

**Intern Supervision Assigned to:**

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<b>Supervisor/Health Director</b>	<b>County</b>	<b>Phone</b>
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<b>Intern Name</b>	<b>Date</b>
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**Prior to beginning the On-Site Wastewater Track within the Centralized Intern Training program, the intern must turn in an initialed, completed copy of this checklist. The intern can turn the checklist in on the first day of training. Keep a copy in the intern's county personnel file.**

Date Completed	Intern & Supervisor Initials	Activity
		<p><b>Complete the OSWP specific distance learning requirements prior to attending CIT in Raleigh.</b></p> <p>Read referenced rules within each section from:  <a href="https://ehs.dph.ncdhhs.gov/oswp/docs/15ANCAC18E-WorkingCopy-11-9-2023-Color.pdf">https://ehs.dph.ncdhhs.gov/oswp/docs/15ANCAC18E-WorkingCopy-11-9-2023-Color.pdf</a></p> <p>Read referenced chapters from <i>Soil Science Simplified Fourth Edition</i> by Helmut Kohnke and D.P. Franzmeier*.</p> <p>Read referenced pages from the <a href="#">Onsite Wastewater Guidance Manual (OWGM)</a>.</p>
		<p><b>Introduction to Onsite Wastewater:</b> <i>(Review and read)</i></p> <p style="padding-left: 40px;"><b>Introduction to Septic Systems:</b> <i>Septic Systems and their Maintenance</i>  <a href="https://content.ces.ncsu.edu/septic-systems-and-their-maintenance">https://content.ces.ncsu.edu/septic-systems-and-their-maintenance</a></p> <p style="padding-left: 40px;"><a href="#">OWGM Chapter 2.1-2.8, Background</a></p>
		<p><b>Introduction to Soils and Soil Formation:</b> <i>(Review and read)</i></p> <p style="padding-left: 40px;">Title 15A NCAC 18E: <a href="#">Rule .0501</a></p> <p style="padding-left: 40px;"><i>Soil Science Simplified:</i> Chapters 1-4</p> <p style="padding-left: 40px;">Introduction to Soils &amp;BMP, Durham SWCD:  <a href="https://www.youtube.com/watch?v=DDn66moJP58">https://www.youtube.com/watch?v=DDn66moJP58</a></p> <p style="padding-left: 40px;">Soil formation, Thomas Pettengill:  <a href="https://www.youtube.com/watch?v=thttNgtsSxU">https://www.youtube.com/watch?v=thttNgtsSxU</a></p> <p style="padding-left: 40px;"><i>Soil Science Simplified</i> Chapters 6,7</p> <p style="padding-left: 40px;">Soil Formation, Science Monkey:  <a href="https://www.youtube.com/watch?v=7iyxocIhfu0">https://www.youtube.com/watch?v=7iyxocIhfu0</a></p>
		<p><b>Topography and Landscape Position:</b> <i>(Review and read)</i></p> <p style="padding-left: 40px;"><a href="#">Rule .0502</a></p> <p style="padding-left: 40px;">Introduction to Topo Maps, Seth Horowitz:  <a href="https://www.youtube.com/watch?v=zqPMYGDxCr0">https://www.youtube.com/watch?v=zqPMYGDxCr0</a></p> <p style="padding-left: 40px;">How to use a Laser Level, Permaspien: <a href="https://www.youtube.com/watch?v=bDyFNOC558c">https://www.youtube.com/watch?v=bDyFNOC558c</a></p> <p style="padding-left: 40px;">Determining Landscape Slope, Clear Image Solutions:  <a href="https://www.youtube.com/watch?v=bOouNoX8WfU">https://www.youtube.com/watch?v=bOouNoX8WfU</a></p>

		<p><b>Soil Morphology:</b> <i>(Review and read)</i></p> <p><a href="#">Rule .0503</a></p> <p><i>Soil Science Simplified:</i> Chapter 8</p> <p>Texture (.1941(a)(1)) Soil Texture by Feel, UCDavis (no audio):  <a href="https://www.youtube.com/watch?v=GWZwbVJCNEc">https://www.youtube.com/watch?v=GWZwbVJCNEc</a></p> <p>Structure (.1941(a)(2)) Soil Structure Part 1, NVGrapegrowers:  <a href="https://www.youtube.com/watch?v=yEDjwQOpzrA">https://www.youtube.com/watch?v=yEDjwQOpzrA</a></p> <p>Mineralogy (.1941(3)) Soil Mineralogy, Clay Mineralogy, Elementary Engineering  <a href="https://www.youtube.com/watch?v=Qh6wSfVN45s">https://www.youtube.com/watch?v=Qh6wSfVN45s</a>  Cation Exchange, LearningGamesLab: <a href="https://www.youtube.com/watch?v=HmEeymGXOfI">https://www.youtube.com/watch?v=HmEeymGXOfI</a></p>
		<p><b>Soil Wetness:</b> <i>(Review and read)</i></p> <p><a href="#">Rule .0504(a)(b)</a></p> <p>Soils: Soil Color, Clear Image Solutions:  <a href="https://www.youtube.com/watch?v=N6doCSP8T7I">https://www.youtube.com/watch?v=N6doCSP8T7I</a></p>
		<p><b>Introduction to LTAR:</b> <i>(Review and read)</i></p> <p><a href="#">Rule .0901(c)</a></p> <p><a href="#">OWGM Chapter 4.6.1-4.6.4, Onsite Wastewater Loading Rates</a></p> <p>LTAR: <a href="http://americangeoservices.com/ltar-long-term-acceptance-rate.html">http://americangeoservices.com/ltar-long-term-acceptance-rate.html</a></p> <p>Water Movement in Soils, NRCS NSSC:  <a href="https://www.youtube.com/watch?v=vmo0FRAVgkM">https://www.youtube.com/watch?v=vmo0FRAVgkM</a></p>
		<p><b>Miscellaneous Topics:</b> <i>(Review and read)</i></p> <p>Boundary Survey, ludlowengineering: <a href="https://www.youtube.com/watch?v=-1KSBqYHfOg">https://www.youtube.com/watch?v=-1KSBqYHfOg</a>  (use 1.25 speed for playback)</p> <p>Laurel Falls Saprolite, jshoemaker_1: (<a href="#">Rule .0506</a>, <a href="#">Rule .0901(c) Table XVIII</a>):  <a href="https://www.youtube.com/watch?v=WY-nnloWgT4">https://www.youtube.com/watch?v=WY-nnloWgT4</a></p> <p><a href="#">OWGM: Onsite Wastewater System Design, Chapter 5.2.1-5.2.14</a>  <a href="#">OWGM: Tanks, Chapter 5.3.1-5.3.7</a>  <a href="#">OWGM: Conventional Onsite Systems, Chapter 5.3.8-5.3.20</a>  <a href="#">OWGM: Shallow Placement, LDP, PPBPS, Pressure Manifold, Chapter 5.4.7-5.4.12</a>  <a href="#">OWGM: System Inspection, Chapter 5.5.15-5.5.24</a></p>
		<p><b>Forms:</b></p> <p>Review county forms including Application packet, Improvement Permit, Construction Authorization, and Operation Permit.</p> <p>Review application procedures with responsible staff. If possible, observe an applicant being assisted with submission.</p>

		<p><b>Field Observations:</b> <b>Site Evaluations:</b></p> <ul style="list-style-type: none"> <li>• Accompany an REHS on a minimum of 3 new soil/site evaluations. On the first site, review procedure for completing a site evaluation (orient to site plan/map, identify property corners/boundary markers, identify proposed facility location, discuss boring placement, observe auger borings and completion of a soil evaluation sheet, discuss system layout).</li> <li>• On at least one site, practice the following: <ul style="list-style-type: none"> <li>-Review application and site plan/map.</li> <li>-Identify property corners and lines and orient yourself to the site plan provided.</li> <li>-Locate the proposed facility.</li> <li>-Use a hand auger to excavate a boring.</li> <li>-Observe and assist with the layout of a wastewater system.</li> </ul> </li> </ul> <p><b>System Installations:</b></p> <ul style="list-style-type: none"> <li>• Accompany EHS on 3 final inspections of new installations of on-site sewage systems, if available.</li> <li>• Review completed Operation Permits for these 3 inspections.</li> <li>• Complete a mock final inspection checklist (attached) for one of these installations. Bring completed checklist to CIT.</li> </ul>
		<p><b>Gather required equipment for module:</b></p> <ul style="list-style-type: none"> <li>• Auger</li> <li>• Knife/rock hammer or pick</li> <li>• Water bottle for wetting soil samples</li> <li>• 100' or 200' measuring tape</li> <li>• Engineer scale</li> <li>• Laser level (if available)</li> <li>• Pin flags</li> <li>• Clinometer (Or download a clinometer app to your phone that provides present slope)</li> <li>• Munsell Color Chart</li> <li>• Field Book for Describing and Sampling Soils</li> <li>• 12' measuring tape</li> <li>• Clipboard</li> <li>• Rain gear</li> <li>• Calculator</li> </ul>

\*The fourth edition of *Soil Science Simplified* is available used online. If you have the fifth edition, chapter equivalents are below.

Fourth Edition	Fifth Edition
Chapter 1: Nature/Function	Ch 1: Nature/Function
Chapter 2: Physical Properties	Ch 3: Physical Properties
Chapter 3: Soil&Water	Ch 4: Soil Water and Climate
Chapter 4: Chemical Properties	Ch 2: Soil Minerology & Chemistry
Chapter 6: Organic Matter/Microbes	Ch 9: Organic Matter and Microbes
Chapter 7: Soil Formation	Ch 5: Soil Formation
Chapter 8: Morphology	Ch 6: Morphology