COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: September 9, 2013
AGENDA NUMBER: 11
FILE NUMBER: 13 - 070
ITEM: Hidden Forest North

RECOMMENDATION: Table with 4 Stipulations

APPLICANT: Plowe Engineering, Inc.

PURPOSE: This project entails the subdivision of an existing 38.8 acre wooded parcel into 16 single-family lots.

LOCATION: Quemoy & 139th Ave in the City of Ham Lake
APPLICABILITY:
1. Work adjacent to a Public Ditch within the Watershed District.
2. Work in wetlands.
3. One or more cumulative acres of land disturbance.
4. Activities upstream from land that is dependent upon removal of water from the soil profile for their continued use (Drainage Sensitive Uses)
5. High infiltration soils.
6. Highly erodible soils.

EXHIBITS:
1. Stormwater Drainage Report by Plowe Engineering, Inc. including Existing and Proposed Drainage Areas maps, Revised 8/20/2013, Received 8/19/2013
2. Project Plan Sheets 1 through 8, Dated 8/16/2013, Received 8/19/2013
3. Project Plan Sheets 1 through 8, Dated 8/22/2013, Received 8/22/2013
4. Hidden Forest North-Response Letter and Project Plan Sheets 1 through 8, Dated 8/22/2013, Received 8/22/2013
5. Preliminary Utility Plan Sheets C1.1, C1.2, C2.1, C2.2 and C3, Dated 8/20/2013, Received 8/19/2013
6. Project Plan Sheets 1 through 8, Dated 8/28/2013, Received 8/29/2013
7. Preliminary Utility Plan Sheets C2.1 and C2.2, Dated 8/28/2013, Received 8/29/2013

HISTORY & CONSIDERATIONS: This project was reviewed and tabled by the Board July 8, 2013.

FINDINGS:
Ditches and Drainage: The project site is tributary to County Ditch 59-5 59-5A. The trend in land use for this drainage area is toward residential. There are flooding concerns downstream. The Ditch was last repaired in 1999. The segment adjacent to this project was last inspected in 2012. The inspection showed an inefficiency in the channel due to dense vegetative growth. Alternatives to additional drainage considered and reviewed include storage and retention. The public ditch was last repaired in 200. The ditch is not in need of repair.

Floodplain: There is no floodplain on the property according to FEMA. Compensatory storage is provided.

Groundwater: Ground water is present between 14 and 26 feet. Mottled soil is found between 14 and 44 inches. Low floor elevations do not meet the criteria for Ham Lake (1 ft above mottled soil elevation, 1 ft above 100-year) because of the mottling. However, because of the peak elevations of the adjacent wetlands and topographic position of the site, low floors are fine.
**Historic Sites:** The proposed project does not include sites of historic or archeological significance.

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

**Local Planning & Zoning:** The proposed project is consistent with local planning and zoning. There is no approved local water plan.

**Maintenance:** The proposed project does not include ditch maintenance easement, utility line crossings. A drainage and utility easements are provided for the storm water/infiltration ponds shown on the drainage plan and access to ponding areas. Property owners affected by changes in drainage have been notified and acknowledge the changes proposed.

**Soils & Erosion Control:** Soils affected by the proposal are Isanti, Rifle and Zimmerman. Stabilizing vegetation is 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 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 exist downstream from the proposed site. The rate of post development runoff from the site does 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 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 exist on-site according to the NWI, Soil Survey and the 87 Manual’s regional supplements. The applicant proposes 9,410 square feet of wetland impact in four locations. A wetland application has been submitted and distributed to the TEP members. The TEP reviewed this project August 20, 2013 and found the proposed impacts unavoidable.

**Wetland Mitigation:** The applicant is proposing mitigation at a 2:1 ratio via purchase of wetland bank credits.
**Wildlife:** The proposed project does not include endangered & threatened species, colonial waterbird nesting sites, migratory supply, waterfowl concentration areas, deer wintering areas, wildlife travel corridors. The site does not include rare natural communities. No substantial adverse alteration or significant detrimental impact on a species food security or reproductive cycle or the alteration or removal of a plant species will occur.

**Escrows:** Escrows have not been paid. $1500 + (39 acre *200/acre) = $9,300.00

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<tr>
<th>ISSUES/CONCERNS</th>
<th>Needs</th>
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<tr>
<td><strong>Ditches and Drainage:</strong> There are flooding concerns downstream. The segment adjacent to this project was last inspected in 2012. The inspection showed inefficiency in the channel due to dense vegetative growth.</td>
<td>See stormwater and Hydraulics</td>
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<td><strong>Stormwater &amp; Hydraulics:</strong> Drainage sensitive uses exist downstream from the proposed site. The rate of post development runoff from the site does exceed predevelopment rates, or rates which would interfere with sensitive downstream land uses.</td>
<td>Since there are drainage sensitive uses downstream the post 100-year rates need to be below the pre development 25 year rates. The 25 year event needs to be modeled. Back yard runoff does not count towards rate control. However, everything that gets to the ponds A and B will count towards rate control.</td>
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<td>Based on aerial imagery and DNR Statewide LiDAR contours, Wetland 1 (PW1) appears to drain towards County Ditch 59-5A. The current model connects wetland 1 and wetland 2 by a culvert crossing.</td>
<td>The drainage needs to be verified to determine the rate control concerns stated above.</td>
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<td><strong>Escrows:</strong> Escrows have not been paid. $1500 + (39 acre *200/acre) = $9,300.00</td>
<td>Deposit escrow</td>
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**RECOMMENDATION:** Table with 4 Stipulations

**Stipulations:**
1. Provide model runs for the 25 year pre and post conditions
2. Provide 100-year elevations for wetland 1 assuming it drains to County Ditch 59-5A, or show justification for having them connected.
3. Provide summary table comparing existing peak flow rate and volume to proposed peak flow rates and volume
4. Provide escrow of $9,300