COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: April 28, 2014
AGENDA NUMBER: 11
FILE NUMBER: 13-129
ITEM: Lawrence Estates

RECOMMENDATION: Table with 12 Stipulations

APPLICANT: Doug and JoAnn Lawrence
2477 Main Street NW
Coon Rapids MN 55448

PURPOSE: 10 unit single family development

LOCATION: North and South sides of 128th Avenue NW, Coon Rapids MN
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. Any activity involving drainage, filling or alteration of wetlands
4. One or more cumulative acres of land disturbance.
5. The lands and water that have been, or may be covered by the regional flood.
6. Activities upstream from land that is dependent upon removal of water from the soil profile for their continued use (Drainage Sensitive Uses)
8. High infiltration soils.
9. Highly erodible soils
10. Any land alteration within 1 mile of an impaired water

EXHIBITS:
1. Plan Set by Hakanson Anderson, dated 4-1-14, received 4-2-14.
2. Floodplain Permit Application by Hakanson Anderson, dated 4-1-14, received 4-2-14.
4. Drainage Area exhibit by Hakanson Anderson dated 4-1-14, received 4-2-14.
5. Water quality and runoff calculations by Hakanson Anderson dated 4-1-14, received 4-2-14.

HISTORY & CONSIDERATIONS:
The applicant is proposing to develop a 10 unit single family development. The road and utilities through the proposed development were constructed in the early 1990’s. The higher areas on both sides of 128th Avenue are wooded while the low lands are currently being used for sod farming. The development will result in filling of floodplain and wetland on both sides of the road.

FINDINGS:
Ditches and Drainage: There is a public ditch on the property. The ditch is 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 860.2 (NAVD 1988). The plans show the NGVD 1929 elevations of 859.9 feet for four parcels in Outlot A and 859.5 feet for six parcels in Outlot B. The total floodplain impact is 0.08 acre-feet, within the flood/fringeway. Compensatory storage is provided.

Groundwater: Surficial ground water is present at 6.5 feet (852.6). The site does 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 Coon Rapids (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 not include a ditch maintenance easement or utility line crossings. A drainage and utility easement is not provided for the storm water/infiltration pond shown on the drainage plan.

**Soils & Erosion Control:** Soils affected by the proposal are Nymore and Alluvial land. 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 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 exist downstream from the proposed site. Calculations have not been provided to compare the rate of post development runoff to the predevelopment rates.

**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.

**Wetlands:** Wetlands do exist on-site according to the 1987 Federal Manual and its associated supplement(s), NWI, and Soils Survey. The wetland boundary has been reviewed. The project is not exempt. The proposed project is not wetland dependent.

The applicant is proposing 21,795 square feet (0.50 acre) of wetland impacts in two locations under sequencing flexibility. Plans submitted in the application for the wetland impacts do contain a sequencing discussion or material to support the request for sequencing flexibility. The TEP met on April 15, 2014 and discussed the need for the applicant to use another wetland bank since the one that is proposed has not been approved by the Army Corps of Engineers or provide financial assurance until the bank is approved.

**Wildlife:** The proposed project does not include endangered & threatened species, rare natural communities, colonial waterbird 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:** $14,160.00

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<th>ISSUES/CONCERNS:</th>
<th>NEED:</th>
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<td><strong>Groundwater:</strong> The low floor elevations do not meet the criteria for the City of Coon Rapids (3 ft above mottled soil elevation, 2 ft above 100-year). The low floor elevations of various lots do not meet the requirement of 2 ft above the high water level of 860.2 ft.</td>
<td>1. Provide clarification of the EOF elevations of 861.1 and 860.7 at the intersection of 128th Avenue and the business entrance to the south, as these elevations are above the low floor elevations of the proposed houses.</td>
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<td>2. Adjust the low floor elevations to provide for a 2 ft. separation between the low floor elevation and the 100-year elevation.</td>
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<td><strong>Stormwater &amp; Hydraulics:</strong> 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. The applicant may not be meeting the rate control requirement as calculations were not provided to compare pre- and post-development runoff rates. 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>
<td>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.</td>
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<td>4. Provide a drainage easement for the filtration basin.</td>
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<td>5. Provide detail and identify area where applicant intends to access proposed floodplain mitigation. Include methods and means of restoring this area to preconstruction conditions after activities cease. a. It is recommended that this access be at the shortest possible crossing of wetland.</td>
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<td>6. Provide a defined overflow for the infiltration basin.</td>
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<td>Coon Creek Watershed District shall be notified prior to the test to witness the results.</td>
<td>7. Provide stormwater runoff calculations that show the site is meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation.</td>
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<td>8. Provide runoff calculations that show the site is meeting the rate control requirement by reducing the post-development rates below the pre-development rates.</td>
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<td>9. Provide elevations for the bottom of the drainage sump to show that there will be a three foot separation between the bottom of the void space and groundwater.</td>
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<td>10. Adjust the bottom elevation of the filtration basin to provide for 3 foot separation between the basin and groundwater.</td>
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<td>Soils &amp; Erosion Control: All wetlands, waterbodies, ponds, infiltration basins and water conveyance systems are not protected from erosion and sedimentation.</td>
<td>11. Provide protection for all wetlands, waterbodies, ponds, infiltration basins and water conveyance systems from erosion and sedimentation.</td>
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<td>Escrows: $2,000 + (24.32 acres x $500/acre)= $14,160.00</td>
<td>12. Receipt of escrows</td>
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**RECOMMENDATION:** Table with 12 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 stormwater runoff calculations that show the site is meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation.
4. Provide runoff calculations that show the site is meeting the rate control requirement by reducing the post-development rates below the pre-development rates.
5. Provide elevations for the bottom of the drainage sump to show that there will be a three foot separation between the bottom of the void space and groundwater.
6. Adjust the bottom elevation of the filtration basin to provide for 3 foot separation between the basin and groundwater.
7. Adjust the low floor elevations to provide for a 2 ft. separation between the low floor elevation and the 100-year elevation.
8. Provide clarification of the EOF elevations of 861.1 and 860.7 at the intersection of 128th Avenue and the business entrance to the south, as these elevations are above the low floor elevations of the proposed houses.
9. Provide a drainage easement for the filtration basin.
10. Provide detail and identify area where applicant intends to access proposed floodplain mitigation. Include methods and means of restoring this area to preconstruction conditions after activities cease.
   a. It is recommended that this access be at the shortest possible crossing of wetland.
11. Provide a defined overflow for the infiltration basin.
12. Provide protection for all wetlands, waterbodies, ponds, infiltration basins and water conveyance systems from erosion and sedimentation.