



AGENDA
CHARTER TOWNSHIP OF MERIDIAN
ENVIRONMENTAL COMMISSION
REGULAR MEETING
June 2, 2021 7 pm

ZOOM MEETING: ID: **867 3903 8953** Password: **5151**

1. CALL MEETING TO ORDER
2. APPROVAL OF THE AGENDA
3. APPROVAL OF THE MINUTES
4. PUBLIC REMARKS
5. NEW BUSINESS
 - A. Welcome Tim Schmitt, Meridian's new Director of Community Development and Planning
 - B. Wetland Preservation & Stewardship Discussion
 - C. New Application – Jean McDonald
6. OLD BUSINESS
 - A. Green Infrastructure Grants for Schools
 - B. Tree City Update
 - C. Other
7. CHAIR'S REPORT
8. STAFF REPORT
9. Commission, Committee, Study Group and Trustee Reports (if applicable)
 - A. Board of Trustees
 - B. Brownfield Redevelopment Authority
 - C. Energy Team
 - D. Environmental Justice
 - E. Green Team
 - F. Land Preservation Advisory Board
 - G. Planning Commission
 - H. State of Michigan
 - I. Transportation Commission
 - J. Tree Team
10. PUBLIC REMARKS
11. ADJOURNMENT



**MINUTES (DRAFT)
ENVIRONMENTAL COMMISSION**

May 5, 2021

Attending: Commissioners: John Sarver, Rose Vadnais, Kendra Grasseschi, Anne Colby, Bill McConnell, and Tom Frazier. **Staff:** Derek Perry, LeRoy Harvey, Stephen Gebes, Trustee/Treasurer Phil Deschaine
Guests: Bernadette Osborn, Annaka Saffron, and Audrey Hirschert-Walton.

Approval of the Agenda: Sarver mentioned that the wetlands discussion will be postponed. Vadnais suggested that the tree city update become a Tree Team Update. McConnell moved to accept the agenda. Grasseschi seconded and the new agenda was unanimously approved.

Approval of Minutes: Frazier moved to approve the minutes and Colby seconded. Approved.

Pathway Master Plan: Public Works Director Perry provided an update on the plan. He provided a memo and map distributed in the meeting packet. The pathway program started in 1974 and has been well received by the community. The current millage provides about \$600,000 annually supporting over 70 miles of pathways and 30 miles of paved shoulders. Typically, the plan is updated every 5 years. This money helps leverage additional funds for grants. The boardwalk along Okemos Rd is a good example. The next three years are devoted to completing the MSU to Lake Lansing pathway. Proposed 2024-25 improvements include extensions to fill gaps. Perry is sharing this plan with several commissions, inviting public input, and expects a public hearing with the Board of Trustees in June. Sarver asked about the increased use of trails. Perry responded that increased litter is a good indicator of the increased traffic as well as the increasing use of the dog waste bags. Vadnais suggested Strava as a tool to also provide some pathway usage data. Frazier asked about the difference between short and long term plans. Perry responded that long term plans help leverage developer investments. Harvey invited input from the student members of the Commission. Hirschert-walton mentioned a potential connection across the river between Riverwood and Tacoma Hills (close to Central School). Saffron also mentioned the lack of sidewalks between Okemos and East Lansing. Perry mentioned that the MSU-Lake Lansing is a step in this direction. Perry invited people to email comments to DPW@meridian.mi.us. See the memo and proposed map: <https://www.meridian.mi.us/home/showpublisheddocument/23076/637550496632900000>

Student Commissioner Alternates: There is interest involving more students and several options were discussed including "alternates.". Both Osborn and Saffron are interested in participating. Vadnais suggested a student advisory committee. Grasseschi also endorsed the idea more student involvement and welcomed student involvement in a number of projects. Colby suggested that we welcome both Osborn and Saffron and consider further developing a student advisory board. Hirschert-walton asked what type of topics might the Earth Club get involved in. Sarver mentioned that education and community outreach, climate action plan, wetlands, etc. Grasseschi also invited students to watch parts of our meetings that are of interest. Sarver motioned to appoint Osborn and Saffron and create a Student Advisory Group that would include members of the Earth Club, Luca Wisinski, and other students in Okemos or Haslett. Colby seconded. Vadnais suggested further discussion before the next meeting and agreed to facilitate that.

Green Infrastructure Grants in Schools: Harvey provided a brief update on the payment schedule. Vadnais is hoping to get more pictures and video of the Radmoor project. Sarver reminded us about a future report to the Trustees. Harvey mentioned a remaining balance in the budget and possibility of supporting additional projects.

Tree Team Update: Vadnais mentioned a recent collaborative meeting with Parks and Public Works to discuss promotion of trees. Vadnais also helped distribute approximately 200 seedlings at the farmers market this past weekend. Vadnais also mentioned interest in discussing trees in the green infrastructure audit. Grasseschi will follow up with Clerk Guthrie about a Powell Rd. tree-saving effort.

Chair's Report: Sarver reported progress on the Citizen's Climate Commitment and encouraged people to check it out, sign on the commitment, and consider electric alternatives in the future. The web page has been created by Communication staff and is available at <https://www.meridian.mi.us/residents/township->

[services/recycle-go-green/energy-climate-initiatives](#). Sarver encouraged everyone to tell their friends and encourage them to make are similar climate commitment.

Staff Report: Harvey reported an outreach effort at the Farmer's market. This is an ongoing volunteer opportunity in collaboration with parks, Ingham Conservation District, the Green Team, the Tree Team, Harris Nature Center, Meridian Conservation Corp, and others. There will be a bicycle recycling event on May 22nd in partnership with MSU bikes. Also, more trees will be distributed during the following two weekends. There is also discussion about recycling center improvements and another recycling facility. A community survey is being developed which might be an opportunity to hear from residents about recycling or other environmental topics. The green dialogues continue on Wednesday mornings and Harvey encouraged people to tune in at 9:00 AM. Construction for a solar array will begin in July at the Service Center. Harvey is also working on sponsorship for the September electronics recycling event.

Green Team: Frazier mentioned work on a flyer for the September 18th electronics collection. The Green team will meeting Thursday to discuss events and details. Sarver mentioned that an Environmental Commission and a green dialogue are two great ways for a communities to enliven their green initiatives.

Transportation Commission: McConnell mentioned work on the Pathway Plan.

Planning Commission: McConnell reported that the Planning Commission met on April 26 and they are looking at zoning applications at a former car dealership add a couple residential rezoning requests And a special use permit for a car wash at the old Paul Revere's site.

MI Township Association (MTA): Frazier reported that the rewrite of public act 115 dealing with solid waste, resources and recycling has moved on to the Senate.

Land Preservation Advisory Board: Emma helped with a wetland video. Grasseschi also reported on the vernal pool training. There have been several conservation core activities involved with invasive species removal and planting of native species. Campbell is currently managing over 200 volunteers to assist. 205 native trees were planted at the tower reserve. There is also discussion about improving communications related to controlled burns.

Environmental Justice: Vadnais reports that EGLE is hosting an on-line environmental justice conference on May 18th and 19th. April was fair housing month and bad knees attended and learned about connections between real estate and environmental justice. One issue is love letters which are now being discouraged. This has become a way to screen buyers who may be biased. Vadnais suggests a meeting in the next month which may include Grasseschi, Trustee Wisinski. Colby also expressed interest.

Board of Trustees: Treasurer Deschaine expressed appreciation for the work of the Environmental Commission. he also mentioned that trustees are working on rezoning for a car dealership. Deschaine reports but the board is split on recreational marijuana. He also mentions that the board of trustees are very supportive of another tree initiative such as the one that occurs at Chippewa last fall. Deschaine also mentioned participating in the Towar Woods enhancements and the remarkable improvement there over the past decade.

Public & Additional Remarks: Esser mentioned that Alexa Hexel will be presenting at the Green Dialogue on May 19th. She is the owner of the clean refillery and will talk about their products and reducing packaging waste. More at www.cleanrefillery.com/ Esser also recommends Bill Gates' book about avoiding a climate disaster. Harvey mentioned that we might want to include a student update. Server welcomed Osborn and Saffron to the Environmental Commission. Grasseschi was recently invited to speak to Rotary and if anyone else is interested in doing that please contact Grasseschi.

Adjournment: Vadnais moved to adjourn. Seconded by Frazier. Unanimously approved at 8:12 PM

To: Environmental Commission Members
From: Trustee Wisinski and Commissioner Grasseschi
Date: 05.27.2021
Re: Meridian Township Wetland Ordinance

The Township Board and Environmental Commission finds that wetlands are indispensable and fragile natural resources that provide many public benefits, including maintenance of water quality through nutrient cycling and sediment trapping as well as flood and stormwater runoff control through temporary water storage, slow release, and groundwater recharge. In addition, wetlands provide open space; passive outdoor recreation opportunities; fish and wildlife habitat for many forms of wildlife, including migratory waterfowl, and rare, threatened, or endangered wildlife and plant species; and pollution treatment by serving as biological and chemical oxidation basins.

To ensure we protect these precious resources, the Meridian Township Wetland Protection ordinance was adopted in 1991 and amended in 2001. According to the Meridian Township Wetland Protection Code, the Environmental Commission shall perform the following duties:

- Advise the Township Board, Planning Commission, and Director of Community Planning and Development, as necessary, on wetland use permits, appeals of wetland use permits, and mitigation plans.
- Serve in an advisory role in setting policy guidelines on wetland issues in the Township.
- Identify conflicts and propose solutions to resolve conflicts regarding wetland protection by present Township ordinances, Township operating procedures, and Township activities.
- Identify and propose solutions to problems associated with wetland management.
- Provide recommendations to the Director of Community Planning and Development on map administration.
- Assist landowners who are interested in the voluntary protection of wetlands.
- Promote wetland education at all levels. Develop education programs for the public and for Township schools. The program should promote the values of wetlands and awareness of the hazards and threats to wetlands. The program should be particularly targeted to landowners with wetlands and emphasize how best to protect wetland values on their property.
- Coordinate a voluntary wetland stewardship program. Develop an adopt-a-wetland program for interested citizens to participate more directly in preservation of specific wetlands.

We look forward to discussing ideas on how we are/can ensure the Environmental Commission is upholding the incredible task to protect wetlands in Meridian Township.

Enclosed: Meridian Township Wetland Protection Ordinance

Chapter 22. Environment

ARTICLE IV. Wetland Protection

[1] *State law references: Wetland protection, MCL 324.30301 et seq.; local wetland protection ordinances, MCL 324.30307(4), 324.30308.*

DIVISION 1. Generally

§ 22-116. Definitions.

[Code 1974, § 105-3; Ord. No. 2002-02, 3-19-2002; Ord. No. 2003-11, 7-6-2003; Ord. No. 2011-04, 3-15-2011]

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:

AQUATIC LIFE

Vertebrates or invertebrates that are dependent on wetlands for some vital portion of their life cycle, including any of the following: breeding, spawning, nesting, rearing of young, feeding, and resting or protection.

CONTIGUOUS

Any of the following:

- (1) A permanent surface water connection or other direct contact with an inland lake, pond, river or stream.
- (2) A seasonal or intermittent direct surface water connection to an inland lake, pond, river or stream.
- (3) A wetland which is partially or entirely located within 500 feet of the ordinary high water mark of an inland lake, pond, river or stream, unless it is demonstrated by the property owner by clear and convincing evidence that there is no relation whatever between the wetland and the inland lake, pond, river or stream taking into the purposes of this article, as set forth in § **22-118**.
- (4) Two or more areas of wetland separated only by barriers, such as dikes, roads, berms or other similar features, but only with any of the wetland areas contiguous under the criteria described in subsection **(1)**, **(2)** or **(3)** of this definition.

DEPOSIT

To fill, place or dump.

DIRECTOR OF COMMUNITY PLANNING AND DEVELOPMENT

The Director of Community Planning and Development for the Township or his designee.

ENVIRONMENTAL COMMISSION

The body created pursuant to Chapter 2, Article VI, Division 3, and designated by the Township Board to advise the Township on wetland issues.

FILL MATERIAL

Soil, rocks, sand, or waste of any kind, or any other material which displaces soil or water, or reduces water retention potential.

INLAND LAKE, STREAM, RIVER OR POND

Any of the following:

- (1) A river or stream that has definite banks, a bed, and visible evidence of a continued flow or continued occurrence of water.
- (2) A natural or permanent artificial inland lake or impoundment that has definite banks, a bed, a visible evidence of a continued occurrence of water, and a surface area of water that is more than five acres, not including lakes constructed by excavating or diking dry land and maintained for the sole purpose of cooling or storing water and not including lagoons for treating polluted water.
- (3) A natural or permanent artificial pond that has permanent open water with a surface area that is more than one acre but less than five acres, not including ponds constructed by excavating or diking dry land and maintained for the sole purpose of cooling or storing water and not including lagoons used for treating polluted water.

INTERESTED PERSON

Either:

- (1) A resident of the Township who will suffer an identifiable injury, loss, or potential loss as a result of a wetland use permit decision; or
- (2) An owner of property within 500 feet of the wetland that is the subject of a wetland use permit decision.

LOT

Land occupied or to be occupied by a building, structure, land use, or group of buildings, together with such open space or yards as are required under the code of ordinances and having its principal frontage upon a street.

MINOR DRAINAGE

Includes ditching and tiling for the removal of excess soil moisture incidental to the planting, cultivating, protecting, or harvesting of crops or improving the productivity of land in established use for agriculture, horticulture, silviculture, or lumbering.

MITIGATION OF WETLANDS

- (1) Methods for eliminating or reducing potential impact to regulated wetlands; or
- (2) Creation of new wetlands of the same or similar function to offset unavoidable loss of existing wetlands to meet the Township goal of no net loss of wetlands.

PERSON

An individual, sole proprietorship, partnership, corporation, association, municipality, of the state; an instrumentality or agency of this state; the federal government, or an instrumentality or agency of the federal government, or other legal entity.

PROTECTED WETLANDS

Any of the following:

- (1) Wetlands, regardless of size, which are contiguous to any inland lake stream, river, or pond, whether partially or entirely within the project site.

- (2) Wetlands, regardless of size, which are partially or entirely within 500 feet of the ordinary high water mark of any inland lake, stream, river or pond, unless it is determined by the state department of environmental quality that there is no surface or groundwater connection between the wetland and the water body.
- (3) Wetlands which are larger than two acres, whether partially or entirely contained within a lot, and which are not contiguous to any inland lake, stream, river or pond.
- (4) Wetlands, regardless of size, which are not contiguous to any inland lake, stream, river or pond, if the state department of environmental quality determines the protection of the wetland is essential to the preservation of the natural resources of the state from pollution, impairment or destruction.
- (5) Wetlands, equal to or greater than one-quarter acre and equal to or less than two acres in size, which are not contiguous to any inland lake, stream, river or pond and are determined to be essential to the preservation of the natural resources of the Township as provided in § 22-156.

REMOVE

To dig, dredge, suck, pump, bulldoze, drag line, or blast.

RESTORATION

To return from a disturbed or totally altered condition to a previously existing natural or altered condition by some action of man.

STRUCTURE

Any assembly of materials above or below the surface of the land or water, including, but not limited to, buildings, bulkheads, piers, docks, landings, dams, waterway obstructions, paving and roadways, poles, towers, cables, pipelines, drainage tiles, and other underground installations.

TOWNSHIP BOARD

The legislative body of the Charter Township of Meridian, Ingham County, Michigan.

TOWNSHIP ENVIRONMENTAL CONSULTANT

A person professionally knowledgeable in wetland delineation and resource value assessment, wetland protection, wetland restoration and wetland mitigation, appointed pursuant to § 3.4 of the Township personnel policy to carry out certain duties hereunder. Any firm or individual appointed on a contract basis shall be selected competitively under the Township purchasing policy.

TOWNSHIP WETLAND INVENTORY MAP

The Meridian Township Wetland Inventory Map created to comply with § 30308 (1), of the Natural Resources and Environmental Protection Act (MCL § 324.30308). The Township wetland inventory map is based on the National Wetland Inventory Map of the U.S. Fish and Wildlife Service, the Michigan Resource Information System Mapping (MIRIS) of the state department of natural resources, the soils maps of the soil conservation service, aerial photography and on-site inspections.

WETLAND

Land characterized by the presence of water at a frequency and duration sufficient to support, and that under normal circumstances does support, wetland vegetation or aquatic life and commonly referred to as a bog, swamp, or marsh.

WETLAND VEGETATION

Plants that exhibit adaptations to allow germination and growth with at least their root systems in the water or saturated soils under normal conditions.

Cross reference: Definitions generally, § 1-2.

§ 22-117. Findings.

[Code 1974, § 105-1; Ord. No. 2002-02, 3-19-2002]

- (a) The Township Board finds that wetlands are indispensable and fragile natural resources that provide many public benefits, including maintenance of water quality through nutrient cycling and sediment trapping as well as flood and stormwater runoff control through temporary water storage, slow release, and groundwater recharge. In addition, wetlands provide open space; passive outdoor recreation opportunities; fish and wildlife habitat for many forms of wildlife, including migratory waterfowl, and rare, threatened or endangered wildlife and plant species; and pollution treatment by serving as biological and chemical oxidation basins.
- (b) Preservation of the remaining Township wetlands in a natural condition shall be and is necessary to maintain hydrological, economic, recreational, and aesthetic natural resource values for existing and future residents of the Township, and, therefore, the Township Board declares a policy of no net loss of wetlands. Furthermore, the Township Board declares a long-term goal of net gain of wetlands to be accomplished through review of degraded or destroyed wetlands in the Township and, through cooperative work with landowners, using incentives and voluntary agreements to restore wetlands.
- (c) Pursuant to Article 4, § 52 of the Constitution of the State of Michigan, the conservation and development of natural resources of the state is a matter of paramount public concern in the interest of the health, safety, and general welfare of the people. Therefore, with authority from § 30307(4) of the Natural Resources and Environmental Protection Act (MCL § 324.30307 et seq.), the Township Board finds that this article is essential to the long-term health, safety, economic, and general welfare of the people of the Township and to the furtherance of the policies set forth in Part 17 of the Natural Resources and Environmental Protection Act (MCL § 324.101 et seq.).

§ 22-118. Purpose.

[Code 1974, § 105-2; Ord. No. 2002-07, 3-19-2002; Ord. No. 2011-04, 3-15-2011]

The purposes of this article are to provide for:

- (1) The protection, preservation, replacement, proper maintenance, restoration, and use in accordance with the character, adaptability, and stability of the Township's wetlands in order to prevent their pollution or contamination; minimize their disturbance and disturbance to the natural habitat therein; and prevent damage from erosion, siltation, and flooding.
- (2) The encouragement of proper and reasonable economic use of wetlands, the discouragement and limitation of improper use, the reduction of financial burdens improper uses impose on the community, the maintenance of harmonious and compatible land use balance within the Township, and the prevention of nuisance conditions that arise with the indiscriminate development of wetlands.
- (3) The coordination with, and support for, the enforcement of applicable federal, state, and county statutes, ordinances, and regulations, including, but not limited to:
 - a. Part 303, Wetland Protection of the Natural Resources and Environmental Protection Act (MCL § 324.30301 et seq.), enforced by the State Department of Environmental Quality; and
 - b. Part 91 of the Natural Resources and Environmental Protection Act (MCL § 324.9101 et seq.), enforced by the Township.
- (4) Compliance with Part 17 of the Natural Resources and Environmental Protection Act (MCL § 324.1701 et seq.), which imposes a duty on government agencies and private individuals and

organizations to prevent or minimize the pollution, impairment or destruction of the natural resources that is likely to be caused by their activities.

- (5) The establishment of standards and procedures for the review and regulation of the use of wetlands.
- (6) The issuance of wetland use permits for approved activities.
- (7) A procedure for amending wetland use permits.
- (8) A procedure for appealing decisions.
- (9) The establishment of enforcement procedures and penalties for the violation of this article.
- (10) Assurance that the right to reasonable use of private property is maintained.

§ 22-119. Penalties and enforcement.

[Code 1974, § 105-19; Ord. No. 2002-07, 8-20-2002; Ord. No. 2011-04, 3-15-2011]

- (a) In the event of a violation of this article, the Township may commence a civil action for appropriate relief, including injunctive relief. An action under this article may be brought in the circuit court for the county. The court has jurisdiction to restrain the violation and to require compliance with this article. In addition to any other relief granted under this article, the court may impose a civil fine of not more than \$10,000 per day of violation. A person who violates an order of the court is subject to a civil fine not to exceed \$10,000 for each day of violation.
- (b) A person who violates this article is guilty of a misdemeanor, punishable by a fine of not more than \$2,500.
- (c) A person who willfully or recklessly violates a condition or limitation in a permit issued by the Township under this article, or a corporate officer who has knowledge of or is responsible for a violation, is guilty of a misdemeanor, punishable by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. A person who violates this article a second or subsequent time is guilty of a felony, punishable by a fine of not more than \$50,000 for each day of violation, or by imprisonment for not more than two years, or both.
- (d) In addition to the penalties provided under subsections **(a)**, **(b)**, and **(c)** of this section, the court may order a person who violates this article to restore as nearly as possible the wetland that was affected by the violation to its original condition immediately before the violation. The restoration may include the removal of fill material deposited in the wetland or the replacement of soil, sand, or minerals.
- (e) Whenever any work is performed contrary to the provision of this article or of a condition set forth in a wetland use permit, the Township Manager or his agent shall order the work to cease by notice in writing served on any persons engaged in the doing or causing such work to be performed, and any such persons shall, upon receipt of the order, forthwith stop such work until authorized by the Township Manager or his agent to proceed. In addition, if a person acts in violation of this article the Township may refuse a certificate of occupancy or other construction permits related to the project whenever there is failure to comply with the provisions of this article.
- (f) The Director of Community Planning and Development or his agent shall have authority under this article to enter upon privately owned land for the purpose of performing the Township's duties under this article and may take or cause to be made such examinations, surveys or samplings as are deemed necessary.

- (g) Law enforcement officials or other officials having the police power shall have authority to assist the Department of Community Planning and Development in the enforcement of this article.
- (h) In the event of a violation of this article, the Township Board shall have the power to order wetland restoration for the damaged or destroyed wetland area by the owner of the property affected or the person or agent responsible for the violation. If the owner or person responsible does not complete the restoration measures within the ordered period of time, the Township Board may order the affected wetland restored to its prior condition and/or create or restore other wetlands for the purpose of offsetting losses sustained as a result of this violation. The owner or other person responsible for the original violation shall be responsible to the Township for the full cost of all such remedial activity.

§ 22-120. Existing nonconforming lots, uses and structures.

[Code 1974, § 105-9; Ord. No. 2002-07, 8-20-2002; Ord. No. 2011-04, 3-15-2011]

Building sites or lots, uses and structures lawfully existing on September 2, 1991, shall be subject to the requirements of this article, except as follows:

- (1) Any activity, structure, or use lawfully existing prior to September 2, 1991, but not in conformity with the provisions of this article, may be continued, maintained and operated. No nonconforming activity, structure or use shall be enlarged or increased or extended to occupy a greater area of land than was occupied at the effective date of Ordinance No. 2011-04, from which this article is derived without first obtaining a wetland use permit.
- (2) Any structure lawfully existing prior to September 2, 1991, if destroyed by any means to an extent of more than 50% of its replacement costs, exclusive of the foundation, may be reconstructed only in conformity with the provisions of this article. The estimated cost of reconstruction shall be determined by the Township Chief Building Inspector. Persons aggrieved by the determination of estimated replacement cost by the Chief Building Inspector may appeal such determination to the Zoning Board of Appeals.

§ 22-121. Township wetland inventory map.

[Code 1974, § 105-5, Ord. No. 2002-07, 8-20-2002; Ord. No. 2011-04, 3-15-2011]

The Township wetland inventory map is a guide to the location of wetlands in the Township. The map shall be used in the administration of this article and Chapter **86**, Article **V**.

- (1) The Township wetland inventory map, together with all explanatory matter thereon and attached thereto, as may be amended through the wetland verification and delineation process, is hereby adopted by reference and declared to be part of this article. The Township wetland inventory map shall be on file in the Department of Community Planning and Development.
- (2) The Township wetland inventory map shall serve as a general guide for the location of protected wetlands.
- (3) The Township wetland inventory map does not create any legally enforceable presumptions regarding whether property that is or is not included on the inventory map is or is not in fact a wetland.
- (4) Map amendment process:
 - a. Any change to the Township wetland inventory map, approved by the Director of Community Planning and Development through verification or delineation, shall be added to the Township wetland inventory map on an annual basis.

- b. The Township shall ensure that each recorded owner of property on the property tax roll shall be notified of any amendment to the Township wetland inventory map on an annual basis. The notice shall include the following information:
 1. The maps have been amended.
 2. The location to review the maps shall be indicated.
 3. The owner's property may be designated as a wetland on the inventory map.
 4. The Township has an ordinance regulating wetlands.
 5. The inventory map does not necessarily include all of the wetlands within the Township that may be subject to this article.

§ 22-122. Wetland delineation and verification.

[Code 1974, § 105-6; Ord. No. 2002-07, 8-20-2002; Ord. No. 2011-04, 3-15-2011]

The Township wetland inventory map shall be validated through the wetland delineation process or the wetland verification process. The wetland delineation process shall be used to establish the actual boundaries of wetlands by the Township environmental consultant. The wetland verification process shall be used to verify the boundaries of wetlands through the review by the Township environmental consultant of a wetland delineation prepared by a qualified professional or wetland consultant.

Prior to issuance of a building permit or land development approval, the Director of Community Planning and Development shall determine the necessity for establishing the boundary of wetlands based on the proximity and relationship of the project to wetlands shown on the Township wetland map.

(1) Wetland delineation process.

- a. A property owner or an applicant with the property owner's written permission shall submit a wetland delineation application and fee authorized by the Township Board to the Department of Community Planning and Development with the following material:
 1. A survey, site plan, or plot plan drawn to an appropriate scale. The survey, site plan, or plot plan shall include the following:
 - i. Property lines and dimensions.
 - ii. North arrow and scale.
 - iii. Existing topography contours depicted at two-foot intervals.
 - iv. Adjacent and on-site roads; railroads; and streams, lakes, and ponds.
 - v. Footprints of existing buildings, parking lots, accessory structures, and other structures.
 - vi. Any notable man-made or natural features along the suspected wetlands.
- b. The property boundaries shall be clearly flagged or staked prior to the field investigation.
- c. Upon receiving a complete application, the Department of Community Planning and Development shall transmit the request to the Township environmental consultant for a field investigation. In the event that weather conditions prohibit the Township environmental consultant from conducting a thorough field investigation including the evaluation of vegetation, soil, and hydrology, the application and fee will be held until such time that the review can be conducted.

- d. Identification, flagging, or staking of the wetland boundaries in the field shall be completed by the Township environmental consultant during a field investigation. An arc-map compatible digital copy of the delineated wetland boundary shall be provided to the Director of Community Planning and Development.
- e. Wetland delineations completed by the Township environmental consultant shall be valid for a period of three years from the date of the delineation report.
- f. In delineating wetland boundaries, all delineations shall apply the technical wetland delineation standards set forth in the U.S. Army Corps of Engineers, January 1987 Wetland Delineation Manual, technical report y-87-1, and appropriate regional U.S. Army Corps of Engineers supplements.
- g. Wetlands under the jurisdiction of the department of environmental quality may need to have the delineation reviewed and approved by representatives of the state.

(2) Wetland verification process.

- a. A property owner or an applicant with the property owner's written permission shall submit a wetland verification application and fee authorized by the Township Board to the Department of Community Planning and Development with the following material:
 - 1. A survey, site plan, or plot plan that includes the following information:
 - i. Property lines and dimensions.
 - ii. North arrow and scale.
 - iii. Existing topography contours depicted at two-foot intervals.
 - iv. The boundary of all wetlands identified on the site.
 - v. Adjacent and on-site roads; railroads; and streams, lakes, and ponds.
 - vi. Footprints of existing buildings, parking lots, accessory structures, and other structures.
 - vii. Surveyed points of reference.
 - viii. Any notable man-made or natural features along the wetland boundaries.
 - 2. A wetland delineation report that is no more than three years old. The report shall at a minimum include the following information:
 - i. Dominant vegetation in the tree, sapling, shrub, and herb layers.
 - ii. Presence of or lack of accepted wetland hydrology layers.
 - iii. Analysis of soil including a description of the soil profile to at least 20 inches.
 - iv. Comparison of county soil survey to the wetland shown in a manner that allows comparison to the Township wetland inventory map.
 - v. A notation in the report whether potential off-site wetlands (within 40 feet of the property line) can be observed from the subject site.
- b. Upon receiving a complete application, the Department of Community Planning and Development shall transmit the request to the Township environmental consultant for a field investigation. In the event that weather conditions prohibit the Township environmental

consultant from conducting a thorough field investigation including the evaluation of vegetation, soil, and hydrology, the application and fee will be held until such time that the review can be conducted.

§ 22-123. Duties of the environmental commission.

[Code 1974, § 105-16; Ord. No. 2002-07, 8-20-2002; Ord. No. 2011-04, 3-15-2011]

The environmental commission created pursuant to Chapter 2, Article VI, Division 3, shall perform the following duties with regard to this article:

- (1) Advise the Township Board, Planning Commission, and Director of Community Planning and Development, as necessary, on wetland use permits, appeals of wetland use permits, and mitigation plans.
- (2) Serve in an advisory role in setting policy guidelines on wetland issues in the Township.
- (3) Identify conflicts and propose solutions to resolve conflicts regarding wetland protection by present Township ordinances, Township operating procedures, and Township activities.
- (4) Identify and propose solutions to problems associated with wetland management.
- (5) Provide recommendations to the Director of Community Planning and Development on map administration.
- (6) Assist landowners who are interested in the voluntary protection of wetlands.
- (7) Promote wetland education at all levels. Develop education programs for the public and for Township schools. The program should promote the values of wetlands and awareness of the hazards and threats to wetlands. The program should be particularly targeted to landowners with wetlands and emphasize how best to protect wetland values on their property.
- (8) Coordinate a voluntary wetland stewardship program. Develop an adopt-a-wetland program for interested citizens to participate more directly in preservation of specific wetlands.

§ 22-124. through § 22-150. (Reserved)

DIVISION 2. Permit

[1] *State law reference: Wetland permits, MCL 324.30306 et seq.*

§ 22-151. Activities requiring a wetland use permit.

[Code 1974, § 105-8; Ord. No. 2002-07, 8-20-2002; Ord. No. 2011-04, 3-15-2011]

- (a) It shall be unlawful for any person to conduct any activity listed below within a protected wetland without first obtaining a wetland use permit in accordance with the requirements of this division. Activities governed by this section include, but are not limited to, the following:
 - (1) Depositing, permitting the placement of fill material or maintaining fill material in a protected wetland.
 - (2) Grading in a protected wetland.
 - (3) Dredging, removing, or permitting the removal of soil or minerals from a protected wetland.

- (4) Draining, or causing to be drained, any water into or from a protected wetland.
- (5) Constructing, operating, or maintaining any use or development in a protected wetland.
- (6) Diverting, obstructing or impeding the flow of water into a protected wetland.

§ 22-152. Activities not requiring a permit.

[Code 1974, § 105-7; Ord. No. 2002-07, 8-20-2002; Ord. No. 2011-04, 3-15-2011]

- (a) The following uses shall be allowed in a wetland without a permit subject to other laws of this state and the owner's regulation:
 - (1) Fishing, trapping or hunting.
 - (2) Swimming or boating.
 - (3) Hiking.
 - (4) Grazing of animals.
 - (5) Farming, horticulture, silviculture, lumbering, and ranching activities, including plowing, irrigation, irrigation ditching, seeding, cultivating, minor drainage, harvesting for the production of food, fiber, and forest products, or upland soil and water conservation practices. A wetland altered under this article shall not be used for a purpose other than a purpose described in this subsection without a permit from the Township.
 - (6) An activity in a wetland that was effectively drained for farming before October 1, 1980, and that on and after October 1, 1980, has continued to be effectively drained as part of an ongoing farming operation.
 - (7) Maintenance or operation of serviceable structures in existence on October 1, 1980, or constructed pursuant to part 303, of the Natural Resources and Environmental Protection Act (MCL § 324.30301 et seq.).
 - (8) Construction or maintenance of farm or stock ponds.
 - (9) Maintenance, operation, or improvement which includes the straightening, widening or deepening of the following which is necessary for the production or harvesting of agricultural products:
 - a. An existing private agricultural drain.
 - b. That portion of a drain legally established pursuant to the drain code of 1956 (MCL § 282.1 et seq.) which has been constructed or improved for drainage purposes.
 - c. A drain constructed pursuant to other provisions of part 303 of the Natural Resources and Wetland Protection Act (MCL § 324.30301 et seq.).
 - (10) Construction or maintenance of farm roads, forest roads, or temporary roads for moving mining or forestry equipment, if the roads are constructed and maintained in a manner to ensure that adverse effect on the wetland will be otherwise minimized.
 - (11) Drainage necessary for the production and harvesting of agricultural products if the wetland is owned by a person who is engaged in commercial farming and the land is to be used for the production and harvesting of agricultural products. Except as otherwise provided in part 303 of the Natural Resources and Environmental Protection Act (MCL § 324.30301 et seq.), a wetland improved under this subsection after October 1, 1980, shall not be used for

nonfarming purposes without a permit from the state department of environmental quality. This subsection shall not apply to a wetland which is contiguous to a lake or stream, or to a tributary of a lake or stream, or to a wetland which the state department of environmental quality has determined by clear and convincing evidence to be a wetland which is necessary to be preserved for the public interest, in which case a permit shall be required.

- (12) Maintenance or improvement of public streets, highways or roads, within the right-of-way and in such a manner as to ensure that any adverse effect on the wetland will be otherwise minimized. Maintenance or improvement does not include adding extra lanes; or deviating from the existing location of the street, highway, or road.
- (13) Maintenance, repair, or operation of gas or oil pipelines and construction of gas or oil pipelines having a diameter of six inches or less, if the pipelines are constructed, maintained, or repaired in a manner to ensure that any adverse effect on the wetland will be otherwise minimized.
- (14) Maintenance, repair, or operation of electric transmission and distribution power lines and construction of distribution power lines, if the distribution power lines are constructed, maintained, or repaired in a manner to ensure that any adverse effect on the wetland will be otherwise minimized.
- (15) Operation or maintenance, including reconstruction of recently damaged parts, of serviceable dikes and levees in existence on October 1, 1980, or constructed pursuant to part 303 of the Natural Resources and Environmental Protection Act (MCL § 324.30301 et seq.).
- (16) Construction of iron and copper mining tailings basins and water storage areas.
- (17) A wetland that is incidentally created as a result of one or more of the following activities:
 - a. Excavation for mineral or sand mining, if the area was not a wetland before excavation. This exemption does not include a wetland on or adjacent to a water body of one acre or more in size.
 - b. Construction and operation of a water treatment pond or lagoon in compliance with the requirements of state or federal water pollution control regulations.
 - c. A diked area associated with a landfill if the landfill complies with the terms of the landfill construction permit and if the diked area was not a wetland before diking.
- (18) Cranberry beds.
 - a. The construction of cranberry beds, including associated dikes and water control structures associated with dikes, such as headgates, weirs, and drop inlet structures shall be considered a water-dependent activity.
 - b. The following activities associated with cranberry operations are not considered to be water dependent:
 1. The construction of roads, ditches, reservoirs, and pump houses that are used during cultivation of cranberries.
 2. The construction of secondary support facilities for shipping, storage, packaging, parking, and similar purposes.
 - c. The demonstration by an applicant that there is no feasible and prudent alternative to the construction of cranberry beds, including dikes, is not subject to either of the following presumptions:

1. That the feasible and prudent alternatives that do not involve a wetland are available.
2. That a feasible and prudent alternative that does not affect a wetland will have less adverse effects on the aquatic ecosystem.

§ 22-153. Relationship to state and federal permits.

[Ord. No. 2002-07, 8-20-2002]

Whenever persons requesting a wetland use permit are also subject to state and/or federal permit requirements, the following shall apply:

- (1) The Township shall have jurisdiction for the regulation of wetlands under this article concurrent with the jurisdiction of the state department of environmental quality.
- (2) Approvals under this division shall not relieve a person of the need to obtain a permit from the state department of environmental quality and/or the U.S. Army Corps of Engineers, if required.
- (3) Issuance of a permit by the state department of environmental quality and/or the U.S. Army Corps of Engineers shall not relieve a person of the need to obtain approval under this division, if applicable.

§ 22-154. Application requirements for wetland use permits.

[Code 1974, § 105-10; Ord. No. 2002-07, 8-20-2002; Ord. No. 2011-04, 3-15-2011]

- (a) Application for approval, appeal, and issuance of wetland use permits shall be concurrent with the application for approval, appeal, and issuance of other necessary Township approvals. The applicant for a wetland use permit shall submit the following to the Director of Community Planning and Development.
 - (1) An application completed in full, on a form supplied by the state department of environmental quality and made available by the Township with such other information as required by the Director of Community Planning and Development.
 - (2) Wetland delineation documentation prepared by the Township environmental consultant pursuant to § **22-122(1)** or wetland delineation documentation prepared by a qualified wetland professional or wetland consultant in accordance with the requirements listed in § **22-122(2)**, including verification by the Township environmental consultant.
 - (3) Soil erosion and stormwater management plans with runoff calculations. The plans shall be prepared and sealed by a professional engineer licensed by the State of Michigan.
 - (4) A mitigation plan, which complies with all federal, state and local laws, if the proposed activity will result in the loss of wetland resources.
- (b) The applicant may elect to have the application processed under the following procedure:
 - (1) The wetland application shall be reviewed immediately, either prior to or concurrent with the review of the proposed land use review, with the understanding that the land use review may not be completed at the time a decision is rendered on the wetland application. Election of this alternative may require a reopening of the wetland application if the land use approval is inconsistent with the wetland approval.

§ 22-155. Method of review of wetland use permit application.

[Code 1974, § 105-11; Ord. No. 2002-07, 8-20-2002; Ord. No. 2003-11, 7-6-2003; Ord. No. 2006-04, 9-25-2006; Ord. No. 2011-04, 3-15-2011]

- (a) The Director of Community Planning and Development shall ensure that all required information including a wetland delineation and payment of a fee has been submitted. If an application is not complete, it shall not be processed until the applicant provides all of the required information to the Department of Community Planning and Development. The receipt of a complete application shall constitute permission from the owner to conduct an on-site investigation.
- (b) Upon receipt of a complete application, the Director of Community Planning and Development shall:
 - (1) Transmit one copy of the application to the state department of environmental quality.
 - (2) Cause to be published a notice of the application and the date and time for submission of written public comments.
 - (3) Transmit one copy of the application and supporting materials to the Township environmental consultant to confirm the boundaries of the wetland and to review the proposal in light of the purpose and review standards of § **22-157** of this article and other applicable sections of this article.
- (c) The Township environmental consultant shall prepare and transmit a report and recommendation to the Director of Community Planning and Development documenting the review required by subsection (b)(3) of this section.
- (d) The following process shall apply to wetland use permit decisions by the Director of Community Planning and Development:
 - (1) For wetland use permit applications submitted in conjunction with activities that do not require approval by the Planning Commission and/or Township Board, the Director of Community Planning and Development shall approve, approve with conditions or deny the application within 90 days after receipt of a complete application.
 - (2) The Director of Community Planning and Development shall transmit application materials and the report and recommendation prepared by the Township environmental consultant to the environmental commission. The environmental commission may review the materials and transmit comments for consideration to the Director of Community Planning and Development.
 - (3) The applicant shall post a notice of the wetland use permit application on a form provided by the Township, on the subject property within five days of submittal of a complete application.
 - (4) Persons wishing to comment on the application must submit their comments in writing to the Director of Community Planning and Development prior to the date and time set in the notice. Persons wishing to receive notice of the Director of Community Planning and Development's decision must submit a written request to the Director of Community Planning and Development.
 - (5) The Director of Community Planning and Development's decision shall be made only after reviewing the report and recommendation from the Township environmental consultant, written public comments, and any comments submitted by the environmental commission.
 - (6) When a wetland use permit is approved, approved with conditions, or denied by the Director of Community Planning and Development, written notice shall be sent to the applicant and to all persons who have requested notice of the Director of Community Planning and Development's decision. The denial of a permit shall be accompanied by a written reason of denial.

- (7) A permit approved by the Director of Community Planning and Development shall not be issued or effective until 10 calendar days following the date of the approval and compliance with § 22-159(c).
- (e) The following process shall apply to appeals of decisions made by the Director of Community Planning and Development or Planning Commission:
 - (1) Any interested person may appeal a decision by the Director of Community Planning and Development or Planning Commission, as applicable, to approve, approve with conditions, or deny a wetland use permit to the Township Board by filing a written statement containing the specific reasons for the appeal and setting forth the facts establishing status as an interested person. This written statement must be filed with the Township Clerk within 10 calendar days following the date of decision. The timely filing of a statement satisfying the requirements of this provision shall have the effect of staying the permit pending the Township Board's decision on appeal.
 - (2) The Township Board shall determine whether an individual pursuing an appeal is an interested person as defined by this article before addressing the merits of that appeal.
 - (3) The Township Board shall hold a hearing on the appeal, which shall be open to public comment, and shall include opportunity for the appealing party to present their appeal.
 - (4) Notice of the time and place for consideration of an appeal shall be placed in a newspaper of general circulation in the Township not less than five days prior to the date of the hearing. A notice shall also be sent by mail or personal delivery to the owners of the property considered in the appeal and to all owners listed on the most recent tax roll of real property within 500 feet of the boundary of the property in question. Such notice shall be sent not less than five days prior to the hearing.
 - (5) The Township Board shall affirm, affirm with conditions, or reverse the decision of the Planning Commission or Director of Community Planning and Development. The board's decision shall be based on written findings.
 - (f) The following process shall apply to wetland use permit decisions by the Township Board and Planning Commission:
 - (1) Wetland use permit applications submitted in conjunction with a related land development activity shall be decided by the same entity that decides the related land development activity consistent with part 303 of the Natural Resources and Environmental Protection Act (MCL § 324.30301 et seq.). The Director of Community Planning and Development shall transmit application materials and the report and recommendation prepared by the Township environmental consultant to the Township Board, Planning Commission, and the environmental commission. The environmental commission may review the materials and provide comments for consideration by the Township Board or Planning Commission, as applicable.
 - (2) After review and study of the application materials, the Township environmental consultant's report and recommendation, and comments from the environmental commission, the Township Board or Planning Commission, as applicable, shall hold one public hearing after publication in a newspaper of general circulation in the Township not less than 15 days prior to the date of the hearing. Such notice shall indicate the place, time and subject of the hearing and the place and time the proposed wetland use permit may be examined. The wetland use permit hearing may be held in conjunction with a review of the related land use request.
 - (3) The notice shall be sent by mail or personal delivery to the owners of property for which approval is being considered and to all owners of property, as listed on the most recent tax roll, within 500 feet of the boundary of the property in question. Notification need not be given to more than one occupant of a structure, except that if a structure contains more than one

dwelling unit or spatial area owned or leased by different persons, one occupant of each unit shall receive notice. In the case of a single structure containing more than four dwelling units, notice may be given to the manager or owner of the structure, who shall be requested to post the notice at the primary entrance to the structure. A notice containing the time, date, place and purpose of the hearing shall be posted by the applicant on a form provided by the Township, on the subject property at least 15 days prior to the hearing.

- (4) After completing the review and holding one public hearing, if so required, the Township Board or Planning Commission shall approve, approve with conditions or deny the application within 90 days after receipt of an application, in accordance with this division.
- (5) Written notice shall be sent to the applicant upon approval, approval with conditions or denial of a wetland use permit by the Township Board or Planning Commission. The denial of a permit shall be accompanied by a written reason for denial.
- (6) A permit approved by the Township Board or Planning Commission shall not be issued or effective until 10 calendar days following the date of the approval and compliance with § 22-159(c).

§ 22-156. Criteria for wetlands under two acres in size.

[Code 1974, § 105-12; Ord. No. 2002-07, 8-20-2002; Ord. No. 2011-04, 3-15-2011]

- (a) Where an applicant proposes to perform a regulated activity in a protected wetland less than two acres in size, the Director of Community Planning and Development shall be so advised in writing. The Director of Community Planning and Development shall forward the location and other information concerning the wetland to the Township environmental consultant, who shall issue a preliminary finding as to whether one or more of the following criteria are likely to apply to the wetland:
 - (1) The wetland supports state or federal endangered or threatened plants, fish, or wildlife appearing on a list specified in part 365 of the Natural Resources and Environmental Protection Act (MCL § 324.36501 et seq.).
 - (2) The wetland represents what is identified as a locally rare or unique ecosystem.
 - (3) The wetland supports plants or animals of an identified local importance.
 - (4) The wetland provides groundwater recharge documented by a public agency.
 - (5) The wetland provides flood and storm control by the hydrologic absorption and storage capacity of the wetland.
 - (6) The wetland provides wildlife habitat by providing breeding, nesting, or feeding grounds or cover for forms of wildlife or waterfowl, including migratory waterfowl and rare, threatened, or endangered wildlife species.
 - (7) The wetland provides protection of subsurface water resources and provision of valuable watersheds and recharging groundwater supplies.
 - (8) The wetland provides pollution treatment by serving as a biological and chemical oxidation basin.
 - (9) The wetland provides erosion control by serving as a sedimentation area and filtering basin, absorbing silt and organic matter.

- (10) The wetland provides sources of nutrients in water food cycles and nursery grounds and sanctuaries for fish.
- (b) The Township environmental consultant's report shall be forwarded to the Township Board, which shall determine whether a wetland use permit application meeting the requirements of § **22-154** shall be required, based on a finding that the wetland is essential to the preservation of the natural resources of the Township. Such determination shall be based on a finding that one or more of the criteria set forth in subsection **(a)** of this section are met.
- (c) If the Township Board determines that the wetland is not essential to the preservation of the natural resources of the Township, the Township Board's decision shall be so noted on the Township wetland inventory map at the time it is amended. The requested activity shall be approved subject to all other applicable laws and regulations.
- (d) When a wetland under two acres in size has been determined to be essential to the natural resources of the Township and the Township has found that one or more of the criteria set forth in subsection **(a)** of this section exist at the site, the Township shall notify the applicant in writing, stating the reasons for determining the wetland to be essential to the preservation of the natural resources.
- (e) After determining that a wetland less than two acres in size is essential to the preservation of the natural resources of the Township, the wetland use permit application shall be reviewed according to the standards in § **22-157**.

§ 22-157. Review standards for wetland use permits.

[Code 1974, § 105-13; Ord. No. 2002-07, 8-20-2002; Ord. No. 2011-04, 3-15-2011]

The criteria to evaluate wetland use permits under this division and to determine whether a permit is granted are as follows:

- (1) A permit for any activity listed in § **22-151** shall not be approved unless the proposed activity is in the public interest, the permit is necessary to realize the benefits derived from the activity, and the proposed activity is otherwise lawful in all respects. Public input shall be evaluated in approving, approving with conditions, or denying the application. The reasonable use of the property involved in accordance with applicable local ordinances and state law shall also be considered.
- (2) In determining whether the proposed activity is in the public interest, the benefit which reasonably may be expected to accrue from the proposed activity shall be balanced against the reasonably foreseeable detriments of the activity. The decision shall reflect the national, state, and local concern for the protection of natural resources from pollution, impairment, and destruction. The following general criteria shall be considered:
- a. The relative extent of the public and private need for the proposed activity.
 - b. The availability of feasible and prudent alternative locations and methods to accomplish the expected benefits from the activity.
 - c. The extent and permanence of the beneficial or detrimental effects which the proposed activity may have on the public and private uses to which the area is suited, including the benefits the wetlands provide.
 - d. The probable impact of each proposal in relation to the cumulative effect created by other existing and anticipated activities in the watershed.
 - e. The probable impact on recognized historic, cultural, scenic, ecological, or recreational values and on the public health or safety, or fish or wildlife.

- f. Economic value, both public and private, of the proposed land change to the general Township area.
 - g. The size and quality of the wetland being considered.
 - h. The findings of necessity for the proposed activity which have been made by other agencies.
 - i. Amount of wetland remaining in the general area and proximity to a waterway.
 - j. Proximity to any water body.
 - k. Extent to which upland soil erosion adjacent to the protected wetland is controlled.
- (3) A wetland use permit shall not be issued unless it is shown that an unacceptable disruption will not result to the aquatic resources. In determining whether a disruption to the aquatic resources is unacceptable, the benefits outlined in § 22-117 and the criteria set forth in subsection (2) of this section shall be considered. A permit shall not be issued unless the applicant also shows either of the following:
- a. The proposed activity is primarily dependent upon being located in the wetland; or
 - b. A feasible and prudent alternative does not exist.
- (4) Failure to submit a complete application may be reason for denial of a wetland use permit.
- (5) While determining the expected benefits of a proposed wetland use permit and its alternatives, an area not presently owned by the applicant which could reasonably be obtained, utilized, expanded, or managed in order to fulfill the basic purpose of the proposed activity may be considered as a feasible and prudent alternative for permitted activities.
- (6) An alternative that entails higher costs, as described in R281.922a(11) of the Michigan Administrative Code is not feasible and prudent if those higher costs are unreasonable. In determining whether such costs are unreasonable, the Director of Community Planning and Development, Planning Commission, or Township Board whichever is applicable shall consider both of the following:
- a. The relation of the increased cost to the overall scope and cost of the project.
 - b. Whether the projected cost is substantially greater than the costs normally associated with the particular type of project.
- (7) Following approval of the application, a wetland use permit shall be issued upon determination that all other requirements of the ordinance and law have been met, including site plan, plat or land use approval, as applicable, and including issuance of a permit by the state department of environmental quality if required under MCL § 324.30301 et seq. In cases where a state department of environmental quality permit allows activities not permitted by the wetland use permit approval granted under this section, the restrictions of the approval granted under this section shall govern.

§ 22-158. Consideration of wetland mitigation proposals.

[Code 1974, § 105-14; Ord. No. 2002-07, 8-20-2002; Ord. No. 2011-04, 3-15-2011]

To ensure no net loss of wetlands in the Township, mitigation shall be required in instances where there are losses of wetland resources. The Township environmental consultant shall review an applicant's mitigation plan and transmit a recommendation to the Director of Community Planning and Development. The Director of Community Planning and Development, Planning Commission, or Township Board, as applicable shall review the applicant's mitigation plan and consider the Township

environmental consultant's recommendation as part of the wetland use permit review process. A mitigation plan, if required, shall be approved as part of the wetland use permit decision. Mitigation shall not be considered a substitute for making all prudent attempts to avoid wetland impacts.

- (1) Prior to considering a proposal for wetland mitigation, it must be shown that it is practical to replace the wetland resource values which will be impacted, including flood prevention, wildlife habitat, groundwater resource protection and recharge, pollution treatment, erosion control, nutrient sources, aesthetics, recreation, open space and any other values identified.
- (2) If determined by the Township environmental consultant that the requirements of subsection (1) of this section are met, the following criteria shall be considered when reviewing an applicant's mitigation proposal:
 - a. Mitigation shall be provided on site where practical and beneficial to the wetland resources. If on-site mitigation is not practical and beneficial, then mitigation in the immediate vicinity, within the same watershed of the permitted activity may be considered. Only if all of these options are impractical shall mitigation be considered elsewhere.
 - b. Any proposal shall ensure that there will be no net loss to the wetland resource values.
 - c. The mitigation plan must comply with all applicable federal, state, and local laws.
 - d. A plan to monitor preserved and replacement wetlands.
- (3) Wetland mitigation and monitoring plans shall become conditions to the wetland use permit and shall be the responsibility of the applicant or its successors.
- (4) Financial assurances that mitigation is accomplished as specified by the permit condition may be required by the Director of Community Planning and Development, Planning Commission, or Township Board, as applicable.
- (5) Any mitigation activity shall be completed before initiation of other permitted activities, unless a phased concurrent schedule can be agreed upon between the Director of Community Planning and Development, Planning Commission, or Township Board, as applicable, and the applicant.
- (6) Wetland mitigation plans that create less than two acre wetlands shall meet one of the conditions listed in Subsection **22-156(a)**.

§ 22-159. Wetland use permit conditions of issuance.

[Code 1974, § 105-15; Ord. No. 2002-07, 8-20-2002; Ord. No. 2011-04, 3-15-2011]

- (a) The Director of Community Planning and Development, Planning Commission, or Township Board, as applicable, shall attach any reasonable conditions considered necessary to ensure that the intent of this article will be fulfilled, to minimize or mitigate damage or impairment to, encroachment in, or interference with natural resources and processes within the protected wetland, or to otherwise improve or maintain the water quality.
- (b) The Director of Community Planning and Development, Planning Commission, or Township Board shall fix a reasonable time for the undertaking and completion of all activities and structures, as applicable.
- (c) Following the approval of the wetland use permit application, a permit shall be issued upon determination that all other requirements of the ordinance and law have been met, including site plan, plat or land use approvals, as applicable, and including issuance of required permits by the county or the state department of environmental quality under part 303 of the Natural Resources and Environmental Protection Act (MCL § 324.30301 et seq.).

- (d) The Director of Community Planning and Development, Planning Commission, or Township Board, as applicable, upon issuance of a wetland use permit, may require the applicant to file with the Township Treasurer cash, certified check, or an irrevocable bank letter of credit in an amount the Director of Community Planning and Development, Planning Commission or Township Board, as applicable, determines is necessary to ensure compliance with the wetland use permit approval conditions and this article.
- (e) At no time shall the Director of Community Planning and Development, Planning Commission, or Township Board, as applicable, issue a wetland use permit that allows a more extensive alteration of the wetland than permitted by state or federal law.
- (f) Wetland use permits for seasonal operations need not be renewed annually unless otherwise stated in the permit.
- (g) Any change that increases the size or scope of the operation and that affects the criteria considered in approving the permit, as determined by the Director of Community Planning and Development, Planning Commission, or Township Board, as applicable, shall require the filing of a new wetland use permit application.
- (h) Any temporary, seasonal, or permanent operation that is discontinued for two years or two seasons shall be presumed to have been abandoned and the wetland use permit automatically voided.
- (i) Any permit granted under this division may be revoked or suspended by the Township Board, after notice and an opportunity for a hearing, for any of the following causes:
 - (1) A violation of a condition of the permit.
 - (2) Misrepresentation or failure to fully disclose relevant facts in the application.
 - (3) A change in a condition that requires a temporary or permanent change in the activity.
- (j) An applicant who has received a wetland use permit under this division shall comply with the following in connection with any construction or other activity on the property for which the wetland use permit has been issued:
 - (1) Maintain all soil erosion control structures and measures, including, but not limited to, silt fences, straw bale berms, and sediment traps. The permittee shall provide for periodic inspections throughout the duration of the project.
 - (2) Maintain clear delineation of the protected wetlands, so marked by the Township environmental consultant during the on-site inspection, so that such locations are visible to all construction workers.
 - (3) Post on the site, prior to commencement of work on the site and continuing throughout the duration of the project, a copy of the approved wetland use permit containing the conditions of issuance, in a conspicuous manner such that the wording of such permit is available for public inspection.
 - (4) Provide to the Township written notice of commencement prior to work beginning on the site.
- (k) The wetland use permit shall remain effective for a time period coincidental with any other land use permit reviewed and approved concurrent with the wetland use permit. If applied for prior to the expiration date and concurrent with the expiring land use permit, the applicant may be granted an extension that corresponds to additional time granted for the underlying land use permit. Extensions shall be approved by the same person or body that made the original decision. The maximum number of extensions shall coincide with the maximum number allowed for the underlying land use permit.

- (l) Where there is no other activity or permit involved, the wetland use permit shall remain effective for two years. One extension may be granted for a period not to exceed 12 months from the expiration date of the wetland use permit if requested in writing prior to the expiration date. An extension shall be reviewed and approved or denied in writing by the same person or body that made the original decision.

§ 22-160. Amendments.

[Code 1974, § 105-17; Ord. No. 2002-07, 8-20-2002; Ord. No. 2011-04, 3-15-2011]

- (a) Any applicant who has been granted a wetland use permit may apply for an amendment in writing to the Director of Community Planning and Development.
- (b) Amendments to an approved wetland use permit shall be granted by the same entity that decided the original wetland use permit in accordance with the procedures and criteria set forth in this section.
 - (1) Application. An application for an amended wetland use permit shall be submitted to the Director of Community Planning and Development prior to the expiration date of the existing wetland use permit.
 - (2) Public hearing. The application for an amended wetland use permit shall be subject to the same notices and hearings and all other procedures required for the initial application.
 - (3) Decision. Prior to deciding the application, the Township Board, Planning Commission, or Director of Community Planning and Development shall refer the application to the Township environmental consultant for a recommendation and to the environmental commission for comments.
 - (4) Appeals. Appeals of a decision on an amendment by the Director of Community Planning and Development and the Planning Commission shall follow the criteria established in Subsection **22-155(e)**.

§ 22-161. Request for revaluation of affected property.

[Code 1974, § 105-18; Ord. No. 2002-07, 8-20-2002; Ord. No. 2011-04, 3-15-2011]

The owner of any property for which a wetland use permit was applied for under this division and was denied, upon appeal, by the Township Board, may request a revaluation of the affected property by the Township Board of review for assessment purposes to determine its fair market value under the use restriction. A landowner who is aggrieved by a determination, action, or inaction under this article may protest and appeal that determination, action or inaction pursuant to the General Property Tax Act (MCL § 211.1 et seq.).

§ 22-162. through § 22-170. (Reserved)

CHARTER TOWNSHIP OF MERIDIAN

Ronald J. Styka
Brett Dreyfus
Julie Brixie
Frank L. Walsh

Supervisor
Clerk
Treasurer
Manager



Phil Deschaine
Patricia Herring Jackson
Dan Opsommer
Kathy Ann Sundland

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

(*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: **HAVE EXPERIENCE WITH COMMUNITY SERVICE - MESS BEING INVOLVED**

Describe education, experience or training which will assist you if appointed. (Attach resume if available) **TEACHER - 37 yrs / INGHAM Co COMMISSIONER - 2012 / ROAD COMMISSIONER 6 yrs**

Name: JEAN McDONALD
 Occupation: RETIRED Place of Employment: LANS. SCHOOLS / INGHAM Co.
 Home Address: 2019 HAC du Mont HASLETT 48840
 Phone: (days) 517-2190968 (evenings) _____ E-mail: McDONALDJEANM@GMAIL.COM
 Signature: [Handwritten Signature] Date: 5/3/21

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		Distro:	Application #
Registered Voter:	Y / N		
Date Appointed:			



SHARING EXPERIENCES

with High School Students Like Me



Join a sharing circle led by Okemos High School students. This is an opportunity for Kinawa and Chippewa BIPOC (Black, Indigenous and People of Color) students and, their allies to engage in sharing of their lived experiences in a safe and supportive environment (sharing isn't required). Come build new connections and positive change within the Okemos school community.

Tuesday, June 1st, 2021
6:30 - 7:30 pm

Wonch Park
4555 Okemos Rd
*across from Okemos Public
Montessori/Okemos
Administration Building

FOR FURTHER INFORMATION, PLEASE CONTACT
PAM WILLIAMS, RESOURCE TEACHER AT OKEMOS HIGH SCHOOL &
BLACK STUDENT UNION ADVISOR PAM.WILLIAMS@OKEMOSK12.NET

OKEMOS PUBLIC SCHOOLS

Together...educating with excellence, inspiring each learner for life.



To: Planning Commission
From: LeRoy Harvey, Environmental Programs Coordinator
Date: November 6, 2020
Re: Green Stormwater Infrastructure Code Audit

The Environmental Commission (E.C.) invites the Planning Commission to participate in an “Environmental Review of Meridian Township’s Policies and Procedures.” We realize that many of your decisions have environmental impacts and that your expertise and experiences can help guide the Township as we not just “grow greener” – but seek ways to work smarter, save time, simplify processes, and promote sustainable, low-impact development and redevelopment.

Initially, the E.C. is focusing on a “Green Stormwater Infrastructure Code Audit.” While we welcome environmental-related ideas for policies and procedures at any time, we see this as a positive step forward and are excited to move forward on Phase 1 (low-hanging fruit) and Phase II (changes that expand options for homeowners and developers).

Please see the attached letter and recommendations compiled with assistance from Cliff Walls, Tri-County Regional Planning Commission. We look forward to your comments, questions, guidance and help moving these changes forward and proceed with a larger review of our policies and procedures.

Thank you for your consideration.

Attachment:

1. Letter and Summary of Phase 1 and Phase II Recommendations.



Clinton County
Clinton County Road Com.
Delhi Charter Twp
Delta Charter Twp
DeWitt Charter Twp
City of DeWitt
City of East Lansing
Eaton County

City of Grand Ledge
Ingham County
Lansing Charter Twp
Lansing School District
City of Lansing
City of Mason
Meridian Charter Twp
Michigan State University
Waverly Community Schools

Administrative Support:
Tri-County Regional
Planning Commission
3135 Pine Tree Road.
Suite 2C
Lansing, MI 48911
(517) 393-0342
Fax (517) 393-4424

To: Meridian Township Environmental Commission
From: Clifford Walls, GLRC Coordinator
Date: 10-29-20
RE: Meridian Township Green Stormwater Infrastructure Code Audit

With help from the Greater Lansing Regional Committee for Stormwater Management (GLRC) Coordinator, Meridian Township's Environmental Commission performed an audit of the Township's Code of Ordinances. The goal of this audit was to identify sections of municipal code that may discourage, complicate, or outright prevent the widespread adoption of green infrastructure in the Township. Using a Green Stormwater Infrastructure (GSI) Audit Workbook developed by the Wisconsin SeaGrant, Township regulations were reviewed to identify any barriers to green infrastructure stemming from outdated, unclear, or prohibitive code language.

With a Municipal Separate Storm Sewer System limited to Township owned properties, much of the permitting and design of stormwater management infrastructure at private developments falls outside of the Township's purview and is instead administered by the county Drain Commission. However, the Township's zoning, landscaping, and other non-stormwater specific regulations can still have great influence on the potential adoption of green infrastructure practices. These areas were the focus of this exercise.

The GSI audit identified various codified barriers that fall into two categories. The first category of barriers is best described by a lack of language defining, allowing, or encouraging green infrastructure. While the Township Master Plan and Code of Ordinances express the Township's desire for sustainability and to preserve its natural resources, nowhere is green infrastructure mentioned by name as a valuable tool to achieve it. Green infrastructure features are not defined and there are no purpose statements indicating the Township's support for their installation. In the absence of clear language and intent, the likelihood of GSI implementation is determined by the interpretation of the code by staff, builders, and developers. Solutions to barriers in this category can be addressed by broad purpose statements that communicate the Township's desire for developers to propose or include more green infrastructure in their plans.

The second category of barriers are more technical in nature and are related to either specific requirements of the ordinance or Township processes. Some present outright obstacles to GSI implementation while others are simply opportunities to optimize specific standards to either accommodate green infrastructure or discourage the advance of turf and hardscape. Some of these obstacles could also be overcome by making minor changes to code language but are considered Phase 2 recommendation because their adoption would more significantly impact current processes or require new layers of Township approval.

Recognizing that the remedies to these different obstacles will require layers of discussion and consideration by multiple commissions and the Township Board, it is recommended that these barriers

are addressed in a phased approach. The following Phase 1 recommendations address the absence of GSI language and recommend minor changes to codify the Environmental Commission's existing goals. Rather than prescribing new requirements, Phase 1 recommendations will seek to clearly encourage the implementation of GSI. In contrast, Phase 2 recommendations focus on structural or procedural changes of a technical nature that expand the options available to homeowners and developers.

It should also be noted that the Environmental and Planning Commissions, staff, and Township Board must determine which of these suggested changes are desirable and/or feasible in Meridian and do not conflict with other Township goals or ordinances. Any change should also conform with the requirements of the county drain commission and any other relevant authority. The following recommendations are simply areas that deserve a closer look. Once Township priorities and possibilities are identified, then begins the work of drafting specific language for inclusion in the Code.

A handwritten signature in black ink, appearing to read 'C. Walls', with a long horizontal flourish extending to the right.

Clifford Walls
GLRC Coordinator

Phase 1 Recommendations

Use purpose statements to specifically encourage green stormwater infrastructure and naturalized drainage in the Code of Ordinances.

Though existing purpose statements (Section 86-5) and review criteria (Section 86-156) either mention outcomes that can be achieved through GSI or allude to natural stormwater solutions, there is no direct mention of Green Infrastructure, Low Impact Development, or other specific reference that encourages a naturalized, engineered stormwater control measure.

Section 86-5: "Encourage the preservation and use of lands, open space, and natural resources in accordance with their character and suitability for particular purposes and limit the improper use of land and natural resources."

Section 86-156: "Stormwater detention, retention, transport, and drainage facilities shall, insomuch as practical, be designed to use or enhance the natural stormwater system on-site, including the storage and filtering capacity of wetlands, water features, and/or the infiltration capability of the natural landscape. Stormwater facilities shall be designed so as not to cause flooding or the potential for pollution of water features or groundwater, on-site or off-site."

Add goal/purpose about how low impact design/GSI/naturalized drainage is a preferred feature.

Example: "It is the purpose of these standards to promote the use of green infrastructure or vegetated stormwater management measures, where suitable, to manage stormwater runoff."

Clearly state green infrastructure implementation goals in the Master Plan.

Currently there is no direct mention of green stormwater infrastructure in the Master Plan. GSI is a tool to meet some of the Township's stated goals in the "Preserve Open Space and Natural Areas" section, such as "conserve water retention areas, linking natural areas, promote sustainable growth, water quality protection...". There is an opportunity to include a direct reference (or stated preference) for GSI.

The Master Plan does reference the TCRPC Water Policy document which does expand on GSI and watershed protection, but there is no specific commitment to it.

Consider stating GSI goals directly during the next Master Plan update.

Workbook Example: "It is the goal of the Township to implement policies, investments, standards and actions, including the use of green infrastructure, that will protect and enhance water quality within the Township and its watersheds."

In the Master Plan, describe green infrastructure and water quality beyond its drainage/infrastructure utility.

GSI has many community benefits beyond drainage and flood control. It can increase property values, sequester carbon, reduce energy and chemical usage, increase biodiversity and provide placemaking benefits. Promote the multitude of benefits of GSI techniques in private and municipal projects in Master Plan.

Include GSI pilot/municipal projects in Master Plan objectives.

Specific language such as “complete a permeable paving demonstration project in a municipal parking lot” helps in grant applications.

Define “Low Impact Development” or “Green Infrastructure” in the Code of Ordinances.

Green Infrastructure and Low Impact Development is not defined in the Code. There are stated goals/preferences for reducing impervious surfaces/protecting water/reducing runoff/maximizing green space, etc that GSI helps achieve, but it should be defined in the Code in order to promote it throughout.

An inclusive definition of green infrastructure can be: “Vegetated stormwater management measures. Swales, bioretention areas, rain gardens, amended soil areas, pocket or modular wetlands, stormwater trees, vegetated or green roofs, and similar practices *specifically designed to provide water quantity and water quality treatment of stormwater runoff, and to promote evapotranspiration and infiltration of stormwater.*”

Add definitions of the different GSI practices to Code of Ordinances.

Adding definitions of the different green infrastructure practices themselves (rain garden, bioretention, bioswale, etc) is especially important to providing guidance and encouragement to applicants and effective standards for its use in the community.

Include definitions of rainwater-harvesting and stormwater control elements in Code.

Include definitions or illustrations of green roofs, planter boxes, rain barrels and cisterns; this ensures reviewers and designers will know that these elements are allowed or encouraged. There is currently no mention of rain barrel, rain collection, etc in municipal code.

Promote naturalized landscaping for use in stormwater treatment practices in Landscaping standards/specifically allow native plantings in lawns and front yards.

Adding language like *“rain gardens, naturalized landscapes, and vegetated stormwater controls may be incorporated in lawn areas where planned and designed to receive stormwater runoff”* or *“The incorporation of stormwater trees, native plants, and other vegetative stormwater control measures into landscaping plans are encouraged”* makes it clear that these are allowable features. Referencing the function of its design helps reduce confusion or abuse of the ordinance, preventing a property owner from justifying a neglected lawn/landscape as a “naturalized landscape.”

Currently, no occupancy can be granted until a lot has been “seeded, covered with sod, or covered with appropriate ground cover.” Language could be added to include that native/deep rooted plants may be used. Make it known that native plants are “appropriate ground cover” and may be used (with or without review/approval).

Promote native plants in the Lake Lansing Residential Overlay District.

“Section 86-442 (10) Stormwater” requires that runoff from new construction directed towards Lake Lansing shall be filtered through a vegetated area, a minimum of 20 feet in width, before entering the lake. It states that the vegetated area may include a grass lawn.

Encourage the planting of native, deep rooted buffers to receive this runoff.

Add “reducing runoff” as a goal for parking lot landscaping requirements.

Currently, Section 86-758 indicates that parking lot interior landscaping “shall be installed and designed to control traffic, provide shade, screen views into and within vehicular use areas, and separate parking.” The inclusion of “reducing runoff,” either in a following sentence or within the existing language, will help communicate that goal. The word “shall” may be too strong, so a separate sentence encouraging it may be more appropriate.

Phase 2 Recommendations

Encourage that parking lot islands, cul de sacs, and other parking lot landscaping are designed for stormwater treatment. Create a process to waive numerical, spacing, and species requirements in landscaping areas in exchange for GSI.

Actively encouraging the use of islands and perimeters for green infrastructure gives important direction to site planners. Landscaping in parking lots, parking lot islands, and cul de sacs can mitigate urban heat island effects, beautify what is otherwise hardscape, and be co-designed as green infrastructure for stormwater treatment. Encourage this practice.

Existing numerical, dimensional, and species requirements may conflict with the design of these vegetated stormwater controls. Waivers can allow variation where needed to accommodate green stormwater infrastructure implementation.

For Parking Lot Landscaping standards, the Code is currently prescriptive:

Section 86-758:

"A minimum of two canopy trees shall be provided for every 10 parking spaces, meeting the following standards:

1. Canopy trees shall be a minimum of two inches in caliper at time of planting.
2. Conifer trees shall be a minimum of eight feet in height at time of planting.
- d. A minimum of 50% of each landscaped area, at time of planting, shall be planted with grass, ground cover, shrubs, or other living vegetation."

Similar with cul de sac requirements:

Section 62-64

- a) A minimum of one canopy tree or one conifer tree shall be planted for every 1,000 square feet of ground area within each cul-de-sac island.
- b) Canopy trees shall be a minimum of three inches in caliper and shall be planted at least 10 feet from the back of curb.
- c) Conifer trees shall be a minimum of eight feet in height and shall be planted at least 15 feet from the back of curb.
- d) Canopy trees shall be maintained so the lowest branch is a minimum of 13 feet above the elevation of the street surface.

The Township should exempt these requirements if the design serves the interest of stormwater control.

Example: "The planting plan may be varied to accommodate the design of vegetated stormwater control measures, so long as the total number of trees required is met. The use of deciduous trees (which may function as stormwater trees) is encouraged."

Example: "The integration of depressed bioretention areas used for landscaping and stormwater management is strongly encouraged. Where areas are designed specifically for stormwater management, the planting and dimensional requirements may be varied"

as necessary to ensure the area functions effectively for stormwater treatment, so long as the equivalent amount of landscaping, planting, or screening is provided.”

Allow vegetated stormwater management areas, such as bioretention areas, rain gardens, stormwater trees or other plantings, to count towards required landscape minimums.

Requiring ornamental landscaping in addition to bioretention areas or other GSI is a significant barrier. Often, there will not be enough area on the site to accommodate both.

Allow variation in landscape requirements in exchange for GSI implementation.

Example: “The planting plan may be varied to accommodate the design of vegetated stormwater control measures, so long as the total number of trees required is met. The use of deciduous trees (which may function as stormwater trees) is encouraged.”

Allow greater flexibility in parking deferments.

Current language indicates that the purpose of parking deferrals is to eliminate unused paved areas and unnecessary levels of stormwater runoff. However, it states that areas of land where parking construction was deferred shall not be used to satisfy landscaping requirements or stormwater detention/retention requirements. While the intent is likely to prevent stormwater ponds from being sited in these areas, the Township could encourage bioretention/naturalized drainage by offering deferments in exchange for utilizing these areas for GSI.

Encourage or require that preliminary or sketch plans include stormwater measures and landscape techniques for initial review.

Early review of land use concepts helps identify opportunities to integrate green infrastructure into landscaping and drainage. Putting grading/drainage and landscaping plans on the same sheet can illustrate where and how landscaping and stormwater management can be integrated.

Encourage the integration of vegetated stormwater controls into screen or buffer areas.

Current language is prescriptive on design. Section 62-64 requires a landscape buffer 20 feet wide when a subdivision entrance is along a major road. It states the buffer shall include trees, shrubs, berms or walls. Section 86-756 requires a vegetated buffer and vertical screen for parking lots adjoining residential districts or public streets. Per Code definitions, “When a screen is called for, this shall be a dense evergreen planting area or solid fence as determined and approved by planning commission.”

The inclusion of language allowing for variation if co-designed for stormwater, and/or indicating a preference for naturalized buffers, can loosen this prescriptive requirement.

Example: *“The buffer planting plan may be varied to accommodate the design of vegetated stormwater control measures, so long as the equivalent amount of screening is provided.”*

Allow vegetated open channels/curb cuts in lieu of curb and gutter.

Options for swale drainage, or partial curb-and-drain profiles with inlets for bioretention can allow for enhanced water quality and infiltration. Current parking lot requirements (Section 86-756) do offer flexibility to waive curb and gutter requirements for parking lot exteriors and islands. However, one criterion is that the parking lot has fewer than 25 parking spaces, which is limiting.

A process for a waiver exists, but it’s recommended to include language promoting “curb cuts” and inlets for bioretention and reference them as practices that could waive curb and gutter requirements.

Section 62-62: requires 6 inches straight faced curb and gutter on all streets and roads in accordance with the standards of county road commission.

Offer waivers of design or architectural provisions to accommodate stormwater harvesting/control measures (planters, cisterns, green roofs, etc).

Where there are waivers for standards, “siting of green infrastructure measures” should be a specific reason for the grant of a waiver.

Currently, section 86-440 MUPUD 3 A/B/F offers design flexibility in exchange for amenities like porous pavement, the reduction of impervious surfaces, more greenspace, etc, but GSI should be encourage by name. There are many amenities listed under a wide variety of goals. An Overall purpose statement, or one withing each district regulation section, that communicates the Township’s preference for GSI, would be clearer. Offer flexibility in design, upon approval, if it is for a stormwater control. “Siting of green infrastructure measures” should be listed as a reason for a waiver.

Allow stormwater control measures to be sited within setback areas.

Allowing ponds, bioretention areas and other surface stormwater controls within setback typically increases the density that can be achieved on site. Currently, half of the area of a detention or retention pond counts as “pervious surface” under the pervious surface percentage requirement.

Increasing the percentage of stormwater ponds that is considered “pervious” can reduce the total amount of turf grass planted on site.

Include “siting of green infrastructure” as a permitted yard encroachment (Section 86-564).

Clearly encourage permeable/porous pavement.

Current code language requires “concrete or asphaltic” surfacing. While there are porous asphalt and concrete options, that is not obvious to the average person. Add “Permeable pavement is encouraged and may be use upon approval of the Township engineer.”

There is reference to porous pavement in Section 86-440 as a possible amenity in mixed use PUDs, however it is listed as one of many possible design features and limited to this section of the Code. The above suggestion makes the Township’s preference known to developers of all sites and homeowners looking for options to redo their driveways.

Reduce the Maximum Lot Coverage percentage unless a portion is permeable.

The current impervious yard coverage limitation (Section 86-754) is 35%. It’s possible to lessen the allowable cover unless a portion is permeable or allow for expanded parking if that expanded area is permeable.

For example, East Lansing’s existing code indicates that: *“In all residential districts, the amount of paving in a front yard and in a side yard along a street on a corner lot shall not exceed an amount equal to 25 percent of the front yard area as defined in section 50-9 of this chapter or up to 35 percent where 10 percent of the paving is pervious paving material.”*

Consider maximum rather than minimum frontage and setback requirements.

Per the dimensional requirements form (Section E) Current setback and frontage requirements are set as minimums. Reduced setbacks and frontages requirements make for reduced roadway/driveway length and smaller areas of turfgrass. Consider setting a ceiling rather than a floor.

Include a roof material and design exception for Green Roofs.

Currently code (86-368) requires residential roofs follow prescriptive design and material specifications. There is exemption for alternative energy/solar panels, but not for green roofs.

Add Green Roofs as an eligible exemption upon approval of the Township.

Designate staff person to field citizen questions regarding GSI and develop procedures to address common GSI questions from residents.

It is important that all staff know to transfer questions to a knowledgeable person or department, and having a written procedure for common requests greatly facilitates both the use of these techniques and the management of neighbor inquirers and concerns.

For example, many in the region believe rain collection is illegal. By offering guidelines and encouragement for installation, the Township can reduce these concerns. Having a point person within the township to field general questions or concerns regarding GSI (and its legality under the code) is an important step.

Wetlands in the Township

Most people are familiar with the cattail or lily pad wetland found in areas with standing water, but wetlands can also be grassy meadows, shrubby fields, or mature forests.

Many wetland areas have only a high ground water table and standing water may not be visible.

According to the U.S. Fish and Wildlife Service, over 50% of Michigan's original wetlands have been drained or filled, thereby making the protection of remaining wetlands that much more important.

Over 25% of Meridian Township is covered in wetlands (5778 of 20,160 acres), making wetland stewardship an important responsibility and opportunity in every neighborhood.

The Township has a wetland ordinance that protects wetlands as small as 1/4 acre. This ordinance requires a 20-foot natural vegetation buffer.

Want to help protect our wetlands?

Volunteer with the Meridian Township Conservation Corps! Call Emma Campbell at 517.853.4614 for more info!

Also visit MyWatersheds.org, MGROW.org, and Meridian.mi.us/gogreen to learn more about local water protection efforts.

Your actions can help keep our water clean, reduce pollution, and prevent flooding!



*Help keep Meridian Township beautiful!
Find out how and spread the word!*

Meridian.mi.us/GoGreen
www.MyWatersheds.org



**POLLUTION
ISN'T PRETTY.**



Protect Our Wetlands

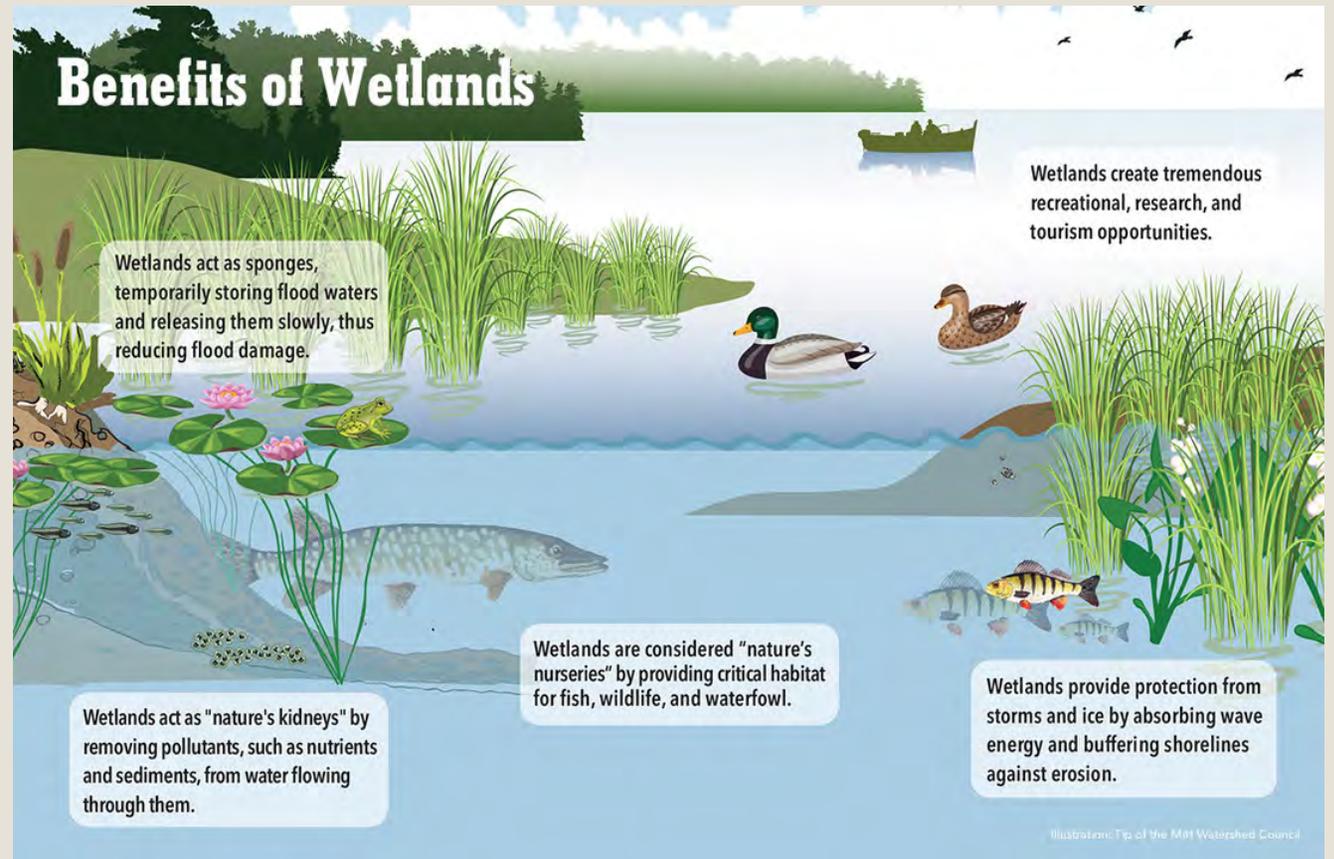
*Your actions can help
keep our water clean*



Wetland Services

Wetlands are a critical part of our environment helping reduce flooding, clean water, provide habitat, and offer other benefits:

- **Water storage** – wetlands act as a sponge to absorb water during floods and slowly release the water back during droughts. They also slow down the water's momentum and decrease erosion.
- **Water filtration** – wetlands allow pollutants like sediments and nutrients to be absorbed or settle to improve water quality.
- **Habitat and nurseries**– wetlands are diverse ecosystems that are home to a wide variety of plants and animals.
- **Recreation** – wetlands offer opportunities to hike, birdwatch, canoe and enjoy nature along with educational opportunities for youth and adults alike
- **Reduction of mosquito populations** – a healthy, functioning wetland can actually reduce mosquito populations by providing proper habitat for the natural enemies of mosquitos and by preventing or reducing flooding.



Together We Can Protect Our Wetlands

- DO plant native vegetation on your property and remove invasive species.
- DO protect the required 20 foot natural vegetation buffer around the wetlands.
- Do not remove trees, stumps, roots and other natural vegetation from the wetlands or buffer.
- Do not mow in the wetlands or within the buffer.
- Do not use chemicals, fertilizers and pesticides in the wetlands and the 20 foot natural vegetation buffer. For information about invasive species removal, call 517.853.4614.
- Do not put yard waste or "fill material" (soil/ dirt, stones, mulch, etc.) in wetlands or within the 20 foot natural vegetation buffer.
- Contact the Planning Department at 517.853.4560 if you are planning construction or landscaping within 40 feet of a wetland.
- Contact Public Works at 517.853.4440 if you are moving dirt or disturbing soil. A Soil Erosion/ Sedimentation Control Permit may be required.
- Inform neighbors, developers, and state and local decision-makers about the importance of wetlands.

Environmental Commission Goals for 2021

1. Assist with Green Grants for Schools
2. Expand the Green Neighbor Network
3. Achieve Tree City USA Designation
4. Implement Climate Action Plan
 - Help codify Green Infrastructure Audit recommendations
 - Continue Environmental Review and Changes to policies and procedures
 - Support continued progress on renewable and efficiency improvements
 - Collaborate other regional partners on climate action
5. Ongoing
 - Continue Study Groups on Environmental Justice and other topics
 - Host Green Theme Presentations
 - Review Wetland Permits
 - Continue Environmental Stewardship Awards
 - Communicate with other Commissions, Boards, Trustees, and the Public
 - Adapt and revise goals as needed

Past goals...

2020

1. Assist with Tree Planting Initiative
2. Implement Climate Action Plan
 - Green Infrastructure Review
 - Green Building Code
 - Waste Reduction (plastic bags, etc.)
3. Recommend Township Support of PAH Ordinance
4. Ongoing Tasks/Responsibilities
 - Organize and Host Green Theme Presentations
 - Review Wetland Permits
 - Continue Environmental Stewardship Awards
 - Communicate with other Commissions, Boards, Trustees (liaison)

2019

1. Revise Wetland Ordinance
2. Continue Green Themes-Sustainable paving; Green Burial; Red Cedar Cleanup; etc.
3. Review Wetland Use Permits

2018

1. Collaborate with Park and Transportation Commissions on wayfinding
2. Review progress on the Greenspace Plan
3. Actualize the Climate Sustainability Plan and review related ordinances
4. Discuss how greening the Township might attract green businesses
5. Collaborate with the Land Preservation Advisory Board