COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: January 14, 2019
AGENDA NUMBER: 21
FILE NUMBER: 17-208
ITEM: Catchers Creek East

RECOMMENDATION: Table with 11 Stipulations

APPLICANT: Mark Smith
2120 Otter Lake Drive
Medina, MN 55110

PURPOSE: 43 Lots on 19.1 Acres

LOCATION: SW of intersection of Butternut St and Andover Blvd, Andover, MN

APPLICABILITY:
1. Within 1 mile of an impaired waters.
2. Any work within or adjacent to a Public ditch within the Watershed District.
3. Any work in or adjacent to wetlands, lakes or water courses
4. One or more cumulative acres of land disturbance
5. The lands and waters that have been, or may be covered by the regional flood.
6. Activities upstream from land that is dependent upon removal of water from the soil profile for their continued use (Drainage Sensitive Land Uses)

7. High water table, outwash and organic soils

**EXHIBITS:**
1. Construction Plan set (10 sheets); by Landform, dated 12/17/18, received 12/17/18.
PREVIOUS ACTION TAKEN: The application was approved at the March 13, 2018 meeting with 2 stipulations:
1. Receipt of escrows.
2. Provide results of additional soil borings to indicate groundwater separation on site.

The most recent submittal has a new street layout, additional lots, and infiltration areas since the March approval. The graded area has increased to approximately 19.4 acres.

FINDINGS:
Pre-application Meeting: The project as submitted has not received a general review during a pre-application meeting.

Ditches: There is a public ditch on the property. The public ditch is County Ditch 57 according to the public drainage map. The approved elevations through this property are 869.6ft MSL at the downstream end and 869.7ft MSL at the upstream end. Existing elevations, slopes and condition of the ditch are 871.1ft MSL at the downstream end and 870.9ft MSL at the upstream end and represent a 1.5-1.2ft variance from the approved elevations. The ditch is a 5th order stream. The ditch serves the primary role of a trunk drainage system. The ditch serves approximately 0 acres of agricultural land. Land use in
the area is toward residential. There are no flooding concerns upstream or downstream. The ditch has been inspected. Existing elevations, slopes and condition of ditch are fair. Alternatives to repair and additional drainage have been considered and reviewed. The ditch is not in need of repair.

**Ditch Hydraulics:** A crossing of the ditch is not proposed.

**Erosion and Sediment Control:** Soils affected by the proposal are Lino, Sartell and Zimmerman.

- 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 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.
- Stormwater runoff does pass through a sediment basin or other sediment trapping BMP with equal or greater storage capacity.
- Stabilization adequate to prevent erosion has been provided at the outlets of all storm sewer pipes.
- All storm sewer inlets are 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 tracking 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. Dewatering is not anticipated as part of the development construction.

**Floodplain:** There is floodplain on the property according to the District model and FEMA. The District’s floodplain elevation is at 880.6 feet on the east to 880.2 feet on the west. The project does propose to place fill within the floodplain. The total floodplain impact is 0.23 acre-feet. The proposed impact is within the flood fringe. Compensatory storage is provided. There are no flooding concerns upstream or downstream.
High Water Flooding: Information has been provided to substantiate low floor elevations. Low floor elevations meet the criteria for the City of Andover; 3 ft above mottled soils/groundwater, 2 ft over 100 yr.

Groundwater: Geotechnical information collected in March 2014 indicates long term groundwater elevation is present at 6-31 feet below the surface.

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 include sites of historic or archeological significance. The sites have been evaluated by the state archeologist and delineated.

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 should be notified and acknowledge the changes proposed.

Maintenance: The Owner of the Stormwater Management features and treatment practices is City of Andover. 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>Basins (A, B, D, E, F)</td>
<td>5</td>
<td>City of Andover</td>
</tr>
<tr>
<td>Wet Pond (C)</td>
<td>1</td>
<td>City of Andover</td>
</tr>
<tr>
<td>Sump</td>
<td>1</td>
<td>City of Andover</td>
</tr>
</tbody>
</table>

As a requirement of the City’s MS4 program, the city will inspect and maintain the stormwater facilities.

Easements: The proposed project does include ditch maintenance easement. A ditch maintenance easement is required and has been provided. Maintenance access to all storm water management features is provided. It in unclear if the infiltration areas are located within a drainage and utility easement.

Stormwater & Hydrology: Infiltration is allowed within the project area. The 1-inch infiltration may be achieved. A geotechnical boring must be completed beneath the proposed infiltration basin to confirm groundwater separation. The stormwater management system utilizes infiltration and wet ponds. 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 exceed predevelopment rates. However, the rates are not expected to 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 stormwater 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 infiltration basins are pretreated. 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 within one (1) mile of and drains to an Impaired Water. The Impaired Water is Coon Creek (County Ditch 57). Coon Creek is impaired for (Aquatic Life (Macro-invertebrates)/Aquatic Recreation (E. coli). The major stressors are Total Suspended Solids (TSS)/Total Phosphorus (TP)/E.coli. There is not an EPA approved Total Maximum Daily Load (TMDL) or Waste Load Allocation (WLA) for this 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 September 5, 2014. The wetland boundary has been checked and approved. The wetland boundary is not shown on the plans. The wetland is not a DNR protected water.

The total proposed wetland impact is unknown. The impact is through drainage in one location as shown below.
The de minimis is 2,500 sf (type 1). TEP members have not been notified with a complete plan and have not been requested to submit comments.

The project is not wetland dependent. The project is not exempt. The applicant does not need to contact the DNR area hydrologist and the Corps of Engineers.

**Wetland Replacement Plan:** A replacement plan application has not been submitted. The wetland replacement plan has not been sent to TEP members for comment.

**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. An MBS Site of Outstanding Biodiversity Significance is present. The applicant has not contacted the MDNR natural heritage or endangered species program. If the project is present, the project does propose substantial adverse alteration, or significant detrimental impact on a species, or removal of a plant species will occur.

**Performance Escrow:** $11,600.00  
**Wetland Escrow:** $ N/A

There are not ditch liens on the property.

### ISSUES/CONCERNS:

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>NEED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Escrows:</strong> $2,000 + (19.2 * $500/ac) = $11,600.00</td>
<td>1. Receipt of escrows.</td>
</tr>
<tr>
<td><strong>Groundwater:</strong> Engineer noted that additional soil borings will be completed prior to construction. Soil borings are required beneath all infiltration basins</td>
<td>2. Provide results of additional soil borings to indicate groundwater separation on site.</td>
</tr>
<tr>
<td><strong>Maintenance:</strong> Backyard infiltration areas are not within D&amp;U easement. Property owners could fill in low areas and impact proposed drainage and HWLs for backyard infiltration areas</td>
<td>3. Provide D&amp;U easement for all infiltration basins to ensure proper drainage and modeled HWL are maintained.</td>
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<td><strong>Stormwater &amp; Hydraulics:</strong> Following items are inconsistent between construction plans and model:</td>
<td>4. Update construction plans and/or model for consistency of items noted in issues:</td>
</tr>
<tr>
<td>a. Proposed impervious area plans (5.59 acres) and HydroCAD model (approx. 6 acres).</td>
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<td>b. EOF Basin A (895.82 v 895.0)</td>
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<tr>
<td>c. Tertiary culvert Basin C not on plans</td>
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<tr>
<td>d. EOF Basin E (894.5v 895.0)</td>
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<td>e. 18-inch culvert inverts (883.0 v 883.3)</td>
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<td>Basin D’s HWL does not appear to be contained within property limits.</td>
<td>5. Indicate HWL of Basin D and ensure it is either within property limits.</td>
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<tr>
<td>Unclear if Basin C will be able to maintain NWL of 880.0 without liner. Current plans assume groundwater is greater than 3 feet below 880</td>
<td>6. Provide liner at Basin C to ensure NWL of 880.0</td>
</tr>
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<td>Unclear of statement in SWMP that Basins A, E and F have no defined outlet. Plans and model indicate storm sewer will function as outlet in addition to graded EOFs provided.</td>
<td>7. Clarify statement in SWMP regarding Basins A, E and F having no outlet.</td>
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<td><strong>Soils &amp; Erosion Control:</strong> District requires all stabilization vegetation be within seven (7) days of rough grading or inactivity.</td>
<td>8. Update construction plans:</td>
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<tr>
<td>A minimum depth of scarification is required to reduce runoff.</td>
<td>a. (sheet C3.3) to stabilize vegetation within 7 days of rough grading or inactivity.</td>
</tr>
<tr>
<td><strong>Wetlands:</strong> Delineated wetland boundary not shown on map.</td>
<td>b. (Sheets C 3.1 &amp; 3.2) Grading note 8 - “Soil shall be scarified to a minimum depth of 8” prior to reseeding to reduce soil compaction”.</td>
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<tr>
<td>9. Provide surveyed wetland boundary per the approved wetland delineation.</td>
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<tr>
<td>Wetland impacts from excavation and drainage are not identified.</td>
<td>10. Provide a wetland replacement plan for review and approval by the TEP or alter the grading on Lots 3 &amp; 4, Block 4 to avoid wetland impacts.</td>
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<td>Wildlife: The project proposes impacts to a MBS Site of Outstanding Biodiversity Significance.</td>
<td>11. Provide documentation from DNR indicating the impact is acceptable or alter the grading on Lots 3 &amp; 4, Block 4 to avoid impacting the MBS Site of Outstanding Biodiversity Significance.</td>
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**RECOMMENDATION:** Table with 11 Stipulations

**Stipulations:**

1. Receipt of escrows.
2. Provide results of additional soil borings to indicate groundwater separation on site.
3. Provide D&U easement for all infiltration basins to ensure proper drainage and modeled HWL are maintained.
4. Update construction plans and/or model for consistency of items noted in issues:
   a. Proposed impervious area plans (5.59 acres) and HydroCAD model (approx. 6 acres).
   b. EOF Basin A (895.82 v 895.0)
   c. Tertiary culvert Basin C not on plans
   d. EOF Basin E (894.5v 895.0)
   e. 18-inch culvert inverts (883.0 v 883.3)
5. Indicate HWL of Basin D and ensure it is either within property limits.
6. Provide liner at Basin C to ensure NWL of 880.0
8. Update construction plans (sheet C3.3) to stabilize vegetation within 7 days of rough grading or inactivity.
9. Provide surveyed wetland boundary per the approved wetland delineation.
10. Provide a wetland replacement plan for review and approval by the TEP or alter the grading on Lots 3 & 4, Block 4 to avoid wetland impacts.
11. Provide documentation from DNR indicating the impact is acceptable or alter the grading on Lots 3 & 4, Block 4 to avoid impacting the MBS Site of Outstanding Biodiversity Significance.