COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: July 14, 2014
AGENDA NUMBER: 12
FILE NUMBER: 14 - 083
ITEM: London Meadows

RECOMMENDATION: Table with 6 Stipulations

APPLICANT: Paul Emmerich Construction Company
1875 Station Parkway
Andover, MN

PURPOSE: Proposed development of five single family homes

LOCATION: East of London Street NE between Radisson Road NE and 134th Lane NE, Ham Lake MN

APPLICABILITY:
1. One or more cumulative acres of land disturbance.
2. Activities upstream from land that is dependent upon removal of water from the soil profile for their continued use (Drainage Sensitive Uses)
3. High water table, outwash and organic soils.
4. High infiltration soils.
5. Highly erodible soils

EXHIBITS:

HISTORY & CONSIDERATIONS:

The site is currently an open field with sparse trees and is used as an ATV track.

FINDINGS:
Ditches and Drainage: There is not a public ditch on the property. The project site is tributary to County Ditch 59. The trend in land use for this drainage area is toward residential. There are no flooding concerns downstream. Alternatives to additional drainage considered and reviewed include storage and retention.

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 903.2 feet.

Groundwater: Mottled soil is present at 1 to 5.7 feet below the surface at elevations that range from 904.31 to 914.44 feet. The site does not include groundwater sensitive areas. Information has been provided to substantiate low floor elevations. Low floor elevations do not meet the criteria for the City of Ham Lake (1 ft above mottled soil elevation, 1 ft above 100-year).

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 provided for the storm water and infiltration ponds shown on the drainage plan. Property owners affected by changes in drainage have not been notified and have not acknowledged the changes proposed.
**Soils & Erosion Control:** Soils affected by the proposal are Zimmerman. Stabilizing vegetation is proposed for disturbed areas within two weeks of rough grading. Adjacent properties are not protected from sediment deposition. All wetlands, waterbodies, ponds, infiltration basins and water conveyance systems are not 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. 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 down-stream 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 not include new impervious drainage areas greater than 1 acre. There are no proposed discharges into wetlands. 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 not exist on-site according to the 1987 Federal manual, NWI, PWI and Soil Survey.

**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:** $4,950

**ISSUES/CONCERNS:**

<table>
<thead>
<tr>
<th>Groundwater: Lot 2 Block 1 low floor needs to be raised 0.1” to achieve a 1’ separation between the low floor and mottled soils.</th>
<th>1. Adjust low floor elevations to meet the requirements of the City of Ham Lake. The residence on lot 2 of block 1 has a proposed low floor elevation that is 0.9 feet above mottled soils. The City requires a minimum of 1 foot of separation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soils &amp; Erosion Control: Inlet protection is needed for all catch basin including the catch basins located at the intersection of 133rd lane and London Street NE.</td>
<td>2. Provide inlet protection for all proposed catch basins and catch basins located at the intersection of 133rd lane and London Street NE.</td>
</tr>
</tbody>
</table>
**Stormwater & Hydraulics:** The rear yards of Block 2 may have wet backyards due to the infiltration basin and high mottled soils. A drain tile with a cap should be installed during construction to allow for a filtration option if the basin remains wet post construction.

3. Add an underdrain to infiltration basin and place an overflow device at the basin outlet. The mottled soils in this location suggest that infiltration may not be feasible. Ensure the design is consistent with the Minnesota Stormwater Design Manual.

High mottled soils and sedimentation that may cover the infiltration area may not make infiltration in Pond 100 possible. A two cell pond or another method to contain sediment is necessary for the design.

4. Design Pond 100 to meet the volume retention requirement. Due to high mottled soils (908.71) shown in boring #1023, infiltration may not be feasible. Consider splitting the pond into a filtration basin and smaller pond in order to meet the 1 inch requirement. Ensure the design is consistent with the Minnesota Stormwater Design Manual.

The HydroCAD model nomenclature needs to be consistent with grading plan for the basin bottom.

5. Revise plans or HydroCAD for consistency. The construction plans show the bottom elevation of the infiltration basin at 905.5. The HydroCAD model lists the bottom elevation as 905.

| Escrows: $2,000 + (5.9 ac *$500/ac) = $4,950.00 | 6. Receipt of escrows. |

**RECOMMENDATION:** Table with 6 Stipulations

**Stipulations:**

1. Receipt of escrows.
2. Adjust low floor elevations to meet the requirements of the City of Ham Lake. The residence on lot 2 of block 1 has a proposed low floor elevation that is 0.9 feet above mottled soils. The City requires a minimum of 1 foot of separation.
3. Provide inlet protection for all proposed catch basins and catch basins located at the intersection of 133rd lane and London Street NE.
4. Add an underdrain to infiltration basin and place an overflow device at the basin outlet. The mottles soils in this location suggest that infiltration may not be feasible. Ensure the design is consistent with the Minnesota Stormwater Design Manual.
5. Design Pond 100 to meet the volume retention requirement. Due to high mottled soils (908.71) shown in boring #1023, infiltration may not be feasible. Consider
splitting the pond into a filtration basin and smaller pond in order to meet the 1 inch requirement. Ensure the design is consistent with the Minnesota Stormwater Design Manual.

6. Revise plans or HydroCAD for consistency. The construction plans show the bottom elevation of the infiltration basin at 905.5. The HydroCAD model lists the bottom elevation as 905.