Village of Clemmons
Stormwater Management Permit Application

A complete application form must accompany each Stormwater Management (SWM) Plan submittal. Two (2) copies of the proposed Site/SWM Plan, SWM Study, and Erosion & Sediment Control Plan are required for submittal along with the permit application fee. The Village will issue a SWM Permit for each site upon demonstrated and approved compliance with Village watershed protection and stormwater management requirements per Chapter C, Article III and Article VII of the Unified Development Ordinance. Sections 1 through 6 below are the minimum permit application requirements for Village review, approval, and issuance of a SWM Permit. Section 7 provides minimum requirements for Village review, approval, and issuance of a Stormwater Management Occupancy Permit.

This section for Village of Clemmons use only

Date SWM Plan Received: _____

SWM Permit Application Fee: $_____

SWM Permit Number: _____

Exemption if Disturbed Area < 1 acre + Site Not Part of Larger Common Plan of Development: Y N

Other applicable Exemption per Art. III, 3-1.5 and/or Art. VII, 7-1.5_____

Date SWM Permit Issued: _____ Date SWM Occupancy Permit Issued: _____

1. Project/Site Information

Project/Site Name: _____

Project Location (Address): _____

PIN(s): _____

Total Site Area (ac): _____ Total Proposed Disturbed Area (ac): _____

Existing Built-Upon Area, BUA (ac): _____ Proposed BUA (ac): _____ Proposed BUA (% of site):_____

Site within a Water-Supply Watershed: Y N Low Density Development: Y N

2. Applicant/Engineer Information

Applicant/Engineer Name: _____ NC PE License #: _____

Company: _____

Company Address: _____

Office Phone: _____ Cell Phone: _____ Fax: _____

E-mail Address: _____

Applicant Signature: _____ Date: _____

3. Project Owner Information (if different from Applicant)

Owner Name: _____

Owner Company/Firm: _____

Owner Company/Firm Address: _____

Office Phone: _____ Cell Phone: _____ Fax: _____

E-mail Address: _____

Owner Signature: _____ Date: _____

4. Posting of Financial Security for Required Stormwater Control Structure(s)

[Applicant/Owner must provide adequate financial assurance in the form of a performance bond and/or other cash security for required stormwater control structure(s) prior to issuance of SWM Permit.]

Applicant/Owner shall file with the Village of Clemmons one of the following (check one):

- ☐ Performance bond
- ☐ Irrevocable letter of credit issued by a bank
- ☐ Deposit of funds in escrow under the same terms and conditions applicable to bonds

Amount of Financial Security Posted: $_____

Date Financial Security provided to Village of Clemmons: _____

- ☐ Not applicable [No required stormwater control structure(s)]

5. Site/SWM Plan Requirements

Please review and check items below indicating that the proposed Site/SWM Plan contains the following minimum information. More information may be required by the Village of Clemmons as directed.

- ☐ Project owner and project designer contact information
- ☐ A vicinity map
- ☐ North arrow
- ☐ Appropriate scale
- ☐ Benchmark information
- ☐ Appropriate legend identifying features and layers on the Site/SWM Plan
- ☐ Property boundaries for the proposed development/redevelopment site along with all properties contiguous to the site proposed for development/redevelopment

- ☐ Show all areas downstream of the site to a point where the area of the site proposed for development constitutes less than ten percent (10%) of the total area draining to that point
- ☐ Show ownership information for the proposed development site and all properties contiguous to the site
- ☐ Note existing and proposed land use(s) for the proposed site development area
- ☐ Note existing land use(s) for all off-site areas
- ☐ Proposed limits of disturbed area(s)
- ☐ Show existing and proposed built-upon areas and other proposed site improvements
- ☐ Note existing and proposed built-upon area in terms of total acreage and % BUA
- ☐ Designated water-supply watershed classification, if applicable
- ☐ Note allowable limits on BUA %
- ☐ Existing streams (identify intermittent and perennial streams, to the extent possible)
- ☐ Show stream buffer widths along streams (where required)
- ☐ Existing wetlands, water impoundments, and other surface water features on the site (as applicable)
- ☐ Regulatory floodways and floodplains (as applicable). Identify and label 100-year Base Flood Elevations (BFEs) where available. Show limits of both the floodway and floodplain along with BFEs where available.
- ☐ Note if site drains to a 303(d) listed stream identified by the North Carolina Division of Water Quality (see NC DWQ Website for more information - http://h2o.enr.state.nc.us/tmdl/)
- ☐ Note precipitation and hydrologic design parameters required for drainage and flow calculations for site stormwater conveyance and stormwater quality and quantity management features, as applicable (note: this may include but not be limited to design rainfall intensities and depths, soil classifications and hydrologic soil types, time of concentration values, Rational C runoff factors, NRCS Curve Number values, etc.)
- ☐ Existing and proposed site topography showing existing and proposed drainage patterns (note: utilize a contour interval appropriate for the site conditions, typically 2-ft unless specific site conditions dictate a smaller or larger internal)
- ☐ Existing and proposed utilities
- ☐ Existing and proposed easements (note: include temporary and permanent easements of all types, including easements required for storm drainage systems and structural stormwater BMPs/controls such as ponds)
- ☐ 15-ft minimum maintenance access easement required for all permanent stormwater BMPs/controls, where applicable (note: maintenance access easement must connect to a public right-of-way)
- ☐ Identify and note the watershed area for any off-site runoff that flows onto the proposed development site (note: applicant must also provide watershed delineation and mapping for any off-site runoff that flows onto the proposed site)
- ☐ Identify and label proposed stormwater drainage system including but not limited to storm drainage inlets, catch basins, junction boxes, storm drainage pipes, natural vegetated conveyances, infiltration areas, swales, energy dissipaters, and/or structural stormwater BMPs/controls such as wet ponds, as may be applicable

☐ Details and profiles of proposed storm drainage systems

☐ Details of proposed permanent structural stormwater BMPs/controls, where applicable

☐ Note the latitude and longitude beside each BMP structure. Report latitude and longitude in degrees, minutes and seconds to the nearest tenth of a second (e.g. 36°01'14.2"N, 80°22'59.1"W)

☐ Identify and delineate drainage areas and flow paths of runoff to each structural stormwater BMP/control, where applicable

☐ Identify and show where runoff discharges from the proposed development site (including outflows from BMPs/controls, where applicable) with appropriate connections into a downstream receiving municipal drainage system and/or open stream channel. Note that the point(s) of discharge from the proposed development site must not contribute to erosion or other degradation of the receiving municipal drainage system or stream channel.

- Show mitigation measures proposed to protect the downstream system where the volume of runoff from the post-development, 2-year, 1-hour rainfall event is 10% greater than the volume of runoff from a pre-development, 2-year, 1-hour rainfall event.

☐ Envisioned sequence of construction for permanent stormwater BMPs/controls, where applicable

☐ Identification of the entity responsible for long-term maintenance of permanent structural stormwater BMPs/controls, where applicable

☐ *Certification of design for permanent structural stormwater BMPs/controls*, where applicable

- A licensed professional engineer or landscape architect, to the extent allowed by North Carolina General Statutes, shall sign and seal a certification on the plan that the plan satisfies applicable stormwater management control design requirements.

- Certification of Design for Stormwater Management BMP(s)/Control(s):

"I, (Name of licensed design professional), to the best of my knowledge, certify that the permanent stormwater management control(s) labeled as (identify structural stormwater control or controls here) on this plan has been designed in accordance with stormwater management quantity and stormwater management quality requirements of the Village of Clemmons and the State of North Carolina, as applicable. I also certify that other applicable local, state, and federal permits have been applied for and/or received."

Check other permits applied for and/or received, if applicable:

____ Erosion and Sediment Control permit (Winston-Salem/Forsyth County)

____ Floodplain Development permit (Winston-Salem/Forsyth County)

____ 401 water quality certification (State of NC)

____ 404 permit for work in waters/wetlands of the US (US Army Corps of Engineers)

____ Dam Safety permit (State of NC)

____ Other: specify here _____

Signature of licensed design professional _____ Date _____

[Licensed professional seal]

☐ Prominently display on the drawing cover sheet the following statement: **The General Contractor/Developer shall contact the Stormwater Administrator for an inspection of the stormwater features prior to the issuance of the Stormwater Management Occupancy Permit.**

☐ *Where improvements to the downstream (off-site) drainage system are proposed as part of the SWM Plan for the proposed site development*, documentation shall be provided which demonstrates the developer's authority to perform construction on the downstream property/drainage system

☐ *Stormwater Control Operations & Maintenance Lien & Easement Agreement* between the Developer and Village, where applicable (refer to Attachment A of the ordinance for an example Agreement)

- Note: A signed and sealed *Agreement* must be provided as part of the SWM Permit Application Package prior to Village issuance of a SWM Permit. The Agreement must also be filed and recorded with the Forsyth County Register of Deeds, in accordance with the ordinance requirements, prior to Village issuance of a SWM Occupancy Permit, per Section 7 of this form.

☐ *Operation & Maintenance Plan* for each permanent structural stormwater BMPs/controls, where applicable, to accompany the *Stormwater Control Operations & Maintenance Lien & Easement*

- Note: The *Operation & Maintenance Plan* shall be provided by the applicant/developer for each stormwater control structure, indicating what operation and maintenance actions are needed, what specific quantitative criteria will be used for determining when those actions are to be taken and, consistent with the *Operation & Maintenance Agreement*, who is responsible for those actions. The Plan shall also clearly indicate the steps that will be taken for restoring a stormwater control structure to design specifications if a failure occurs.

- Note: *Annual maintenance inspection and report required* – The owner of a permitted structural stormwater BMP/control shall annually submit a maintenance and inspection report for each BMP to the Village of Clemmons Stormwater Administrator. Annual inspections shall begin within one year of the recordation of any deed(s) showing stormwater BMPs/control structures. The *Operation & Maintenance Agreement* and *Plan* shall include and specify the owner responsibilities and requirements for the annual maintenance and inspection report.

☐ Separate Erosion and Sediment Control (E&SC) Plan sheet(s), where required, with site construction sequence and E&SC details

- Note: The E&SC Program for Clemmons is administered by Winston-Salem/Forsyth County. Applicant/Owner is responsible for applying for the appropriate Land Disturbing Permit from Winston-Salem/Forsyth County Inspections. Village SWM Plan review shall commence upon receipt of Village SWM Permit application requirements which include a copy of the E&SC Plan submitted to City/County Inspections. In addition to meeting all Village SWM Permit requirements, the Village shall not issue the SWM Permit until the applicant/owner has satisfied City/County Inspection requirements for approval of the Land Disturbing Permit. City/County Inspections will notify the Village of Clemmons once the Applicant/Owner has satisfied E&SC requirements associated with the Land Disturbance Permit. Applicant/Owner is then responsible for providing the Village with a copy of the final E&SC Plan that satisfies City/County Inspection requirements.

- Note: On the E&SC Plan, be sure to label E&SC features which are also intended to become permanent structural stormwater BMPs/controls, if any, and note the process for transitioning the device from a temporary E&SC measure to a permanent stormwater control feature.

☐ Sealed and certified plan set: All plan sheets shall be signed and sealed by a licensed professional engineer or landscape architect, to the extent allowed by North Carolina General Statutes

6. SWM Study Requirements for Non-Exempt Sites

[In addition to the minimum Site/SWM Plan requirements identified in Section 5, a SWM Study is required for non-exempt sites]

☐ Project narrative – brief description of project, pre- and post-development site conditions, hydrologic and hydraulic study, and proposed SWM plan

☐ Hydrologic and hydraulic calculations demonstrating analysis and design of all stormwater management features and systems on site

☐ Calculations and procedures used to design permanent structural stormwater BMPs/controls (note: analysis and design of BMPs must be based on State of NC DENR Stormwater BMP Guidance Manual)

☐ Precipitation data used in stormwater conveyance system and/or stormwater BMP/control analysis and design

☐ Time of concentration (Tc) calculations for existing and proposed site conditions and drainage features (also identify and show flowpaths used for Tc determinations on the SWM Plan or separate map)

☐ NRCS Curve Number (CN) and/or Rational C* analysis and determinations for existing and proposed site conditions (also show on the SWM Plan or separate map).

** Where runoff volume analysis and design is required to satisfy stormwater management requirements, discuss the most appropriate technical methodology to utilize with Village Stormwater Administrator. The Rational Method may generally only be appropriate for peak flow estimations from drainage areas of 200 acres or less.*

☐ Peak Flows, Runoff Volumes, and Hydrographs (as applicable) to analyze and design site stormwater management features. Stormwater quantity management per Chapter C, Article VII of the UDO must include analysis and design of features and controls per the following minimum performance standards

- Peak discharge control for the 2-year, 10-year, and 25-year storm events. Post-development peak flows for the 2-year, 10-year, and 25-year events must not exceed pre-development peak flows. Storm durations should be appropriate for the site of interest and confirmed with the Village Stormwater Administrator.
- Volume control for the difference in runoff volume from the pre-development 25-year, 6-hour storm to the post-development 25-year, 6-hour storm
- Volume control where the post-development 2-year, 1-hour storm event is 10% greater than the volume of runoff from the pre-development 2-year, 1-hour storm
- Any proposed water impounding structures (i.e., dams) shall be designed in accordance with North Carolina Dam Safety Standards, and if required, shall be reviewed and approved by the NC State Dam Safety Engineer

☐ Other stormwater analysis and design calculations as appropriate for the site to satisfy ordinance requirements

7. Requirements Prior to Issuance of Stormwater Management Occupancy Permit

[Prior to Village issuance of a Stormwater Management Occupancy Permit, the following are required]

☐ Village of Clemmons Stormwater Management Permit

☐ Certified "as-built" drawings of the site plan and stormwater management BMPs/controls

- The designer of the permanent structural stormwater management BMP(s)/control(s) shall certify, under professional seal, that the "as-built" stormwater measures, BMPs, controls, drainage system components, and other stormwater management features are in compliance with the approved stormwater management plans and designs and with the requirements of applicable ordinances

- Designer's Certification of Stormwater BMP/Control Completion:

"I, (Name of licensed design professional), certify that the permanent stormwater management control(s) labeled as (identify structural stormwater control or controls here) on this plan has been completed in conformance with the approved design plans and specifications, has its full design volume available, and is functioning as designed."

Signature of licensed design professional _____ Date _____

[Licensed professional seal]

☐ *Stormwater Control Operations & Maintenance Lien & Easement Agreement(s)* and any other legal documents and recordations must be properly filed and recorded with the Forsyth County Register of Deeds

- The continuous, ongoing obligation of all subsequent property owners to operate, maintain, and re-construct the stormwater control structure(s) shall be disclosed in all plats and deeds of conveyance. The deed for the property or any part thereof subsequently presented for recording to the office of the Register of Deeds shall contain a full disclosure regarding the stormwater control structure(s) together with any restrictive covenants and liens pertaining to maintenance of said structure(s). The following disclosure statement shall appear on all plats and deeds recorded for property developed under the provisions of the ordinance
  - NOTICE: THIS PROPERTY IS LOCATED IN A STORMWATER MANAGEMENT PROTECTION AREA AND/OR PUBLIC WATER SUPPLY WATERSHED. DEVELOPMENT RESTRICTIONS APPLY. THIS PROPERTY IS SUBJECT TO RESTRICTIVE COVENANTS AND A CONTRACTUAL LIEN REQUIRING MAINTENANCE OF A STORMWATER CONTROL STRUCTURE.

☐ Final inspection of the site and stormwater management BMPs/controls scheduled with and completed by the Village Stormwater Administrator

☐ Copies of any/all applicable local, state, and federal permits/permit applications (note: this would include 404/401 permits for work in regulated waters/wetlands, State Dam Safety permits, floodplain development permits, and/or other as applicable)