COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: May 13, 2019
AGENDA NUMBER: 18
FILE NUMBER: 19-063
ITEM: NSC A3-A4 Artificial Turf Field

RECOMMENDATION: Approve with 1 Stipulation

APPLICANT: National Sports Center
Attn: Neil Ladd
1700 105th Ave NE
Blaine, MN 55449

PURPOSE: Replace existing soccer fields with an artificial turf field

LOCATION: 1700 105th Ave NE, Blaine, MN 55449

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.
EXHIBITS:
1. Construction Plan set (8 sheets); by LHB, dated 5/1/19, received 5/1/19.
2. Stormwater Management Report; by LHB, dated 5/1/19, received 5/1/19.

PREVIOUS ACTION TAKEN: The application was tabled at the April 22, 2019, Board Meeting with 4 stipulations:

1. Receipt of escrows.
2. Include the discharge to pond in HydroCAD to determine storm bounce.
3. Provide statement within Construction Plan set that states dewatering will not be required.
4. Based on the geotechnical report for 17-026, the elevations for the artificial turf field infiltration system proposed prior to the resubmittal achieved 3-feet of separation between bottom of sand and groundwater. Raising the field by 1.8-feet is not required and not recommended as it will result in unnecessary fill being placed within the flood fringe. Using the elevations initially proposed for the infiltration system, provide an updated calculation to substantiate flood fringe fill.

The current submittal shows a proposed top of turf elevation at 898 feet. This is 0.5 feet higher than the 3/27/19 submittal (897.5’) and 1.3 feet lower than the 4/10/19 submittal (899.3’).

FINDINGS:
Pre-application Meeting: The project as submitted has not received a general review during a pre-application meeting.
**Ditches:** There is a private ditch on the property that drains to County Ditch 41.

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

**Erosion and Sediment Control:** Soils affected by the proposal are Rifle.
- 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 have a note to stabilize within seven (7) days of inactivity.
- Adjacent properties, stormwater ponds, and stormwater conveyance systems 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 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 does not require dewatering.

**Floodplain:** There is floodplain on the property according to the District model and FEMA. The District’s floodplain elevation is at 898.4 feet. The project does propose to place fill within the floodplain. The total floodplain impact is 2,645 cubic yards. The proposed impact is within the flood fringe. Compensatory storage is not provided. Wenck performed a floodplain analysis using the proposed turf elevations presented in the 4/10/19 submittal. Adding fill resulted in a 0.2-foot increase in flood stage. The adjacent school and City right-of-way will not be impacted as flooding is confined to the NSC’s property. The 5/1/19 submittal proposes a turf elevation 1.3 feet lower than the 4/10/19 submittal; therefore, the current design is acceptable.
High Water Flooding: Information substantiating low floor elevations is not required as no new structures are proposed.

Groundwater: The geotechnical report used to review this permit was from an adjacent project (17-026 Spring Lake Park Elementary School). The soil conditions for 19-063 NSC A3-A4 Artificial Turf Field were assumed to be consistent. The geotechnical information collected in November 2017 indicates long term groundwater is present between 891- and 893-feet MSL.

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 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: No Stormwater Management features are proposed as part of this project.

Easements: The proposed project does not include a ditch maintenance easement. A ditch maintenance easement is not required.

Stormwater & Hydrology: Infiltration is allowed within the project area. The 1-inch infiltration is achieved. The stormwater management system utilizes an artificial turf field infiltration system. 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. 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 is not proposed as part of this project. 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. Discharges north to the private ditch and east to
the stormwater pond are pretreated by the artificial turf field infiltration system which is 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.

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.

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.

Performance Escrow: $4,500.00 (received 3/27//19 #4025)
Wetland Escrow: $ N/A
There are no ditch liens on the property.

ISSUES/CONCERNS:

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<td><strong>Stormwater &amp; Hydraulics</strong>: Construction Plans inconsistent with HydroCAD Report regarding the invert elevations of the 12” Collector Pipes for both the north and south discharge points.</td>
<td>1. Update invert elevations for 12” Collector Pipes on Construction Plans to match invert elevations shown in HydroCAD Report.</td>
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RECOMMENDATION: Approve with 1 Stipulation

Stipulations:
1. Update invert elevations for 12” Collector Pipes on Construction Plans to match invert elevations shown in HydroCAD Report.

Note: The NSC must complete an overall stormwater plan prior to proposing a project that will use any floodplain storage.