COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: February 11, 2019
AGENDA NUMBER: 14
FILE NUMBER: 18-072
ITEM: Lions Coon Creek Park Improvements

RECOMMENDATION: Table with 10 Stipulations

APPLICANT: City of Coon Rapids
11155 Robinson Drive
Coon Rapids, MN 55433

PURPOSE: Lions Park improvements and 119th Ave NW culvert replacement

LOCATION: Hanson Blvd and 119th Ave NW, and north of Coon Creek, 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. 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. Construction Plan set (44 sheets); by WSB, dated 1/16/19, received 1/30/19.
2. HydroCAD Report; by WSB, dated 1/16/19, received 1/30/19.
3. Stormwater Narrative; by WSB, dated 1/30/19, received 1/30/19.
4. Existing Drainage Area Figure; by WSB, dated 1/16/19, received 1/30/19.
5. Proposed Drainage Area Figure; by WSB, dated 1/16/19, received 1/30/19.
6. Flood Plain Cut Fill Exhibit; by WSB, dated 1/29/19, received 1/30/19.
7. Geotechnical Report for Lions Coon Creek Park Improvements; by NTI dated 4/12/18, received 1/30/19.
8. Geotechnical Report for 119th Avenue Northwest Culvert Replacement; by NTI, dated 8/27/18, received 1/30/19.
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 public ditches are County Ditch 54 (Coon Creek) and Tronson Creek according to the public drainage map. The approved/as-built elevations through this property are 843.9 ft MSL at the downstream end and 844.6 ft MSL at the upstream end (Coon Creek) and no approved elevation for Tronson Creek.

Existing elevations, slopes and condition of ditch 54 are 848.5 and represent a 4.1 variance from the as-built elevations. Alternatives to repair and additional drainage have been considered and reviewed.

Ditch 54 is a 5th order stream and Tronson Creek is a 2nd order stream. The ditches serve the primary role of:
   a. Storm water conveyance
   b. Trunk drainage system

The ditch serves approximately 0 acres of agricultural land.
Land use in the area is toward residential and vacant open land. There are no flooding concerns upstream and/or downstream.

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

Ditch Hydraulics: A crossing of the ditch is proposed. The proposed crossing involves the replacement of a culvert. The proposed culvert may be of sufficient hydraulic capacity. Proposed bridge improvements are within the floodway, proposed cross section must match existing cross section.

Erosion and Sediment Control: Soils affected by the proposal are Lino, Isanti, Rifle, Nymore, Markey, 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 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.
• 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 does require dewatering.

Floodplain: There is floodplain on the property according to the District model and FEMA. The District’s floodplain elevation at Lions Park is at 857.6 feet. The District’s floodplain elevation upstream and downstream of 119th Ave NW is at 861.3 and 857.6 feet, respectively. The project does propose to place fill within the floodplain. There is a net increase of 0.04 acre-feet of proposed storage volume within the floodplain. Compensatory storage is provided but calculations need to be verified. There are no flooding concerns upstream or downstream.

High Water Flooding: Information has not been provided to substantiate low floor elevations and is not needed as no new buildings are proposed.

Groundwater: Geotechnical information for Lions Coon Creek Park Improvements collected in March 2018 and for 119th Ave NW Culvert Replacement collected in July 2018 indicate long term groundwater elevation is between 849.5 and 852 feet.

The project site is not within the Emergency Response Area, 10 Year Well Head Protection Area, or 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.

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 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>
</tr>
</thead>
<tbody>
<tr>
<td>Biofiltration Basin</td>
<td>1</td>
<td>City of Coon Rapids</td>
</tr>
<tr>
<td>Sump</td>
<td>1</td>
<td>City of Coon Rapids</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 allowed within the project area but is not feasible due to high groundwater elevation. The stormwater management system utilizes a biofiltration basin. Volume reduction is not achieved due to high groundwater. Calculations have been provided that illustrate the 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. No increases in velocity and peak water flow rates of storm water runoff is expected. Volume of storm water runoff is expected to increase, but this increase is not expected to have negative impacts downstream. No concentrated storm water is proposed as part of this project. No on-site constructed storm water conveyance channels are proposed as part of this project.

**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 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 Impaired Waters. The Impaired Waters are County Ditch 54, Sand Creek, and Lower Coon Creek. These waters are 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 not exist on-site according to the 1987 Federal manual, NWI, PWI and Soil Survey. Wetlands have not been delineated. An adjacent delineation approved in 2017 had a wetland elevation at about 852’. The project does not encroach below that.

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

**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 applicant has contacted the MDNR natural heritage or endangered species program. The applicant has indicated that contact was made 11/02/18. MDNR has responded to the applicant.

If the project is present, the project does not propose substantial adverse alteration or significant detrimental impact on a species or removal of a plant species, if the DNR recommendations are followed.

**Performance Escrow:** $5,045

**Wetland Escrow:** $N/A

There are ditch liens on the property.

**ISSUES/CONCERNS:**

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<tr>
<th>ISSUE</th>
<th>NEED</th>
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<tbody>
<tr>
<td>Escrows: $2,000 + (6.09 ac * $500/ac) = $5,045</td>
<td>1. Receipt of escrows.</td>
</tr>
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</table>

**Stormwater & Hydraulics:** The applicant is meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation. A post construction test on the biofiltration basin will be required to verify the assumed filtration rates are obtained.

The proposed culvert may be of sufficient hydraulic capacity.

Filtration basin may interact with groundwater.

2. The applicant must provide a note on the construction plans that a post construction test on the biofiltration basin will be conducted 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.

3. Provide calculations that illustrate proposed culvert capacity matches existing conditions. If the capacity is greater, provide information that downstream structures will not be
Proposed bridge improvements are within the floodway, proposed cross section must match existing cross section.**impacted, and creek will be protected.**

4. Provide impermeable liner for filtration basin.

5. Provide survey data for bridge cross section before and after construction to ensure the as-built cross section matches the existing cross section.

**Floodplain:** Compensatory storage calculations are provided. However, it is unclear if the cut areas are still connected to the floodplain.

6. Illustrate how cut volumes are connected to the overall floodplain.

**Soils & Erosion Control:** Adjacent properties and stormwater ponds are not protected from sediment deposition.

District requires that stockpiles receive temporary stabilization if unworked for 7 days.

Filtration basin is not protected from sediment deposition

7. Update Sheet L2.4 to reflect double row of perimeter control upstream and downstream of 119th Ave NW at Tronson Creek.

8. Update Sediment Control Practices on Sheet L1.1 to initiate stabilization of unworked stockpiles within 7 days.

9. Provide inlet protection and perimeter control of filtration after rough grading to prevent sediment from entering and construction vehicles or equipment do not enter BMP.

**Wildlife:** Considerations for wildlife not addressed.

10. Provide acknowledgement for following DNR NHIS recommendations.

**RECOMMENDATION:** Table with 10 Stipulations

**Stipulations:**

1. Receipt of escrows.
2. The applicant must provide a note on the construction plans that a post construction test on the biofiltration basin will be conducted 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.
3. Provide calculations that illustrate proposed culvert capacity matches existing conditions. If the capacity is greater, provide information that downstream structures will not be impacted, and creek will be protected.

4. Provide impermeable liner for filtration basin.

5. Provide survey data for bridge cross section before and after construction to ensure the as-built cross section matches the existing cross section.

6. Illustrate how cut volumes are connected to the overall floodplain.

7. Update Sheet L2.4 to reflect double row of perimeter control upstream and downstream of 119th Ave NW at Tronson Creek.

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9. Provide inlet protection and perimeter control of filtration after rough grading to prevent sediment from entering and construction vehicles or equipment do not enter BMP.

10. Provide acknowledgement of following DNR recommendations.