COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: January 8, 2018
AGENDA NUMBER: 23
FILE NUMBER: 17-233
ITEM: Shaw’s Glen 2nd

RECOMMENDATION: Table with 8 Stipulations

APPLICANT: Jethro Carpenter
826 Golden Way
Isanti, MN 55040

PURPOSE: 5 Lots on 2.8 Acres

LOCATION: Southeast corner of Nightingale St NW and 157th Lane NW, Andover MN

APPLICABILITY:
1. Any work in or adjacent to wetlands, lakes or water courses
2. One or more cumulative acres of land disturbance
3. The lands and waters that have been, or may be covered by the regional flood.
4. Activities upstream from land that is dependent upon removal of water from the soil profile for their continued use (Drainage Sensitive Land Uses)
5. Appropriation and use of groundwater
6. High water table, outwash and organic soils

EXHIBITS:
1. Construction Plan set (9 sheets); by Plowe Engineering, dated 11/29/17, received 12/11/17.

PREVIOUS ACTION TAKEN: This is a new application.

FINDINGS:
Pre-application Meeting: The project as submitted has received a general review during a pre-application meeting.

Ditches: There is not a public ditch on the property.

Ditch Hydraulics: A crossing of the ditch is not proposed.
Erosion and Sediment Control: Soils affected by the proposal are Isanti and Sartell.

- Stabilizing vegetation is not proposed for disturbed areas within seven (7) days of rough grading.
- Soil stockpiles have been proposed to be fitted with sediment-trapping measures to prevent soil loss.
- Adjacent properties and stormwater ponds are not protected from sediment deposition.
- Construction schedules detailing when sediment trapping measures will occur; stabilization of earthen structures and the general timing of construction phases have been provided.
- Stabilization adequate to prevent erosion has not been provided at the outlets of all storm sewer pipes.
- All storm sewer inlets are not protected from sediment-laden water during construction.
- All work adjacent to water or related resource has taken precautions to contain sediment, and stabilize the work area during construction.
- Provisions have been made to minimize transport of sediment (mud) by runoff or vehicle racking onto the paved surface.
- Provisions have been made for cleaning road surfaces where sediment is transported by the end of the day.
- Construction entrance points are clearly located on the erosion and sediment control plan.
- The erosion and sediment control plan does provide for the repair and maintenance of all temporary and permanent erosion and sediment control practices.

Dewatering: Shallow ground water does exist on site. The project may require dewatering.

Floodplain: There is floodplain on the property according to the District model. The District’s floodplain elevation is at 894.5 feet. The project does propose to place fill within the floodplain. The total floodplain impact is unknown. The proposed impact is within the flood fringe. Calculations have not been provided to determine if compensatory storage has been provided. There are no flooding concerns upstream and/or downstream.

High Water Flooding: Information has been provided to substantiate low floor elevations. Low floor elevations do meet the criteria for the City of Andover; 3 ft above mottled soils/groundwater, 2 ft over 100 yr.

Groundwater: Geotechnical information collected in November 2017 indicates long term groundwater elevation is present at 5-11 feet below the surface which correlates to approximately 890.4 feet.

The site is not within a Municipal Drinking Water Supply Area (DWSMA).
The project site is not within the Emergency Response Area/10 Year Well Head Protection Area/Drinking Water Supply Management Area.

The proposal does not contain a land use discouraged or prohibited by the Safe Drinking Water Supply Act (SDSA).

**Historic Sites:** The proposed project does not include sites of historic or archeological significance.

**Local Planning & Zoning:** The proposed project is consistent with local planning and zoning. There is an approved local water plan.

Property owners affected by changes in drainage have been notified and acknowledge the changes proposed.

**Maintenance:** The Owner of the Stormwater Management features and treatment practices is unknown. The Stormwater Treatment Practices (STPs) consisting of the following:

<table>
<thead>
<tr>
<th>Stormwater Treatment Practices</th>
<th>Number</th>
<th>Maintenance Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infiltration Basins</td>
<td>2</td>
<td>Unknown</td>
</tr>
<tr>
<td>Swale</td>
<td>1</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

A maintenance agreement has not been executed. The applicant has not submitted a Maintenance Plan for each Stormwater Treatment Practice.

Easements: The proposed project does not include ditch maintenance easement. A ditch maintenance easement is not required. A maintenance access to all storm water management features is provided.

**Stormwater & Hydrology:** Infiltration is allowed within the project area. The 1-inch infiltration is achieved. The stormwater management system utilizes infiltration basins. Stormwater leaving the site is discharged into a well-defined receiving channel or pipe and routed to a public drainage system.

Drainage sensitive uses do exist downstream from the proposed site. The rate of post-development runoff from the site does not exceed predevelopment rates, or rates which would interfere with sensitive downstream land uses. Properties and waterways downstream from the project are protected from erosion due to increases in the volume, velocity and peak water flow rates of stormwater runoff. Concentrated storm water leaving a site is discharged directly into a well-defined natural or man-made off-site receiving channel or pipe. All on-site constructed storm water conveyance channels are constructed to withstand the expected velocity from a 2-year frequency storm without erosion.
**Water Quality:** The proposed project does not cause an exceedance of State water quality standards. The project does not contribute to the adverse impact of wetlands through inundation or volume of flow. All discharges into wetlands are pretreated by a sediment basin/water quality pond, and are designed correctly. All work adjacent to wetlands, waterbodies and water conveyance systems are protected from erosion. The proposal will not detrimentally affect the existing water quality of the receiving water. The proposal will not cause extreme fluctuations of water levels or temperature changes.

**Impairments:** This project is not within one (1) mile of an Impaired Water.

There are new impervious surfaces proposed as part of this project.

**Wetlands:** Wetlands do exist on-site according to the 1987 Federal manual, NWI, PWI and Soil Survey. Wetlands have been delineated. The most recent delineation was completed on August 11, 2016. The wetland boundary has been checked. There are no proposed wetland impacts. The wetland is not a DNR protected water.

**Wetland Replacement Plan:** A wetland replacement plan is not required.

**Wildlife:** The proposed project does not include endangered or threatened species, rare natural communities, colonial waterbird nesting sites, migratory waterfowl concentration areas, deer wintering areas or wildlife travel corridors.

**Performance Escrow:** $3,125.00

**Wetland Escrow:** $N/A

There are not ditch liens on the property.

**ISSUES/CONCERNS:**

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>NEED</th>
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</thead>
<tbody>
<tr>
<td><strong>Escrows:</strong> $2,000 + (2.25 ac * $500/ac) = $3,125.00</td>
<td>1. Receipt of escrows.</td>
</tr>
<tr>
<td><strong>Stormwater &amp; Hydraulics:</strong> Model updates needed:</td>
<td>2. Provide model updates that address the following issues:</td>
</tr>
<tr>
<td>- Proposed model does not include wetland area (water) used in E1 of the existing model.</td>
<td>a. Include wetland area (water) used in E1 of the existing model in the proposed model.</td>
</tr>
<tr>
<td>- Drainage area between existing and proposed are not consistent.</td>
<td>b. Consistent drainage area between existing and proposed or explanation of why there is a difference.</td>
</tr>
<tr>
<td>- Starting elevation of 3P is not consistent with what is shown on the grading plan.</td>
<td>c. Starting elevation of 3P needs to match grading plans.</td>
</tr>
<tr>
<td>A post construction test on the infiltration basin will be required to verify the assumed infiltration rates are obtained.</td>
<td>3. The applicant must acknowledge that they will conduct a post construction test on the infiltration basin by filling the basin to a minimum depth of 6</td>
</tr>
</tbody>
</table>
Soils & Erosion Control: District requires all stabilization vegetation be within seven (7) days of rough grading or inactivity.

- It is unclear if dewatering is needed during the construction of the proposed project.
- Swale/infiltration basin not protected from sedimentation/compaction during construction.

4. Update construction plans to stabilize vegetation in 7 days of rough grading or inactivity.

5. Provide statement whether dewatering will be required for the construction of the proposed project. If yes, provide well-field location, rates, discharge location, schedule and quantities.

6. Provide silt fence along western portion of proposed swale to prevent sedimentation and compaction.

Maintenance: It is unknown who will be responsible for the inspection and maintenance of stormwater facilities. A maintenance agreement has not been executed. The applicant has not submitted a Maintenance Plan for each Stormwater Treatment Practice.

7. Provide an O&M Agreement that meets District requirements.

Floodplain: District model indicates that the 100-Yr floodplain is at 894.5 feet.

8. Floodplain issues to be addressed:
   a. Provide calculations for amount of fill proposed and amount of compensatory storage provided.
   b. Update HWL of existing basin to be 894.5, not the 893.6 as currently shown on plans.

RECOMMENDATION: Table with 8 Stipulations

Stipulations:
1. Receipt of escrows.
2. Provide model updates that address the following issues:
   a. Include wetland area (water) used in E1 of the existing model in the proposed model.
   b. Consistent drainage area between existing and proposed or explanation of why there is a difference.
   c. Starting elevation of 3P needs to match grading plans.
3. The applicant must acknowledge that they will conduct a post construction test on the infiltration basin by filling the basin to a minimum depth of 6 inches with
water and monitor the time necessary to drain. The Coon Creek Watershed District shall be notified prior to the test to witness the results.

4. Update construction plans to stabilize vegetation in 7 days of rough grading or inactivity.

5. Provide statement whether dewatering will be required for the construction of the proposed project. If yes, provide well-field location, rates, discharge location, schedule and quantities.

6. Provide silt fence along western portion of proposed swale to prevent sedimentation and compaction.

7. Provide an O&M Agreement that meets District requirements.

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