COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: May 11, 2015
AGENDA NUMBER: 15
FILE NUMBER: 15 - 035
ITEM: Springbrook Nature Center

RECOMMENDATION: Table with 4 Stipulations

APPLICANT: City of Fridley
100 85th Ave NE,
Fridley, MN 55432

PURPOSE: Nature center building renovation and expansion over 2.7 acres

LOCATION: 100 85th Ave NE, Fridley, MN

[Map of the area]
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 water that have been, or may be covered by the regional flood.
5. Appropriation and use of groundwater.
6. High water table, outwash and organic soils.
7. High infiltration soils.
8. Highly erodible soils
9. Endangered, Threatened or Special concern species, elements of communities.

EXHIBITS:
1. Geotechnical report by AllPhase Companies, Inc, 12/10/14, received 4/30/15.
2. HydroCad model by BKBM, 4/28/15, received 4/30/15.
4. Demolition and erosion control plan, grading drainage and erosion control plan, utility plan, paving and geometric plan and civil detail sheets by Partners and Sirny Architects and BKBM Engineers, 4/29/15, received 4/30/15.
5. Wetland delineation, Pinnacle Engineering,

HISTORY & CONSIDERATIONS:
This item has not been before the Board.

FINDINGS:
Ditches and Drainage: There is a public ditch on the property. The ditch is County Ditch 17 and is also known as Springbrook. The ditch has not been inspected. There are approximately 0 acres of existing agricultural land affected by this ditch. The project site is tributary to County Ditch 17. The trend in land use for this drainage area is toward residential, commercial, and industrial. There are flooding concerns downstream. Alternatives to additional drainage considered and reviewed include storage and retention. The internal flow control weirs were repaired during the winter of 2014/15.

Floodplain: There is no floodplain on the property according to FEMA. The District Atlas 14 model predicts the 100-year elevation for the subwatershed at 862.6 feet. The total floodplain impact is 0 acre-feet, within the floodplain. Compensatory storage is provided.

The applicant is required to run the 100-year elevation for interior ponds using the NOAA Atlas 14 information as shown in the following web link.
http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=mn
**Groundwater:** Surficial ground water is present at 856.5 to 858.9 feet. The site does include groundwater sensitive areas. Information has been provided to substantiate low floor elevations. Low floor elevations do meet the criteria for the City of Fridley 1 feet above mottled soil.

**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 proposed project does not include a ditch maintenance easement or utility line crossings. A drainage and utility easement is not provided for the storm water/infiltration ponds shown on the drainage plan and is not needed since this property is owned by the City of Fridley. Property owners affected by changes in drainage have been notified and have acknowledged the changes proposed.

**Soils & Erosion Control:** Soils affected by the proposal are Zimmerman. Stabilizing vegetation is not proposed for disturbed areas within two weeks of rough grading. Adjacent properties are protected from sediment deposition. All wetlands, waterbodies, ponds, infiltration basins and water conveyance systems are protected from erosion and sedimentation. Project site is greater than 1 acre; an NPDES permit is required.

**Stormwater & Hydraulics:** The applicant is not meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation. The applicant is proposing pervious concrete parking and four rain gardens. The analysis needs to show volume reduction by small subwatershed and not the total project size. 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 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.

**Water Quality:** Project does include new impervious drainage areas greater than 1 acre. All discharges into wetlands are not pretreated by a sediment basin/water quality pond and are not designed correctly. Since the water quality standard is being met through volume management calculations for the one inch standard needs to be completed by subwatershed. 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.

**Wetlands:** Wetlands do exist on-site according to the 1987 Federal manual, NWI, PWI and Soil Survey. The delineation has been reviewed and approved by the TEP. No wetland impacts are proposed.
**Wildlife:** The proposed project does include the Blanding’s turtles (*Emydoidea blandingii*), a state-listed threatened species, which has been reported from the vicinity of the proposed project and may be encountered on site. The DNR has provided the applicant with information to protect the turtle.

The site has also been identified as a Site of Moderate Biodiversity Significance in 1989. However, much of the site has been developed since 1989 so a Biological Assessment is not being required by the DNR.

**Performance Escrow:** $3,345.00

### ISSUES/CONCERNS:

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<th><strong>Stormwater &amp; Hydraulics:</strong> It is unclear if the applicant is meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation. The volume analysis needs to be completed for each containment unit. That is the parking lot pervious pavement needs be separated from the four rain gardens.</th>
<th>1. Provide stormwater runoff calculations that show the site is meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation by each subwatershed or volume treatment method.</th>
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<td>The applicant is not meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation. All projects in the Coon Creek Watershed District must meet this requirement. If applicants cannot meet this requirement due to site constraints in its entirety, they must meet it to the greatest extent practical and explain why it cannot be met.</td>
<td>2. The applicant must acknowledge that they will conduct a post construction test on the infiltration 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.</td>
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<td>A post construction test on the infiltration basin will be required to verify the assumed infiltration rates are obtained. The applicant must acknowledge that they will conduct a post construction test on the infiltration 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.</td>
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Soils & Erosion Control: Stabilizing vegetation is not proposed for disturbed areas within two weeks of rough grading.

3. Provide a note on the plans stating revegetation will occur within 14 days of the conclusion of rough grading.

Escrows: $2,000 + (2.69 ac * $500/ac) = $3,345.00

4. Receipt of escrows.

RECOMMENDATION: Table with 4 Stipulations

Stipulations:
1. Receipt of escrows.
2. The applicant must acknowledge that they will conduct a post construction test on the infiltration 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.
3. Provide a note on the plans stating revegetation will occur within 14 days of the conclusion of rough grading.
4. Provide stormwater runoff calculations that show the site is meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation by each subwatershed or volume treatment method.