COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: February 24, 2020
AGENDA NUMBER: 11
FILE NUMBER: 19-075
ITEM: Pheasant Hollow

RECOMMENDATION: Approve with 4 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:
6. MPCA Contamination Screening Checklist; by Demarc Land Surveying and Engineering, dated 1/15/2020, received 2/5/2020.
7. Trail Easement Exhibit; by Demarc Land Surveying and Engineering, undated, received 1/16/2020.
PREVIOUS ACTION TAKEN: The application was tabled at the January 27, 2020 meeting 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-builts 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.

**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 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 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. 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 applicant has applied to the City. The City has not completed its review of the current plans.

**Maintenance:** The owner of the Stormwater Management features and treatment practices is the City of Coon Rapids. 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>
<tbody>
<tr>
<td>Basin</td>
<td>1</td>
<td>City of Coon Rapids</td>
</tr>
<tr>
<td>Sump w/ SAFL Baffle</td>
<td>1</td>
<td>City of Coon Rapids</td>
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</tbody>
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As a requirement of the City’s MS4 program, the City will inspect and maintain the stormwater facilities.

**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. Project is within the City of Coon Rapids which has adopted the MIDS performance standard. The 1.1-inch infiltration is achieved. Calculations have been provided that illustrate the 1.1-inch infiltration volume is achieved below outlet.

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.

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 contacted the DNR natural heritage or endangered species program.

MDNR has not responded to the applicant.

**Performance Escrow:** $3,790.00  
**Wetland Escrow:** $N/A

There are not ditch liens on the property.

**ISSUES/CONCERNS:**

<table>
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<tr>
<th>ISSUE</th>
<th>NEED</th>
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<tbody>
<tr>
<td>Escrows: $2,000 + (3.58 ac * $500/ac) = $3,790.00</td>
<td>1. Receipt of escrows.</td>
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<tr>
<td><strong>Local Planning and Zoning:</strong> The City has not completed its review of the current plans. The City’s review of the previous plan set indicated that the applicant was not meeting the 1.1” volume calculations for new and reconstructed impervious surfaces. This has been addressed in the current plan set.</td>
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| **Water Quality:** All discharges into infiltration basins are pretreated by a sediment sump manhole with SAFL baffle. SHSAM output summary provided without input parameters; unclear if the reported removal efficiencies represent accurate drainage area to sump. | 2. Provide SHSAM input parameters and output summary to indicate sumps are appropriately sized to meet district removal rates of 80% TSS for OK110 particle size. Input parameters shall include but are not limited to:  
a. Particle Size Distribution  
b. Watershed Data (drainage area, impervious percent, hydraulic length, average slope, pervious CN)  
c. Influent Concentration |
| **Maintenance:** Long term functioning and protection of the infiltration basin is not adequate. | 3. Provide details and locations for permanent signage around filtration practices to ensure their long-term operation. Detail to be provided by developer with wording to include |
**Filtration Area. No Fill or Structures Allowed Within.** or use MnDOT standard sign X3-6a.

| 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. |
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**Stipulations:**
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