CHARTER TOWNSHIP OF MERIDIAN
ENVIRONMENTAL COMMISSION
AGENDA
Thursday, March 24, 2016
5:00pm

Administrative Conference Room
Meridian Municipal Building, 1st Floor
5151 Marsh Road, Okemos, MI 48864

Special Meeting

1. Call to order
2. Approval of agenda
3. Approval of March 16, 2016 Special Meeting Minutes
4. Review/Recommendation for Wetland Use Permit #16-01 (Ingham Co. Drain Commissioner's Office)
5. Other business
6. Public remarks
7. Adjournment

CHARTER TOWNSHIP OF MERIDIAN
ENVIRONMENTAL COMMISSION MINUTES
Meridian Municipal Building – Town Hall Room
March 16, 2016 - Draft

SPECIAL MEETING

PRESENT: Chair McConnell, Vice-Chair Schools, Commissioners Jackson, Sarver and Dickmann

ABSENT: Commissioner Kielbaso

STAFF: Harmony Gmazel, AICP, Associate Planner

OTHERS: None

1. **CALL SPECIAL MEETING TO ORDER**

Chair McConnell called the meeting to order at 6:04 p.m.

2. **APPROVAL OF THE SPECIAL MEETING AGENDA**

Approved by consent without objection.

3. **REVIEW/RECOMMENDATIONS FOR WUP #16-01 (Ingham Co. Drain Commissioner)**

The Commission had specific questions for the applicant, which will be forwarded to the ICDC's representative in the coming week. Potential recommendations discussed:

- In order to positively impact recreation in the Township, the Commission recommends that future pathway improvements found on the Township Pathway Master Plan be incorporated as a part of this project. There are multiple alternatives for a pathway connecting Jolly Oak Drive with areas to the north across the Smith Drain. We recommend this potential linkage be coordinated with any future projects in the area.
- The angle of southern most outlet structure between the drain and east wetland should be softened in order to allow for natural flow between the two areas.
- Please provide a detailed planting plan.

4. **OTHER**

The Commission accepted the Township Pedestrian Pathway Master plan for review at their April 6 meeting.

5. **PUBLIC REMARKS**

None

6. **ADJOURNMENT**

Approved by consent without objection at approximately 7:15p.m.

streamside
ecological services

March 18, 2016

Harmony Gmazel, AICP
Associate Planner
Charter Township of Meridian
5151 Marsh Rd.
Okemos MI 48864-1198

RE: Response to the Environmental Commission's Questions; Smith Consolidated Drain

Dear Ms. Gmazel

We have received your March 17, 2016 email listing five questions asked by the Environmental Commission in review of our request for a Wetland Use Permit. Below are our responses to each question.

1) If topsoil will be removed and taken to an offsite upland area, where are those upland areas generally located?

The location of soils placement will be identified by the contractor for the project. Prior to beginning work, the contractor will be required to identify the spoils disposal location(s) and receive approval from the project engineer. This is to ensure the spoils are not being placed within wetland, floodplain, or within an area close to wetlands or a stream where the reed canary grass can spread.

2) What is the prognosis for the elimination of reed canary grass at the site? This question is in terms of understanding that your investment in native plantings will be worth it, and not be overrun with canary grass again in the future?

The proposed enhancement is not intended to completely eliminate the presence of reed canary grass but to increase the values and functions of the existing wetland, including increases in plant and animal diversity. Areas adjacent to the drain and along the upland/wetland fringe contain reed canary grass and are proposed to remain as they currently exist. However efforts are proposed to help control the spread of reed canary grass and other invasive species within the enhancement areas. Methods of control include:

- Excavation and removal of the top layer of soil and plants to reduce the reed canary grass seed bank within the excavation areas.
- Routine monitoring of the enhancement areas for invasive species (minimum annually) for 5 years.
- Chemically spot treat invasive plant species identified during monitoring.
- Monitoring the establishment of desired native species and adjusting water elevations as necessary to promote native growth and reduce invasion by undesirable plant species.
- Bid documents will include requirements for contractor(s) to thoroughly wash equipment and personal gear prior to entering the project site. Typical soil erosion and sedimentation control measures such as gravel access strips will be used in conjunction with washing of equipment to minimize soil transport.

The goal of the enhancement is to convert a comparably dry, wet meadow wetland dominated by reed canary grass to a more diverse wet meadow and emergent wetland. The plans (submitted with the permit application) propose a shallow gradient throughout most of the wetland enhancement area once the desired depth is achieved. This design provides for gradual variations in water depths, mimicking natural wet meadow and emergent wetland systems. The intended goal is expected to increase plant and animal diversity.

Current conditions show extremely low plant diversity within the proposed enhancement areas. Changes in ground elevations, varying water depths, and introduction of a variety of native plant species is expected to significantly increase plant diversity. In addition, the enhancement area avoids impact to all woody areas, resulting in additional plant diversity and habitat types overall. A proposed seeding plan is attached to this response letter identifying the included species and amount of seed per species per acre. The proposed seed mix, which includes forbs and grasses, will be applied over the entire enhancement areas.

Improvement in plant diversity and hydrology of the system is expected to increase animal use of the wetlands. Migratory waterfowl, wading birds, insect eating Neotropical migrants, small mammals, reptiles and amphibians are all expected to use and benefit from the enhancement. Habitat structures will also be placed within the wetlands at a rate of 6 structures per acre. The structures include:

- Trees with stumps with a minimum 2 inch DBH and a minimum of 6 feet long (log and root ball combined) laid horizontally within the wetland area.
- Logs laid horizontally within the wetland area Minimum 10 feet long with a DBH of at least 6 inches.
- Whole trees a minimum of 20 feet long with a minimum DBH of 12 inches laid horizontally within the wetland area, with fine structure left intact.

Turtle nesting islands are also proposed within the adjacent upland along the eastern boarder of the eastern enhancement area.

3) *Where do you purchase your native plantings/seeds?*

The nursery(s) to be used will be identified by the contractor and approved by the project engineer. The contract will require the seed mix for the enhancement area be as shown in the attached list, and require the species be from local genotypes. Numerous nurseries are available that carry these species harvested from local seed sources.

4) *When will the pathway be closed during this project?*

Current plans call for closure of the path for approximately two weeks. The closure is dependent on the contractor's schedule and will occur sometime between July 1 and October 30, 2016.

5) *If the wooded wetland to the west is a higher quality wetland area than those being improved along the drain, will the change in hydrology along the drain negatively impact the wooded wetland?*

Hydrology for the adjacent wooded wetland is not readily derived from the Smith Consolidated Drain. This area receives hydrology from surface runoff, direct precipitation,

and to some degree, groundwater. The wetland enhancement project will not reduce the overland runoff or the volume of precipitation. Since the existing groundwater elevation at the proposed enhancement location will be maintained, there will be no change in the head differential of the groundwater table between the wooded wetland and the surrounding areas. With no change in head differential, no changes in groundwater flow rate or volume are anticipated and therefore the project will not alter the ground water elevations in the forested areas. Additionally, the frequency, duration, and depth of inundation of the wooded wetland due to waters of the Smith Consolidated Drain will not be altered by these project activities.

We appreciate your attention to our application. If you have any questions please contact me at 586-764-9366.

Sincerely,

STREAMSIDE ECOLOGICAL SERVICES, INC.

Michael B. Nurse, PWS, Wetlands/Aquatic Biologist

Atts:

streamside
ecological services

Smith Drain Wetland Enhancement; Proposed Wetland Seed Mix

Permanent Grasses/Sedges/Rushes

Botanical Name	Common Name	PLS Ounces/Acre
Bolboschoenus fluviatilis	River Bulrush	1.00
Carex comosa	Bristly Sedge	2.50
Carex lacustris	Common Lake Sedge	0.25
Carex lurida	Bottlebrush Sedge	4.00
Carex stricta	Common Tussock Sedge	1.00
Carex vulpinoidea	Brown Fox Sedge	6.00
Eleocharis palustris	Great Spike Rush	1.00
Juncus effusus	Common Rush	1.00
Leersia oryzoides	Rice Cut Grass	3.00
Schoenoplectus acutus	Hard-stemmed Bulrush	2.50
Schoenoplectus americanus	Chairmaker's Rush	3.00
Schoenoplectus tabernaemontani	Softstem Bulrush	6.00
	Total	**31.25**

Forbs

Botanical Name	Common Name	PLS Ounces/Acre
Acorus americanus	Sweet Flag	0.50
Alisma spp.	Water Plantain	2.00
Asclepias incarnata	Swamp Milkweed	1.50
Cephalanthus occidentalis	Buttonbush	6.00
Decodon verticillatus	Swamp Loosestrife	0.50
Eutrochium maculatum	Spotted Joe-Pye Weed	0.50
Hibiscus spp.	Rosemallow	4.00
Iris virginica	Blue Flag	6.00
Lobelia cardinalis	Cardinal Flower	0.25
Lobelia siphilitica	Great Blue Lobelia	0.25
Lycopus americanus	Common Water Horehound	0.25
Mimulus ringens	Monkey Flower	1.00
Peltandra virginica	Arrow Arum	16.00
Penthorum sedoides	Ditch Stonecrop	0.50
Polygonum spp.	Pinkweed	0.50
Pontederia cordata	Pickerel Weed	10.00
Sagittaria latifolia	Common Arrowhead	2.00
Sparganium eurycarpum	Common Bur Reed	6.00
Verbena hastata	Blue Vervain	1.00
	Total	**58.75**