COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: January 27, 2020
AGENDA NUMBER: 13
FILE NUMBER: 19-075
ITEM: Pheasant Hollow

RECOMMENDATION: Table with 8 Conditions and 2 Stipulations

APPLICANT: Northstar Improvements
23250 Sunset Road NE
East Bethel, MN 55005

PURPOSE: Four lot residential development and cul-de-sac

LOCATION: 12031 Partridge Street NW, Coon Rapids, 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. High infiltration soils
7. Highly erodible soils
8. Endangered, Threatened or Special concern species, elements or communities

EXHIBITS:
4. MPCA Contamination Screening Checklist; by Demarc Land Surveying and Engineering, dated 1/15/2020, received 1/16/2020.
6. Trail Easement Exhibit; by Demarc Land Surveying and Engineering, undated, received 1/16/2020.

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 was provided initial comments.

Ditches: There is a public ditch on the property. The public ditch is County Ditch 54/Coon Creek according to the public drainage map. The elevations through this property are 848.8 ft MSL at the downstream end and 849.7 ft MSL at the upstream end.

The ditch is a 5th order stream. The ditch serves the primary role of a trunk drainage system.

The ditch serves approximately 80 acres of agricultural land. Land use in the area is a mix of agricultural, residential, and wetlands. There are drainage sensitive uses upstream.

The ditch has been inspected. Existing elevations, slopes and condition of ditch are good. The ditch is not in need of repair.

There are no proposed activities within the ditch.

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

Erosion and Sediment Control: Soils affected by the proposal are Rifle, Nymore, and Duelm.

- Stabilizing vegetation is 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 and do have a note to stabilize within seven (7) days of inactivity.
- 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.
- Stormwater runoff does not pass through a sediment basin or other sediment trapping BMP with equal or greater storage capacity and is not required.
- 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 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.
• Details provided for ESC (riprap, perimeter control, concrete washout, inlet protection, etc.)

Dewatering: Shallow ground water does not exist on site. The project may require dewatering.

Floodplain: There is floodplain on the property according to the District model and FEMA. The District’s floodplain elevation is at 857.8 feet. The project does propose to place fill within the floodplain. The total floodplain fill quantity was not provided. Floodplain storage calculations were provided. Adequate compensatory storage is provided. The proposed impact is within the flood fringe. There are no flooding concerns upstream and downstream.

High Water Flooding: Information has been provided to substantiate low floor elevations. Low floor elevations meet the criteria for the City of Coon Rapids; 3 feet above mottled and 2 feet above 100-year high water level.

Groundwater: Geotechnical information collected in November 2019 indicates long term groundwater elevation is present at 6 to 11.5 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 not include sites of historic or archeological significance.

Local Planning & Zoning: The proposed project is not consistent with local planning and zoning. There is an approved local water plan.

Property owners affected by changes in drainage have not been notified or acknowledged 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>Inspection &amp; Maintenance Responsibility</th>
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</thead>
</table>
A maintenance agreement has not been executed. The applicant has not submitted a Maintenance Plan for each Stormwater Treatment Practice. The Maintenance Plan is not consistent with District Maintenance standards for each STP.

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 a sediment sump manhole with SAFL baffle and an infiltration basin. Calculations have been provided that illustrate the 1-inch infiltration volume is achieved below outlet. Project is within the City of Coon Rapids which has adopted the MIDS performance standard. The 1.1-inch infiltration is not achieved.

Drainage sensitive uses do not 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 via overland flow. All discharges into infiltration basins are pretreated by a sediment sump manhole with SAFL baffle and may be 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 and drains to an Impaired Water. The Impaired Water is County Ditch 54 (Coon Creek). Coon Creek is impaired for Aquatic Life (Macro-invertebrates) and Aquatic Recreation (E. coli). The major stressors are Total Suspended Solids (TSS), Total Phosphorus (TP), and 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.

<table>
<thead>
<tr>
<th>Basins</th>
<th>1</th>
<th>Unknown</th>
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<tbody>
<tr>
<td>Sump w/ SAFL Baffle</td>
<td>1</td>
<td>Unknown</td>
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</table>
**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 November 14, 2019. The wetland boundary has been checked.

There is a DNR protected water on the property. The wetlands adjacent to the project area are not DNR protected waters.

The total proposed wetland impact is 0 square feet.

**Wetland Replacement Plan**: A wetland replacement plan has not been submitted and is not required.

**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.

The applicant has not contacted the MDNR natural heritage or endangered species program.

**Performance Escrow**: $3,790.00  
**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>Escrows: $2,000 + (3.58 ac * $500/ac) = $3,790.00</td>
<td>1. Receipt of escrows.</td>
</tr>
<tr>
<td><strong>Floodplain</strong>: Floodplain storage calculations were provided. Adequate compensatory storage is provided. The infiltration basin is included in the proposed cut volume within the floodplain, which is not allowed.</td>
<td>2. Update floodplain storage calculations to exclude volume within the infiltration basin.</td>
</tr>
<tr>
<td><strong>Local Planning &amp; Zoning</strong>: The proposed project is not consistent with local planning and zoning.</td>
<td>3. Update volume calculations and stormwater facility design to meet the City’s requirement for infiltration of 1.1” of runoff from both new and reconstructed impervious surfaces.</td>
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<td><strong>Stormwater &amp; Hydraulics</strong>: The rear yard of lot 4 appears that it could pond water up to an elevation of 854.8.</td>
<td>4. Update the grading of the rear yard of lot 4 to maintain positive drainage to the wetland.</td>
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<td><strong>Soils &amp; Erosion Control</strong>: Adjacent properties and stormwater ponds are not protected from sediment deposition. Proposed perimeter control along eastern</td>
<td>5. Update Construction Plans to include the following: a. Update Stormwater Pollution Prevention Plan to show a single</td>
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</table>
The extent of land disturbance is not continuous.

Stabilization adequate to prevent erosion has not been provided at the outlets of all storm sewer pipes.

Infiltration basins are not protected from erosion and sedimentation during construction. After initial grading the District requires that infiltration basins be completely surrounded by erosion control measures to prevent the basin from clogging.

<table>
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<tr>
<th>Water Quality: All discharges into infiltration basins are pretreated by a sediment sump manhole with SAFL baffle. The sump manhole with SAFL baffle may designed correctly for water quality treatment prior to discharge into a treatment practice.</th>
<th>6. Provide calculations (SHSAM can be used) to indicate sumps are appropriately sized to meet district removal rates of 80% TSS for OK110 particle size. A minimum of 4-foot depth is required to prevent resuspension.</th>
</tr>
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<tbody>
<tr>
<td>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.</td>
<td>7. Provide an O&amp;M Agreement that meets District requirements.</td>
</tr>
<tr>
<td>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.</td>
<td>8. 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.</td>
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**RECOMMENDATION:** Table with 8 Conditions and 2 Stipulations

**Conditions:**
1. Receipt of escrows.
2. Update floodplain storage calculations to exclude volume within the infiltration basin.
3. Update volume calculations and stormwater facility design to meet the City’s requirement for infiltration of 1.1” of runoff from both new and reconstructed impervious surfaces.
4. Update the grading of the rear yard of lot 4 to maintain positive drainage to the wetland.

5. Update Construction Plans to include the following:
   a. Update Stormwater Pollution Prevention Plan to show a single row of perimeter control extending north to provide continuous perimeter control along the eastern extent of the land disturbance.
   b. Update Grading and Drainage Plan to include energy dissipation at the outlet to the infiltration basin.
   c. After initial grading completely surround the proposed infiltration basins with erosion control measures to prevent the basin from clogging.

6. Provide calculations (SHSAM can be used) to indicate sumps are appropriately sized to meet district removal rates of 80% TSS for OK110 particle size. A minimum of 4-foot depth is required to prevent resuspension.

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

8. 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

**Stipulations:**

1. Submittal of as-builds for sediment sump manhole (sump elevation, invert elevations), infiltration basin overflow and EOF elevations, and infiltration basin treatment volume.

2. Completion of a post construction infiltration test on the infiltration basin by filling the basin to a minimum depth of 6 inches with water and monitoring the time necessary to drain, or double ring infiltration tests to ASTM standards. The Coon Creek Watershed District shall be notified prior to the test to witness the results.