COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: May 28, 2019
AGENDA NUMBER: 12
FILE NUMBER: 18-171
ITEM: Coon Rapids Self Storage

RECOMMENDATION: Approve with 5 Stipulations

APPLICANT: John Washburn
800 E Main St
Anoka, MN 55303

PURPOSE: Construct self-storage building
25,200 SQ FT BUILDING ON 1.64 ACRE LOT

LOCATION: Southeast corner of Foley Blvd & 101st Ave

APPLICABILITY:
1. Within 1 mile of an impaired water.
2. One or more cumulative acres of land disturbance
EXHIBITS:
1. Infiltration Test Result; by Northern Technologies LLC, dated 4/26/2019, received 5/14/2019.
PREVIOUS ACTION TAKEN: The application remained tabled at the 5/13/2019 meeting with 4 stipulations:

1. Provide details on roof drain system to show how roof runoff will be routed to infiltration basin.
2. Provide update HydroCAD model with correct time of concentration for area P1.
3. Update infiltration rate used in HydroCAD model.
4. Provide an O&M Agreement that meets District requirements.

FINDINGS:
Pre-application Meeting: The project as submitted has received a general review during a pre-application meeting on 10/4/18.

Ditches: There is not a public ditch on the property.

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

Erosion and Sediment Control: Soils affected by the proposal are Sartell.

- 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.
- 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: It is unknown if shallow groundwater exists on site. The project may require dewatering.
**Floodplain:** There is no floodplain on the property according to the District model and FEMA.

**High Water Flooding:** Information has been provided to substantiate low floor elevations. Low floor elevations do meet the criteria for the City of Coon Rapids; 3 ft above mottled, 2 ft above 100 yr.

**Groundwater:** Geotechnical information collected in April 2019 indicates long term groundwater elevation is present at 13 feet below the surface.

The project site is within the 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.

**Maintenance:** The owner of the Stormwater Management features and treatment practices is E&R Investments, LLC. 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>Filtration basin</td>
<td>1</td>
<td>E&amp;R Investments</td>
</tr>
<tr>
<td>Infiltration basin</td>
<td>1</td>
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</tr>
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</table>

A maintenance agreement has not been executed. The applicant has submitted a draft Maintenance Plan for each Stormwater Treatment Practice. The Maintenance Plan is 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 not provided.

**Stormwater & Hydrology:** Infiltration is allowed within the project area but must be filtered prior to infiltration due to the project location within a WPA/DWSMA. The site is not within the Emergency Response Area. The 1-inch infiltration is achieved. The stormwater management system proposes an infiltration basin for roof runoff and a filtration basin for other impervious runoff.
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; regional basin used. 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 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 within one (1) mile of an Impaired Water. The Impaired Water is Pleasure Creek. Pleasure 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 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.

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

**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. The applicant has not contacted the MDNR natural heritage or endangered species program and is not required to.

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.

**Performance Escrow:** $2,660 (Received 4/30/19 #4068): $2,000 + (1.32 ac * $500/ac) = $2,660

**Wetland Escrow:** $N/A

There are not ditch liens on the property.
**ISSUES/CONCERNS:**

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>NEED</th>
</tr>
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<tr>
<td>Stormwater &amp; Hydraulics: No information provided on roof drain system.</td>
<td>1. Provide details on roof drain system to show how roof runoff will be routed to infiltration basin.</td>
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<td></td>
<td>2. The applicant must provide a note on the construction plans that a post construction test on the Filtration 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.</td>
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<td>Proposed infiltration basin is modeled in HydroCAD with infiltration rate of 0.75 inches/hour but is modeled in MIDS with infiltration rate of 1.63 inches/hour.</td>
<td>3. Update MIDS calculations for proposed infiltration basin to reflect infiltration rate of 0.75 inches/hour.</td>
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| Time of Concentrations for E1, P1, P2, and P3 have been calculated with Sheet Flow greater than 100 feet. Sheet Flow should not exceed 100 feet. Once flow length eclipses 100 feet it should be characterized as Shallow Concentrated Flow. | 4. Provide updated HydroCAD model that addresses the following:  
  a. Limit Sheet Flow to 100 feet. Characterize the additional flow length as Shallow Concentrated Flow.  
  b. Change Sheet Flow Surface Description for Subcatchment P1 from Short Grass to Smooth Surfaces to represent roof flow. |
| Maintenance: A maintenance agreement has not been executed. | 5. Provide an O&M Agreement that meets District requirements. |

**RECOMMENDATION:** Approve with 5 Stipulations

**Stipulations:**

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2. The applicant must provide a note on the construction plans that a post construction test on the Filtration 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. Update MIDS calculations for proposed infiltration basin to reflect infiltration rate of 0.75 inches/hour.
4. Provide updated HydroCAD model that addresses the following:
a. Limit Sheet Flow to 100 feet. Characterize the additional flow length as Shallow Concentrated Flow.

b. Change Sheet Flow Surface Description for Subcatchment P1 from Short Grass to Smooth Surfaces to represent roof flow.

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