



# Watershed Development Plan Review Checklist

Project: \_\_\_\_\_

Date submitted: \_\_\_\_\_ County Case #: \_\_\_\_\_

To assist applicants in the preparation of site development plans in compliance with Stormwater Management and Watershed Protection regulations, this Checklist is provided as general guidance for submitting a comprehensive set of plans and reports. Please complete this checklist and include it in the submission package for review by the Watershed Section of the Technical Review Committee (TRC). Providing the checklist information will help to assure a more complete submittal and a timelier review. This list is not all inclusive and additional information may be required to address project specific circumstances.

Watershed Section approval of the following plan submissions are required prior to the issuance of a Grading Permit by the Erosion Control Section:

- Watershed Development Plan (low- and high-density projects)
  - Submit with Site Plan for commercial projects
  - Submit with Prelim Plat for subdivisions
- Buffer Authorization (when required)
- Floodplain Development Permit (when required)

See Unified Development Ordinance (UDO) [Article 9 Environmental Regulations](#) and [Appendix 2 – Map Standards](#) for additional information required.

See [Stormwater Control Measure \(SCM\) Checklists and Forms](#) for additional information required for high-density projects. SCM design must meet Minimum Design Criteria (MDC) requirements outlined in NCDEQ Stormwater Manual.

Provide PDF of plans, reports and associated documentation to the Watershed Section for review.

**Complete this checklist and include it with your plan submission. Indicate for each item as required:**

- √ - Provided
- N/A - Not applicable or required
- UNK - Unknown at this time (must be verified before approval)

**RESPONSES TO PLAN REVIEW COMMENTS MUST BE PROVIDED WITH REVISED PLAN SUBMISSION FOR REVIEW. INDICATE SHEET #, NOTE #, OR PAGE # IN RESPONSE.**

## Watershed Development Plan / Stormwater Management Plan:

- \_\_\_ Project name
- \_\_\_ Owner and Engineer contact information
- \_\_\_ Professional Engineer’s signature, seal, date signed
- \_\_\_ Vicinity map
- \_\_\_ North Arrow
- \_\_\_ Scale Bar (engineering scale)
- \_\_\_ Legend
- \_\_\_ Survey background reference info



- \_\_\_ Parcel info (Parcel ID, Owner, DB & PG)
- \_\_\_ Property boundaries and rights-of-way
- \_\_\_ Adjoining property owners labeled (Parcel ID, Owner, DB & PG)
- \_\_\_ Easements (drainage, utility, other)
- \_\_\_ Water Supply Watershed (WSW) name and classification. Indicate if site in WSW General Watershed Area (GWA) or Watershed Critical Area (WCA) with WCA Tier #.
- \_\_\_ Indicate Riparian Buffer Rules that apply (Jordan Lake, Randleman Lake, Polecat Creek WS-III, Sandy Creek WS-III, NPDES non-WSW Area)
- \_\_\_ Project Density Calculations (allowable and proposed density in dwelling units per acre or % BUA as appropriate)
- \_\_\_ Total Site Area
- \_\_\_ Existing, Proposed (net change), Total BUA (acreage & % total)
- \_\_\_ Deed Restriction – Restrictive covenant note (UDO 9.1.F.4) on subdivision plats
- \_\_\_ Existing and Proposed Topography at minimum 2-foot contour intervals with elevation labels
- \_\_\_ Water Courses (Streams, Ponds, Wetlands)
- \_\_\_ Riparian Buffers and Buffer Detail
- \_\_\_ Riparian Buffer impacts (obtain Buffer Authorization for non-exempt uses)
- \_\_\_ Floodplain information (1% Chance Annual Flood Limits - SFHA, Floodway or Non-encroachment Area Limits, FIRM Map number and Effective Date)
- \_\_\_ Stormwater Conveyance System (pipe sizes, slopes, materials, classification; storm structures, types, invert and grade elevations; culverts; swales with surface type; riprap aprons; details; bedding)
- \_\_\_ SCM design plans, cross-sections, details, specifications, and provide profile of core trench for wet detention ponds.
- \_\_\_ SCM Maintenance & Access Easement with connection to public ROW
- \_\_\_ SCM Maintenance Responsibility Note (UDO 9.1.F.5.d.iv)
- \_\_\_ Guilford County SCM Standards Notes (these can be requested from the Watershed Section) for:
  - SCM General Notes
  - SCM Maintenance Responsibility Notes
  - SCM Close-out Requirements Prior to Issuance of Temporary or Final Certificate of Occupancy (site plans)
  - SCM Close-out Requirements Prior to Recording of Subdivision Plats (subdivisions)
  - SCM Material Submittals (for engineer of record review and approval prior to installation)
  - SCM Inspections (for engineer of record inspections required during construction prior to SCM certification and close-out)
- \_\_\_ SCM Conversion Notes (when permanent SCM to be utilized as temporary Erosion Control Measure during construction)
- \_\_\_ Engineer's Statement of Runoff Control (for SCMs per UDO 9.1.F.5.d.iii), signed, sealed, dated
- \_\_\_ Pre- and Post-Development Drainage Area Plans (include in plan set and report)
- \_\_\_ Include typical Site Construction Document plans with the Watershed Development Plan submission including, but not limited to Site Plan, Utility Plan, Erosion Control Plan (with full limits of disturbance), Grading and Drainage Plan, Landscape Plan (including SCM plantings), details.



- Guilford County Site Plan Standard Notes for Watersheds, Buffers, Floodplains, WQCE (these can be requested from the Watershed Section)
- Impacts to Riparian Buffers, if any (Buffer Authorization maybe required)
- Development in the Special Flood Hazard Area a.k.a. 100-year Floodplain, if any (Floodplain Development Permit required for and development activity in the SFHA include, but not limited to land disturbance, clearing, erosion control measures, structures, grading, paving, excavation, utilities, mining, dredging, and any other development in the SFHA). No-fill is allowed in the SFHA.
- Low-density Development projects must be demonstrated to meet requirements of UDO Section 9.1.F.5.c, NCDEQ Stormwater Design Manual Section E-1, 15A NCAC 2H .1003(2) for non-WSW areas, and 15A NCAC 02B .0624(5) for WSW areas.

### **Stormwater Management Report & Calculations (for projects with SCM)**

- Narrative (project summary; existing and proposed site conditions; calculation methodology description; summary table of calculation results demonstrating MDC and UDO compliance)
- Water Quality Design Calculations (per NCDEQ Design Manual & MDCs)
- Hydrographs with input and output data (pre- and post-development, including bypass areas)
- SCM Stage-Storage calculations & Outlet Control Structure routing model inputs
- Curve Number (CN) calculations
- Time of Concentration (Tc) calculations
- Precipitation Data (NOAA)
- Soils Map with HSG info
- Exhibits (Pre- and Post-Development Drainage Area Maps with acreages and Tc path. Bypass areas, and off-site drainage areas discharging onto property to be indicated)
- Seasonal High-Water Table Study (if applicable)
- Documentation of request for NCDEQ Dam Safety Law of 1967 Jurisdictional Determination / Hazard Classification (for wet detention ponds and sites with work near or downstream of existing dams)

### **Stormwater Conveyance Report**

- Storm pipe calculations (capacity, peak flow and HGL for 10-year storm event)\*\*\*
- Swale Calculations (capacity and liner design)\*\*\*
- Precipitation / IDF Data (NOAA)
- Drainage Area Exhibit for storm structures, culverts and swales

\*\*\* Public ROW drainage must be designed per NCDOT standards and submitted to NCDOT for their review and approval. The more stringent standards must be followed.

### **Buffer Use Request application (if applicable)**

- Buffer Use Request application (Stream Buffer Use Request Form for proposed buffer impacts)
- Buffer Impact Exhibits showing temporary and permanent impacts
- Narrative of impacts with Letter of No Practical Alternative

Contact Guilford County Watershed Section and see Stream Buffer Use Request Form for additional information required.



## **Floodplain Development Permit Application (if applicable)**

- Floodplain Development Permit Application (no-fill allowed in SFHA)
- Plans showing all proposed development / encroachments in the SFHA
- No-rise Certification, documentation and narrative report, if required (encroachments in Floodway or Non-Encroachment Area)
- FEMA CLOMR or LOMR, documentation and narrative report, if required (encroachments in Floodway or Non-Encroachment Area)

## **Other Requirements (if applicable)**

- NCDEQ 401 Permit approval (if applicable)
- USACE 404 Permit approval (if applicable)



## Signature and Contact Information:

Complete the information below and submit this page with development plans to signify that every attempt was made to provide the applicable information as outlined in the forgoing Watershed Development Plan Review Checklist. Providing the checklist information will help to assure a more complete submittal and a timelier review.

County project number: \_\_\_\_\_

Project name: \_\_\_\_\_

Project address: \_\_\_\_\_

Name of submitting Engineer: \_\_\_\_\_

E-mail address: \_\_\_\_\_

Phone number: \_\_\_\_\_

Signature and submittal date: \_\_\_\_\_