



AGENDA
CHARTER TOWNSHIP OF MERIDIAN
LAND PRESERVATION ADVISORY BOARD
REGULAR MEETING
September 11, 2019 6 PM

1. CALL MEETING TO ORDER
2. APPROVE AGENDA
3. CITIZENS ADDRESS AGENDA ITEMS AND NON-AGENDA ITEMS
4. APPROVE MINUTES
 - A. July 10, 2019
5. COMMUNICATIONS
6. OLD BUSINESS
7. NEW BUSINESS
 - A. Davis Foster Preserve Barn Discussion
 - B. Tree Bank Discussion
 - C. 2019 Deer Management Program Overview
8. COMMENT FROM THE PUBLIC
9. OTHER MATTERS AND BOARD MEMBERS' COMMENTS
10. ANNOUNCEMENTS
 - A. Next Land Preservation Advisory Board Meeting: Wednesday, October 9, 2019, 6 pm, Meridian Service Center
11. CLOSED SESSION (separate envelope)
12. ADJOURNMENT

Individuals with disabilities requiring auxiliary aids or services should contact the Meridian Township Land Preservation Advisory Board by contacting: Director LuAnn Maisner, 5151 Marsh Road, Okemos, MI 48864 or 517.853.4600 - Ten Day Notice is Required.

Meeting Location: 2100 Gaylord C. Smith Ct., Haslett, MI 48840

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CHARTER TOWNSHIP OF MERIDIAN
LAND PRESERVATION ADVISORY BOARD

September 11, 2019 6 PM

4. APPROVE OF MINUTES
 - A. July 10, 2019

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CHARTER TOWNSHIP OF MERIDIAN
LAND PRESERVATION ADVISORY BOARD REGULAR MEETING MINUTES
2100 Gaylord C. Smith Court, Haslett
Meridian Service Center Lunchroom
Wednesday, July 10, 2019 6 PM

PRESENT: Chair, Jon Mayes; Vice-chair, James Kielbaso; Board Member Roland Harmes, Board Member Jamie Hiller; Board Member Kirk Lapham, Board Member YuMan Lee
ABSENT: Board Member Mark Stephens
STAFF: Jane Greenway, Parks and Land Management Coordinator; Kelsey Dillon, Park Naturalist and Stewardship Coordinator
TOWNSHIP: Township Trustee, Dan Opsommer
OTHER: None

1. CALL MEETING TO ORDER

Chair Mayes called the meeting to order at 6 pm.

2. APPROVAL OF AGENDA

Board Member Hiller moved **TO MOVE CLOSED SESSION TO AGENDA ITEM 3**. Seconded by Board Member Kielbaso.

Board Member Lapham moved **TO APPROVE THE AGENDA AS AMENDED**. Seconded by Board Member Hiller.

VOICE VOTE: Motion carried unanimously.

3. CLOSED SESSION

Board Member Hiller moved **TO MOVE INTO CLOSED SESSION**. Seconded by Trustee Opsommer.

Roll Call:

AYES: Chair, Jon Mayes; Vice-chair, James Kielbaso; Board Member Roland Harmes; Board Member Jamie Hiller; Board Member Kirk Lapham; Board Member YuMan Lee; Trustee Dan Opsommer

NAYS: None

The Board moved into closed session at 6:07 pm.

Board Member Hiller moved **TO ADJOURN THE CLOSED SESSION AND RETURN TO THE OPEN SESSION**. Seconded by Board Member Kielbaso.

Roll Call:

AYES: Chair, Jon Mayes; Vice-chair, James Kielbaso; Board Member Roland Harmes; Board Member Jamie Hiller; Board Member Kirk Lapham; Board Member YuMan Lee; Trustee Dan Opsommer

NAYS: None

The Board reopened the meeting at 6:19 pm.

4. CITIZENS ADDRESS AGENDA ITEMS AND NON-AGENDA ITEMS

None

5. APPROVE MINUTES

Board Member Hiller moved **TO APPROVE THE MINUTES OF April 10, 2019 REGULAR MEETING**. Seconded by Board Member Lapham.

VOICE VOTE: Motion carried unanimously.

Board Member Hiller moved **TO APPROVE THE MINUTES OF April 10, 2019 REGULAR MEETING**. Seconded by Trustee Opsommer.

VOICE VOTE: Motion carried unanimously.

6. COMMUNICATIONS

None

7. OLD BUSINESS

None

8. NEW BUSINESS

None

9. STAFF REPORT

- A. Review of Environmental Commission Joint Topics
- B. 2019 Management plan Update

10. COMMENTS FROM THE PUBLIC

None

11. OTHER MATTERS AND BOARD MEMBERS' COMMENTS

- A. Board Member Harmes requested a visit to the Davis Foster Preserve to discuss the structures on the property.

12. ANNOUNCEMENTS

Next Land Preservation Advisory Board Meeting: Wednesday, August 14, 2019, 6 pm, Meridian Service Center

13. ADJOURNMENT

Board Member Kielbaso moved **TO ADJOURN THE MEETING**. Seconded by Trustee Opsommer. Chair Mayes adjourned the meeting at 6:57 pm.



CHARTER TOWNSHIP OF MERIDIAN
LAND PRESERVATION ADVISORY BOARD

September 11, 2019 6 PM

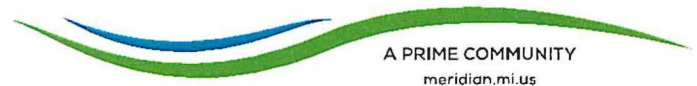
7. New Business

A. Davis Foster Barn Discussion

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a guide to understanding a barn and planning for maintenance



Barn School

Stephen L. Stier

Step back and get the big-picture view of a barn. The identification of problem areas and issues will provide you with a basis for determining priorities and creating a plan for maintenance and repair and more.

Checklist & Photos

A thoughtfully completed checklist with companion photographs provide a basic overview of the condition of the building. Photography is the best way of documenting. Carefully photograph what you discover from this process – outside and inside the barn.

Take long-views of each elevation (side) of your barn from 20-30' away. Capture in the image the whole elevation (side to side and ground to sky). Take close-ups -- inside and outside -- of the barn that document the problems and concerns you discover. These can include: failing joints, water stain, rot, cracks across the grain, missing parts and sagged or bulging surfaces, etc.

Moisture & Maintenance

Uncontrolled moisture and deferred maintenance are the twin killers of barns. Most owners would not allow trees to grow into the foundation of homes. We would fix broken doors, holes in the roof or broken windows. Yet many barns suffer from years or decades of deferred maintenance. This allows moisture to degrade our barns. Bad drainage invites excess moisture that deteriorates foundations and rots wood members -- floors, and sills. Holes in the roof and windows bring in water to stand and rot critical barn structural members.

Investigating Possibilities

Barn School has been conceived and piloted during 2016 and 2017 as a process that any interested person can use to investigate and assess the condition and needs of a barn.

With training and a completed assessment you will have gained a better understanding of your barn. This can be a basis for prioritizing needs and forming a plan for repairs, rehabilitation and preservation into the future. This process will also give you confidence and a basis for discussions with contractors.

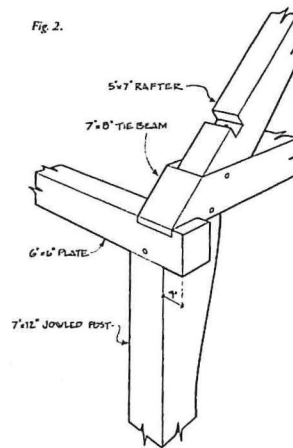
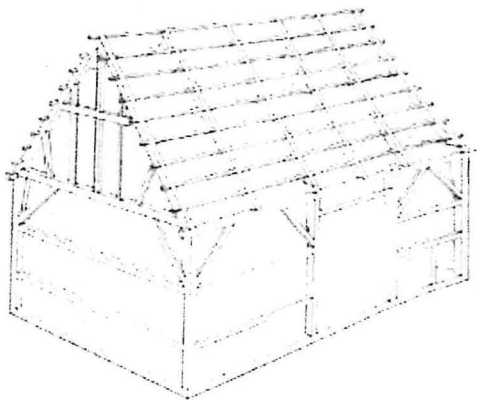


Barns 101 • Vocabulary, Parts and History

First, so we are all on the same page, it is important to understand the history, the vocabulary, and the structure of Michigan barns. Here are some of the basics.

History

Before Michigan was settled, the timber framing that was used along the East Coast in Colonial times and post-Revolutionary war times were a carry-over from European timber framing. These early American barns had three distinct features that early Michigan barns do not have: the Scribe rule layout, the English tying joint, and the Principal rafter system.



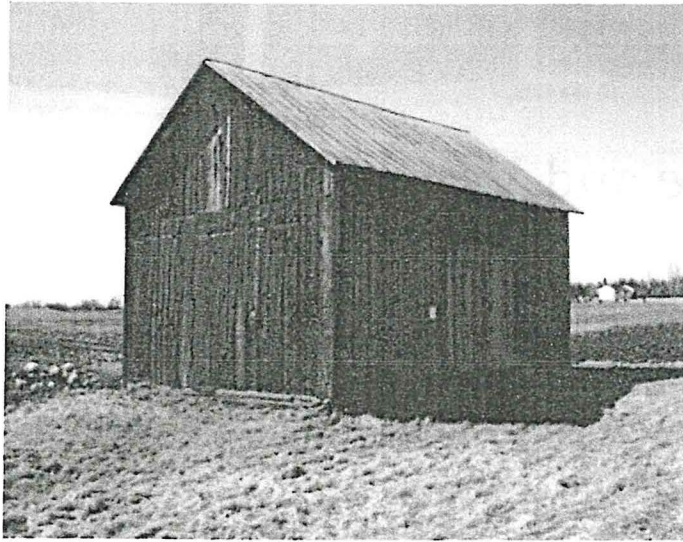
English timber frame and tying joint illustrations by Jack A. Sobon from Historic American Timber Joinery. Permissions to use are pending.

Immigration to Michigan from other places in North America began in large numbers in 1825 with the opening of Erie Canal. It is important to note that the vast majority of these Michigan Pioneers came from other farming states e.g. Vermont, New Hampshire, New York and Canada.

They were for the most part already farmers and came to Michigan for the prospect of better farming opportunities -- more land, and better soil. These farmers considered themselves Americans. They were 1 or 2 generations away from emigrate families from European countries. For these reasons, it is my theory that there is very little evidence in barn style and construction that have any ethnic characteristics. These Michigan immigrants built American barns. Exceptions to this are the emigrates who came directly from the European homeland, such as the Dutch, who came directly to the Holland, MI area and Finnish who immigrated to Michigan's Upper Peninsula.

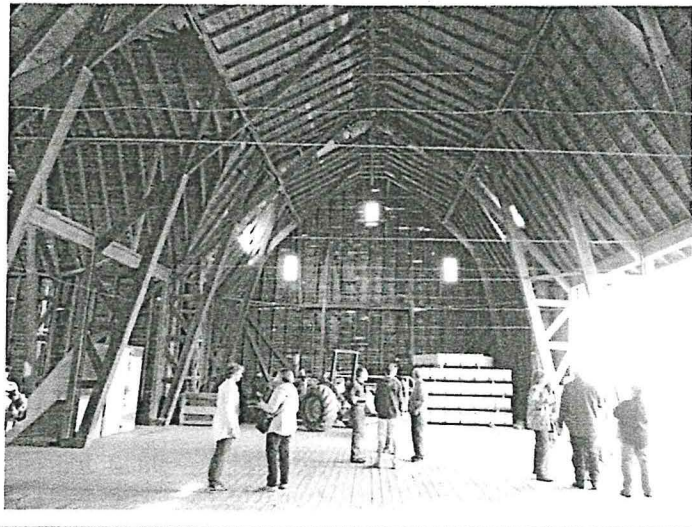
Moving to an American barn By the time that pioneers came to Michigan developments had occurred that modernized Michigan's timber frame barns. The steel framing square, developed in the first quarter of the 19th century, allowed a standardization of construction features not possible before this time. In these American barns two consistent standards of measurements emerged:

- a 2" measurement for laying out the mortise & tenon joints and
- the use of a 45 degree diagonal bracing at 3' legs.



Early Michigan barns were mostly hand hewn, fairly small timber frame structures that were built on grade with a gable roof. This small, 3-bay barn was often about 20' x 30'. As the need arose, barns were increased in size in a variety of ways: setting them on a basement (adding another level), building shed roof lean-tos, and/or by increasing the size or the number of bays.

A transition to plank frame barns began around the turn of the 20th century as farmers began to look towards conserving labor and materials. Instead of large timber posts and beams with wood pins holding them together, plank frame barns were built of 2" thick planks and nailed together.

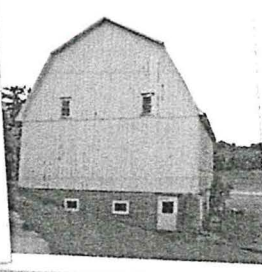
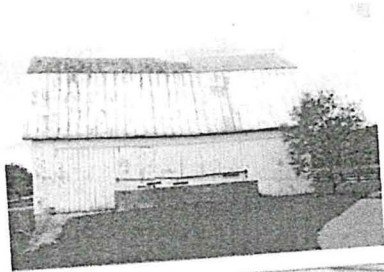
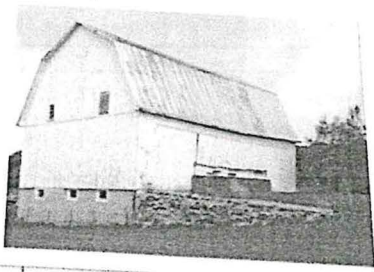


A Midwestern agricultural engineer, John Shawver, was an early proponent of plank frame barns. He is also credited with inventing the "Shawver truss system" for supporting roofs. This truss system offered more clear span and with it the ability to store more loose hay in the mow.

Gambrel roofs came into being at the turn of the 20th century. A common explanation for the popularity of the gambrel roof is that farmers were putting up more loose hay and believed that this shape change would offer them more useable space. Around this time, a significant amount of barns (10 – 20%) were changed from a gable to a gambrel roof.

The heavy timber frame transitioned to become 2" planks cut in a sawmill. Sawn planks replaced large timbers, pole rafters and wall girts. From the outside of the barn you cannot typically tell if it is a timber frame or a plank frame barn. Plank frame barns continued to take over from timber frames through the depression. After WWII pole frame barns became popular because they were cheap and easy to erect.

Round barns and round or curved roof barns have both similar and different framing structures.



Structure and Vocabulary

Barn Vocabulary

Bent – The structural posts and beams that form a cross section of the barn. The typical 3-bay barn has 4 bents.

Bay – space between the bents

Roof shapes

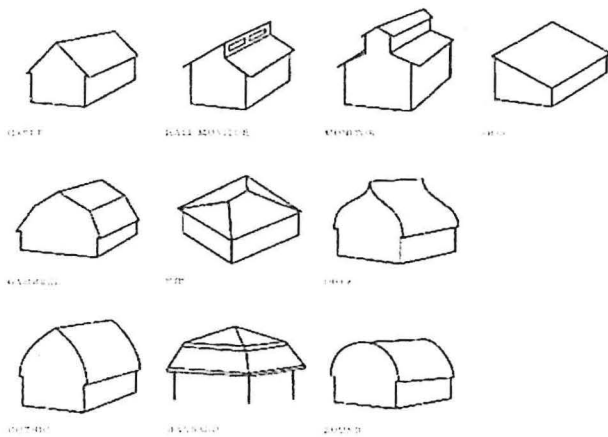


Illustration from Michigan Barn and Farmstead Survey by Steve Stier.

Foundation Types

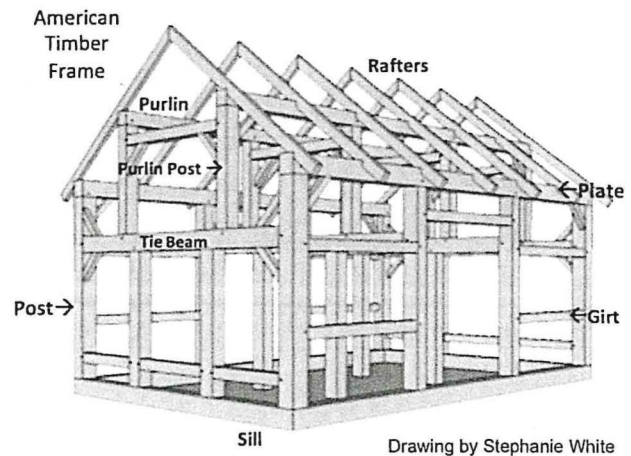
On grade – Built at ground level with no ramp. Barn doors are at grade level

Piers or boulders elevate the sill of the building a few inches to feet above the ground.

Raised and ramped – Raised foundations were built on grade but with a distinct lower level or basement. The upper floor usually has a built earthen ramp that allows access.

Bank – Built into a hillside, allowing access to a lower level on the downhill side and upper level above

Bridged – Built with a ramp that is hollow under the portion next to the foundation.



Drawing by Stephanie White

Materials Identification

Roof Coverings:

Shingles: wood, slate, or asphalt

Steel: corrugated, ribbed, or standing seam

Siding:

Wood vertical boards, v-groove siding, board and batten; and horizontal siding

Foundation:

Boulders; field stone (plain, split or dressed), rubble; poured concrete; glazed tile, concrete block





On-site Review and Documentation

Looking at and Documenting the Barn

With this checklist and your camera in hand, set out to carefully observe and review the barn through this process. Observe and record -- through notes and photographs -- the materials and general conditions that you see.

Based upon your own judgment, use a basic scale of "good," "fair," and "poor" as it relates to the joinery, surfaces, and parts of the barn. This will provide a basis of understanding consistent with your own judgment and experience. Trust yourself. This process will give you a basic understanding about what is going on with this building.

EXTERIOR four elevations -- north, south, east, west

Elevations Observe the whole barn by looking carefully at each elevation from about 20-30' away. An elevation is the outside view of the 2 sides and 2 ends of the building. Use the scale: good, fair and poor, with notes and photographs to record your observations, opinions and to document what you are seeing.

Straightness Notice ridgeline and eave line and look at the corners of the barn. Are they all straight and plumb (vertical -- straight up and down)? Are they leaning? Is there any sagging or bulging present?

As you walk up to the barn, let your eyes scan across the flatness of the roof. On a gable roof there is one flat plane or pitch on each side. On a gambrel roof there are two flat planes or pitches on each side of the roof. Notice how straight the fold of the gambrel is. These observations of straightness provide evidence of structural stability or potential problems with the framing inside.

Vegetation Check the presence of vegetation -- shrubs, trees, plant matter -- within 10 feet of and/or overhanging the barn.

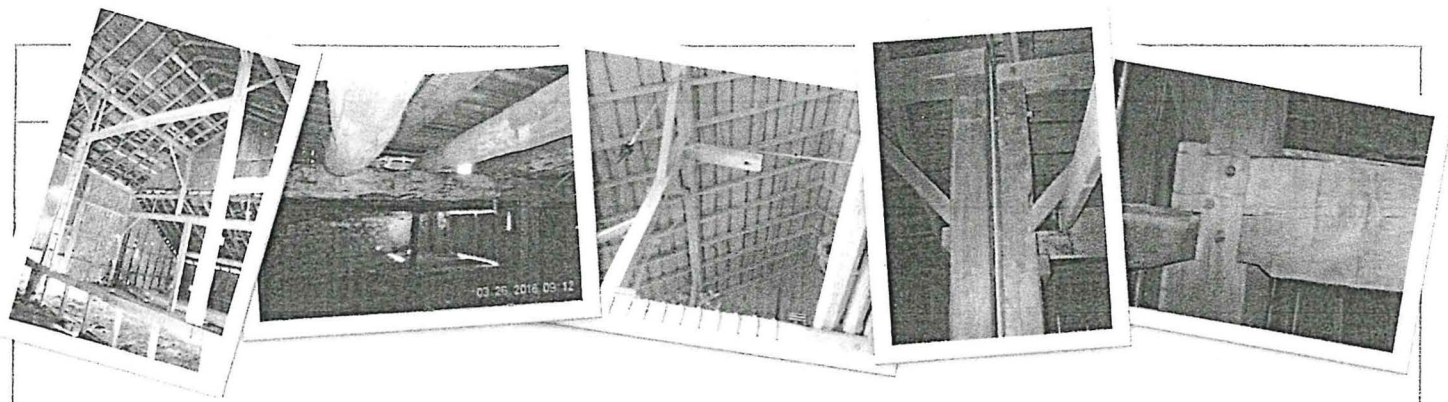
Drainage Is there "positive drainage" possible all around the barn? Does the ground slope away from the barn for at least 6' on all elevations? Is it possible to grade the ground so that this exists? What interferes with this?

Exterior Surfaces & Condition

- Identify the foundation material and condition
- Identify the roof material and condition
- Identify siding material and siding condition
- Identify doors, windows and trim condition

The Sill Try to observe the condition of the sill. If there are gaps between the siding, at the top of the foundation, this is an opportunity to assess the condition of the sill. Try poking a pocketknife into the wood between the siding boards. If your knife goes into the wood, even 1" easily, this signifies rot. Record how far your knife penetrates easily. It may be rotted on the outside but not on the inside of the barn. A sill is typically an 8" x 8" timber upon which posts sit. This serves as a surface to nail the exterior siding to.





On-site Review and Documentation *continued*

INTERIOR Walk into the barn on the main floor.

Joints in General Look at the mortise & tenon joints between the tie beams and posts to be sure they are not pulled apart. Then look at the ends of the tie beams at the corner posts to be sure they are not pulled apart.

Braces – diagonal supports in the barn. They are often 45 degrees, angled between a post and beam. Look for missing bracing indicated by empty mortises.

Diagonal Braces, Plates & Purlins Look at each end of each structural member for general condition and note if condition is sagged, broken, rotted, or missing; and identify irregularities and deterioration.

Plate the beam at the top of the front and back walls of the barn that supports the rafters. Look to identify if these are in good condition. Is there a presence of dark water stains, obvious rot, broken, sagged or missing parts, etc.

Checks Cracks appearing in timbers that run parallel with the grain of the timbers *do not affect the structural capacity*. Cracks that run across the grain of the timber *indicate structural problems*; note these if they occur.

Rafters are the framing members that support the roof. They extend from the plate to the peak of the roof. Rafters may be poles (small trees flattened on the top), or sawn planks. Poles may even have bark on them.

Roof sheathing are the boards which you can see from inside the barn. These are the bottom side of the roof upon which the roofing material is anchored. Observe the sheathing to discover if there are dark stains. This could indicate the roofing has leaked.

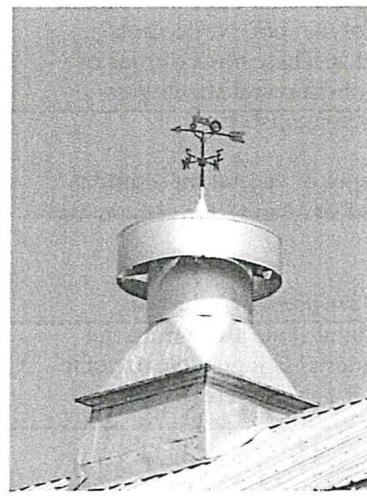
Hay carrier track Is a hay carrier track suspended at the peak of the roof? This may be a wood or iron track. There may be a hay car or other hay carrying equipment still suspended from the track.

BASEMENT Go there for final inspection review.

Sill In most cases the condition of the sill cannot be seen well from the outside of the barn, but from the basement you can look up and observe the inside surface of the sill beams on each of the 4 sides of the barn. Check the condition visually and if suspect (dark stains, coarse or absent areas of wood) use your pocket knife to test the quality of the wood. If your knife enters the wood easily more than 1/8" it is probably compromised. Identify particular areas of rot for further investigation.

Floor support timbers and posts The posts in the basement hold up the support beams; the support beams hold up the floor joists, and the joist supports the floor boards above. Look for rot, cracks, and broken members. Is there rot at the bottom of posts? Are there sagged or broken beams.

Powder-Post Beetles Look for tiny holes and white or tan dust trails on posts and beams. This may signify the presence of Powder Post beetles. Beetles typically do not destroy structural members unless it is a severe infestation. Powder Post beetles can be controlled with applications of borax and water.



Exterior Ornamentation

Cupola, ventilator, lighting rods, painted trim and designs, cut-out designs, and ornamental trim.

Note these elements and their condition and photograph them.

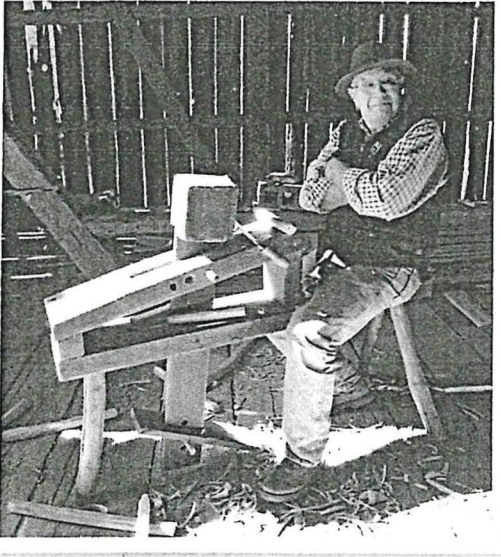


Photo by Kelly Rundle, Fourth Wall Films.

Steve Stier is a licensed builder and Historic Preservationist who works with traditional building methods and materials. He consults with owners of elderly buildings and has repaired, moved and restored traditional barns and historic buildings. An educator, Steve has taught timber frame building classes and led workshops teaching barn owners solutions for problems of their barns. Steve has extensive experience in restoration and renovation of many types of historic structures along with specialized study and experience in repairing, restoring and moving traditional barns.

Steve is a "student of barns" who has combined on-the-job learning with academic study. He holds Masters Degrees in Historic Preservation (Eastern Michigan University, 2000) and in Industrial Arts Education (Western Michigan University 1974).

A founding member of the Michigan Barn Preservation Network, Steve is Vice President and Chair of the Technical Committee.

As a board member of the Michigan Historic Preservation Network, he developed hands-on training programs for owners and most recently coordinated a 9 week intensive Living Trades Academy focusing on traditional building crafts and historic preservation in inner city Detroit.

Contact Steve Stier at stephenstier@gmail.com

Michigan Barn Preservation Network

Michigan Barn Preservation Network is an active Michigan 501(c)3 nonprofit organization of barn owners and enthusiasts. We believe that barns are economic resources, symbols of our agriculture heritage, and icons of our American character.

MBPN fosters the sharing of barn experiences; hosts annual conferences, tours and hands-on workshops; publishes a regular newsletter; recognizes barn rehabilitation and education successes; helps to identify speakers for programs; and identifies and shares rehabilitation information on traditional barns.

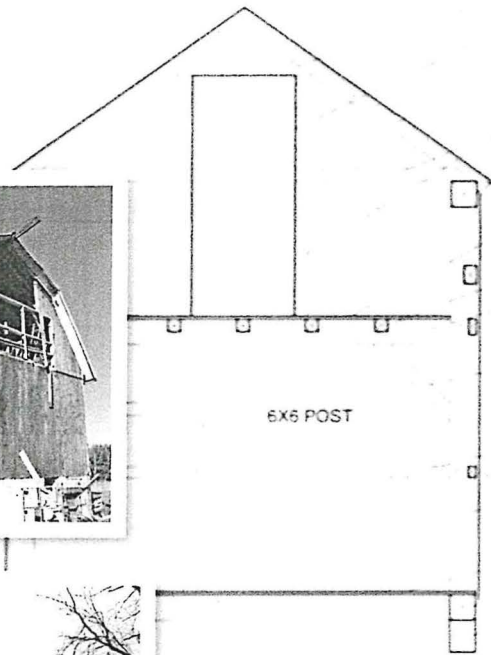
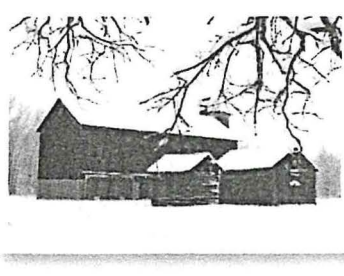
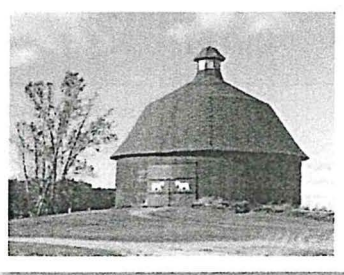
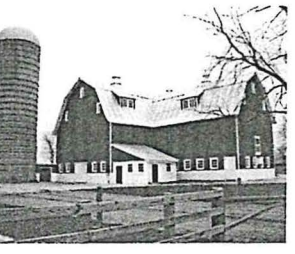
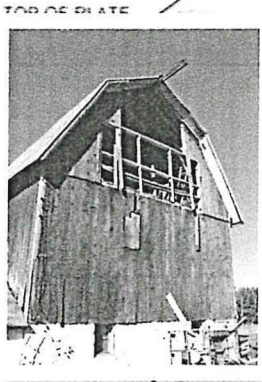
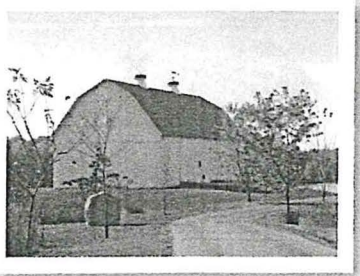
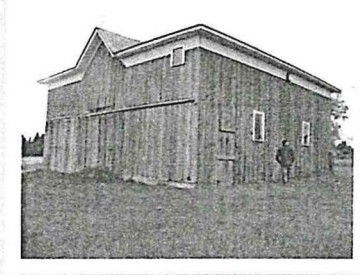
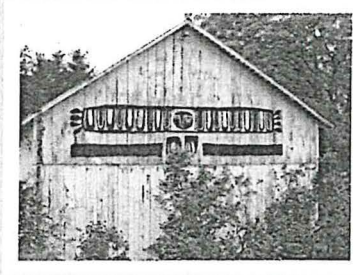
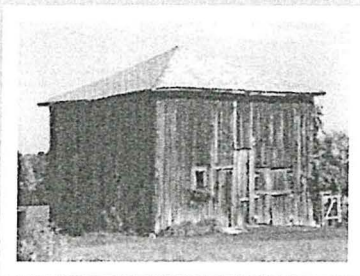
The Michigan Barn Preservation Network is an all volunteer organization committed to the rehabilitation of traditional barns for agricultural, commercial, residential, and public uses. Our work raises awareness and aids in the continuing presence of barns in our communities and on the landscape.

MBPN strategic planning has identified our **VISION for the future:**

- **MBPN is making a difference in the preservation of Michigan barns.**
- **Individuals and communities are engaged in barn preservation, and**
- **MBPN is considered to be the 'go-to' resource about traditional barns.**



Special thanks to MBPN board members Tammi Donaldson and Julie Avery for assistance in the development of Barn School and this booklet; to Sarah Bearup-Neal and Keith Kehlbeck for their editorial review; and to Stephanie White for the measured drawings on pg. 4 and back cover.



2X4 HEADER
DOOR OPENING
3X4 ROOF RAFTERS

4X4
8X8 TOP PLATE

UPPER FLOOR BOARDS
4X4 FLOOR JOISTS
8X8 TIE BEAM

4X4 BRACING
SIDEWALL A

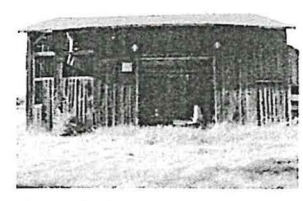
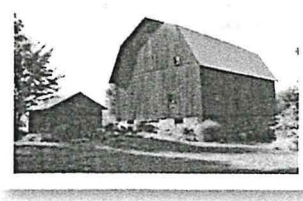
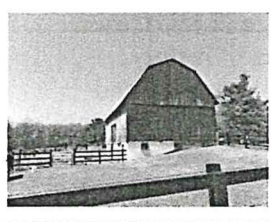
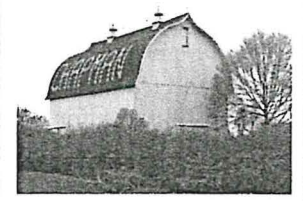
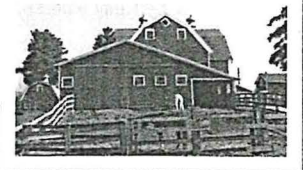
4X4 GIRT

8X8 POST

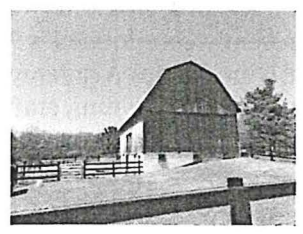
FLOOR BOARDS

6X6 POST

3'-7"
7'-2"
3'-4"
7'-10"



BARN SCHOOL is a pilot project held at the 2018 annual conference of the Michigan Barn Preservation Network.





CHARTER TOWNSHIP OF MERIDIAN
LAND PRESERVATION ADVISORY BOARD

September 11, 2019 6 PM

7. New Business

B. Tree Bank Discussion

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Meeting Location: 2100 Gaylord C. Smith Ct., Haslett, MI 48840

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5A.01. - Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Agriculture/farming means any land in which the principal use is to derive income from the growing of plants and trees, including but not limited to land used principally for fruit and timber production.

Caliper means the diameter of a tree trunk measured six inches (15 cm) above ground level for trees up to four-inch caliper and 12 inches above the ground for larger sizes.

Clear cutting means the complete clearing, cutting or removal of trees and vegetation.

Commercial nursery/tree farm means any commercial establishment which is licensed by the state or federal government for the planting, growing and sale of live trees, shrubs, plants and plant materials for gardening and landscaping purposes.

Developed property means any land which is either currently used for residential, commercial, industrial, or agricultural purposes or is under construction of a new building, reconstruction of an existing building or improvement of a structure on a parcel or lot, the relocation of an existing building to another lot, or the improvement of open land for a new use.

Diameter at breast height (DBH) means the diameter in inches of the tree measured at four feet above the existing grade.

Dripline means an imaginary vertical line that extends downward from the outermost tips of the tree branches to the ground.

Forest means any treed area of one-half acre or more, containing at least 28 trees with a DBH of six inches or more.

Grade means the ground elevation.

Grubbing means the effective removal of under-canopy vegetation from a site. This shall not include the removal of any trees.

Landmark/historic tree means any tree which stands apart from neighboring trees by size, form or species, as specified in the landmark tree list in section 94-36, ^[4] or any tree, except box elder, catalpa, poplar, silver maple, tree of heaven, elm or willow, which has a DBH of 24 inches or more.

Single-family lot means any piece of land under single ownership and control that is two acres or more in size and used for residential purposes.

Township tree fund means a fund established for maintenance and preservation of forest areas and the planting and maintenance of trees within the township.

Tree means any woody plant with at least one well-defined stem and having a minimum DBH of three inches.

Undeveloped property means any property in its natural state that is neither being used for residential, commercial, industrial or agricultural purposes nor under construction.

(Amend. of 7-11-2006(2); Amend. of 10-20-2009)

5A.02. - Purpose.

The purpose of this article is to promote an increased quality of life through the regulation, maintenance and protection of trees, forests and other natural resources.

(Amend. of 7-11-2006(2))

5A.03. - Interpretation; conflicts with other ordinances.

The provisions of this article shall be construed, if possible, in such a manner as to make such provisions compatible and consistent with the provisions of all existing and future zoning and other ordinances of the township and all amendments thereto. If there is believed to be a conflict between the stated intent and any specific provision of this article, the township board may, in accordance with established zoning ordinance procedures, permit modification of such specific provisions while retaining the intent in such appealed instance.

(Amend. of 7-11-2006(2))

5A.04. - Notice of violation; issuance of appearance ticket.

If a violation of this article is noted, the ordinance inspector will notify the owner of record and the occupant of the property of the violation. Such notice shall specify the violation and the time within which corrective action must be completed. This notice may be served personally or by mail. If the property is not in compliance with this article at the end of the period specified in the notice of violation, an appearance ticket may be issued.

(Amend. of 7-11-2006(2))

5A.05. - Tree removal permit.

A. *Required.*

1. The removal or relocation of any tree with a DBH of six inches or greater on any property without first obtaining a tree removal permit shall be prohibited.
2. The removal, damage or destruction of any landmark tree without first obtaining a tree removal permit shall be prohibited.
3. The removal, damage or destruction of any tree located within a forest without first obtaining a tree removal permit is prohibited.
4. Clear cutting or grubbing within the dripline of a forest without first obtaining a tree removal permit is prohibited.

B. *Exemptions.* All agricultural/farming operations, commercial nursery/tree farm operations and occupied lots of less than two acres in size, including utility companies and public tree trimming agencies, shall be exempt from all permit requirements of this article.

C. *Display.* Tree removal permits shall be continuously displayed for the entire period while the trees are being removed.

D. *Application.* Permits shall be obtained by submitting a tree removal permit application in a form provided by the municipal services department. The application shall *include a tree survey conducted not more than two years prior to the date of application* and contain the following information:

1. The owner and/or occupant of the land on which the tree is located.
 2. The legal description of the property on which the tree is located.
 3. A description of the area affected by the tree removal, including tree species mixture, sampling of tree size and the notation of unusual, scarce or endangered trees.
 4. A description of each tree to be removed, including diseased or damaged trees, and the location thereof.
 5. A general description of the affected area after the proposed tree removal.
- E. *Review procedures* . Municipal services shall review the applications for tree removal permits and may impose such conditions on the manner and extent of the proposed activity as are necessary to ensure that the activity or use will be conducted in such a manner as will cause the least possible damage, encroachment or interference with natural resources and natural processes within the affected area.
- F. *Review standards* . The following standards shall be used to review the applications for tree removal permits:
1. The protection and conservation of irreplaceable natural resources from pollution, impairment or destruction is of paramount concern. The preservation of landmark/historic trees, forest trees, similar woody vegetation and related natural resources shall have priority over development when there are other on-site location alternatives.
 2. The tree shall be evaluated for effect on the quality of the area of location, including tree species, habitat quality, health and vigor of tree, tree size and density. Consideration must be given to scenic assets, wind blocks and noise buffers.
 3. The trees and surrounding area shall be evaluated for the quality of the involved area by considering the following:
 - a. Soil quality as it relates to potential tree disruption.
 - b. Habitat quality.
 - c. Tree species (including diversity of tree species).
 - d. Tree size and density.
 - e. Health and vigor of tree stand.
 - f. Understory species and quality.
 - g. Other factors such as value of the trees as an environmental asset (i.e., cooling effect, etc.).
 4. The removal or relocation of trees within the affected areas shall be limited to instances:
 - a. Where necessary for the location of a structure or site improvement and when no reasonable or prudent alternative location for such structure or improvement can be had without causing undue hardship.
 - b. Where the tree is dead, diseased, injured and in danger of falling too close to proposed or existing structures, or interferes with existing utility service, interferes with safe vision clearances or conflicts with other ordinances or regulations.
 - c. Where removal or relocation of the tree is consistent with good forestry practices or if it will enhance the health of remaining trees.
 5. The burden of demonstrating that no feasible or prudent alternative location or improvement without undue hardship shall be upon the applicant.
 6. Tree removal shall not commence prior to approval of a site plan, final site plan for site condominiums or final preliminary plat for the subject property.

Sec. 5a.06. - List of landmark/historic trees.

Landmark/historic trees are as follows:

Common Name	Species	DBH
Arborvitae	<i>Thuja occidentalis</i>	18"
American Basswood	<i>Tilia americana</i>	24"
American Beech	<i>Fagus grandifolia</i>	18"
American Chestnut	<i>Castanea</i>	8"
Birch	<i>Betula</i> spp.	18"
Black Alder	<i>Alnus glutinosa</i>	12"
Black Tupelo	<i>Nyssa sylvatica</i>	12"
Black Walnut	<i>Juglans nigra</i>	20"
White Walnut	<i>Juglans cinerea</i>	20"
Buckeye (Horse Chestnut)	<i>Aesculus</i> spp.	18"
Cedar, Red	<i>Juniperus</i> spp.	12"
Crabapple (cultivar)	<i>Malus</i> spp.	12"
Douglas Fir	<i>Pseudotsuga menziesii</i>	18"
Eastern Hemlock	<i>Tsuga canadensis</i>	12"
Fir	<i>Abies</i> spp.	18"
Flowering Dogwood	<i>Cornus florida</i>	8"
Ginkgo	<i>Ginkgo biloba</i>	18"
Hackberry	<i>Celtis occidentalis</i>	18"
Hickory	<i>Carya</i> spp.	18"

Honey Locust	Gleditsia triacanthos	24"
Kentucky Coffeetree	Gymnocladus dioicus	18"
Larch/tamarack	Larix laricina (Eastern)	12"
Sycamore/London Planetree	Platanus spp.	18"
Maple	Acer spp.(except negundo and saccharinum)	18"
Oak	Quercus spp.	20"
Pine	Pinus spp.	18"
Sassafras	Sassafras albidum	15"
Spruce	Picea spp.	18"
Tuliptree	Liriodendron tulipifera	18"
Cherry	Prunus spp.	18"

(Amend. of 7-11-2006(2); Amend. of 10-20-2009)

5A.07. - Protective barriers.

It shall be unlawful to develop, clear, fill or commence any activity for which a use permit is required in or around a landmark/historic tree or forest without first erecting a continuous protective barrier around the perimeter dripline.

(Amend. of 7-11-2006(2))

5A.08. - Relocation or replacement of trees.

- A. *Landmark tree replacement*. Whenever a tree removal permit is issued for the removal of any landmark tree with a DBH of six inches or greater, such trees shall be relocated or replaced by the permit grantee. Every landmark/historic tree that is removed shall be replaced by three trees with a minimum caliper of four inches. Such trees will be of the species from section 5b.06.
- B. *Replacement of other trees*. Whenever a tree removal permit is issued for the removal of trees, other than landmark/historic trees, with a DBH of six inches or greater (excluding boxelder (acer negundo), ash(fraxinus spp) and cottonwood (populus spp)), such trees shall be relocated or replaced by the permit grantee if more than 25 percent of the total inventory of regulated trees is removed. Tree replacement shall be done in accordance with the following: If the replacement trees are of at least two-inch caliper at six inches above the

ground or eight-foot height for evergreens, but less than three inches measured at six inches above the ground or nine-foot height for evergreens, the permit grantee shall be given credit for replacing one tree. If the replacement trees are of at least three-inch caliper at six inches above the ground or nine-foot height for evergreens, but less than four inches measured at 12 inches above the ground or ten-foot height for evergreens, the permit grantee shall be given credit for replacing 1½ trees. If the replacement trees are of at least four-inch caliper at 12 inches above the ground or ten-foot height for evergreens, the permit grantee shall be given credit for replacing two trees.

- C. *Exemptions* . All agricultural/farming operations, commercial nursery/tree farm operations and occupied lots of less than two acres shall not be required to replace or relocate removed trees.
- D. *Replacement tree standards* . All replacement trees shall:
1. Meet both the American Association of Nurserymen Standards and the requirements of the state department of agriculture.
 2. Be nursery grown.
 3. Be guaranteed for two years, including labor to remove and dispose of dead material.
 4. Be replaced immediately after the removal of the existing tree, in accordance with the American Association of Nurserymen standards.
 5. Be of the same species or plant community as the removed trees. When replacement trees of the same species are not available from Michigan nurseries, the applicant may substitute any species listed in section 5a.06 provided that shade trees are substituted with shade trees and evergreen trees with evergreen species. Ornamental trees need not necessarily be replaced with ornamental trees, but this shall be encouraged where feasible.
- E. *[Location of replacement trees.]* Wherever possible, replacement trees must be located on the same parcel of land on which the activity is to be conducted. Where tree relocation or replacement is not possible on the same property on which the activity is to be conducted, the permit grantee shall either:
1. Pay monies into the township tree fund for tree replacement within the township. These monies shall be equal to the per-tree amount representing the current market value for the tree replacement that would have been otherwise required.
 2. Plant the required trees off site. If the grantee chooses to replace trees offsite the following must be submitted prior to approval of the permit:
 - a. A landscape plan, prepared by a registered landscape architect, indicating the sizes, species and proposed locations for the replacement trees on the parcel.
 - b. Written permission from the property owner to plant the replacement trees on the site.
 - c. Written agreement to permit the grantee to inspect, maintain and replace the replacement trees or assumption of that responsibility by the owner of the property where the trees are to be planted.
 - d. Written agreement to permit township personnel access to inspect the replacements as required.

(Amend. of 7-11-2006(2); Amend. of 10-20-2009)



CHARTER TOWNSHIP OF MERIDIAN
LAND PRESERVATION ADVISORY BOARD

September 11, 2019 6 PM

7. New Business

C. 2019 Deer Management Overview

Individuals with disabilities requiring auxiliary aids or services should contact the Meridian Township Land Preservation Advisory Board by contacting: Director LuAnn Maisner, 5151 Marsh Road, Okemos, MI 48864 or 517.853.4600 - Ten Day Notice is Required.

Meeting Location: 2100 Gaylord C. Smith Ct., Haslett, MI 48840

Providing a safe and welcoming, sustainable prime community.



A PRIME COMMUNITY
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To: Land Preservation Advisory Board

**From: Jane Greenway and Kelsey Dillon
Parks and Recreation Department**

Date: September 5, 2019

Re: 2019 - Deer Management Recommendation

The purpose of this memo is to update the Land Preservation Advisory Board on the status of the deer management program.

Proposed 2019 properties for the Deer Management Program (see attached map for locations):

1. Central Park
2. Towner Road Park
3. Wonch Park
4. Ferguson Park
5. Eastgate Park
6. Legg Park
7. Hartrick Park
8. Ted Black Woods
9. North Meridian Rd. Park
10. Red Cedar Natural Area
11. Forest Hills Natural Area
12. Tacoma Hills Natural Area
13. Orlando Outlot B
14. Davis Foster Preserve
15. Hubbel Preserve
16. Lake Lansing North Preserve
17. Newman Equities Preserve
18. Towar Woods Preserve
19. Lake Lansing South Preserve
20. Central Meridian Uplands
21. Sower Woods Preserve
22. Tihart/Cornell Wetland
23. Southwest Meridian Uplands
24. Sumbal Preserve
25. Red Cedar Glen Preserve
26. Towner Wetland Preserve
27. Meridian Central Wetland
28. Red Cedar River East Preserve
29. Forest Grove Preserve
30. North Ridge Preserve
31. Mandenberg Woods
32. Tihart Preserve
33. Ponderosa Preserve
34. Nemoke Preserve
35. Glendale Cemetery
36. Riverside Cemetery
37. Ingham County Farm
38. Transfer Station

Background

Meridian Township’s ninth year of deer management will officially commence on October 1, 2019 and will run until January 1, 2020. This popular program places volunteer archery hunters on select Township and County owned properties to manage the deer population. Meridian Township has an over-population of deer that has resulted in an increase of damage to landscaping, reports of vehicle/deer accidents, concern for public health, and a disruption to the ecological balance of our natural areas. In response, the Meridian Township Board directed staff to develop and implement a deer management plan that outlines measures for a highly managed program to harvest white-tailed deer in a number of selected township-owned properties. The program began in 2011 and has been conducted each year since that time. The harvest is held during the regular archery season, October 1st through January 1st. The managed harvest is NOT open to the general public. All hunters must be approved by the Township and are tested for proficiency at the MSU Demmer Archery Center. Only approved, qualified, competent and experienced hunters will be considered to access Township property for the managed harvest. Neighboring property owners are notified of the harvest each year. All parks and land preserves remain open to the public during archery season. The hunters have proven to be valuable partners and act as the eyes and ears on Township-owned properties. The program continues to receive accolades statewide and serves as a model for suburban wildlife management.

Deer Management Program Statistics

(Collision based on data provided on the MSP “Traffic Crash Reporting System – Crash Statistics Report Selection Criteria”)

	Total Hunters	Properties Hunted	Deer Harvested	Reported Deer/Car Collisions
2011	25	7	43	152
2012	50	18	90	153
2013	60	20	127	180
2014	73	21	150	137
2015	30	19	63	144
2016	73	31	73	164
2017	66	30	80	129
2018	74	38	57	129
2019	---	38 proposed	---	---

Chronic Wasting Disease (CWD)

CWD is a deadly neurological disease found in the state's free-ranging deer population. Since the discovery of CWD deer in Meridian Township in May 2015, over 2,000 deer from Meridian Township have been tested for CWD in order to gauge the extent of the disease across the landscape. To date, ten deer in Ingham and Clinton counties have tested positive for the disease with five of them found in Meridian Township. To date, more than 61,000 deer in Michigan have been tested for chronic wasting disease, and CWD has been confirmed in 120 free-ranging deer in eight Michigan counties: Clinton, Ingham, Ionia, Jackson, Kent, Gratiot, Eaton and Montcalm.

In summary, the discovery of CWD somewhat complicated the Meridian Deer Management program because the hunters are no longer allowed to utilize bait to attract the deer. This has resulted in a significant drop in deer harvested (seen from 2014 to 2015). In addition, local processors who processed the Township's deer are no longer participating in the Michigan Sportsmen Against Hunger program due to concerns over CWD. The World Health Organization has advised against consuming venison that is contaminated with CWD, although no link to harmful effects in humans has yet been proven. Many processors will not take deer within the core CWD zone to be sure they are not contaminating their equipment which would have to be thrown out if a CWD positive deer was processed. The DNR is unsure of when the CWD restrictions can be lifted but they advised it will be at least a few more years. Until that time, the closest processor that works with Michigan Sportsmen against Hunger is in Howell. However, many of our hunters donate their venison through other private programs or directly provide venison to families in need. A few local processors will still process deer in the core zone and then the hunters take it upon themselves to donate the meat to charity.

Michigan State University Research Project

Johnathan Trudeau, a PhD student with the MSU Department of Fisheries and Wildlife, is conducting a long-term research project on white-tailed deer movement that started in January 2018. This research is part of a large-scale collaboration between Michigan State University (MSU), the Michigan Department of Natural Resources (MDNR), and the United States Department of Agriculture (USDA) aimed at characterizing deer movement across a landscape with varying human development. With the emergence of chronic wasting disease (CWD) in mid-Michigan, it is crucial to understand deer movement patterns to best inform effective disease management practices. The study area spans Ionia, Clinton, Ingham, and Shiawassee counties. Jonathan's team successfully captured and fit global positioning system (GPS) collars on 20 adult white-tailed deer in 2018 and 39 adult white-tailed deer in 2019. The GPS collars allow Jonathan to monitor the survival and movement of each deer for up to two years.

The following properties are being utilized for the study: Central Park, North Meridian Road Park, Ted Black Woods, Nancy Moore Park, Towar Woods, Central Meridian Uplands, Davis Foster Preserve, Red Cedar River East Preserve, Tihart/Cornell Wetland Preserve, Legg Park, Forest Grove Preserve, North Ridge Preserve, the Transfer station, and Tihart Preserve.

Future Plans

The intention is to continue the volunteer archery deer management program in 2019 with the hope that our volunteer's efforts will continue to reduce the herd and provide valuable data on Chronic Wasting Disease to the Michigan DNR.

Conclusion

The Parks and Recreation office regularly fields calls from residents complaining about deer damage to personal property. Our environmental consultants and staff continue to report severe ecological damage to the natural areas due to over-browsing.

The onset of CWD has also raised concerns about the health of the deer herd in Meridian Township. While not its original intention, the deer management program now plays a vital role in providing the Michigan DNR and MSU with valuable data on the disease. Although, this now means one of the goals of the program to donate all harvested venison is not a possibility at this time. We will keep encouraging hunters to privately donate the venison they harvest and as soon as the CWD restrictions are lifted, we hope to resume all donations to Sportsman Against Hunger.

Attachment:

1. Meridian Township 2019 Deer Management Areas Map



MERIDIAN TOWNSHIP DEER MANAGEMENT HARVEST REGULATIONS - 2019

General Information & Designated Deer Harvest Locations

1. Permitted hunting will be in accordance with the laws of the Michigan Department of Natural Resources (MDNR), the State of Michigan, and the regulations of Meridian Charter Township.
2. Hunting may take place on the following Township or County properties by permission ONLY. (All other Township or County-owned properties are NOT open for public hunting.)
 1. Central Park
 2. Towner Road Park
 3. Wonch Park
 4. Ferguson Park
 5. Eastgate Park
 6. Legg Park
 7. Hartrick Park
 8. Ted Black Woods
 9. North Meridian Rd. Park
 10. Red Cedar Natural Area
 11. Forest Hills Natural Area
 12. Tacoma Hills Park
 13. Orlando Outlot B
 14. Davis/Foster Preserve
 15. Hubbel Preserve
 16. Lake Lansing North Preserve
 17. Newman Equities Preserve
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 31. Mandenberg Woods
 32. Tihart Preserve
 33. Ponderosa Preserve
 34. Nemoke Preserve
 35. Glendale Cemetery
 36. Riverside Cemetery
 37. Ingham County Farm
 38. Transfer Station

Participation Rules

1. Participants must be Meridian Township residents and at least 18 years old.
2. Hunters will be required to sign a release of liability form and consent to a background check. Meridian Township will require a copy of driver's license.
3. **Existing hunters:**
Participants who passed a proficiency test at a previous archery workshop are **not** required to perform a test in 2019. Returning participants are required to attend the meeting at the Demmer Center before the testing (**5:30pm on September 19th**).
New Hunters:
You are required to take a proficiency test at the MSU Demmer Center. Orientation and testing is scheduled for **September 19th from 5:30-7pm**. If you are unable to attend on that date, please let Jane Greenway know and she will make arrangements for a future testing date.

Managed Hunt Rules

1. Days and Hours: Hunting shall be permitted only during those days and hours set forth in the Michigan Department of Natural Resource's 2019 Hunting and Trapping Digest.
2. Designated managed harvest dates:
Seven days a week during the regular 2019 bow and firearm season (October 1, 2019 – January 1, 2020).
3. Hikers, hunters, bicyclists may share the township and county properties during the regular hunting season. Property entrances are posted and adjacent neighbors are notified. Please hunt responsibly.
4. Meridian Township and Ingham County property is NOT open to the general public for hunting. Meridian Township has the sole discretion in selecting volunteers, and may make its decision based on whatever factors it deems appropriate.
5. Meridian Township's deer management program is ARCHERY ONLY. Bow hunting is allowed during the firearm season(s) with the appropriate license.
6. The 2019 deer harvest will operate according to these regulations:
 - a. Hunters may keep all deer harvested.
 - b. Hunters are responsible for finding a processor.
 - c. All deer must be checked at a DNR check station.
 - d. Failure to properly comply may result in loss of hunting privileges.
 - e. It is the responsibility of the hunter to understand all State rules.
 - f. It is the responsibility of the hunter to understand the parameters of the Disease Control Permit.

Managed Hunt Procedure

1. Hunters will be assigned to specific properties.
2. Hunters are required to report participation throughout the season upon entering and exiting the property, each hunter will have two options for recording participation (entrance and exit times/dates), either through the use of the Facebook group 'Meridian Deer Management', or by email to greenway@meridian.mi.us or dillon@meridian.mi.us.
3. Hunters must remain within 50 feet of the blind or stand while hunting.
4. It is expected that hunters will only take shots within their level of proficiency in accordance with hunter's ethics, which dictate that a shot is only taken when capable of effectuating a quick and humane harvest. Hunters using a compound bow should limit their shots to a maximum of 30 yards and those using a crossbow should limit their shots to a maximum of 40 yards.
5. Hunters are required to limit their shooting distance to that which will ensure the deer is put down quickly. Never take a shot if you are unsure of what lies beyond the target.

6. Safety harness use in tree stands is mandatory.
7. Tree stands and blinds must comply with MDNR rules for public land that state “a portable deer stand left overnight must have the hunter’s name and address on the stand and be readable from the ground.” If you would like to use another hunter’s stand or blind, you must contact them directly for permission to do so.
8. Use of bolts, screws, and screw-in type steps are not allowed. Stands and associated equipment may not pierce trees.
9. Township personnel will remove any and all stands and blinds that are in violation of the MDNR rules for public property.
10. No trail flagging material should be placed on trees, branches or other objects. Do not remove any existing flagging.
11. Absolutely no marking or defacing of any tree, plant, shrub, etc. However, small tree branches may be carefully trimmed to accommodate tree stands.
12. Fires and overnight camping are not permitted at any time.
13. Participants must carry proof of being a member of the deer management team at all times (small pink card).
14. Participants must display a Managed Deer Harvest Notice in their vehicle while hunting on township property.
15. All hunters must wear blaze orange hunting gear during firearm season per DNR regulations.
16. **NO** bait piles – per MDNR rules relative to chronic wasting disease.
17. Use of the all-terrain wheelchair or other special arrangements may be made for hunters. Contact Jane Greenway at 517.853.4610 or greenway@meridian.mi.us for arrangements.
18. Hunters must report the date and location of deer taken directly to Jane Greenway at 517.853.4610 or greenway@meridian.mi.us, or via the Facebook Page. **Do not report number of deer taken to the Police Department.** Hunters must also comply with all reporting requirements of the Disease Control Permit. To join the Facebook page, simply type in “Meridian Deer Management” and request to join the group or type in <https://www.facebook.com/groups/677493192339578/>.

Tracking Deer and Field Dressing

1. Trespassing on private property for the purpose of tracking deer is strictly prohibited. Written permission is required to hunt or retrieve deer on private property.

2. Deer shot and **not** recovered, should be reported as soon as practical to the Meridian Township Police at **517.853.4800** (cadet desk) and to Jane Greenway (517.853.4610) or Kelsey Dillon (517.853.4614).
3. **Hunters tracking deer after dark must contact the Meridian Township Police to alert them of their activity, 517.853.4800 (cadet desk).**
4. Deer harvested may be kept by the hunter.
5. Deer must be dressed in the field, well away from roads or trails. **DNR check stations have dumpsters available for bagged deer parts and carcasses. The head must be brought to a check station. There is a drop box for after hours.**

Deer Permits

1. The Meridian Township Managed Deer Harvest will take place under a 2019 Disease Control Permit. Deer Management Assistance Permits are invalid after the last day of the deer season.
2. Antlered Deer may be harvested and kept by utilizing a disease control permit tag. If the hunter utilizes a disease control permit tag they are NOT permitted to keep the deer's head or antlers. If the hunter utilizes a personal tag they ARE permitted to keep the head and antlers (after CWD testing – the DNR will return it to the hunter).
3. Every unused deer permit must be returned to the Township when the hunter will no longer be deer hunting on the property authorized by this program.
4. It is illegal to sell 2019 Disease Control Permits to anyone, or transfer them to any other person, except by issuance to hunters. It is illegal for the township to charge a per permit fee or a per deer fee which, in effect, is selling the permit or selling a deer; both of which are illegal in Michigan.

Illegal Hunting Activity

1. Your help is important in keeping Meridian Township parks and land preserves clean and well-maintained. Report hunting-related incidents and accidents to 911 or the **Meridian Township Police non-emergency line at 517.332.6526.**
2. Report poaching and other illegal hunting activity to the **MDNR RAP Hotline at 1.800.292.7800.**

Questions may be directed to:

Jane Greenway or Kelsey Dillon
Meridian Township
2100 Gaylord C. Smith Ct.
Haslett, MI 48840
(517) 853-4610 or (517) 853-4614; greenway@meridian.mi.us or dillon@meridian.mi.us



Deer Management FAQ's

- 1. How can I participate in the Meridian Township Deer Management Program?**

To submit your name for the waiting list please call or visit the Meridian Township Service Center at 2100 Gaylord C. Smith Court Haslett, MI 48840 to fill out an application, view hunting maps, rules, and regulations.
- 2. What are the requirements to hunt in the Deer Management Program?**

Placement in the program is **limited to Meridian Township residents**. All hunters must submit to a background check, and pass a proficiency test and equipment check. There are also minimum participation requirements throughout the hunting season.
- 3. When and where does the hunt take place?**

The deer management program coincides with the archery season, running from October 1, 2019 through January 1, 2020. Hunting occurs seven days a week from ½ hour before dawn to ½ hour after dusk. All participating properties are posted at obvious points of entry.
- 4. What safety precautions has the township taken to prevent hunting related incidents?**

Hunting is limited to **archery only**. Designated properties have a predetermined number of hunters based on the property size, huntable area, and public use. All hunters are required to have a background check, pass a proficiency test, and pass an equipment check. Hunter participation is reported as far as property entrance and exit times, their stand locations, and deer in process of being tracked.
- 5. Can I hunt on private property in Meridian Township?**

Yes, be sure to obtain written landowner permission and follow all State rules and regulations. **Meridian Township parks and land preserves are not open to public hunting.**
- 6. What do the hunters do with the venison?**

Hunters are allowed to keep the meat themselves, but are encouraged to donate the deer through Michigan Sportsman Against Hunger (MSAH), so that the meat can be donated to local food banks.
- 7. How many reported deer car collisions occur in Meridian Township?**

2018: 129	2013: 180
2017: 129	2012: 152
2016: 164	2011: 152
2015: 145	2010: 138
2014: 137	
- 8. Who can I call to report a dead deer along the roadway?**

Meridian Township at 517.853.4600.
- 9. How can I remove a dead deer from my yard?**

Call Meridian Township at 517.853.4600.
- 10. I believe someone is poaching on my property or illegally feeding deer, who do I call?**

Michigan Department of Natural Resources RAP line (Report All Poaching) 800.292.7800

Meridian Township Deer Management Areas 2019

- 1 Central Park
- 2 Towner Road Park
- 3 Wonch Park
- 4 Ferguson Park
- 5 Eastgate Park
- 6 Legg Park
- 7 Hartrick Park
- 8 Ted Black Woods
- 9 North Meridian Rd. Park
- 10 Red Cedar Natural Area
- 11 Forest Hills Natural Area
- 12 Tacoma Hills Natural Area
- 13 Orlando Outlot B
- 14 Davis/Foster Preserve
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- 36 Riverside Cemetery
- 37 Ingham County Farm
- 38 Transfer Station

