

**CHARTER TOWNSHIP OF MERIDIAN  
ENVIRONMENTAL COMMISSION  
AGENDA  
Wednesday, March 16, 2016**

**Town Hall Room  
Meridian Municipal Building  
5151 Marsh Road, Okemos, MI 48864**

**Special Meeting**

1. Call to order
2. Approval of agenda
3. Review/Recommendation for Wetland Use Permit #16-01 (Ingham Co. Drain Commission)
4. Other business
5. Public remarks
6. Adjournment



March 14, 2016  
Project No. G160096W01

Mr. Mark Kieselbach  
Charter Township of Meridian  
5151 Marsh Road  
Okemos, MI 48864

Re: Wetland Use Permit #16-01 Application Review  
Ingham County Drain Commissioner  
Smith Consolidated Drain

Dear Mr. Kieselbach:

The Ingham County Drain Commissioner (ICDC) is requesting to enhance an existing low quality wetland as part of a stormwater management project associated with the Smith Consolidated Drain (Drain). The primary focus of the project is to alleviate flooding near Jolly Road west of Okemos Road. The ICDC proposes to make improvements to Charter Township of Meridian (Township) Wetland No. 33-2 and an existing stormwater basin to detain downstream peak flows.

At the request of the Township, FTCH reviewed the Wetland Use Permit (WUP) request, including the following:

- A Joint Permit Application, dated February 18, 2016, prepared by Streamside Ecological Services (SES) and Spicer Group, Inc. (Spicer);
- SES Wetland Delineation Report, dated February 15, 2016;
- SME Soil Boring Logs, dated January 22 and 25, 2016.

FTCH also inspected the site on February 3, 2016, as part of a preapplication meeting with Mr. Mike Nurse of SES, Mr. James Ensign of Spicer, and Ms. Carla Clos of ICDC. Flagged wetland boundaries and site conditions were reviewed during the meeting.

This report provides a brief description of the resources that would be impacted by the proposed work, evaluates WUP Application #16-01 according to review standards in the Township Wetland Protection Ordinance (Article IV of Chapter 22 of the Code of Ordinances of the Charter Township of Meridian), and makes recommendations to the Township regarding issuance or denial of the WUP application. This evaluation is limited to a review of wetland impacts and does not assess broader hydrologic and hydraulic issues pertaining to the Smith Drain and the proposed culvert pipe replacement.

## Overview of Proposed Wetland Impacts

The proposed activities are located in the western half of Section 33, Town 4 North, Range 1 West, Ingham County, Michigan. Proposed impacts are located on:

- Parcel Number 33-02-02-33-100-024, owned by Consumers Energy Company. This parcel contains electrical power lines, the Drain, and a wet meadow wetland dominated by reed canarygrass (*Phalaris arundinacea*).
- Parcel Number 33-02-02-33-100-006, owned by Club Meridian Louis Eyde LLC. This parcel contains a wet meadow/scrub-shrub/forested wetland complex, the Drain, a paved off-road pathway (Meridian Township Pedestrian-Bicycle Pathway system), and high-density residential property.

The ICDC has submitted a WUP application to the Township requesting the following:

- Construction of two weirs in the Drain to manage peak flood flows.
- Excavation of wetland at two locations to create storm water detention and wetland enhancement. Wetland impacts are limited to low quality, emergent wetland located adjacent to the Drain.
- Provide hydrologic connections from the Drain to the wetlands.
- Place fill within 0.03-acre of wetlands at the north weir to contain detention.
- Construct a 0.05-acre mitigation wetland adjacent to existing wetland along the Drain.
- Temporarily impact wetlands for construction access along the existing pathway and then restore these wetlands.

## Review of WUP Application

The review standards used to evaluate WUP applications are found in Section 22-157 of Article IV (Wetland Protection) of Chapter 22 of the Township's Code of Ordinances. WUPs are not to be issued unless the proposed activity is found to be in the public interest, the permit is necessary to realize the benefits from the activity, and the proposed activity is otherwise lawful in all respects. Section 22-157(2) lists eleven general criteria to be considered when evaluating whether or not a proposed activity is in the public interest. An evaluation of the proposed activity, according to each of the eleven criteria, is as follows:

Section 22-157(2)(a) *The relative extent of the public and private need for the proposed activity.*

- There is a high public and private need for the proposed wetland enhancement. The primary goal of the project is to provide additional detention of peak flows which will result after replacing a failing pipe associated with the Drain. This pipe is located beneath Jolly Road, west of Okemos Road. The road segment crossing the failing pipe supports high traffic volumes, including commuters to and from Michigan State University, Okemos High School, surrounding businesses, and residential neighborhoods. The Township has petitioned ICDC to replace this pipe to alleviate road flooding and to protect the integrity of Jolly Road. The existing pipe has collapsed three times in the last four years, resulting in sinkholes that created a danger to motorists and pedestrians.
- A hydraulic study determined that the existing pipe beneath Jolly Road is too small to accommodate peak flows. Increasing the size of the pipe will increase stormwater conveyance, resulting in a need for mitigation measures that prevent downstream flooding. The proposed wetland enhancement, in combination with the construction of two weirs, provides these measures.

Section 22-157(2)(b) *The availability of feasible and prudent alternative locations and methods to accomplish the expected benefits from the activity.*

- The permit application indicated that other locations along the Drain were considered for detention but were rejected due to lack of space within the drain easement between existing homes, a cemetery, commercial buildings, and other site constraints.
- An existing detention pond directly upstream of the proposed wetland enhancement areas was evaluated regarding its capacity for detaining peak flows. The pond can accommodate 6 inches of stormwater above normal water levels, which is not enough to hold the additional peak runoff to reduce hydraulic grade line elevations downstream.

Section 22-157(2)(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.*

- The proposed project is a suitable use for the subject site, since the impacted wetland is of low quality and in close proximity to the Drain.
- The existing wetland provides the following functions and values: water storage, water quality improvement, limited wildlife habitat, and limited aesthetic value. Enhancement of the wetland by removing the surface 1.5 feet of soil (thereby removing invasive reed canarygrass), lowering overall site topography, creating five shallow pools of limited extent, placing one foot of topsoil, seeding with an emergent wetland seed mixture, and installing habitat structures will improve and diversify wetland functions and values. The resulting wetland should be of higher quality, due to greater plant diversity introduced by the proposed wetland seed mixture.
- Installation of the north weir will fill 0.03 acre of low quality, wet meadow wetland, which will be compensated through the creation of 0.05 acre of wetland mitigation.

Section 22-157(2)(d) *The probable impact of each proposal in relation to the cumulative effect created by other existing and anticipated activities in the watershed.*

- Development of the wetland enhancement areas is an important element in a larger effort addressing stormwater management in the Drain's watershed. By providing additional stormwater detention, the wetland enhancement areas will contribute to alleviation of flooding in the drainage district.

Section 22-157(2)(e) *The probable impact on recognized historic, cultural, scenic, ecological, or recreational values and on the public health or safety, or fish or wildlife.*

- FTCH has no direct information pertaining to historic and cultural value or issues relating to impacts on public health.
- The proposed site development is not likely to significantly impact (positively or negatively) recreational value of the site.
- Construction of the proposed wetland enhancement area is likely to result in a higher quality and more scenic wetland than is currently present on the site. Wetland improvements will result in improved wildlife habitat and greater ecological value.
- The proposed design maintains base flow through the Drain and the wetland enhancement area. Therefore, fish passage and downstream drift of aquatic macroinvertebrates will not be impeded.
- The reduction of flooding resulting from this project will provide public health and safety benefits.
- No other impacts on recognized historic, cultural, scenic or recreational values are apparent for the proposed activities.

Section 22-157(2)(f) *Economic value, both public and private, of the proposed land change to the general township area.*

- The proposed land change protects against downstream flooding, which provides positive economic value, both public and private, to the general township area.

Section 22-157(2)(g) *The size and quality of the wetland being considered.*

- The proposed land change impacts 2.9 acres of wet meadow wetland dominated by reed canarygrass, an invasive species. The impacted wetland is located within Meridian Township Wetland No. 33-2, an approximately 52-acre, emergent/scrub-shrub/forested wetland complex located along the Drain. The proposed area of wetland impact is confined to the low quality, reed canarygrass-dominated wetland. No impact to forested and scrub-shrub wetlands is proposed.
- Construction of a weir north of the wetland enhancement areas will fill 0.03 acre of reed canarygrass-dominated wetland. ICDC proposes to construct 0.05-acre of wet meadow, mitigation wetland adjacent to existing wetland associated with the Drain's stormwater basin.

Section 22-157(2)(h) *The findings of necessity for the proposed activity which have been made by other agencies.*

- The proposed work is the result of a petition to the ICDC by both Meridian and Alaieton Townships that was found necessary by a statutory Board of Determination.

Section 22-157(2)(i) *Amount of wetland remaining in the general area and proximity to a waterway.*

- The proposed work occurs within an approximately 52-acre, emergent/scrub-shrub, forested wetland complex located contiguous to the Drain. The project resulting in enhancement of 2.9 acres of wet meadow wetland and 0.03 acres of wetland fill.

Section 22-157(2)(j) *Proximity to any waterbody.*

- The proposed wetland enhancement areas are located approximately 15 feet from the Drain. Diversion structures will be installed next to the Drain to route water to the enhancement wetlands.

Section 22-157(2)(k) *Extent to which upland soil erosion adjacent to the protected wetland is controlled.*

- Plans provided in the WUP application indicated that soil erosion and sedimentation control (SESC) measures will be performed according to Ingham County Drain Office Authorized Public Agency standards and approved plan. An SESC plan was not submitted as part of the WUP application.

## Recommendations

Based upon our review of the submitted materials, it is our opinion that the proposed project meets the Township's requirements for permit issuance. FTCH recommends the WUP permit be issued with the following conditions:

- Reposition the proposed East Wetland Enhancement diversion structure from an acute angle relative to the drain to an angle more in line with stream flow.
- Ensure that excavated soil placed as topsoil within the wetland enhancement and wetland mitigation areas contains an organic component, and do not consist of sandy subsoil.
- Implement appropriate SESC measures during construction to ensure there are no impacts to wetlands outside of project activities as a result of soil erosion.
- Submit a planting plan for the 2.9-acre wetland enhancement areas and the 0.05-acre mitigation wetland. The planting plan should include a plan view noting areas that will be seeded and planted with live plants, methods, species list with scientific and common names for both the seed mixture and plantings, seeding

rates, planting densities, and source of any plant or seed stock. Note wetland restoration activities that will occur in disturbed areas along the pathway.

- Submit a wetland monitoring plan that notes vegetative monitoring sampling transects, photo points, and monitoring well/staff gauge location. Monitoring should occur in both the 2.9-acre wetland enhancement areas, the 0.05-acre mitigation wetland, and the wetland restoration area along the pathway.
- Monitor the wetland enhancement areas, the mitigation wetland, and the wetland restoration area along the pathway for five years.

We appreciate the opportunity to assist in the review of this file. If you have any questions or require additional information, please contact me at 616.464.3738 or ehtripp@ftch.com.

Sincerely,

FISHBECK, THOMPSON, CARR & HUBER, INC.

A handwritten signature in black ink, reading "Elise Hansen Tripp". The signature is fluid and cursive, with the first name "Elise" being the most prominent.

Elise Hansen Tripp, PWS

pmb

By email

cc: Ms. Harmony Gmazel, AICP – Township