COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: February 11, 2019
AGENDA NUMBER: 12
FILE NUMBER: 19-033
ITEM: Catchers Creek West

RECOMMENDATION: Table with 12 Stipulations

APPLICANT: Mike Smith
4728 Greenhaven Drive
St. Paul, MN 55127

PURPOSE: Single Family Home Development
9 Lots on 5 Acres

LOCATION: 1049 Andover Blvd, Andover, MN
APPLICABILITY:
1. Within 1 mile of an impaired waters.
2. One or more cumulative acres of land disturbance.
3. Any work in or adjacent to wetlands, lakes, or water courses.
4. The lands and waters that have been or may be covered by the regional flood.
5. Activities upstream from land that is dependent upon removal of water from the soil profile for their continued use (Drainage Sensitive Land Uses)

EXHIBITS:
1. Construction Plan set (8 sheets); by Carlson McCain, dated 1/29/2019, received 1/30/2019.
4. No-Loss Application; by Kjolhaug Environmental Services, dated 1/30/2019, received 1/30/2019.

PREVIOUS ACTION TAKEN: This is a new application.

FINDINGS:
Pre-application Meeting: The project as submitted has not 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 Lino, Rifle and Sartell.
- Stabilizing vegetation is proposed for disturbed areas within seven (7) days of rough grading.
- Soil stockpiles have not 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 not been provided.
- Stabilization adequate to prevent erosion has not 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 not taken precautions to contain sediment, and stabilize the work area during construction.
- Provisions have not been made to minimize transport of sediment (mud) by runoff or vehicle racking onto the paved surface.
- Provisions have not 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 not 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 will likely require dewatering.

Floodplain: There is floodplain on the property according to the District model. The District’s floodplain elevation is at 882.1 feet. The project does not propose to place fill within the floodplain.

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. According to soil boring #2, Low floor elevations for lots 1 and 2 (block 2) do not meet the criteria for the City of Andover; 3 ft above mottled soils.
**Groundwater:** Geotechnical information collected in December 2018 indicates long term groundwater elevation is present at 6-13 feet below the surface.

The project site is 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. SHPO has indicated the site is not a registered site.

**Local Planning & Zoning:** The proposed project is not consistent with local planning and zoning. The application has not been submitted to the city. There is an approved local water plan.

Property owners affected by changes in drainage have not been notified of the proposed changes.

**Maintenance:** The owner of the Stormwater Management features and treatment practices is the City of Andover. The Stormwater Treatment Practices (STPs) consist of the following:

<table>
<thead>
<tr>
<th>Stormwater Treatment Practices</th>
<th>Number</th>
<th>Inspection &amp; Maintenance Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basins</td>
<td>2</td>
<td>City of Andover</td>
</tr>
<tr>
<td>Sumps</td>
<td>1</td>
<td>City of Andover</td>
</tr>
<tr>
<td>Swale</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. A maintenance access to all storm water management features is provided.

**Stormwater & Hydrology:** Infiltration is not allowed within the project area due to it being within a DWSMA/WPA/ERA. The 1-inch filtration is achieved. The stormwater management system utilizes infiltration and filtration. Calculations have been provided that illustrate the 1-inch infiltration volume is achieved below outlet.

Drainage sensitive uses do exist downstream from the proposed site. The rate of post-development runoff from the site does 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 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/stormwater basins 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 within one (1) mile of an Impaired Water. The Impaired Water is Coon Creek. 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 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 approved on 11/16/18. The wetland boundary has been checked. The wetland is not a DNR protected water.

The total proposed wetland impact is 0 square feet. The proposed excavation is not regulated under the WCA. No wetland buffers are provided.
The applicant does not need to contact the DNR area hydrologist and the Corps of Engineers.

**Wetland Replacement Plan:** A wetland replacement plan has not been submitted and 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. The applicant has not contacted the MDNR natural heritage or endangered species program.

If the project is present, the project does may propose substantial adverse alteration or significant detrimental impact on a species or removal of a plant species.

**Performance Escrow:** $4,040

**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>Escrows: $2,000 + (4.08 ac * $500/ac) = $4,040</td>
<td>1. Receipt of escrows.</td>
</tr>
<tr>
<td><strong>Stormwater &amp; Hydraulics:</strong> Infiltration is not allowed on site due to the project location being within a Drinking Water Supply Management Area/Wellhead Protection Area/Emergency Response Area. Proposed pervious area curve numbers match existing pervious area curve numbers and do not take into account soil compaction by heavy equipment due to mass grading. Size of outlet device #2 for Pond 200 is inconsistent in HydroCAD model and on plans. Calculations consider house gutter placement. Unclear how grading plans show gutter locations. Untreated stormwater is discharging to wetland. It appears drainage sensitive uses downstream are affected.</td>
<td>2. Update on site stormwater treatment practices to exclude infiltration and change to filtration. Filtration practices must be lined. 3. Update plans to include soil decompaction or downgrade the proposed pervious area curve numbers in the HydroCAD model. 4. Update outlet device #2 for pond 200 to 48” horizontal orifice. 5. Remove the assumed directional flow of house gutters from the stormwater calculations and provide directional flow based on proposed grading plan. 6. All stormwater generated from new development must be pretreated before entering wetland. 7. Provide clarity to ensure the proposed 100-year peak flow rate shall not exceed the predevelopment 25-year peak flow rate.</td>
</tr>
<tr>
<td><strong>Soils &amp; Erosion Control:</strong> Erosion Control Plan does not meet District requirements. It is unclear if dewatering is needed during the construction of the proposed project. The Geotech report anticipates dewatering.</td>
<td>8. Update Construction plans with the following: a. Construction schedules detailing when sediment trapping measures will occur; stabilization of earthen structures and the general timing of construction phases. b. Provide sediment trapping measures for all proposed soil stockpiles. c. Provide a double row of perimeter control adjacent to wetland.</td>
</tr>
</tbody>
</table>
d. Provisions to minimize the transport of sediment (mud) by runoff or vehicle racking onto paved surfaces.

e. Provisions for cleaning road surfaces where sediment is transported by the end of the day.

f. Stabilization adequate to prevent erosion at the outlets of all storm sewer pipes.

g. Provide for the repair and maintenance of all temporary and permanent erosion and sediment control practices.

h. Provide rip rap at outlet flared end sections and the details.

9. 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.

**Groundwater:** According to the soil borings collected in December 2018, low floor elevations for buildings 1 and 2 (block 2) do not meet the 3-foot separation from mottled soils.

10. Raise low floor elevations to meet the 3-foot separation requirement or provide approval from the City.

**Wetlands:** A wetland buffer of 15 ft is required.

11. Provide a buffer plan with buffer clearly delineated on the grading plan. Permanent boundary markers must be provided.

**Wildlife:** The proposed project may include endangered or threatened species, rare natural communities, colonial waterbird nesting sites, migratory waterfowl concentration areas, deer wintering areas or wildlife travel corridors.

12. Provide documentation from the DNR if the proposed project includes endangered or threatened species, rare natural communities, colonial waterbird nesting sites, migratory waterfowl concentration areas, deer wintering areas or wildlife travel corridors.

**RECOMMENDATION:** Table with 12 Stipulations

**Stipulations:**

1. Receipt of escrows.
2. Update on site stormwater treatment practices to exclude infiltration. Filtration practices must be lined.

3. Update plans to include soil decompaction or downgrading the proposed pervious area curve numbers in the HydroCAD model.
4. Update outlet device #2 for pond 200 to 48” horizontal orifice.
5. Remove assumed directional flow of house gutters from stormwater calculations and provide directional flow based on proposed grading plan.
6. Treat all stormwater before entering wetland.
7. Provide clarity to ensure the proposed 100-year peak flow rate shall not exceed the predevelopment 25-year peak flow rate.
8. Update Construction plans with the following:
   a. Construction schedules detailing when sediment trapping measures will occur; stabilization of earthen structures and the general timing of construction phases.
   b. Provide sediment trapping measures for all proposed soil stockpiles.
   c. Provide a double row of perimeter control adjacent to wetland.
   d. Provisions to minimize the transport of sediment (mud) by runoff or vehicle racking onto paved surfaces.
   e. Provisions for cleaning road surfaces where sediment is transported by the end of the day.
   f. Stabilization adequate to prevent erosion at the outlets of all storm sewer pipes.
   g. Provide for the repair and maintenance of all temporary and permanent erosion and sediment control practices.
   h. Provide rip rap at outlet flared end sections and the details.
9. 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.
10. Raise low floor elevations to meet the 3-foot separation requirement or provide approval from the City.
11. Provide a buffer plan with buffer clearly delineated on the grading plan. Permanent boundary markers must be provided.
12. Provide documentation from the DNR if the proposed project includes endangered or threatened species, rare natural communities, colonial waterbird nesting sites, migratory waterfowl concentration areas, deer wintering areas or wildlife travel corridors