COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: September 25, 2017
AGENDA NUMBER: 11
FILE NUMBER: 17-177
ITEM: Glen Cove Residential Development

RECOMMENDATION: Table with 9 Stipulations

APPLICANT: Doug Paulson
10550 Mississippi Blvd
Coon Rapids, MN 55433

PURPOSE: 19 Lots on 7 Acres

LOCATION: Intersection of Radisson Rd NE and Rodeo Dr NE, Blaine, MN

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. 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. Preliminary Plat of Glen Cove; by Acre Land Surveying, dated September 8, 2017, received September 13, 2017.

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 a public ditch on the property. The public ditch is County Ditch 41-3-A according to the public drainage map. The observed elevations through this property are 893.4 ft MSL at the downstream end and 895.6 ft MSL at the upstream end. The approved elevations through this property are 894.1 ft MSL at the downstream end and 895.3 ft MSL at the upstream end. Existing elevations of the ditch are represent a 0.7-0.3
foot variance from the approved elevations. The ditch is a 1st order stream. The ditch serves the primary role of storm water conveyance. The ditch serves approximately 0 acres of agricultural land. Land use in the area is single family residential and commercial. There are no flooding concerns upstream or downstream. The ditch has been inspected. Existing elevations, slopes and condition of ditch are good/fair/poor. 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 Markey, Lino, Isanti, and Zimmerman.

- 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.
- 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 may exist on site. It is unknown if the project requires dewatering.

**Floodplain:** There is floodplain on the property according to the District model and FEMA. The District’s floodplain elevation is at 899.7 feet. The project does propose to place fill within the floodplain. The total floodplain impact is unknown. There are flooding concerns downstream.
High Water Flooding: Information has been provided to substantiate low floor elevations. Low floor elevations meet the criteria for the City of Blaine; 2 ft above mottled, 2 ft above 100 yr

Groundwater: Geotechnical information collected in June 2017, indicates groundwater is present at 5 to 6.3 feet below the surface.

The site is not within a Municipal Drinking Water Supply Area (DWSMA).

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 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 the City of Blaine. The Stormwater Treatment Practices (STPs) consisting of the following:

<table>
<thead>
<tr>
<th>Stormwater Treatment Practices</th>
<th>Number</th>
<th>Maintenance Responsibility</th>
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<tbody>
<tr>
<td>NURP Wet Sedimentation Basin</td>
<td>1</td>
<td>City of Blaine</td>
</tr>
<tr>
<td>Biofiltration Swale</td>
<td>1</td>
<td>City of Blaine</td>
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</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 achievable within the project area, due to Type ‘D’ soil. The stormwater management system utilizes a NURP sedimentation basin and a biofiltration swale. 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, or rates which would interfere with sensitive downstream land uses. Increases in the volume, velocity and peak water flow rates of stormwater runoff are expected. 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 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 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 not within one (1) mile of an Impaired Water.

**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 is dated 6/2/2017. The wetland is not a DNR protected water. The total proposed wetland impact is 0.3281 acre. The impact is through fill and excavation in two locations as shown below.

![Figure 3 - Proposed Grading Plan](image-url)
TEP members have been notified with a complete plan and have been requested to submit comments. The project is wetland dependent and is not exempt. The applicant has contacted the Corps of Engineers.

Two alternatives, plus the proposed project, have been submitted. On-site sequencing does apply. The avoidance alternatives are considered good faith efforts. None of the avoidance alternatives are considered feasible and prudent.

The applicant suggests that avoidance is not reasonable because:

1) The applicant suggests that avoidance is not reasonable because there is a compelling public need for residential development consistent with the City of Blaine Comprehensive Plan.
2) The wetlands are degraded and partially drained, avoiding the wetlands would perpetuate this status and affect the ability of the wetlands to function in the future.
3) Public Ditch 41-3A is located on the property, limiting the project boundaries and flexibility of site design.
4) Routing stormwater pond discharge to sustain these wetlands would require raising the site at least 1 foot which would cost between $181,000 and $326,700.

**Wetland Replacement Plan:**
A wetland replacement plan has been submitted and sent to the TEP for review. Replacement is proposed to be through purchasing wetland credits at a ratio of 2:1. The credits will be purchased through wetland bank #1409. The TEP has approved the wetland mitigation plan.

**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.

**Performance Escrow:** $5,500.00
**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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<tr>
<td>Escrows: $2,000 + (7 ac * $500/ac) = $5,500.00</td>
<td>1. Receipt of escrows.</td>
</tr>
<tr>
<td>Stormwater &amp; Hydraulics: The rate of post-development runoff from the site exceeds rates which would interfere with sensitive downstream land uses (Golf Course). Basin is within the 50 foot ditch easement and will not allow for ditch maintenance</td>
<td>2. For areas upstream of drainage sensitive land uses, the 100-Year post development discharge rate must be equal to or less than the 25-Year predevelopment discharge rate. 3. Basin design needs to account for maintenance access outside of the</td>
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without compaction of the soil within the basin. Basin design needs to account for maintenance access outside of the footprint of the basin.

No details provided for biofiltration basin:
- HydroCAD model has 6” outlet pipe and construction plans list drain tile as 4”
- It is unclear if soil media or underdrain will be limiting factor for drainage rate of biofiltration basin.
- Need to verify depth of drain tile used in HydroCAD
- Unclear if HWL is contained within the basin.

4. Provide biofiltration basin detail for construction including soil media depth and type, elevations of high points and drain tile size.

5. If soil media is limiting factor for drainage rate, update HydroCAD model to include filtration routed to outlet.

6. The applicant must acknowledge that they will conduct a post construction test on the filtration basin by filling the basin to a minimum depth of 6 inches with water and monitor the time necessary to drain. The Coon Creek Watershed District shall be notified prior to the test to witness the results.

Soils & Erosion Control: It is unclear if dewatering is needed during the construction of the proposed project.

7. 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.

Floodplain: The project proposes to place fill within the floodplain. The floodplain for the project location is 899.7 ft (NAVD 88).

8. Provide a figure and calculations quantifying how much fill will be placed within the floodplain and showing the proposed floodplain extents.

Wetlands: Wetland credits are proposed to be purchased to replace the wetland impacts.

9. Provide proof of purchase for wetland credits.

**RECOMMENDATION:** Table with 9 Stipulations

**Stipulations:**
1. Receipt of escrows.
2. For areas upstream of drainage sensitive land uses, the 100-Year post development discharge rate must be equal to or less than the 25-Year predevelopment discharge rate.
3. Basin design needs to account for maintenance access outside of the footprint of the basin. Maintenance bench should be designed for a 20 foot backhoe track width.

4. Provide biofiltration basin detail for construction including soil media depth and type, elevations of high points and drain tile size.

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