COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: March 10, 2014
AGENDA NUMBER: 14
FILE NUMBER: 14-019
ITEM: Harpers Grove

RECOMMENDATION: Table with 8 Stipulations

APPLICANT: Al & Julie Neske
3041 128th Ave NE
Blaine, MN  55445

PURPOSE: Residential Development

LOCATION: NW1/4 of the SE1/4 of Section 3. Located northwest of the intersection of 128th Avenue NE and Harpers Street NE in Blaine 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. Endangered, Threatened or Special concern species, elements of communities

EXHIBITS:
1. Grading, Drainage, Erosion Control and Tree Protection Plan of: Harpers Grove Second Addition, Dated 1/21/2014, Received 2/14/2014
2. Plan Sheets C1, C1.2, C1.3, C1.4, C2.1, C2.2, C3.1, C3.2, Dated 1/21/2014, Received 2/14/2014
3. All Previous submittals archived under PAN# 08-046

HISTORY & CONSIDERATIONS: This project was approved at the October 27, 2008 Board meeting but the project was never constructed. Due to changes in the rules and the amount of time that has lapsed, the applicant is reapplying. Development plans and submittals were re-evaluated to ensure the development meets current standards.

FINDINGS:
Ditches and Drainage: There is not a public ditch on the property. The project site is tributary to County Ditch 59-4. The trend in land use for this drainage area is toward residential. Alternatives to additional drainage considered and reviewed include storage and infiltration.

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 897.3 feet. The total floodplain impact is 0 acre-feet, within the flood/fringeway. Compensatory storage is not needed.

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: Ground water is present at an elevation of approximately 890-893 feet. The site does not include groundwater sensitive areas. Information has not been provided to substantiate low floor elevations. It is unclear if low floor elevations meet the criteria for the City of Blaine (2 ft above mottled soil elevation, 2 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/infiltration pond shown on the drainage plan.

**Soils & Erosion Control:** Soils affected by the proposal are Lino and 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:** 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 exist downstream from the proposed site. The rate of post development runoff from the site does not exceed rates which would interfere with sensitive downstream land uses.

**Water Quality:** Project does include impervious drainage areas greater than 1 acre. All discharges into wetlands are pretreated by a sediment basin/water quality pond and are designed correctly. 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 or Soils Survey. A staff site visit was confirmed in 2008 indicating there are no jurisdictional wetlands on site. Kjolhaug Environmental Services submitted an e-mail indicating conditions at the site have not changed but a site visit when the snow melts should be conducted to confirm the observations.

**Wildlife:** The proposed project does not include endangered & threatened species, rare natural communities, colonial water bird nesting sites, migratory waterfowl concentration areas, deer wintering areas, wildlife travel corridors. No substantial adverse alteration or significant detrimental impact on a species food supply, security or reproductive cycle or the alteration or removal of a plant species will occur.

**Performance Escrow:** $4,250.00

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<th>ISSUES/CONCERNS:</th>
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<td><strong>Stormwater &amp; Hydraulics:</strong> It is unclear if the applicant is meeting the rate control requirement. A new HydroCAD Model with updated proposed and existing conditions based on Atlas 14 rainfall information is needed to complete this analysis.</td>
<td>1. Provide an updated stormwater calculations/HydroCAD model for the proposed conditions. Also provide an updated stormwater calculations/HydroCAD model for the existing conditions if the site conditions have changed.</td>
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The proposed low floor elevations must be greater than 2 feet above the Atlas 14 100 year elevation.

It is unclear if the applicant is 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. The proposed plan provides a new configuration to the stormwater basin and an infiltration shelf. Calculations or modeling needs to be provided to show that the infiltration shelf meets the district requirement of infiltrating the first inch of precipitation.

- Update all inputs to ensure model accurately reflects proposed conditions. Includes outlet structures/elevations, basin characteristics (size, infiltration shelf, etc), routing, and other inputs as necessary.
- Provide updated drainage area maps for both proposed conditions and existing conditions.
- Provide stormwater runoff calculations that show the site is meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation.
- Provide stormwater runoff calculations for the 100-year Atlas 14 precipitation event for the site.
  1. Ensure proposed low floor elevations meet the city of Blaine requirement of 2 feet above the 100 year elevation.
  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.

Soils & Erosion Control: Not all adjacent properties are protected from sediment deposition. Drainage does leave the site at lots 1 through 4. Grading is not proposed.

- After initial grading completely surrounded the proposed pond/infiltration basins with erosion control measures to prevent the
for this area, however during construction of the houses the site will be disturbed.

Infiltration basins are not protected from erosion and sedimentation during construction. After initial grading the District requires that infiltration basins be completely surrounded by erosion control measures to prevent the basin from clogging and sedimentation.

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<th><strong>Water Quality:</strong> The effects of the proposed development on water quality and downstream receiving waters cannot be fully evaluated without the updated HydroCAD model.</th>
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<td><strong>Wetlands:</strong> In 2008, a site visit was conducted indicating no wetlands on-site.</td>
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<td>The proposed project includes the threatened Blanding’s Turtle (<em>Emydoidea blandingii</em>).</td>
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<td><strong>Escrows:</strong> $1,500 + (4.5 acres x $500/acre) = $4,250.00</td>
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| **RECOMMENDATION:** Table with 8 Stipulations |
| **Stipulations:** |
| 1. Receipt of escrows. |
| 2. Provide an updated stormwater calculations/HydroCAD model for the proposed conditions. Also provide an updated stormwater calculations/HydroCAD model for the existing conditions if the site conditions have changed. |
| a. Update all inputs to ensure model accurately reflects proposed conditions. Includes outlet structures/elevations, basin characteristics (size, infiltration shaft, etc), routing, and other inputs as necessary. |
| b. Provide updated drainage area maps for both proposed conditions and existing conditions. |
| c. Provide stormwater runoff calculations that show the site is meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation. |
| d. Provide stormwater runoff calculations for the 100-year Atlas 14 precipitation event for the site. |
| 4. Extend perimeter silt fence along 128th Avenue NE, Harpers Street NE and the north border of the proposed development for Lots 1-4. |
| 5. A site visit when the snow melts to confirm no wetlands exist on-site. |
| 6. It is recommended that native prairie restoration and/or a butterfly garden be established on the property. |
| 7. Receipt of escrows |
i. Ensure proposed low floor elevations meet the city of Blaine requirement of 2 feet above the 100 year elevation.

3. 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.

4. After initial grading completely surrounded the proposed pond/infiltration basins with erosion control measures to prevent the basin from clogging and sedimentation.

5. Extend perimeter silt fence along 128\textsuperscript{th} Avenue NE, Harpers Street NE and the north border of the proposed development for Lots 1-4.

6. Submit needed information to evaluate potential water quality impacts.

7. A site visit when the snow melts to confirm no wetlands exist on-site.

8. It is recommended that native prairie restoration and/or a butterfly garden be established on the property.