COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: March 9, 2015
AGENDA NUMBER: 11
FILE NUMBER: 15 - 030
ITEM: Catchers Creek 2nd Addition

RECOMMENDATION: Table with 10 Stipulations

APPLICANT: Mark Smith
2120 Otter Lake Drive
St. Paul, MN 55110

PURPOSE: Development of 27 single family homes on a 16.7 acre site

LOCATION: South East of the intersection of Prairie Road and 145th Ave. NE
North of the main branch of Coon Creek (CD-57)
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. Activities upstream from land that is dependent upon removal of water from the soil profile for their continued use (Drainage Sensitive Uses)
6. High water table, outwash and organic soils.
7. Highly erodible soils
8. Endangered, Threatened or Special concern species, elements of communities.

EXHIBITS:
1. Plan set by Randy Hedlund; dated 02/16/15; received 2/25/15
2. Stormwater Management Report by Randy Hedlund; dated February 2015; received 2/25/2015

HISTORY & CONSIDERATIONS:
Mark Smith owns several developments in the vicinity of this project. Catchers Creek 1st and Hickory Meadows 2nd Addition are in the general vicinity.

 Portions of the site to the north drain north into Catchers Creek 1st Addition. These areas were taken into account in the Catchers Creek 1st Addition stormwater modeling.

FINDINGS:
Ditches and Drainage: There is a public ditch on the property. The ditch is County Ditch 57. The ditch has been inspected in 2014. There are approximately 0 acres of existing agricultural land affected by this ditch. The project site is adjacent to County Ditch 57. The trend in land use for this drainage area is toward residential. There are flooding concerns downstream. Alternatives to additional drainage considered and reviewed include storage and infiltration. The ditch was last repaired in 2001. The ditch is not in need of repair.

Floodplain: There is floodplain on the property according to FEMA. The District Atlas 14 model predicts the 100-year elevation for the subwatershed at 880.1 feet. The total floodplain impact is 5,963 cubic feet, within the floodplain. Compensatory storage is provided.

Groundwater Ground water is present at 867.7 to 873.4 feet. The site does not include groundwater sensitive areas. Information has been provided to substantiate low floor elevations. Low floor elevations do meet the criteria for the City of Andover (3 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 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. 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 Rifle, Markey, and 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 not 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 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 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 1987 Federal Manual and its associated supplement(s), NWI, and Soils Survey. Wetlands have been delineated. The wetland boundary has been approved.

The Wetland Permit Application states that 757 S.F. of wetland is proposed to be impacted in 1 location. The grading plan clearly identifies the proposed impact.

The TEP has not reviewed the application for impacts and the replacement plan.

Wildlife: The proposed project does include the threatened species Loggerhead Shrike. The site does not include rare natural communities. The applicant is proposing to provide landscaping conducive to supplying habitat for the Loggerhead Shrike on the lots within the flyway area.

Performance Escrow: $10,350.00
### ISSUES/CONCERNS:

<table>
<thead>
<tr>
<th>Stormwater &amp; Hydraulics: There appears to be grading in the floodway. This is not an acceptable practice unless a “no-rise” analysis is performed on the Coon Creek effective FEMA model per NFIP rules.</th>
<th>1. Remove all grading activities within the floodway or provide a no-rise analysis showing that the grading will not affect the flood elevation upstream or downstream.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Floodway line is not projected along the full length of the ditch adjacent to the project.</td>
<td>2. Project the floodway line work along the creek for the entirety of the project and make sure the line is legible on all plan drawings.</td>
</tr>
<tr>
<td>A comment on the plans is included for the FEMA water surface elevation and the “at the time of survey” water surface elevation. The Coon Creek Watershed District Atlas 14 water surface elevation should also be included.</td>
<td>3. Add a comment referencing the District Atlas 14 model elevation on Coon Creek of 880.1</td>
</tr>
<tr>
<td>There is a free flow boundary condition set for the pond outleting into the creek. This is unrealistic since the outlet culvert will be submerged under the event storms. The downstream boundary elevation of the creek needs to be taken into account when modeling the system. The boundary conditions for the range of floods is:</td>
<td>4. Include a downstream boundary condition to the HydroCAD model for Node 3P to represent the flood elevations of the Creek.</td>
</tr>
</tbody>
</table>
| - 100-year – 880.1  
- 25-year – 879.5  
- 10-year – 878.5  
- 2-year – 876.8 | |
| The outlets to ponds 1 and 3 are likely going to get clogged at some point. Emergency overflows should be provided to account for this. | 5. Emergency over flows need to be added to ponds 1 and 3. |
| Soils & Erosion Control: The discharge into the infiltration basin is not pre-treated. Discharge into an infiltration basin must be pre-treated by a sedimentation basin, sump manhole, or sump manhole with hydrodynamic separation. | 6. Add a statement on the grading and erosion control plan that stabilizing vegetation is to be provided within 14 days of rough grading. |
The plans must state on the erosion control plan that stabilizing vegetation is required within 14 days of rough grading.

**Maintenance:** There is no maintenance easement or access for the stormwater features that are being proposed. With no maintenance access or easement, there is no guarantee that the features will remain permanent and in working order. A maintenance easement and access road needs to be provided in addition to an operations and maintenance agreement with the District.

**Wetlands:** The TEP has not met to discuss this permit application and the replacement plan.

**Escrows:** $2,000 + (16.7 ac * $500/ac) = $10,350.00

**RECOMMENDATION:** Table with 10 Stipulations

**Stipulations:**
1. Receipt of escrows.
2. Remove all grading activities within the floodway or provide a no-rise analysis showing that the grading will not affect the flood elevation upstream or downstream.
3. Project the floodway line work along the creek for the entirety of the project and make sure the line is legible on all plan drawings.
4. Add a comment referencing the District Atlas 14 model elevation on Coon Creek of 880.1
5. Include a downstream boundary condition to the HydroCAD model for Node 3P to represent the flood elevations of the Creek.
6. Add a statement on the grading and erosion control plan that stabilizing vegetation is to be provided within 14 days of rough grading.
7. Provide a maintenance easement and access road for the stormwater features
8. Provide a written operations and maintenance agreement to the District in coordination with District rules.
9. Emergency over flows need to be added to ponds 1 and 3.
10. Approval of wetland permit application and replacement plan.