NCDOT’s Compliance Documentation Workflow for Rule 15A NCAC 04B .0109 *

1. Project involves land disturbing activities
   - Yes
   - No

2. Is there evidence that the postconstruction discharge will not cause an erosion problem?
   - Yes
   - No

3. Calculate pre-development discharge velocity for the 10 yr storm (Vpre)
   - Is Vperm > Vpre?
     - Yes
     - No

4. Address existing erosion problems and attempt to design drainage such that the post-construction 10 yr discharge velocity (Vpost) is <= Vperm
   - Is Vpost <= Vperm?
     - Yes
     - No

5. Design receiving channel to withstand Vpost anywhere it exceeds Vpre by 10%
   - Outlet protection requirements satisfied. Document in SMP

6. Outlet protection requirements satisfied. Document in SMP

7. ID soil type and max permissible velocity (Vperm) from table 15A NCAC 04B .0109(d)

8. Calculate pre-development discharge velocity for the 10 yr storm (Vpre)

9. ID soil type and max permissible velocity (Vperm) from table 15A NCAC 04B .0109(d)

10. Calculate pre-development discharge velocity for the 10 yr storm (Vpre)

11. Address existing erosion problems and attempt to design drainage such that the post-construction 10 yr discharge velocity (Vpost) is <= Vperm

12. Outlet protection requirements satisfied. Document in SMP

13. Outlet protection requirements satisfied. Document in SMP

* Refer to GUIDELINES FOR DRAINAGE STUDIES AND HYDRAULIC DESIGN section 10.5.3 Storm Drain System Outlet Analysis for more information. Document compliance in the project’s Stormwater Management Plan (SMP). Note that there are no rules of thumb related to pre/post peak flow percent increase which serves as a substitute for compliance with the 15A NCAC 04B .0109 rule.