion, first two bullets to
read:

- Is this project the best use of the funds
- Is there an alternative to the plan such as inter-planting between the dead
Buckthorn

COMMISSIONER SMITH MOVED, COMMISSIONER LEE SECONDED, TO
APPROVE THE SEPTEMBER 14, 2016 AND OCTOBER 12, 2016 MEETING
MINUTES AS AMENDED. Voice vote. Motion passed.

5. Communications
 - a. Email from Kelsey Dillon, To: LPAB, RE: Davis Foster Prescribed Burn Hearing no objection, Chair Kielbaso accepted and placed the item of communication on file.

6. Old Business
 - a. Southwest Meridian Upland site visit report

Board Member Hatfield offered the following on the prairie project (September 17): The area has a diversity of species (grasses and forbs) without concentrations of non-native invasives. The land is recovering by natural succession. Abundant milk weed nourishes the monarch butterfly population. Perhaps wild flower seeding is not appropriate except in scattered bare areas.

7. New Business
 - a. Meeting Schedule Resolution

BOARD MEMBER STEPHENS MOVED, BOARD MEMBER SMITH SECONDED, THAT THE LAND PRESERVATION ADVISORY BOARD MEETING SCHEDULE AS OUTLINED IN THE DECEMBER 7, 2016 STAFF MEMORANDUM BE ACCEPTED, THE ATTACHED MEETING RESOLUTION BE APPROVED AND ADOPTED AND COPIES OF THE MEETING SCHEDULE AND/OR RESOLUTION BE FOWARDED TO THE APPROPRIATE INDIVIDUALS.

Roll Call:

AYES: Julie Brixie, Frank Hatfield, Yu Man Lee, Jon Mayes, Margo Smith, Mark Stephens, James Kielbaso

NAYS: None

Motion/resolution passed.

- b. Resolution of Appreciation

CHAIR KIELBASO OFFERED THE FOLLOWING RESOLUTION:

WHEREAS, Frank Hatfield has served as a member of the Land Preservation Advisory Board of the Charter Township of Meridian from 2008 through 2016; and

WHEREAS, Frank Hatfield was an integral part of the first community supported and funded program of its kind in Michigan for the acquisition and permanent preservation of ecologically important open space and natural features; and

WHEREAS, Frank Hatfield served on the Red Cedar Glen Stream Restoration Advisory Committee which worked with the Ingham County Office of the Drain Commissioner to develop site restoration recommendations that helped create a beautiful and sustainable restored site; and

WHEREAS, Frank Hatfield has devoted much of his time and energy on management and stewardship efforts in the Red Cedar Glen Land Preserve; and

WHEREAS, Frank Hatfield's service on the Land Preservation Advisory Board has been very beneficial to the Charter Township of Meridian, its citizens, and its natural environment.

NOW, THEREFORE, BE IT RESOLVED THE LAND PRESERVATION ADVISORY BOARD OF THE CHARTER TOWNSHIP OF MERIDIAN extends its best wishes to Frank Hatfield and expresses its gratitude for his service to the community.

Supported by Board Member Smith

Roll Call:

AYES: Julie Brixie, Frank Hatfield, Yu Man Lee, Jon Mayes, Margo Smith,
Mark Stephens, James Kielbaso

NAYS: None

Resolution passed

c. Lake Lansing North Management

Coordinator Greenway reported the LPAB walked Lake Lansing North in November to look at the exclosures. Suggestion was made to develop goals for Lake Lansing North Preserve, to diversify the trees and plant new trees.

Board Member Smith provided an update on the deer resistant garden and the need for it to be replanted.

8. Land Management Coordinator and Stewardship Coordinator Reports

Coordinator Dillon offered an update on:

- b. The prescribed burn at the Davis Foster Preserve
- c. Clearing project, workdays, tree protection and tree planting plans for Towar Woods
- d. Workdays to treat Autumn Olive and future plans for Red Cedar Glen
- e. Recommended invasive species management and tree planting at Northridge Land Preserve – after a brief discussion LPAB approved Coordinator Dillon to begin work at Northridge and suggested contacting neighbors for funding
- f. Okemos High School Earth Club meeting

Coordinator Greenway offered an update on:

- a. Tank acquisition closing
- b. Grant awards
- c. Signage - waiting on new logo to order rules signs
- d. Japanese Knotwood treatment

e. 66 deer taken in the Meridian Deer Management Program

9. Public Comment

None

10. Other

None

11. Announcements

a. LPAB Meeting: Wednesday, January 11, 2017, 6 pm, Meridian Service Center

b. Joint Meeting with other boards and commissions: Tuesday, January 10, 2017, 6 pm, Town Hall Room, Meridian Municipal Building – Board Member Smith offered to give the LPAB presentation at the joint meeting

12. Closed Session

BOARD MEMBER SMITH MOVED, BOARD MEMBER MAYES SECONDED, TO RETURN TO OPEN SESSION.

Roll Call:

AYES: Julie Brixie, Frank Hatfield, Yu Man Lee, Jon Mayes, Margo Smith, Mark Stephens, James Kielbaso

NAYS: None

The Board returned to open session at 8:07pm.

BOARD MEMBER STEPHENS MOVED, BOARD MEMBER HATFIELD SECONDED, FOR STAFF TO TAKE SUCH ACTION AS WAS PROPOSED IN CLOSED SESSION. Voice vote. Motion passed.

13. Adjournment

Hearing no objections, Chair Kielbaso adjourned the meeting at 8:10pm.



**CHARTER TOWNSHIP OF MERIDIAN
LAND PRESERVATION PROGRAM**

MEETING OF THE LAND PRESERVATION ADVISORY BOARD
FEBRUARY 8, 2017

6. Communications

Jane Greenway

From: Margo Smith <Margo.Smith@chm.msu.edu>
Sent: Wednesday, January 25, 2017 6:43 PM
To: Kelsey Dillon; Jane Greenway
Subject: Fwd: TSN Webcast Next Week - How Deer Affect Plants, Pollinators, and Ecological Processes: Studies in Southeast Michigan

If you did not attend this session, you may want to tune in to this. It was excellent and I am wondering if we can do our own study.

Margo

Sent from my iPad

Begin forwarded message:

From: The Stewardship Network <staff@stewardshipnetwork.org>
Date: January 25, 2017 at 11:04:39 AM EST
To: Margo Smith <smithmk@msu.edu>
Subject: TSN Webcast Next Week - How Deer Affect Plants, Pollinators, and Ecological Processes: Studies in Southeast Michigan
Reply-To: The Stewardship Network <staff@stewardshipnetwork.org>



The Stewardship Network
Connect to Conserve

Dear Margo,

Please join us on Wednesday, February 8th for our next monthly webcast!

How Deer Affect Plants, Pollinators, and Ecological Processes: Studies in Southeast Michigan

February 8th, Wednesday 12:00 noon to 1:00 pm (**Eastern Time Zone**)

Tune in at www.stewardshipnetworkwebcast.org

Deer have expanded their range and increased dramatically in abundance worldwide in recent decades. While research through the northeastern U.S. has shown that deer can lead to decreased vegetation density and diversity, and declines in forest regeneration, debates over deer management in urban and suburban areas often demand local data on deer impacts. I will present data from various research (including exclosure studies, vegetation and browse damage surveys, and sentinel seedling tracking) in southeast Michigan parks and preserves over the past 20 years to outline deer impacts on various native plants, including trees and wildflowers. I will discuss implications for forest regeneration, pollinator interactions, and other community processes.

This presentation was featured at our [recent conference](#), join us if you missed out or want to expand upon what you learned.

Presenters:

Jacqueline Courteau - Jacqueline Courteau is an ecologist and independent researcher/consultant with over 20 years experience with Michigan ecosystems.

Lisa Brush - Executive Director, The Stewardship Network. Lisa has worked in the environmental field in Michigan for the last fifteen years. She is currently the Executive Director of the Stewardship Network and has been involved with the Network since its inception more than 10 years ago. She has a wealth of experience helping non-scientific people understand scientific issues. For over nine years, as she has built and coordinated The Stewardship Network, she has emphasized effective and meaningful stakeholder involvement in developing and implementing all aspects of this program. She has a M.S. in Natural Resources from the University of Michigan and a B.A. (Science in Society) from Wesleyan University.

[Register Now](#)

Please note: If you register in advance you will need to save the link you are given for joining the webcast. *If you try to register again, the system might not let you.* Please check back into your email for the link or use a different email address.

A note for our listeners in government offices: we are working with DTMB to get you back in the webcast room. A firewall change has been requested, and your feedback on this webcast would be appreciated.

We hope you can join us!

The Stewardship Network
(734) 996-3190
staff@stewardshipnetwork.org

[Unsubscribe from this email list](#)

[Unsubscribe from ALL email from The Stewardship Network](#)
416 Longshore Dr.
Ann Arbor, MI 48105
United States

2017 Stewardship Network Conference Notes

Herp Management

- Herps are key bio indicators
- Create more habitat and advertise existing habitat for herps
- Sower Woods sign about herp management

Land, Water, and People

- MEC and Heart of the Lakes
- Create access to natural areas that you want to preserve to get the public to care and invest in them; stewards of these areas
- Most money spent on outdoor recreation is by millennials
- Advertise “the power of nature”

Foreshadowing

- Creating invasive species paper
- Jane Kramer is from East Lansing – collaborate?
- The best paper is made from garlic mustard
- Coordinate with the HNC?

Monitoring Deer Impacts

- Researcher studying the impact of deer on a native oak forest in Ann Arbor
- Study set out to find if the deer browse in several parks throughout Ann Arbor was above 15%, which is the number at which oak forests will not regenerate
- 54% of oaks were browsed by deer

Backpack Sprayer Selection

- Want straps attached in the center for less shoulder strain
- The Shindaiwa was the best in a test by Rutgers where they tested 19 backpack sprayers
- Hollow cone nozzle for basal bark treatment

January 20, 2017

Dear Mr. Menser; Mr. Kieselbach; Meridian Township Planning Commission; Board of Trustees; Manager Walsh, Land Preservation Advisory Board, Zoning Board of Appeals; and Environmental Commission; Ms. Maisner; Parks and Recreation Department;

I am writing this letter in opposition to the rezoning of the Walnut Hills Country Club; based on many reasons, not limited to the following mentioned facts.

According to an Associated Press article dated January 20, the Federal Reserve plans to continue to increase interest rates, leading to higher borrowing costs, thus making the purchase of a home more difficult. The same article stated apartment construction has soared at 54%, which is evident here in plans for development in Okemos, East Lansing and Lansing which continues unchecked, unwarranted and unsustainable.

The Lansing State Journal recently reported there is no need for new housing, student enrollment is declining and President Simon of Michigan State University stated there is already too much housing.

Meridian Township zoning ordinances were designed to protect against this overdevelopment and preserve greenspace, wetlands and ecological balance. At present, the Township is losing taxable income and losing valuable resources that attract families to reside in Meridian Township, due to lack of green space, blighted commercial districts, devalued properties, increased infrastructure costs and empty businesses. Development has caused ecologic imbalance and has led to the decimation of trees and plant life and pushed deer populations into our residential neighborhoods.

"In 2002 Meridian Township Board hired the Greenway Collaborative of Ann Arbor to develop a conservation plan. The residents invested again through taxes in a Land Preservation Millage to preserve and protect the water quality, natural resources, floodplains, wetlands and wildlife", according to the Meridian Township Greenspace Plan of 2004. Meridian Township also "developed a Land Preservation Program and Advisory Board, supported by a Township millage, to preserve and protect the natural areas and vital corridors with a promise of stewardship and natural land conservation". Development of the Walnut Hills Country Club is in violation of these Plans, Programs, Boards, Zoning, Ordinances, and Wetland Protection Ordinances. For these reasons and for the other above aforementioned facts, this request and all future requests for development of Walnut Hill Country Club should be denied.

Please forward this letter to the above participants and other concerned Township affiliates.

Sincerely,

Rhonda Bueche
Okemos resident



Celebrate Enactment Day

January 31, 2017

Dear Board Members and Commissioners,

It is our pleasure to extend a formal invitation to attend the 175th Anniversary Birthday Celebration of Meridian Township and Delhi Township on Thursday, February 16th, 2017 from 1:30pm – 2:30pm at the Michigan State Capitol building, Rooms 402/403.

By way of introduction, Jacob McCormick and I, write to you on behalf of Delhi Township and Meridian Township. We are the 175th Special Events Coordinators for our respective communities. Jacob is also President of the Holt-Delhi Historical Society and a board member of the Historical Society of Greater Lansing and the Ingham County Historical Commission, and I am the Communications Director and Brand Manager for Meridian Township.

We would like to invite you to join us at the State Capitol to celebrate our 175th birthdays and anniversaries. Presenters will be state dignitaries, township officials and local representatives along with Holt Girl Scout Troop #30239 conducting a flag ceremony.

Welcome:

Deborah Guthrie, Meridian Township's 175th Anniversary Chair/Communications Director
George Orban, Ingham County Historical Commission Chair
Ronald J. Styka, Meridian Township Supervisor
Jacob McCormick, Delhi Township's 175th Anniversary Chair/Holt-Delhi Historical Society President
John Hayhoe, Delhi Charter Township Supervisor

Tribute:

Senator Curtis Hertel, Jr., 23rd District State Senator
Representative Sam Singh, 69th District State Representative
Representative Tom Cochran, 67th District State Representative
Kara Hope, Ingham County Commissioner District 7
Dr. Cathy Ash, Superintendent of Okemos Public Schools

Thank You:

Jane Rose, Ex. Director of Meridian Historical Museum and Friends of Historic Meridian
Valerie Marvin, Capitol Historian/Vice President of the Historical Society of Greater Lansing

As regional partners, we intend for our Celebrate Enactment Day to successfully pay tribute to our community's past, present and future history. Refreshments will be served, as well as a commemorative medallion for those in attendance. Please RSVP to Andrea Smiley smiley@meridian.mi.us by February 14, 2017. We look forward to your presence.

Sincerely,

Deborah Guthrie, 175th Anniversary Committee Chair
Meridian Township Communications Director/PIO
guthrie@meridian.mi.us 517.853.4380

LAND PRESERVE SPOTLIGHT

Did you know there are 21 land preserves throughout Meridian Township that are open from dawn to dusk year round? These preserved natural areas are funded through a mileage that aims to protect, preserve and enhance green space in Meridian Township. In this section we will highlight a few of these preserves that are worth a visit during any season!

WINTER - CROSS COUNTRY SKI THROUGH RED CEDAR GLEN

Bundle up and beat the winter blues with cross country skiing or snowshoeing through the Red Cedar Glen Land Preserve! Park near the end of Sylvan Glen Road and proceed down the main trail to observe snowy, wooded scenes. Stay on the main trail and you will be able to follow it along the river through Meridian Riverfront Park. Make sure to keep your eyes open for wildlife tracks in the snow!

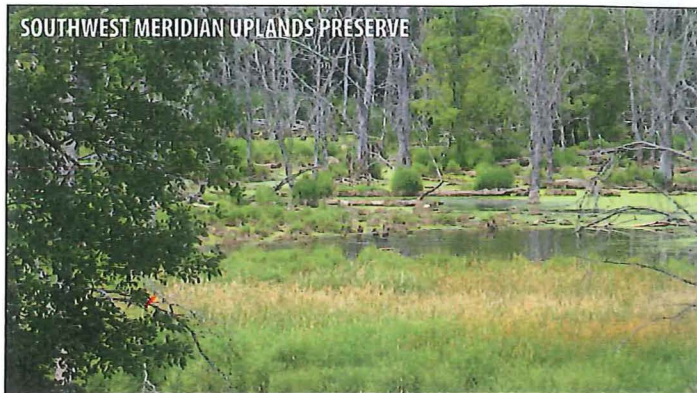
RED CEDAR GLEN PRESERVE



SUMMER – WILDLIFE PHOTOGRAPHY AT SOUTHWEST MERIDIAN UPLANDS

A lesser known/visited of the land preserves the SW Meridian Upland Preserve is definitely worth a visit for wildlife viewing. Bring a mosquito net and head down the path at either the Champion Woods subdivision entrance or Sundance Estates entrance. You'll find wild turkey, Sandhill Cranes, Whitetail Deer and numerous waterfowl species that call this site home. Bring binoculars or a telephoto lens for your camera to make the most of your trip.

SOUTHWEST MERIDIAN UPLANDS PRESERVE



TOWAR WOODS PRESERVE



DAVIS FOSTER LAND PRESERVE



SPRING – WILDFLOWER IDENTIFICATION IN TOWAR WOODS

Ephemeral wildflowers are abundant in this beautiful woodland in the early spring. Treat yourself to a relaxing walk and bring a pocket guide or a smartphone to help identify flowers such as Trillium, Jewelweed, Mayapple and more! Bring along a native hardwood tree ID book as well to test your tree knowledge anytime of the year. Access the preserve by parking at the end of Margate Lane in East Lansing.

FALL – GRASSLAND WALK AND BIRD IDENTIFICATION AT DAVIS FOSTER

One of the most unique ecosystems in our preserves is the restored native grassland at the Davis Foster Land Preserve. A former centennial farm, the crop field now boasts 6 ft. high native grass species such as big blue stem. Take a walk through the center of the grassland for a unique experience and keep your ears open for the call of the state-endangered Henslow's Sparrow and other grassland nesting birds. 5120 Van Atta Road, Okemos.

These four preserves are also some of our most managed natural areas. It takes a lot of effort to keep these preserves free of invasive species and restore them to functioning, native ecosystems. If you would like to volunteer in Meridian's Natural Areas please contact Kelsey Dillon by email at dillon@meridian.mi.us and join our Meridian Volunteer Connection Facebook Page.

Kelsey Dillon, Stewardship Coordinator
(517)853-4614 | dillon@meridian.mi.us

Jane Greenway, Senior Parks and Land Management Coordinator
(517)853-4610 | greenway@meridian.mi.us



JOIN OUR FACEBOOK GROUP
bit.ly/MeridianParkVolunteers

LAND PRESERVES OF MERIDIAN TOWNSHIP

What are Land Preserves?

Land preserves are undeveloped parcels of land such as woodlands, wetlands and prairies. These areas are considered ecologically sensitive and provide important habitat for plants and wildlife. These preserves compliment the 700 acres of natural areas in the parks. Collectively, there are over 1400 acres of natural area in the parks and land preserves.

What's the Land Preservation Program?

Meridian Township's Land Preservation Program was established in 2000 to acquire, preserve, and permanently protect natural areas throughout the township that have unique or special natural features.

Where are the Land Preserves?

There are nearly 771 acres of land preserves located throughout the township. These land preserves are open to the public and some of them contain pathways that are excellent for walking, cross country skiing, or bird watching. See map or call office for exact locations.

How can I help?

Get involved by joining in our conservation efforts! We are always seeking volunteers to act as citizen stewards. Please contact Kelsey Dillon to learn more about volunteer opportunities at (517) 853 - 4614 or dillon@meridian.mi.us

LAND PRESERVES

YELLOW CIRCLE ON MAP

- 1 Davis/Foster Preserve
- 2 Foster-Crouse Preserve
- 3 Hubbel Preserve
- 4 Kuzma Preserve
- 5 Lake Lansing North Preserve
- 6 Newman Equities Preserve
- 7 Towar Woods Preserve
- 8 Lake Lansing South Preserve
- 9 Central Meridian Uplands
- 10 Sower Woods Preserve
- 11 Tihart/Cornell Wetland Preserve
- 12 Southwest Meridian Uplands Preserve
- 13 Sumbal Preserve
- 14 Red Cedar Glen Preserve
- 15 Towner Wetland Preserve
- 16 Meridian Central Wetland Preserve
- 17 Red Cedar River East Preserve
- 18 Forest Grove Preserve
- 19 North Ridge Preserve
- 20 East Lake Drive Preserve

PARKS WITH TRAILS:

- | | | |
|--|---|--|
|  Brattin Woods
5851 Okemos Road, Haslett |  Harris Nature Center
3998 Van Atta Road, Okemos |  Sander Farm Preserved Natural Area
4344 Dobie Road, Okemos |
|  Central Park
5151 Marsh Road, Okemos |  Lake Lansing Park North
6260 E Lake Drive, Haslett |  Tacoma Hills Park
1815 Hamilton Road, Okemos |
|  Central Park South
1990 Central Park Drive, Okemos |  Legg Park
3891 Van Atta Road, Okemos |  Ted Black Woods Park
540 Grand River, Okemos
4714 Van Atta Road, Okemos |
|  Eastgate Park
4203 S. Meridian Road, Okemos |  Nancy Moore Park
1960 Gaylord C. Smith Ct., Haslett |  Wonch Park
4555 Okemos Road, Okemos |
|  Hartrick Park
3685 Hulett Road, Okemos |  North Meridian Road Park
5191 N. Meridian Road, Williamston | |
|  Hillbrook Park
1747 Lake Lansing Road, Haslett | | |

MERIDIAN PARKS VOLUNTEER CONNECTION

Be the first one to be "in the know!" Join community service project events or call us to organize your own project. Be sure to "like" our Facebook page so that you don't miss out on the fun.

VOLUNTEER SPOTLIGHT

DAVE CASZATT

Meridian Township is lucky to have a volunteer as dedicated and passionate as Dave Caszatt. Dave has been hard at work leading stewardship efforts in the Towar Woods Land Preserve for nearly 20 years. He also served on the Land Preservation Advisory Board which oversees the Township's Land Preservation Program and is a founding member of the Towar Community Concerns Committee (TC3) which supports the Snell Towar Recreation Center and neighborhood youth programs.

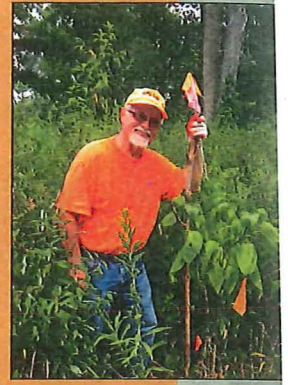
Anyone who knows Dave can speak of his endless energy and determination to improve the ecological health of Towar Woods Land Preserve. He has rallied hundreds of volunteers to plant native hardwood trees and remove invasive species (especially his mortal enemy, Buckthorn) from the preserve. His knowledge of the property and long term management plan is invaluable and keeps the project on track in the preserve. Future generations will reap the rewards of the stewardship efforts he leads and we at Meridian Township cannot thank him enough for his hard work.

MARK STEPHENS

If you know Mark Stephens, you know he likes fishing! Mark believes that it is important to get people, especially children, outside and engaging with the natural world around them. Mark was instrumental in engaging thousands of school children in nature related activities that have improved our parks and land preserves including helping students design, grow and plant butterfly gardens, plant native plants that attracts pollinators, collect seeds, plant trees, lead a wetland restoration program, and release salmon into the Red Cedar River as part of Mark's "Salmon in the Classroom" program. Mark has a gift of making learning about our environment FUN! Mark has brought our community together around fishing, our local environment and local ecology which has greatly benefited our parks and land preserves. Mark is a gem and we consider ourselves lucky to have him as a Park Commissioner.

RENEE TIERNEY

Renee Tierney is a volunteer who dedicates herself to the organizations she is interested in. Her work with the Friends of Historic Meridian has become something we have come to rely on. Need a board member? Renee steps up. Need someone to design curriculum or plan the summer camp programs? Renee's the first to take on the task. Need someone to assist on Saturdays? Renee doesn't just sign up, she shows up, time and time again. And Renee doesn't just stop with her help for the Friends of Historic Meridian. She became involved in the Haslett Women's Club and, of course, has served as part of the executive committee ever since. Renee gives rides to the meetings for those who can or should no longer drive. Her commitment to help her community is laudable and extremely appreciated. Thank you, Renee, for all you do. You make our community a better place.



SATURDAY
MAY 20, 2017
9 am - 12 am

LOVE A
PARK DAY

LOVE A PARK DAY

In 2016, over 50 volunteers helped clean up various parks throughout the township. Hope to see you at the May 20 event!

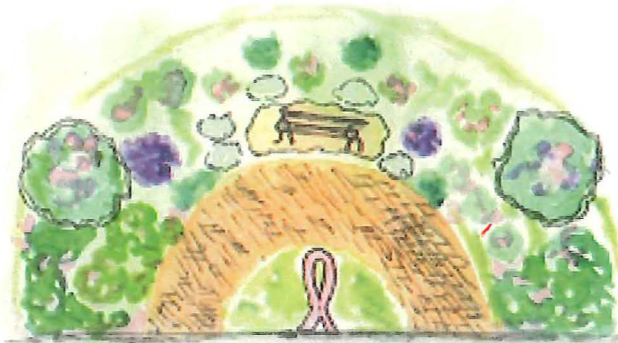
See page 11 for more information about this great community event!

VOLUNTEER PROJECT SPOTLIGHT

"PLANT IT PINK"

The Meridian Garden Club, Inc. broke ground on October 17, 2016 at the Meridian Historical Village for a "Plant it Pink Garden" to provide a healing and meditative space for the survivors of breast cancer, their families and the Meridian Township community. The National Garden Clubs Inc. (NGC) is promoting this activity to their clubs all over the country and urging clubs to plant pink gardens in public landscapes and partner with community groups to "help create hope for a breast cancer-free world". The "Plant it Pink" Garden will be a 720 square foot space overlooking the pond in the Meridian Historical Village featuring an organic mix of trees, flowering shrubs and plants in various shades of pink blooming during each season. Corporate sponsorship to date has been provided by Meijer, Walmart Okemos, H&H Mobil, and Young Bros & Daley.

Fundraising for this project is ongoing and donor bricks are available and may be engraved. You may contribute using the "Donate" button on the Meridian Garden Club website: meridiangardenclub.weebly.com/donations.html



SEED BALLS IN DAVIS FOSTER LAND PRESERVE

The Davis Foster Land Preserve is home to an important ecological feature in Meridian Township; a native restored grassland. Healthy grasslands need to be burned every few years to maintain the native grasses, suppress invasive species and keep out woody plants. In March 2016, Meridian Township conducted a prescribed burn in a 19 acre section of the grassland. This burn created a great opportunity to enhance the grassland through seed balls.

Ninety students from Murphy Elementary School created the seed balls by combining native forb seed and soil, rolling them into balls and then throwing them into the burned portion of the grassland. The teachers also led outdoor classroom lessons about the benefits of native grasslands and overall ecosystem health.



TREES IN FERGUSON PARK

In October 2016, 80 students from Okemos Chippewa Middle School volunteered to walk to Ferguson Park to plant trees as part of "place-based outdoor education". The trees were obtained through the "Right Tree, Right Place" grant from Consumers Energy. The 10 native trees planted here will help to offset the Ash tree loss that many Meridian Township parks suffered from the Emerald Ash Borer. The species that were planted include: Eastern Redbuds, Kousa Dogwood and Downy Serviceberry. These flowering trees will also provide beauty in the springtime and support pollinators. The students learned about proper tree planting techniques and the importance of natural area stewardship.



Meridian Township Land Preservation, 2016



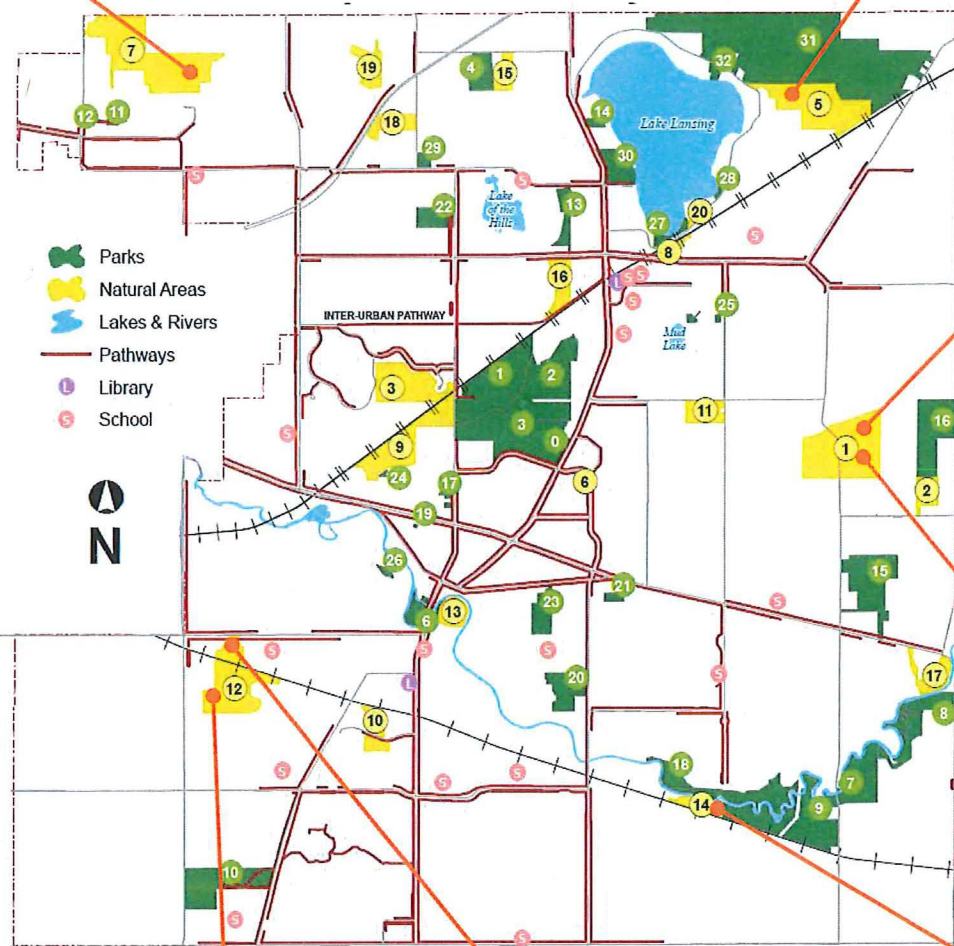
Site Restoration at Towar Woods



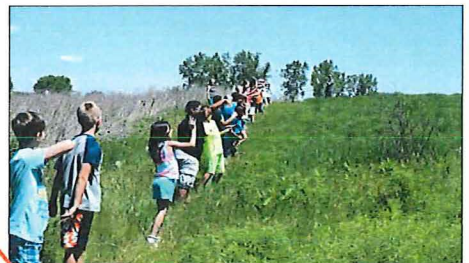
Site Visit—Lake Lansing North



Deer Management Program in 13 Preserves



Davis Foster—Two Prescribed Burns



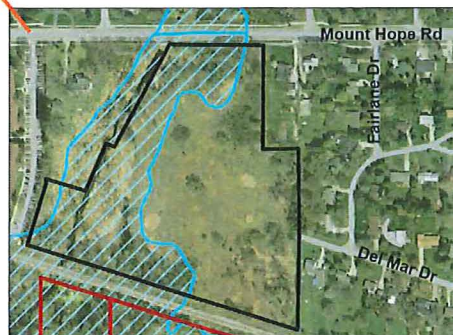
Davis Foster—Seed Ball Project



Red Cedar Glen—Invasive Species Removal



SW Meridian Uplands—Prairie Installation



Land Acquisition—14 Acres



Garlic Mustard Challenge—Multiple Preserves



Meridian Township Land Preservation Program

2017 PROJECTS

Community Engagement and Education

Engage the community and energize stewardship activities. Recruit local neighborhood organizations and schools to actively participate in cleanup and maintenance of the preserves, including elimination of invasive, non-native plants for several preserves. Educate the community on the importance of natural area stewardship and invasive species removal.

Invasive Species Management

Continue to eliminate invasive species throughout Meridian Township and restore sites to natural, functioning ecosystems. Continue to participate in the Garlic Mustard Challenge and other invasive species removal programs and seek funding for site restoration projects where applicable.

Towar Woods

Continue the large-scale site restoration project in the western portion of the Towar Woods Land Preserve. 165 deciduous hardwood trees will be planted in the area that was cleared of the invasive shrub Buckthorn. We will engage neighborhood volunteers, scout troops and school classes in the tree planting project.

Davis Foster

Overlook

Create a space for outdoor place based education for local school groups and a bird watching platform for novices and professionals by constructing a raised observation platform with seating underneath. A local architect, who is designing the beaver dam nature exploration area at the HNC, has agreed to help brainstorm ideas for designing the structure.

Site Restoration

Management of the native grassland will continue with a scheduled prescribed burn on a 5.5 acre area of the preserve. This will give us the opportunity to work with Haslett elementary students again to organize a seed ball grassland enhancement project which engaged 90 students last year.

Signage

Complete rules signage and get them posted in all preserves. Create trail heads and install directional signage in land preserves where applicable. Install large "Natural Area" signs on two new preserves and preserves that do not currently have signs. Install wildlife interpretational signage in high visible areas to increase passive enjoyment of preserves.

Grant Announcement

The Michigan Natural Resources Trust Fund Board awarded Meridian Township Parks and Recreation a grant for \$514,900 to be used to acquire the Ponderosa Land Preserve.

2016 Park Facility Accomplishments

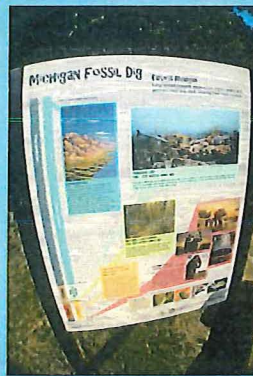
Orlando Story Walk & New Playground



Hillbrook New Playground Equipment, Courts & Trees



Harris Nature Center Fossil Dig



Wonch Pavilion, Fitness Equipment & Mural



Other Park Improvements

Dugout Covers at Hartrick



New Volleyball Sand at Nancy Moore



Meridian Township Park Commission

2017 PROJECTS

Towner Road Park Construction

Development of Towner Road Park has been in the planning stages for a number of years. The project which includes 2 ball diamonds, two soccer/football fields, restroom building, perimeter pathway and pavilion went out to bid in December with bids due on January 30. Spring construction is planned.

Smart Phone App for Parks and Trails Systems

The Parks and Recreation Department worked together with IT staff this past year accumulating raw data to create a web-based-interactive program for our parks and pathway system. A draft program should be available by mid-summer.

North Meridian Road Park Pavilion

Thanks to a Michigan Natural Resources Trust Fund Grant awarded in 2015, North Meridian Road Park will receive a new picnic pavilion in 2017. The project also includes new picnic tables and grills.

Dog Park

A new doggie playground is planned for Central Park. This doggie playground will allow pets and their owners to enjoy time together in this first-ever "off leash" Dog Park in Meridian Township. The park will include areas for both small and large dogs, trails and agility equipment.

Update the 5-Year Parks and Recreation Master Plan 2017-2021

Work on the Master Plan was completed in 2016 and is currently in the thirty-day public review period. A public hearing is scheduled for Tuesday, February 14 together with Park Commission action. Action from the Township Board is planned for February 21st for submission to the Michigan Department of Natural Resources by the March 1, 2017 deadline. This plan is required for grant eligibility.

2016 Grant Announcements

Page #2

The Michigan Natural Resources Trust Fund

- Central Meridian Regional Trail Connector: \$272,500 grant award (2500 lf of trail, trailhead amenities and fishing overlook deck in Central Park South)

Land and Conservation Fund:

- A new gateway footbridge and restroom building in the Historical Village: \$150,000 grant award with a \$150,000 local match from the Park Millage

Ingham County Parks and Trails Millage

- \$600,000 in trail and footbridge improvements (on park trails and in Township Pathway system)

Capital Region Community Foundation

- \$6,500 "Tool Trailer" for park volunteer clean-up projects



Meridian Township Park Commission

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**CHARTER TOWNSHIP OF MERIDIAN
LAND PRESERVATION PROGRAM**

MEETING OF THE LAND PRESERVATION ADVISORY BOARD
FEBRUARY 8, 2017

8. New Business

- a. Forest Grove Flowage Easement
- b. Vernal Pool Project Proposal
- c. Support for the Stewardship Network/ MMSI
- d. Election of Officers

MERIDIAN TOWNSHIP

TO: Land Preservation Advisory Board

FROM: Jane Greenway
Jane Greenway
Land Management Coordinator



DATE: February 2, 2017

RE: Sierra Ridge Flowage Easement across Forest Grove Land Preserve

The Ingham County Drain Commissioner (ICDC) is requesting a flowage easement from Meridian Township in the Sierra Ridge Drain District. This easement would cross a portion of land preservation property known as Forest Grove Land Preserve, located on Newton Road.

The purpose of the easement is to provide drainage for a portion of the Sierra Ridge subdivision. Some of the stormwater runoff from the backyards of the development flows through a culvert under Newton Road and onto the land preserve. Jerry Fedewa, developer of Sierra Ridge, has requested a flowage easement from the Township allowing his water to access the Costigan County Drain. The Drain Commissioner requires a flowage easement for the purpose of accessing the Costigan Drain for maintenance.

All parties met onsite to review the proposed project. Attendees included: Township staff; Jerry Fedewa; and David Love from the ICDC. Township staff present included Jane Greenway, LuAnn Maisner, Kelsey Dillon, and Younes Ishraidi. Township staff expressed concerns about the water quality from the backyard water runoff entering the preserve. Options that were discussed included pretreating the water or considering an alternative route to send the water to the drain.

Andria Ditschman, Jerry Fedewa, and David Love will attend the February 8, 2017 meeting to discuss the requested easement.

Jane Greenway

From: LuAnn Maisner
Sent: Tuesday, January 31, 2017 12:46 PM
To: Jane Greenway; Younes Ishraidi; Derek Perry
Subject: FW: Sierra Ridge drainage summary

FYI

From: Love, David [mailto:DLove@ingham.org]
Sent: Tuesday, January 31, 2017 12:24 PM
To: LuAnn Maisner
Subject: Fw: Sierra Ridge drainage summary

LuAnn, sorry about the misspelling. I have it correct now.

David Love, Ingham County Drain Engineer
Ingham County Drain Commissioner's Office
707 Buhl Street
Mason, MI 48854
517-676-8395 (Office)

517-719-4900 (cell)
517-676-8364 (fax)

From: Love, David
Sent: Tuesday, January 31, 2017 12:16 PM
To: bstockhill@comcast.net
Cc: andria@andriaditschmanlaw.com; Fedewa, Jerry; Younes Ishraidi; Carla Clos; Michael Woodworth; "Lou Ann Maisner"
Subject: Re: Sierra Ridge drainage summary

Brett, I see the additions that you have made. I don't think that this will convince the Land Preservation Board that the runoff from the backyards will meet the water quality that they will be worried about. Therefore, have you considered any other way to get the water to the Costigan Drain? Can the water that goes through the road culvert be collected and tied into the connection that was already made to the Costigan Drain on the east side of Newton Road? Or is there some way to pretreat the water that is proposed to cross Newton Road?

Dave

David Love, Ingham County Drain Engineer
Ingham County Drain Commissioner's Office
707 Buhl Street
Mason, MI 48854
517-676-8395 (Office)

517-719-4900 (cell)
517-676-8364 (fax)

From: bstockhill@comcast.net <bstockhill@comcast.net>
Sent: Monday, January 30, 2017 5:03 PM
To: Fedewa, Jerry; Younes Ishraidi; Love, David
Subject: Re: Sierra Ridge drainage summary

Revised sheets for consideration.

From: bstockhill@comcast.net

To: "Jerry Fedewa" <gshedewa@gmail.com>, "Younes Ishraidi" <ishraidi@meridian.mi.us>, "David Love" <dlove@ingham.org>

Sent: Monday, January 30, 2017 1:44:47 PM

Subject: Sierra Ridge drainage summary

See attached for comment.

1. overall Sierra Ridge existing contours.
2. existing contours with drainage area to the existing pipe highlighted.
3. proposed contours with drainage area to the existing pipe highlighted.
4. existing and proposed highlighted drainage areas overlap.
5. drainage calculations based on these areas showing the factored areas (taking into account runoff coef.).

BRS Engineering
Brett R. Stockhill, PE
3821 Stoneleigh Dr.
Lansing, MI 48910
Phone: 517-719-5094

Jane Greenway

From: Jerry Fedewa <gsfedewa@gmail.com>
Sent: Tuesday, December 20, 2016 3:07 PM
To: Jane Greenway
Subject: Flowage easement required by the Drain commission

Hello Jane Greenway,

We are the developers of Sierra Ridge and are requesting a flowage easement agreement to be approved by you or someone at Meridian Township. Apparently, The Ingham County Drain Office is requiring a water flow easement for water that flows from the east side of Newton to the west side into a parcel of Meridian preserved land. The Ingham easement is necessary for cleaning and clearing purposes. Sierra Ridge Phase three is complete, but cannot be platted until this easement agreement is completed. Please share with me the process necessary to have this easement signed off or pass me off to someone that can help.

Thanks,
Jerry

--
Jerry Fedewa
Jerry Fedewa Homes Inc.
Michigan Licensed and Green Certified Residential Builder
5570 Okemos Rd., East Lansing, Mi. 48823
517-339-0020 office
517-719-6300 cell
gsfedewa@gmail.com



Jane Greenway

From: Love, David <DLove@ingham.org>
Sent: Monday, December 19, 2016 2:46 PM
To: Jane Greenway
Cc: Carla Clos
Subject: Re: Newton Road
Attachments: C2900-SUR-19191219.pdf; Costigan Drain.pdf

Hi Jane, thanks for getting back to me. I'm attaching a drawing that shows a portion of the Costigan County Drain that crosses the parcel that the Township recently acquired. The Drain is an old 12" tile from the 1920's. The survey of the Drain is also attached showing this portion as the Branch Drain. Jerry Fedewa has developed a portion of Sierra Ridge area across Newton Road from this parcel. Some of the runoff from the backyards of the development comes through a culvert under Newton Road and onto this parcel. I requesting that he get a flowage easement from the Township allowing his water to access the County Drain essentially as shown on the drawing. The area in question is very wet and nno changes area required.

On the other hand, we do need to maintain our Drain through the parcel, so much like we did with the Smith Drain, we'd like to meet with any interested Board member to walk the Drain and discuss the maintenance that will be required.

Dave

David Love, Ingham County Drain Engineer
Ingham County Drain Commissioner's Office
707 Buhl Street
Mason, MI 48854
517-676-8395 (Office)

517-719-4900 (cell)
517-676-8364 (fax)

From: Jane Greenway <greenway@meridian.mi.us>
Sent: Monday, December 19, 2016 1:06 PM
To: Love, David
Subject: Newton Road

Hi Dave,

Here is my email!

Thanks
Jane

Jane L. Greenway, LLA
Senior Parks and Land Management Coordinator
Meridian Charter Township
5151 Marsh Road
Okemos, MI 48864
Phone 517-853-4610
Fax 517-853-4099

"Creating Community through People, Parks, and Places"

Survey of the Costigan Drain

Survey of the Costigan Drain, located on sections 3 and 4, Town 4 North, Range 1 West, Township of Meridian, County of Ingham, and State of Michigan, the centerline thereof being described as follows:

Commencing in the Pine Lake Outlet Drain at a point in the N&S $\frac{1}{2}$ line to the SW $\frac{1}{4}$ of said section 3, 678 feet N of the S $\frac{1}{2}$ post to said SW $\frac{1}{4}$, thence over and across the following description: S 36 acres of the W $\frac{1}{2}$ of the SW $\frac{1}{4}$ of section 3, William L. Haag and George H. McNeil, owners, as follows: Commencing at station 0 plus 00 feet of said drain, thence N 84 deg. 55' W 1313 feet to station 13 plus 13 feet in the W line of said lands at a point 245 feet S of the NW corner thereof. Total length of said drain on said lands is 1313 feet.

Thence over and across the following description: the E $\frac{1}{2}$ of the SE $\frac{1}{4}$ of section 4, town and range aforesaid, Roy A. Douglas, owner, as follows: Commencing at station 13 plus 13 feet in the E line of said lands at a point 245 feet S of the NW corner of the S 36 acres of the W $\frac{1}{2}$ of the SW $\frac{1}{4}$ of section 3, thence N 74 deg. 30' W 1402 feet, to station 27 plus 15 feet in the W line of said lands at a point 1100 feet N of the SW corner thereof. Total length of said drain on said lands is 1402 feet.

Thence over and across the following description: the W $\frac{1}{2}$ of the SE $\frac{1}{2}$ of section 4, Willis A. Culver, owner, as follows: Commencing at station 27 plus 15 feet in the E line of said lands at a point 1100 feet N of the SE corner thereof, thence N 87 deg. 35' W 505 feet, thence S 36 deg. 35' W 434 feet, thence S 2 deg. 40' E 184 feet, thence S 61 deg. W 127 feet, thence N 84 deg. W 135 feet, thence N 21 deg. W 372 feet, thence N 41 deg. 40' W 228 feet to station 47 plus 00 feet in the W line of said lands at a point 1075 feet N of the SW corner thereof. Total length of said drain on said lands is 1985 feet.

Thence over and across the following description: the SE $\frac{1}{4}$ of SW $\frac{1}{4}$ of section 4, Daniel R. Andrews and wife, Millie E., joint owners, as follows: Commencing at station 47 plus 00 feet in the E line of said lands at a point 1075 feet N of the SE corner thereof, thence N 41 deg. 40' W 38 feet, thence N 83 deg. 30' W 256 feet, thence S 41 deg. 50' W 606 feet, thence N 78 deg. 20' W 678 feet to station 62 plus 78 feet, the upper terminus of said drain, at a point in the W line of said lands 500 feet S of the center of the SW $\frac{1}{4}$ of section 4. Total length of said drain on said lands is 1578 feet.

The total length of the Main Drain is 6278 feet, or 380.48 rods.

BRANCH DRAIN.

A branch to the Main Drain is located as follows: Commencing at station 47 plus 38 feet of the Main Drain, at a point 221 feet S and 25 feet W of the E $\frac{1}{2}$ post of the SW $\frac{1}{4}$ of section 4, town and range aforesaid, thence over and across the following description: the SE $\frac{1}{4}$ of the SW $\frac{1}{4}$ of said section 4, Daniel R. Andrews and wife, Millie E., joint owners, as

follows: Commencing at station 0 plus 00 feet of said Branch Drain, thence N 1 deg. 30' E 221 feet to station 2 plus 21 feet in the N line of said lands at a point 25 feet W of the NE corner thereof. Total length of said drain on said lands is 221 feet.

Thence over and across the following description: the NE $\frac{1}{4}$ of the SW $\frac{1}{4}$ of said section 4, Ray LaDu, owner, as follows: Commencing at station 2 plus 21 feet in the S line of said lands at a point 25 feet W of the SE corner thereof, thence N 30 deg. W 379 feet to station 9 plus 00 feet, the upper terminus of said Branch Drain at a point 380 feet W and 575 feet N of the E $\frac{1}{2}$ post to the SW $\frac{1}{4}$ of section 4. Total length of said drain on said lands is 679 feet.

The total length of said Branch Drain is 900 feet, or 54.54 rods.

The total length of said Main and Branch Drains is 7,178 feet, or 435.02 rods.

SPECIFICATIONS.

Station stakes and grade hubs are set every 100 feet distant throughout the course of said drain and branch, except between station 62 and the upper terminus of the Main Drain, which is 78 feet; and 25 feet to the right of the centerline, going upstream, from station 0 to station 33 of the Main Drain, and 5 feet to the right of the centerline of the remaining portion of the Main Drain and throughout the course of the Branch Drain.

Said Main Drain shall be constructed as an open drainage channel from station 0 to station 32, with a bottom width of 3 feet, and a $1\frac{1}{2}$ to 1 slope of banks. From station 32 to station 62 plus 78 feet said drain shall be constructed as a closed drain of the following diameters: Station 32 to station 47 plus 40 feet, 20-inch tile; station 47 plus 40 feet to station 56, 16-inch tile; station 56 to station 62 plus 78 feet, 15-inch tile.

Said Branch Drain shall be constructed as a closed drain of 12-inch tile throughout.

The grade of the Main Drain shall be as follows: Commencing at station 0, grade elevation, 841.50; thence a grade of 0.08% to station 32, grade elevation, 844.06; thence a rise in grade of 1.74 feet, grade elevation, 845.30; thence a grade of 0.12% to station 62 plus 78 feet, grade elevation, 849.49.

The grade of said Branch-Drain shall be as follows: Commencing at station 0, grade elevation, 849.00, thence a grade of 0.15% to station 9, grade elevation, 850.35.

The right of way for construction of said drain shall include fifty (50) feet on each side of the centerline as above described.

All work of construction shall be according to plans and specifications on file in the office of the County Drain Commissioner, said work to include the construction of one (1) concrete bulkhead and one catchbasin at the places designated on the profile.

The total fall of the Main Drain is 7.99 feet. The maximum depth of the open portion is 6.79 feet. The minimum depth is 4.63 feet. The av-

erage depth of the open portion is 5.33 feet.

The maximum depth of the closed portion of the Main Drain is 8.06 feet. The minimum depth is 3.06 feet. The average depth is 5.92 feet.

The total fall of the Branch Drain is 1.35 feet.

The maximum depth is 3.86 feet. The minimum depth is 2.51 feet. The average depth is 3.58 feet.

Said drain shall be constructed with the following depths in feet and hundredths of feet, measured from a level with the tops of the aforementioned grade hubs.

SECTION ONE.

(3200 feet, or 198.93 rods open work.)

Sta.	Depth Feet	Sta.	Depth Feet
0	5.48	16	5.00
Com. 3-ft. bot.		17	5.32
1	5.30	18	5.69
2	5.67	19	5.61
3	4.84	20	5.28
4	5.06	21	5.16
5	5.43	22	6.47
6	5.35	23	6.79
7	5.22	24	5.31
8	4.89	25	5.43
9	4.96	26	5.25
10	4.78	27	5.77
11	5.10	28	5.49
12	6.32	29	5.11
13	5.59	30	4.63
14	5.01	31	4.80
15	5.18	32	5.57

SECTION TWO.

(3078 feet, or 186.54 rods tile.)

Sta.	Depth Feet	Sta.	Depth Feet
32	3.83	Com. 16-inch.	
Com. 20-inch.		48	3.49
33	4.89	49	5.22
34	6.24	50	4.75
35	6.17	51	5.02
36	7.65	52	4.90
37	6.93	53	4.73
38	5.31	54	3.96
39	5.59	55	6.49
40	6.63	56	6.67
41	6.93	Com. 15-inch.	
42	4.21	57	6.55
43	4.79	58	6.13
44	0.82	59	6.16
45	7.75	60	6.14
46	7.43	61	5.72
47	8.06	62	3.45
plus 40		plus 78	3.06

SECTION THREE.

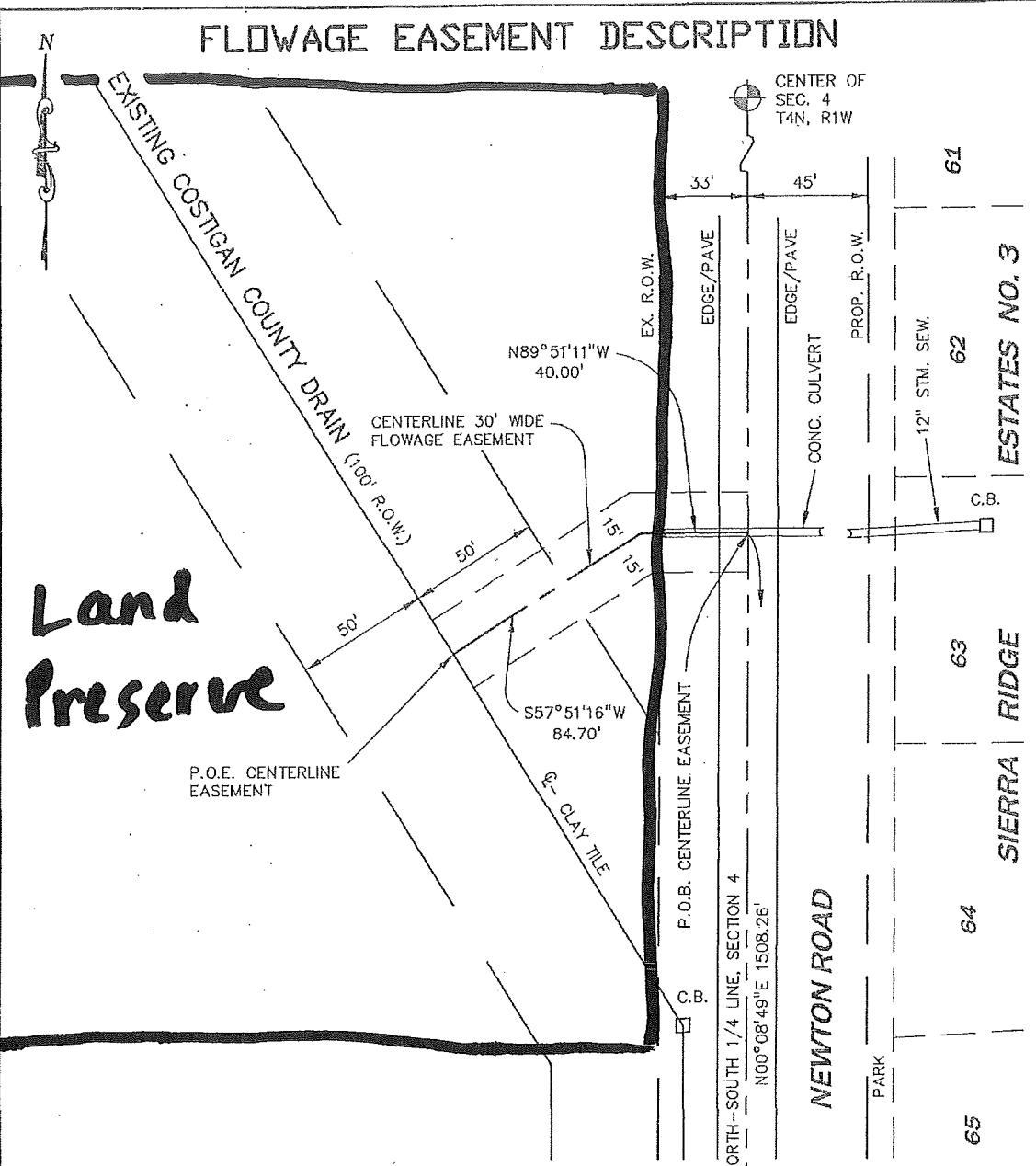
(400 feet, or 54.54 rods tile.)

Sta.	Depth Feet	Sta.	Depth Feet
0	3.61	5	3.61
Com. 12-inch.		6	2.51
1	3.86	7	3.71
2	3.71	8	3.71
3	3.86	9	3.56
4	3.81		

BENCH MARKS

Basswood S Sta. 0, Elev., 848.36.
Willow S. Sta. 26, Elev., 849.73.
White Ash N Sta. 45, Elev., 856.00.
Oak N Sta. 59, Elev., 856.85.
Survey completed Dec. 19, 1919.
WOLVERINE ENGINEERING CO.,
Engineers.
By W. E. Zimmer.
By order of George Graham, County Drain Commissioner of the County of Ingham, State of Michigan.

FLOWAGE EASEMENT DESCRIPTION



Land Preserve

EASEMENT DESCRIPTION:
 A 30 FEET WIDE EASEMENT SITUATED IN THE SOUTHWEST 1/4 OF SECTION 4, TOWN 4 NORTH, RANGE 1 WEST, MERIDIAN TOWNSHIP, INGHAM COUNTY, MICHIGAN, SAID EASEMENT BEING 15 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE: COMMENCING AT THE SOUTH 1/4 CORNER OF SAID SECTION 4; THENCE NORTH 00°08'49" EAST ALONG THE NORTH-SOUTH 1/4 LINE OF SECTION 4 A DISTANCE OF 1508.26 FEET TO THE POINT OF BEGINNING OF THIS CENTERLINE DESCRIPTION; THENCE NORTH 89°51'11" WEST, 40.00 FEET; THENCE SOUTH 57°51'16" WEST, 84.70 FEET TO THE CENTERLINE OF AN EXISTING COUNTY DRAIN AND POINT OF ENDING OF THIS DESCRIPTION. CONTAINING 0.086 ACRES, MORE OR LESS

LEGEND
 -x- Fence
 ~ Line Not To Scale

BENCHMARK SURVEYING, LLC
 9851 MISSAUKEE LANE, HASLETT, MI 48840
 (517) 230-1865 * tw@benchmarksurveying.us

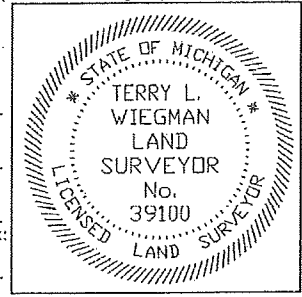
For: INGHAM COUNTY DRAIN COMMISSIONER
 Location: SECTION 4, T4N, R1W
 MERIDIAN TWP., INGHAM CO., MI

Drawn by: TW Dwg. No. 12-039COST

Sheet 1 of 1
 0 50
 SCALE: 1" = 50'

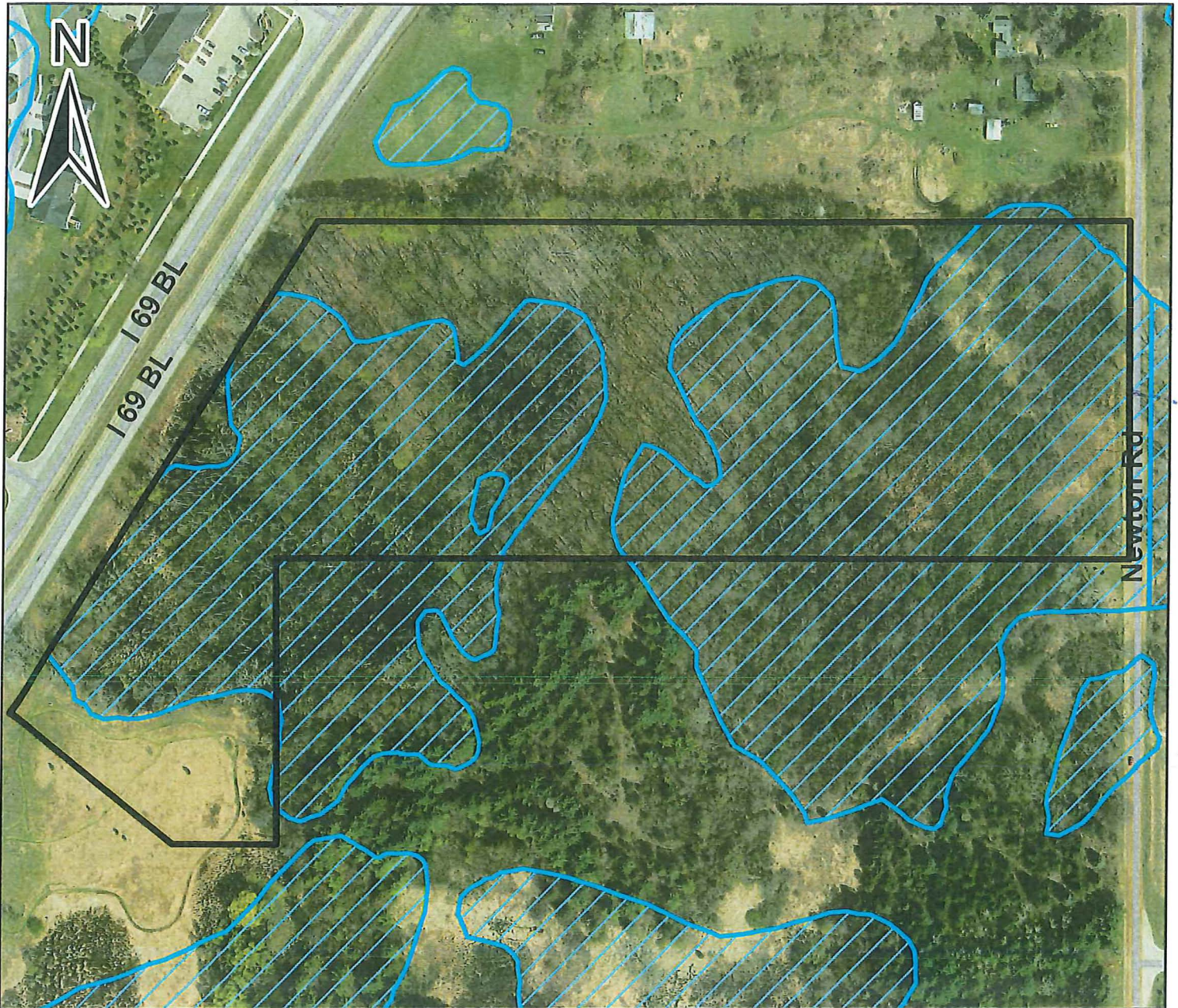
Date: TW
 Field work by: DEC. 2016
 Date of field work: 12-039
 Proj. No.

Terry L. Wiegman, P.S. No. 39100
 (Authorized Agent)



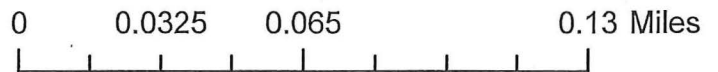
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Forest Grove Land Preserve



Legend

-  Land Preserve
-  Wetland
-  Roads



Location: on the east side of Old M-78 (Saginaw Street), and the west side of Newton Road, north of Lake Lansing Road, and south of Towner Road
Area: 20.4 acres
Year Acquired: 2011
Purchase Price: \$425,000
Description: Heavily wooded and much of the property is wetland

Vernal Pool Mapping and Monitoring Training and Community Involvement



Proposal to:
Charter Township of Meridian
Department of Parks and Recreation
5151 Marsh Road
Okemos, MI 48864

Submitted by:
Michigan Natural Features Inventory
Michigan State University Extension
3rd Floor Constitution Hall
P.O. Box 13036
Lansing, MI 48901-3036

February 2, 2017



Cover Photographs:

Left – Vernal pool in Lake Lansing Park North, on the 120 acres covered by a Meridian Township Land Preservation conservation easement. Photo by Leslie Kuhn.

Left inset – Fairy shrimp, vernal pool indicator species. Photo from Wikimedia Commons.

Right inset – Blue-spotted salamander (*Ambystoma laterale*). Photo by Yu Man Lee.

Top right – Vernal pool training workshop, April 2015, Gaylord, MI. Photo by Angie Lucas.

Bottom right – Blue-spotted salamander egg masses. Photo by Yu Man Lee.

Proposal to Meridian Township Parks and Recreation Department and
Meridian Township Land Preservation Advisory Board

Vernal Pool Mapping and Monitoring Training and Community Involvement

Michigan Natural Features Inventory (MNFI)

Michigan State University Extension

I. PROJECT UNDERSTANDING

Effective management and conservation of natural resources require a basic knowledge of the ecosystems and biodiversity that occur in an area. To help inform and guide natural resource management and stewardship efforts, Meridian Township is interested in learning more about the distribution, status, and ecology of vernal pools that occur on the Township's natural areas and parks and in the Township in general. The purpose of this project is to provide training, support, and assistance to Meridian Township to initiate a citizen science- and community-based vernal pool mapping and monitoring program in the Township. This project is part of a larger, collaborative effort to launch a vernal pool mapping and monitoring program in mid-Michigan with a number of community partners including the Mid-Michigan Stewardship Cluster, Ingham County Parks/Friends of Ingham County Parks, and WildOnes. Michigan Natural Features Inventory (MNFI), a program of Michigan State University Extension, proposes to provide staff with Meridian Township, the Mid-Michigan Stewardship Cluster, and other interested community partners with training, resource materials, support, and assistance to launch and implement vernal pool mapping and monitoring in Meridian Township and the mid-Michigan area. MNFI also will help train community volunteers on how to identify and monitor vernal pools, will provide ongoing support and assistance to community partners and volunteers, and will work with partners to compile the vernal pool data and get the data into the statewide vernal pool database. To provide some baseline data on vernal pools and provide potential vernal pools for community volunteers to map and monitor, MNFI also propose conducting air photo interpretation to identify and map potential vernal pools across all Meridian Township natural areas and park lands.

II. PROJECT NEED AND BACKGROUND

Vernal pools play an important role in maintaining Michigan's biodiversity and healthy forest ecosystems. Vernal pools (also referred to as ephemeral or seasonal pools) are small, shallow, depressional wetlands that usually contain water for only part of the year. They typically fill with water in the spring, fall, or winter, and usually dry up by late summer or early fall. Because they dry up, one of the key characteristics of vernal pools is that they lack fish. The alternating dry and wet conditions and lack of predatory fish populations have resulted in these wetlands providing critical breeding habitats for a host of forest-dwelling amphibians and invertebrates, including some species that are specialized for life in vernal pools and depend on these unique habitats for their survival. These include the Blue-spotted Salamander (*Ambystoma laterale*), Spotted Salamander (*Ambystoma maculatum*), Wood Frog (*Rana sylvatica*), and fairy shrimp (Colburn 2004, Calhoun and deMaynadier 2008). They also provide habitat for other animal and plant species including threatened and endangered species, such as the Small-mouthed Salamander (*Ambystoma texanum*, state endangered), Spotted Turtle (*Clemmys guttata*, state threatened), and Blanding's Turtle (*Emydoidea blandingii*, state special concern) (Harding 1997). The pools serve to connect larger wetland ecosystems by serving as

temporary rest stops for animals. Vernal pools also are important components of forest food webs and nutrient cycles, and provide a number of vital functions including water storage and infiltration, groundwater recharge, and flood control.

Vernal pools are highly vulnerable to disturbance or destruction, and are being lost across Michigan. Because of their small size and seasonal nature, vernal pools can be difficult to identify on the landscape, especially when they are dry, and are often overlooked. Vernal pools receive little or no protection under federal and state wetland regulations because they are small and often isolated from larger, permanent waterbodies and wetlands. Many of these small temporary wetlands have been drained or filled due to agricultural, residential, and/or other development. The construction of a single building can completely cover a pool or so alter local water flow that a pool may either dry up permanently, or remain wet year round. Some pools have been excavated to construct stormwater detention ponds or converted to permanent ponds. Vernal pools also have been impacted by forest management activities. These small ecosystems also may be impacted by climate change since changes in temperature and precipitation can cause dramatic shifts in the number, timing, and duration of vernal pools.

Despite the rich biodiversity, unique species, and integrative function of vernal pools, awareness of their importance has, until recently, not been widely recognized. This, however, is changing. The State of Michigan's recommended sustainable soil and water quality practices on forest land and the Sustainable Forestry Initiative® (SFI®) and Forest Stewardship Council's (FSC®) forest certification standards have included protection for vernal pools on forest lands (Michigan Department of Natural Resources and Michigan Department of Environmental Quality 2009, Sustainable Forestry Initiative 2010, Forest Stewardship Council 2010). However, little information is currently available on the status, distribution, and ecology of vernal pools in Michigan. This information is critical for conservation and management of these important and unique wetland ecosystems.

Due to recent increased awareness of the importance of vernal pools, there has been growing interest in identifying, studying, and conserving these small but valuable ecosystems in Michigan. To help address this need, the Michigan Natural Features Inventory (MNFI) has developed and is in the process of implementing a statewide, citizen science-based vernal pool mapping and monitoring program. This program was developed as part of a project that was funded by the Michigan Department of Environmental Quality (MDEQ) with funds from the U.S. Environmental Protection Agency, and was conducted in collaboration with the Michigan Department of Natural Resources, Michigan Tech Research Institute, Herpetological Resources and Management, Michigan Nature Association, and The Nature Conservancy. The vernal pool program involves recruiting, training, and deploying volunteers/citizen scientists to help verify, map, assess, and monitor vernal pools using a standard protocol so that data can be compared and aggregated across sites and regions in the state. Data collected by the citizen scientists will be entered into a statewide vernal pool database, which is used to store and track information about the status, distribution, and ecology of vernal pools across the state (Lee et al. 2014). This information can be used to inform and guide vernal pool monitoring, research, and conservation efforts.

Meridian Township currently owns and manages over 900 acres of park land and over 700 acres of natural areas. Little information is currently available on the status, distribution, and ecology of vernal pools on these lands and in the Township in general. Little information is also currently available on vernal pools on other public and private lands in the mid-Michigan area. Working with the Mid-Michigan Stewardship Initiative, Ingham County Parks, WildOnes, and other local partners to initiate a vernal pool mapping and monitoring program in Meridian Township and mid-Michigan will help raise awareness of the importance of vernal pools and

wetlands in general to healthy ecosystems and communities, and provide land managers with information needed to manage and protect these wetlands. This project will engage the local community in stewardship and protection of vernal pools and the surrounding ecosystems and natural areas/parks.

MNFI is uniquely qualified to provide training and support to local communities interested in getting involved with vernal pool mapping and monitoring given its role in developing the vernal pool program and diverse expertise in vernal pools, aquatic invertebrates, birds, herpetology, and botany. Over the past couple of years, MNFI has provided training to a number of community partners, agencies, and organizations in Michigan who have initiated or are going to initiate vernal pool mapping and monitoring with internal staff, volunteers, educators, and/or students in their local community and/or on the lands they manage. These partners have included the Michigan Department of Natural Resources, U.S. Forest Service, Oakland County Parks, Oakland Township Parks and Recreation, Ann Arbor Natural Areas Preservation, Little Traverse Conservancy, Grand Traverse Regional Land Conservancy, Michigan Nature Association, Huron Pines, Michigan Sea Grant, Northeast and Northwest Michigan Great Lakes Stewardship Initiative, MSU Extension 4-H Program, Verso Paper Corporation, and a number of teachers and students at various schools in northern Michigan (e.g., Harbor Springs Middle School, Montessori Children's House in Traverse City, Interlochen Academy, Rogers City Middle School, Gaylord High School, Onaway Area School, Roscommon Middle School, and Vanderbilt Area School).

III. PROJECT APPROACH

This project will consist of the following four main components:

- 1) **Potential vernal pool mapping** – MNFI will review aerial imagery/air photos and identify and map potential vernal pools across all Meridian Township natural area and park lands. MNFI will work with Meridian Township to obtain the most recent and highest resolution, leaf-off (ideally color-infrared) aerial imagery available for Meridian Township lands. Potential vernal pools will be mapped in GIS (ArcMap 10.2.1), and a GIS shapefile with the locations of mapped potential vernal pools will be provided to Meridian Township.
- 2) **Public presentation** - A public presentation by MNFI on vernal pools, their importance, indicator species, and the opportunity for involvement in vernal pool mapping and monitoring and the upcoming training. This will be scheduled at an evening or weekend time in mid- to late March, avoiding local school and MSU spring breaks, and when people who work can also participate. Staff and/or members of Meridian Township, the Mid-Michigan Stewardship Cluster, Ingham County Parks (ICP)/Friends of ICP, WildOnes (WO), and other community partners (e.g., Mid-Michigan Land Conservancy, Mid-Michigan CISMA (based in the four regional Conservation Districts, which have massive outreach), East Lansing Parks, Lansing Parks/Fenner, and possibly other groups like the Lake Lansing Property Owner's Association, MGROW, and Friends of the Looking Glass) will be invited. Meridian Township and partners will help invite the general community. Registration can be done to get a head count beforehand. Ideally, presentation will be held in Meridian Township Hall's conference room (other site possibilities: Chippewa Middle School's Meridian Senior Center facility (if room is large enough)).
- 3) **Vernal pool training workshops** – MNFI will present two vernal pool mapping and monitoring training workshops. One workshop will be organized with MNFI by Meridian Township and will primarily focus on community outreach/participation and recruiting and training volunteers on how to map and monitor vernal pools in Meridian Township's natural

areas and parks and on other lands as well. The other workshop will be organized with MNFI by Mid-Michigan Stewardship/FICP/WO, and will focus on “training the trainers”, that is, training stewardship leaders from various organizations on vernal pool mapping and monitoring. The two training workshops will be advertised with these different purposes. Each workshop will consist of classroom presentations and in-field training. Training workshops will be held in early to mid-April (depending on local weather conditions and frog/salamander/fairy shrimp phenology). Training workshops will ideally be limited to 20 people per session, although we may be able to accommodate more participants. We will work with Meridian Township and Mid-Michigan Stewardship to select vernal pools for the in-field training, ideally pools in less sensitive and more accessible areas (e.g., in Lake Lansing Park North, near Sandhill Shelter) with adequate parking. Part of the project will be to assess which sites really are vernal pools, and then to follow up with data collection in spring and fall. MNFI and/or program partners will help participants/volunteers identify vernal pools/potential vernal pools to map and monitor in the field. Participants will commit to visiting their pool at least three times per year and sending/uploading their data to Meridian Township, Mid-Michigan Stewardship, or other partners and eventually to MNFI for processing and inclusion in the statewide vernal pool database.

- 4) **Follow-up support and assistance** - MNFI experts will be available for follow-up questions from the trainees and partners as well as managing the data generated from this project. MNFI will work with Meridian Township, Mid-Michigan Stewardship, and other partners to plan and coordinate vernal pool mapping and monitoring. It is envisioned that Meridian Township program participants will map/monitor vernal pools/potential vernal pools on Meridian Township lands (e.g., those in Legg Park and in the land preserves). FICP/WO/MMSI/other agency participants will work on the vernal pools on their own lands, such as the Iosco Preserve of MMLC, Burchfield, and Lake Lansing Parks. MNFI also will provide program partners and participants with a summary of vernal pool mapping and monitoring data/results and how the data contribute to the statewide vernal pool database and understanding of the health of vernal pools in the project areas.

IV. KEY TASKS AND TIMELINE

Task	Timeline
Plan and coordinate with program partners for presentation and trainings	February – April 2017
Conduct air photo interpretation to map potential vernal pools	February – March 2017
Present public presentation	Mid-late March 2017
Conduct 2 training workshops	Early – mid April 2017
Participants conduct first monitoring visit	Mid – late April 2017
Participants conduct second monitoring visit	May 2017 (preferably early–mid May)
Participants conduct third monitoring visit (to verify pool dries)	Late August – September 2017
Participants compile and submit data to program partner	September – October 2017
Program partners compile and submit vernal pool data to MNFI	November 2017
MNFI enters data into vernal pool database and provides summary of results to partners/participants	December 2017

V. PROJECT COST

The total cost for the proposed scope of work for this project is **\$6,100** (\$5,000 for the vernal pool presentation, trainings, and assistance; \$1,100 for mapping potential vernal pools on Meridian Township natural area and park lands). Of this total, \$5,100 will be used for salaries and fringe to cover MNFI staff time/effort on this project, and \$1,000 will be used to purchase and provide vernal pool monitoring supply kits for program partners and participants (based on \$25/kit @ 40 kits). Mid-Michigan Stewardship Initiative will be contributing \$2,000 total toward the project cost, with funds from Friends of Ingham County Parks and WildOnes. **We are requesting \$4,100 from Meridian Township (\$3,600 from Land Preservation Advisory Board and \$500 from Parks Commission) to cover the remaining balance.** Michigan State University and MNFI understand that this is a fixed fee agreement. MNFI will issue one invoice to Meridian Township for the total amount after the potential vernal pool mapping, public presentation, and training workshops have been conducted.

VI. KEY ASSUMPTIONS

For the purposes of costing this scope of work, MNFI assumes that:

1. Meridian Township will work with MNFI to secure an indoor facility/ies for the public presentation and training workshops, and access to a vernal pool(s) for the in-field training portion of the workshops.
2. Meridian Township will help advertise or promote the public presentation and training workshops to community partners and members, and will help MNFI recruit community volunteers to participate in the program.
3. MNFI will be responsible for all travel, supplies, and equipment necessary to fulfill the contract.
4. It is important to note that estimated costs for this project are based on the proposed scope of work and these key assumptions. While there is some flexibility, significant additions or changes to the proposed scope of work may not be able to be accommodated with current estimated costs, and proposed scope of work and estimated costs may/would need to be revised.

VII. REFERENCES

Calhoun, A.J. and P.G. deMaynadier. 2008. Science and Conservation of Vernal Pools in Northeastern North America. CRC Press, New York, NY. 363 pp

Colburn, E.A. 2004. Vernal Pools: Natural History and Conservation. The McDonald and Woodward Publishing Company, Granville, OH. 426 pp.

Harding, J.H. 1997. Amphibians and reptiles of the Great Lakes Region. The University of Michigan Press, Ann Arbor, MI. 378 pp.

Michigan Department of Natural Resources (Michigan DNR) and Michigan Department of Environmental Quality (Michigan DEQ). 2009. Sustainable Soil and Water Quality Practices on Forest Land. Revised Feb. 24, 2009. Lansing, MI. 79 pp.

MERIDIAN TOWNSHIP

TO: Land Preservation Advisory Board

FROM: Jane Greenway
Jane Greenway
Land Management Coordinator

DATE: February 1, 2017

RE: Financial Support of The Stewardship Network



The Land Preservation Advisory Board became a member of The Stewardship Network in 2009. The Stewardship Network is a grassroots cooperative organization working to protect, restore, and manage Michigan's natural lands and waters. It helps individuals, organizations, and businesses manage specific sites through sharing ideas, resources, and information. Our Mid-Michigan Cluster of the Stewardship Network (MMSI) involves the community in conserving native plants and wildlife in all their natural diversity.

The central Stewardship Network office has been especially supportive this past year of our regional efforts including the following:

1. They set up a new website for the Mid-Michigan Cluster that we edit and post our events and informative documents on invasive and native species and restoration to share with others.
2. They provide letters of support for our grant applications, when needed
3. They advertise our workshops via a mailing list of thousands of recipients.
4. They continue providing useful connections to statewide experts, including all the other cluster coordinators, with whom we have webchats and face-to-face meetings; and they make connections for us with other professionals who provide free consulting when we have specific needs (e.g., how to effectively track multidimensional data about invasive species, river monitoring data, and ownership along riparian corridors).
5. They help us develop valuable new regional partnerships, (e.g., with the conservation districts).

Mid-Michigan Stewardship Initiative would use our \$3,500 in local support in the following ways:

1. Carry out our wetland invasive species control efforts (Phragmites, Japanese knotweed, and garlic mustard, in particular) throughout Meridian Township, including sites in Ted Black Woods, SW Meridian Uplands Preserve and Davis Foster Preserve. The funding would provide supplies needed to carry out this work
2. To help Meridian Twp. staff (Parks, LPAB, Planning, and Public Works) with questions and technical needs related to invasive species control and native plant restoration.
3. To support free public workshops that provide interpretive tours of regional natural areas led by experts, and provide hands-on learning on invasive species control, native plant identification, aquatic invasive species ID and control, and other topics.

4. To prepare and distribute informational flyers and brochures on these issues to the township residents.
5. To engage and train volunteers in contributing to invasive species control and volunteering in our regional parks and public areas

We are proposing a \$5,000 contribution to the Stewardship Network. The support will be divided with \$1,500 going to the Stewardship Network and \$3,500 to the Mid-Michigan Stewardship Initiative, to be held/disbursed through the Friends of Ingham County Parks account.

The following motion is proposed:

MOVE that the Land Preservation Advisory Board approve the expenditure of \$5,000.00 of maintenance funds for the purpose of supporting the Stewardship Network. \$3,500 of the total should be allocated to the Mid-Michigan Cluster of the Stewardship Network.

MERIDIAN TOWNSHIP



TO: Land Preservation Advisory Board Members

FROM: Jane Greenway
Land Management Coordinator

DATE: February 8, 2017

RE: Procedure to Elect Officers

The current Chair opens floor for nominations of Chair:

- a. A commissioner nominates a member of the Commission.
- b. Another Commissioner seconds the nomination.
- c. The nominee either accepts or declines nomination.
- d. The Chair asks if there are any other nominations, and if there are, then steps a, b and c are repeated.
- e. Once all nominations are offered, the Chair closes the floor to nominations (or a Commissioner can move to close the floor to nominations) and the Chair takes a roll call vote.

The current newly elected Chair opens the floor for nominations of Vice Chair:

- a. A commissioner nominates a member of the Commission.
- b. Another Commissioner seconds the nomination.
- c. The nominee either accepts or declines nomination.
- d. The Chair asks if there are any other nominations, and if there are, then steps a, b and c are repeated.
- e. Once all nominations are offered, the Chair closes the floor to nominations (or a Commissioner can move to close the floor to nominations) and the Chair takes a roll call vote.

Sample motion wording:

Chair opens the floor for nominations for Chair.

COMMISSIONER _____ MOVED, TO NOMINATE _____ AS CHAIR.
COMMISSIONER _____ SECONDED.

Commissioner _____ accepted the nomination.

Hearing no other nominations, Chair ___ closed the floor to nominations for Chair.

Roll Call Vote:

AYES:

NAYS:

The motion

Chair opens the floor for nomination for Vice Chair.

COMMISSIONER _____ MOVED, TO NOMINATE _____ AS VICE CHAIR.
COMMISSIONER _____ SECONDED.

Commissioner _____ accepted the nomination.

Hearing no other nominations, Chair closed the floor to nomination for Vice Chair.

Roll Call Vote:

AYES:

NAYS:

The motion

Chair opens the floor for nominations

COMMISSIONER _____ MOVED, TO NOMINATE _____ AS CHAIR AND
_____ AS VICE CHAIR. COMMISSIONER _____ SECONDED.

Commissioners _____ accept the nominations.

Hearing no other nominations, Chair closes the floor to nominations.

Roll Call Vote:

AYES:

NAYS:

The motion



**CHARTER TOWNSHIP OF MERIDIAN
LAND PRESERVATION PROGRAM**

MEETING OF THE LAND PRESERVATION ADVISORY BOARD
FEBRUARY 8, 2017

9. Land Management & Stewardship Reports

- a. 2017 Management and Stewardship Plan



CHARTER TOWNSHIP OF MERIDIAN LAND PRESERVATION PROGRAM

2017 MANAGEMENT PLAN

1. Land Preservation Signs

These are the large wooden signs that designate the land preservation properties and come in two sizes (small and large). Preserves that need signs:

- Davis Foster needs one large sign on the west side of Van Atta
- SW Meridian Uplands needs two small signs at the Champion Woods and Estates entrances
- Red Cedar River East needs one large sign off of Grand River Ave. and one small sign on the river for paddlers to see
- Serafine needs one large sign off of Mt. Hope Road that also has the dedication to the Serafine Family as negotiated in the purchase of the property
- Tihart/Cornell Wetland needs two small signs
- Towner Road Wetland needs one large and one small sign

2. Property Boundary Marker Posts & Installation

Four preserves need property boundary post installation:

- Red River Cedar East
- Serafine
- Tank
- Forest Grove

3. Boundary Surveys

Boundary surveys need to be completed for the following preserves:

- Serafine
- Tank

4. Interpretive & Directional Signage

Preserves with trails will receive trailhead signs along with directional signage along the trails. Trail signage will be color coded and match the look of the park and natural area signs. Trails in land preserves will be added to the online GIS system this year as well.

The Davis Foster Land Preserve will be getting a bird observation deck and a space for outdoor “place-based” education for local school groups. David Vanderklok, a local architect, will be helping with the design of the raised platform and sitting area underneath. Plans and final cost will be presented to the board before construction. Davis will also be getting interpretational signage on the history of the property and the grassland restoration project.

5. Rules Signs

All preserves will receive at least one rules sign (preserves with trails at multiple entrances will receive a rules sign at each entrance, see spreadsheet for numbers). As soon as the logo is available we will order all signs and install ASAP.

6. Stewardship Plans

We need to complete the stewardship plans for the preserves that do not have them where we are creating new management plans. Invasive species assessments will not be ordered at this time.

- SW Meridian Uplands
- Red River Cedar East
- Northridge
- Forest Grove
- Tank

7. Invasive Species Management

Invasive Species management expenses are now integrated into site restoration and general categories.

8. Site Restoration

Site restoration refers to anything that increases ecosystem health within the preserve. Our preserve projects for 2017 are as follows:

- Davis Foster– 4 acre prescribed burn on the west side of Van Atta Road, invasive species management, seed ball enhancement (possibly plugs as well)
- Lake Lansing North – Tree planting
- Tower Woods – Tree planting and invasive species management
- Sower Woods – Provide equipment for volunteers to perform invasive species management and forb enhancement
- SW Meridian Uplands – Continue grassland/prairie installation and invasive species management
- Northridge – Small scale tree planting to engage volunteers and start on invasive species management
- Serafine – Eager neighbors, we need to organize a few workdays for invasive management as soon as we close on the property

9. General/Miscellaneous

Herbicide will be purchased in large orders to save money on shipping unless a specialty herbicide is required for a certain treatment.

A security fence needs to be installed at Davis Foster along the east side of Van Atta Road with a gate that will be locked and opened by police. Security camera footage shows a lot of activity after hours at the preserve as well as ATVs and dirt bikes on the property.

10. Trail Maintenance

This money pays for the grounds crew to clear and maintain the trails in applicable preserves.

11. Stewardship Groups

Monetary support for the Stewardship Network (\$1,500 to the larger organization and \$3,500 to the Mid-Michigan chapter that operates in the Lansing area). The Stewardship Network provides valuable online resources and the local chapter provides on the ground support and advice on invasive species removal.