



**PPR – Pre-Submittal Plan Review Checklist (Municipal)**

Project Name STORAGE MAX Jurisdiction ZEPHURON Zoning HC  
 Gettle Engineering and Design, PLLC  
 Applicant \_\_\_\_\_ Watershed NEUSE New or Expansion (N/E)? N  
 Project Acreage 6.5 Existing Impervious SF 0 Proposed Impervious 3.61 Disturbed Acreage 5.93  
 ROW = .64

Residential	<input type="checkbox"/>	Nonresidential	<input checked="" type="checkbox"/>
<b>Submittal Package Requirements</b>			
Applicant shall select all applicable items below and provide with the submittal.			
<input checked="" type="checkbox"/>	1.	Cover letter stating the purpose of the submission	<u>NARRATIVE IN REPORT</u>
<input checked="" type="checkbox"/>	2.	One copy of the Municipal Stormwater Design Tool (Site Data Sheet, Drainage Area Sheets, Site Summary Sheet, BMP Sheets, and BMP Summary sheet) See the <u>Municipal Stormwater Design Tool</u> ; for guidance.	
<input checked="" type="checkbox"/>	3.	Drainage Area Maps with stormwater discharge points (existing/post construction/post BMP)	
<input checked="" type="checkbox"/>	4.	Copy of the USGS Quad Map with delineated project limits	
<input checked="" type="checkbox"/>	5.	Copy of the Wake County Soil Survey map with delineated project limits	
<input checked="" type="checkbox"/>	6.	Proposed Site Plan:	
<input checked="" type="checkbox"/>	a.	North arrow, graphic scale, signed/dated engineer's seal, drafting version date, and legend	
<input checked="" type="checkbox"/>	b.	Show all Riparian Buffers [Article 9-21]; (Neuse: [15A NCAC 02B.0233 & 0242]; Falls [15A NCAC 02B.0277(4)(h)]);	
<input checked="" type="checkbox"/>	c.	Delineation of all existing and proposed impervious surfaces: roads, well lots, recreation sites, single family residences, etc. (consistent with Municipal SW Tool inputs).	
<input checked="" type="checkbox"/>	d.	Delineation of current FEMA boundaries (floodway, flood fringe & future/0.2%)	
<input checked="" type="checkbox"/>	e.	Proposed drainage easements and widths ( <i>in Feet</i> )	
<input checked="" type="checkbox"/>	h.	Location and type of all proposed stormwater management structures ( <i>grass swale, wet/dry detention basin, filtering/infiltration basin, bioretention, etc.</i> )	
<input checked="" type="checkbox"/>	i.	Proposed easement access lanes and sediment disposal areas for future maintenance of stormwater management facilities.	
<input checked="" type="checkbox"/>	j.	A note should be added to the recorded plat distinguishing areas of disconnected impervious	



**PPR – Pre-Submittal Plan Review Checklist (Municipal)**

**Standards and Requirements**

By marking items with an “X”, applicant acknowledges potential standards to be applied to the proposed development.

**Stormwater Management Requirements**

<input checked="" type="checkbox"/>	8.	<p><b>Stormwater Review Required</b> - All residential subdivision development must submit a plan to comply with the applicable municipalities’ stormwater ordinance. Office, institutional, commercial or industrial development that <u>disturbs</u> greater than 20,000 square feet is required to comply with the stormwater management regulations. Development and redevelopment that disturb less than 20,000 square feet are not exempt if such activities are part of a larger common plan of development or sale, even though multiple, separate or distinct activities take place at different times on different schedules.</p> <p><b>Rolesville</b> [7.5.1(E)], <b>Wendell</b> [ 6.5(F)], <b>Zebulon</b> [151.05]</p>
<input checked="" type="checkbox"/>	9.	<p><b>Stormwater Permit</b> – is required for all development and redevelopment unless exempt pursuant to the Code of Ordinances. A permit may only be issued subsequent to a properly submitted, reviewed and approved stormwater management plan and permit application.</p> <p><b>Rolesville</b> [7.5.1(E)(3)], <b>Wendell</b> [6.5(F)(3)], <b>Zebulon</b> [151.21(A)]</p> <p>Note: A permit may not be required if there are no post-construction requirements (i.e. SCMs).</p>
<input checked="" type="checkbox"/>	10.	<p><b>SCMs</b> - For projects requiring stormwater treatment for quality and/or quantity control, the applicant must</p> <ol style="list-style-type: none"> <li>1) comply with the NC BMP Manual <b>Rolesville</b> [7.5.1(G)], <b>Wendell</b> [6.5(H)], <b>Zebulon</b> [151.07]</li> <li>2) as well as <i>Completion of Improvements and Maintenance</i>, prior to issuance of a certificate of compliance or occupancy. <b>Rolesville</b> [7.5.5], <b>Wendell</b> [6.5(O)], <b>Zebulon</b> [151.50 – 151.56]</li> </ol>
<input checked="" type="checkbox"/>	11.	<p><b>Standards Based on Project Density</b>- In accordance with the definitions, projects are identified as Ultra Low-Density (15% or less Built-Up-on Area, referred to as BUA, and less than one dwelling unit per acre), Low-Density (more than 15% BUA and no more than 24% BUA), and High-Density (24% or more BUA).</p> <p><b>Rolesville</b> [7.5.4], <b>Wendell</b> [ 6.5(M)], <b>Zebulon</b> [151.35]</p>



**PPR – Pre-Submittal Plan Review Checklist (Municipal)**

<p>H/A</p> <p><input type="checkbox"/></p>	<p><b>Standards for Ultra-Low and Low-Density Projects:</b></p> <ul style="list-style-type: none"> <li>• Use of vegetated conveyances to maximum extent practicable</li> <li>• Location of development and redevelopment outside Riparian Buffer and Flood Protection Zones</li> <li>• Recorded deed restrictions or protective covenants to ensure future development maintains consistency with approved project plans</li> <li>• Permanent SCMs (Stormwater Control Measures) are to be designed in accordance with and as specified in the North Carolina Department of Environmental Quality’s Design Manual.</li> <li>• For Low-Density only, no net increase in peak flow leaving the site from the pre-development conditions for the 1-yr., 24 hr. storm. Runoff volume drawdown time shall be a minimum of 48 hours, but not more than 120 hours.</li> <li>• Residential runoff after development must not exceed the Target Curve Numbers listed in the chart “Maximum Composite Curve Number, by Soil Group”.</li> <li>• Ultra-Low and Low-Density projects may be eligible for target curve number credits.</li> </ul> <p><b>Wendell Only:</b> Nitrogen export limited to 3.6 pounds per acre per year unless project achieves classification as an LID Project.</p> <p><b>Rolesville [7.5.4(A)(1-3)], Wendell [6.5(M)(1-3)], Zebulon [151.35(A-C)]</b></p>
<p><input checked="" type="checkbox"/></p>	<p><b>Standards for High-Density Projects:</b></p> <ul style="list-style-type: none"> <li>• Measures shall control and treat runoff from the first inch of rain. Runoff volume drawdown time shall be a minimum of 48 hours, but not more than 120 hours.</li> <li>• Structural measures shall be designed to have a minimum of 85% average annual removal for Total Suspended Solids (TSS)</li> <li>• Permanent SCMs (Stormwater Control Measures) are to be designed in accordance with and as specified in the North Carolina Department of Environmental Quality’s Design Manual.</li> <li>• No net increase in peak flow leaving the site from the pre-development conditions for the 1-yr., 24-hr. storm. Runoff volume drawdown time shall be a minimum of 48 hours, but not more than 120 hours.</li> <li>• Location of development and redevelopment outside Riparian Buffer and Flood Protection Zones</li> </ul> <p><b>Rolesville [7.5.4(A)(4)], Wendell [6.5(M)(4)], Zebulon [151.35(D)]</b></p>
<p><input checked="" type="checkbox"/></p>	<p><b>General Standards:</b></p> <ul style="list-style-type: none"> <li>• Downstream Impact Analysis – DIA must be performed in accordance with the “10% rule”, and a copy provided with the application.</li> </ul> <p><b>Rolesville [7.5.4(B)(1)], Wendell [6.5(N)(1)], Zebulon [151.36(A)]</b></p>
<p>H/A</p> <p><input type="checkbox"/></p>	<p><b>Low Impact Development (LID) Classification:</b></p> <ul style="list-style-type: none"> <li>• All development or redevelopment may be submitted for LID classification</li> <li>• Development must mimic the pre-developed hydrologic conditions of the site, as defined as “woods in good condition” for the 2-yr, 24-hr. storm, within 10%.</li> <li>• Techniques required to achieve LID classification             <ul style="list-style-type: none"> <li>➢ Natural site design</li> <li>➢ Bio-retention systems or on-site infiltration (at least one must be used)</li> <li>➢ At least <b>two</b> other techniques from the list provided in <b>Rolesville [7.5.4(B)(5)(e)]</b> and <b>Zebulon [151.36(E)(5)]</b></li> </ul> </li> </ul> <p>At least <b>one</b> other techniques from the list provided in <b>Wendell [6.5(N)(5)(e)]</b></p>



**PPR – Pre-Submittal Plan Review Checklist (Municipal)**

Wake County UDO Article 10 - Erosion and Sedimentation Control Requirements (Applies to Rolesville, Wendell and Zebulon)	
<input checked="" type="checkbox"/>	<p><b>12. Erosion Control:</b> This project will require a Land Disturbance Permit if it involves <u>greater than one acre of disturbance</u>. Adopting by reference the Wake County Soil Erosion and Sedimentation Control Ordinance.  <b>Note:</b> If the land disturbance is part of a common plan of development that is greater than one acre of disturbance, an Approved Erosion and Sediment Control Plan and Land Disturbance Permit are required for each individual tract or parcel disturbance within the common plan of development, regardless of land disturbance acreage in each tract/parcel.</p>
<input checked="" type="checkbox"/>	<p><b>13. 10-20-1 Minimum Standards</b> - All soil erosion and sedimentation control plans and measures must conform to the minimum applicable standards specified in <i>North Carolina's Erosion and Sediment Control Planning and Design Manual</i> and the <i>Wake County Sedimentation and Erosion Control Plan Review Manual</i>. Erosion control devices must be installed to prevent any offsite sedimentation for any construction site regardless of the size of the land disturbance.</p>
<input checked="" type="checkbox"/>	<p><b>14. 10-20-3 Operation in Lakes or Natural Watercourses</b> -Land disturbing activity in connection with construction in, on, over, or under a lake or natural watercourse must minimize the extent and duration of disruption of the stream channel. Where relocation of a stream forms an essential part of the proposed activity, the relocation must minimize unnecessary changes in the stream flow characteristics.</p>
<input type="checkbox"/>	<p><b>15. 10-20-10 Standards for High Quality Water (HQW) Zones</b>          Land-disturbing activities to be conducted in High Quality Water Zones must be designed as follows:</p>
<input type="checkbox"/>	<p><b>a.</b> Uncovered areas in High Quality Water (HQW) zones must be limited at any time to a maximum total area of 20 acres within the boundaries of the tract.</p>
<input type="checkbox"/>	<p><b>b. Maximum Peak Rate of Runoff</b> - Erosion and sedimentation control measures, structures, and devices within HQW zones must be planned, designed and constructed to provide protection from the runoff of the 25-year storm.</p>
<input type="checkbox"/>	<p><b>c. Settling Efficiency</b> - Sediment basins within HQW zones must be designed and constructed so that the basin will have a settling efficiency of at least 70% for the 40 micron (0.04mm) size soil particle transported into the basin by the runoff of that 2-year storm which produces the maximum peak rate of runoff.</p>
<input type="checkbox"/>	<p><b>d. Grade</b> - The angle for side slopes must be sufficient to restrain accelerated erosion (side slopes no steeper than 2 horizontal to 1 vertical if a vegetative cover is used for stabilization unless soil conditions permit a steeper slope or where the slopes are stabilized by using mechanical devices, structural devices or other acceptable ditch liners)</p>
<input checked="" type="checkbox"/>	<p><b>16. Senate Bill 1020; "SECTION 3.(h) Additional standards for land-disturbing activities in the water supply watershed":</b></p>
<input type="checkbox"/>	<p><b>a.</b> Erosion and sedimentation control measures, structures, and devices shall be planned, designed, and constructed to provide protection from the runoff of the 25-year storm</p>
<input type="checkbox"/>	<p><b>b.</b> Sediment basins shall be planned, designed, and constructed so that the basin will have a settling efficiency of at least seventy percent (70%) for the 40-micron size soil particle transported into the basin by the runoff of the two-year storm that produces the maximum peak rate of runoff</p>
<input type="checkbox"/>	<p><b>c.</b> Newly constructed open channels shall be planned, designed, and constructed with side slopes no steeper than two horizontal to one vertical if a vegetative cover is used for stabilization unless soil conditions permit steeper slopes or where the slopes are stabilized by using mechanical devices, structural devices, or other acceptable ditch liners.</p>
<b>Neuse Riparian Buffer Rules</b>	



**PPR – Pre-Submittal Plan Review Checklist (Municipal)**

<input checked="" type="checkbox"/>	17.	Due to the location of this project, it should be noted that a rule to protect and maintain existing buffers along watercourses in the Neuse River Basin became effective on July 22, 1997. The <b>Neuse River Riparian Area Protection and Maintenance Rule (15A NCAC 2B.0233)</b> applies to all perennial and intermittent streams, lakes, ponds and estuaries in the Neuse River Basin with forest vegetation on the adjacent land or "riparian area".
-------------------------------------	-----	--

Applicant Signature: Keith C. Dutton BE

Date: 7/1/2023