COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: February 27, 2017
AGENDA NUMBER: 24
FILE NUMBER: 16-139
ITEM: Hidden Forest East

RECOMMENDATION: Table with 7 Stipulations

APPLICANT: Jeff Stalberger
17404 Ward Lake Dr NW
Andover, MN 55304

PURPOSE: Residential subdivision – 29 single family homes

LOCATION: East of Lexington & North of Bunker Lake Blvd in Ham Lake, Minnesota.
APPLICABILITY:
1. Any work within or adjacent to a Public ditch within the Watershed District.
2. Any work in or adjacent to wetlands, lakes or water courses
3. One or more cumulative acres of land disturbance
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. High water table, outwash and organic soils
6. Excavation or filling or a combination of excavation and filling of sand or other excavation or fill material including the laying, repairing, replacing or enlarging of a culvert or an underground pipe or facility where it crosses a public ditch or waters of the state.
7. Endangered, Threatened or Special concern species, elements or communities

EXHIBITS:
1. Stormwater Memo by Plowe, dated 2/14/17, received 2/14/17.
2. Construction plan set by Plowe; dated 2/14/17, received 2/14/17.
4. Wetland Delineation Report by Kjolhaug Environmental Services; dated 8/22/16, received 8/31/16
5. Wetland Permit Application by Kjolhaug, Environmental Services; dated 1/24/17, received 1/25/17
6. Rare Plant Avoidance Plan by Kjolhaug, Environmental Services; dated 1/25/17, received 1/25/17
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 are public ditches on the property. The access road (143rd Ave) crosses County Ditches 44-7 and 44-8 according to the public drainage map. The ditches were last inspected in 2016.

Ditch 44-7 crossing- The approved elevation at the 143rd Ave crossing is 888.9 ft MSL and 0.04% slope. The observed ditch centerline elevations are 887.7 ft MSL downstream and 887.5 ft MSL upstream. Existing elevations of the ditch represent a 1.2-1.4 foot variance below the design elevations. Existing elevations, slopes and condition of ditch are good. Alternatives to repair and additional drainage have been considered and reviewed. The ditch is not in need of repair. The ditch is a 3rd order stream. Land use in the area is agriculture and single family residential. The ditch serves the primary role of agricultural drainage. The ditch serves approximately 528 acres of agricultural land. There are flooding concerns upstream and downstream.

Ditch 44-8 crossing- The approved elevation at the 143rd Ave crossing is 888.2 ft MSL and 0.10% slope. The observed ditch centerline elevations are 887.8 ft MSL downstream and 888.1 ft MSL upstream. Existing elevations, slopes and condition of ditch are good. Alternatives to repair and additional drainage have been considered and reviewed. The ditch is not in need of repair. The ditch is a 3rd order stream. Land use in the area is agriculture and single family residential. The ditch serves the primary role of agricultural drainage. The ditch serves approximately 4 acres of agricultural land. There are flooding concerns upstream and downstream.

Ditch Hydraulics: Crossings of the ditch are proposed at 44-7 and 44-8. The proposed crossings involves the replacement of culverts. The proposed culverts are of sufficient hydraulic capacity.

Erosion and Sediment Control: Soils affected by the proposal are Lino, Isanti, Rifle and Markey.
- 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 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 and FEMA. The project does propose to place fill within the floodplain. The total floodplain impact is negligible. The proposed impact is within the floodway. There are flooding concerns downstream.

**High Water Flooding:** Information has been provided to substantiate low floor elevations. Low floor elevations do meet the criteria for the City of Ham Lake; 1 ft above mottled soil or 100 yr.

**Groundwater:** Geotechnical information collected in August 2003 and additionally September 2016 indicates long term groundwater elevation is present at 6 - 12 feet below the surface.

The site is within a Municipal Drinking Water Supply Area (DWSMA).

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 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 Ham Lake. The Stormwater Treatment Practices (STPs) consisting of the following:

<table>
<thead>
<tr>
<th>Stormwater Treatment Practices</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basins</td>
<td>8</td>
</tr>
</tbody>
</table>

Inspection and maintenance of stormwater facilities will be the responsibility of the City of Ham Lake. 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. The 1-inch filtration is achieved. The stormwater management system uses NURP ponds and filtration. 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. The project also uses adjacent wetlands to the west for rate control which will not impact adjacent properties. 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 the 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 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 and drains to 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 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 August 22, 2016. The wetland boundary has been checked.

The wetland is a DNR protected water.

The total proposed wetland impact is 5,304 square feet (0.1218 ac). The impact is through fill in 2 locations as shown below:

The de minimis is 400 sf. TEP members have been notified with a complete plan and have been requested to submit comments.

The project is not wetland dependent.

The project is not exempt.

The applicant does need to contact the DNR area hydrologist and the Corps of Engineers.

Two alternatives, plus the proposed project, have been submitted. On-site sequencing does not apply. The avoidance alternatives are considered good faith efforts. None of the avoidance alternatives are considered feasible and prudent.

1. The applicant suggests that avoidance is not reasonable because there is no alternative. No alternative exists because:
1) The basic purpose of the project cannot reasonably be accomplished at an alternative site, alternative sites are not available, alternative sites are not practical/prudent;
2) The applicant has made a good faith attempt in pursuing alternatives;
3) The applicant has demonstrated that the activity will minimize wetland impacts through:
   a. modifying the size, scope, configuration, and density of the project,
   b. attempted to remove or accommodate site constraints including zoning, infrastructure, access, or natural features, and c) otherwise minimize wetland impacts.

2. The applicant suggests that avoidance is not reasonable because sequencing flexibility applies citing that:

   1) Alternatives are demonstrably cost prohibitive such that the only available alternatives would make the projected cost substantially greater than the costs normally associated with similar projects.

   2) The applicant suggests that avoidance is not reasonable because there is a compelling public need/interest. There is a compelling public need/interest because
      a. The wetland impact is minimized and proposed to be mitigated;
      b. the proposed wetland replacement is certain to provide equal or greater functions and public values to the District than the wetland to be impacted.

Wetland Replacement Plan:
A wetland replacement plan has been submitted.
A replacement plan application has been submitted.
The wetland replacement plan has been sent to TEP members for comment.
Consent to Replacement have been completed for replacement wetland.
Replacement is proposed to be through banking at a ratio of 2:1.

The TEP has not approved the wetland mitigation plan.

Wildlife:
The proposed project does include endangered or threatened species, rare natural communities, colonial waterbird nesting sites, migratory waterfowl concentration areas, deer wintering areas or wildlife travel corridors.
The endangered or threatened species, rare natural community are black huckleberry (Gaylussacia baccata), bristle-berry (Rubus semisetosus), Blanding’s Turtle (Emydoidea blandingii) and MBS Site of Biodiversity Significance.
The applicant has contacted the MDNR natural heritage or endangered species program.
The applicant has indicated that contact was made 12/13/16 MDNR has responded to the applicant. The applicant was required to complete an avoidance plan.
It is unknown if the project is present, if the project will propose substantial adverse alteration or significant detrimental impact on a species or removal of a plant species will occur. The MDNR has provided the applicant with preliminary comments requesting additional information.

**Performance Escrow:** $20,000  
**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 + (36 ac * $500/ac) = $20,000</td>
<td>1. Receipt of escrows.</td>
</tr>
</tbody>
</table>
| **Stormwater & Hydraulics:** The proposed culverts at CD 44-8 (Lexington) and 44-7 (143rd Ave) will need to be installed at the approved ditch elevations. | 2. The inverts for the proposed culverts will need to be at the following elevations:  
  - CD 44-8/Lexington (US/DS): 888.3'/888.1’ (88 NAVD)  
  - CD 44-7/143rd Ave (US/DS): 888.9'/889.0’ (88 NAVD) |
| Downstream end of CD 44-7/143rd culvert is not protected from erosion. | 3. Install rip rap at downstream end of proposed CD 44-7/143rd culvert to prevent erosion. |
| **Soils & Erosion Control:** Response letter indicates that no dewatering will be required for two eastern ponds. However, it is unclear if dewatering will be required during construction activities throughout the rest of the site. Detailed information regarding dewatering has not been submitted. | 4. Provide statement regarding dewatering for entire development. If dewatering is required, prior to dewatering activities, provide well-field location, rates, discharge location, schedule and quantities. |
| **Wetlands:** The TEP has not approved the wetland replacement plan. | 5. Replacement Plan must be approved by the TEP |
| Proof of purchase of wetland credits must be provided to the District. | 6. Proof of purchase of credits must be provided to the District. |
| **Wildlife:** The MDNR has not approved the Avoidance Plan for the project. | 7. Proof of an approved Avoidance Plan by the DNR Commissioner |
**RECOMMENDATION:** Table with 7 Stipulations

**Stipulations:**

1. Receipt of escrows.
2. The inverts for the proposed culverts will need to be at the following elevations:
   - CD 44-8/Lexington (DS/US): 888.1'/888.3' (88 NAVD)
   - CD 44-7/143rd Ave (DS/US): 888.9'/889.0' (88 NAVD)
   b. Provide as-built elevations, sizes and pipe lengths for each culvert.
3. Install rip rap at downstream end of proposed CD 44-7/143rd culvert to prevent erosion.
4. Provide statement regarding dewatering for entire development. If dewatering is required, prior to dewatering activities, provide well-field location, rates, discharge location, schedule and quantities.
5. Replacement Plan must be approved by the TEP
6. Proof of purchase of credits must be provided to the District.
7. Proof of an approved Avoidance Plan by the DNR Commissioner