ORDINANCE NO. 500 TC 478

TC-1-23 – STORMWATER MANAGEMENT REGULATIONS

AN ORDINANCE TO AMEND PORTIONS OF ARTICLE 9.2 and ASSOCIATED SECTIONS OF THE UDO, PART 10 RALEIGH UNIFIED DEVELOPMENT ORDINANCE RELATED TO STORMWATER MANAGEMENT REGULATIONS

WHEREAS, the Unified Development Ordinance is a regulatory document and in order to properly regulate development, the document should be clear and understandable;

WHEREAS, the State of North Carolina (State) has revised the Neuse Nutrient Management Strategy Stormwater Development Rules (15A NCAC 02B .0711) effective April 1, 2020.

WHEREAS, in February 2021, the State adopted a New Development Model Program.

WHEREAS, on September 8, 2022, the State approved the City's proposed changes to Article 9.2 of the UDO that would incorporate the revised Rule 15A NCAC 02B .0711 and Model Program requirements.

WHEREAS, on November 1, 2022, the State required that the City incorporate these changes by May 1, 2023.

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF RALEIGH THAT:

Section 1. Section 9.2.1 of Part 10 Raleigh Unified Development Ordinance, General Provisions, is hereby amended adding the language shown in underline:

Sec. 9.2.1. General Provisions

A. Applicability

Prior to any land disturbing activity or subdivision of land, stormwater control measures, watercourse buffers or both must be provided in conformity with the requirements of this Article.

B. Manual and Guidelines Incorporated

1. The Raleigh Stormwater Management Design Manual along with the Guidelines for Land Disturbing Activities and amendments, on file in the City Clerk's Office, is adopted by reference as part of this UDO.

2. If the specifications of the above referenced adopted documents are more restrictive or apply a higher standard than other laws or regulations, that fact shall not prevent application of the specifications in these documents.

C. Conflict of Laws

- 1. This Article is not intended to modify or repeal any other ordinance, rule, regulation, or other provision of law. The requirements of this Article are in addition to the requirements of any other ordinance, rule, regulation, or other provision of law. Where any provision of this Article imposes restrictions different from those imposed by any other ordinance, rule, regulation, or other provision of law, whichever provision is more restrictive or imposes higher protective standards for human or environmental health, safety, and welfare shall control.
- 2. Proposed development projects shall demonstrate compliance with the riparian buffer protection requirements set forth in 15A NCAC 02B .0610, .0611, .0612, and .0714.

D. Authority for Interpretation

- 1. The Engineering Services Director and/or his or her designee has authority to determine the interpretation of this Article, as set forth in Sec. 10.2.14. Any person may request an interpretation of this Article by submitting a written request to the Engineering Services Director and/or his or her designee.
- 2. Any appeal of the Engineering Services Director's and/or his or her designee's interpretation shall follow the procedures for appeals of administrative decisions, as set forth in Sec. 10.2.11.

E. Severability

1. If the provisions of any section, subsection, paragraph, subdivision, or clause of this Article shall be adjudged invalid by a court of competent jurisdiction, such judgment shall not affect or invalidate the remainder of any section, subsection, paragraph, subdivision, or clause of this Article.

F. Definitions

1. 'Built-upon area' means impervious surface or partially impervious surface that significantly reduces and prevents natural infiltration of water into the soil. 'Existing Built-Upon Area' means built-upon area or impervious surface area that existed on a site prior to May 1, 2001. Built-upon area includes but is not limited to roofs, patios, balconies, decks, streets, parking areas, driveways, sidewalks and any concrete, stone, brick, asphalt or compacted gravel surfaces. The effective impervious coverage for certain surfaces listed below are as follows:

- a. Asphalt, concrete, crusher-run gravel, masonry, marl, wood and other impermeable surfaces that prevent land area from infiltrating stormwater are 100% impervious.
- b. Porous surfaces that permit direct infiltration of unconcentrated stormwater into ground areas which are prepared in accordance with plans approved by the City so that the first one-half inch of stormwater infiltrates into the ground are 70% through 10% impervious, depending on:
 - i. Compaction;
 - ii. Condition of subgrade;
 - iii. Extent of land disturbance;
 - iv. Extent of porous openings;
 - v. Protection from siltation and clogging;
 - vi. Slope of the ground area; and
 - vii. Volume of stormwater stored.
- c. <u>Slatted wood decks that allow the drainage of water through the slats to an unpaved surface below are 50% impervious.</u> If the area covered by the deck is washed gravel, the deck is 30% impervious.
- d. <u>Ungraveled natural footpaths</u>, water surfaces of swimming pools and drainfields are 0% impervious.
- e. <u>All other necessary determinations about impervious surfaces will be based on hydrological tests based on existing subgrade soils, slope, rainfall intensity and rainfall duration.</u>
- 2. 'Common Plan of Development' means a site where multiple separate and distinct development activities may be taking place at different times on different schedules but governed by a single development plan regardless of ownership of the parcels.
 Information that may be used to determine a 'common plan of development' include plats, blueprints, marketing plans, contracts, building permits, public notices or hearings, zoning requests, and infrastructure development plans.
- 3. 'Development' means any land-disturbing activity that increases the amount of builtupon area or that otherwise decreases the infiltration of precipitation into the subsoil.
 When additional development occurs at a site that has existing development, the builtupon area of the existing development shall not be included in the density calculations
 for additional stormwater control requirements, and stormwater control requirements
 cannot be applied retroactively to existing development, unless otherwise required by
 federal law.
- 4. 'Existing Development' means those projects that are built or those projects that have established a vested right under North Carolina law as of May 1, 2001.

- 5. 'Owner' means any legal or beneficial owner of land, including but not limited to a mortgagee or vendee in possession, receiver, executor, trustee, or long-term or commercial lessee, or any other person or entity holding proprietary rights in the property or having legal power of management and control of the property. 'Owner' shall include long-term commercial tenants; management entities, such as those charged with or engaged in the management of properties for profit; and every person or entity having joint ownership of the property. A secured lender not in possession of the property does not constitute an owner, unless the secured lender is included within the meaning of 'owner' under another description in this definition, such as a management entity.
- 6. 'Primary Stormwater Control Measure' means a wet pond, stormwater wetland, infiltration system, sand filter, bioretention cell, permeable pavement, green roof, rainwater harvesting, or an approved new stormwater technology that is designed, constructed and maintained in accordance with the North Carolina Department of Environmental Quality Stormwater Minimum Design Criteria.
- 7. 'Redevelopment' means any land-disturbing activity that does not result in a net increase in built-upon area and that provides greater or equal stormwater control to that of the previous development.

Section 2. Section 9.2.2.A. of Part 10 Raleigh Unified Development Ordinance, Active Stormwater Control Measures, Exemptions, is hereby amended by adding the language shown in underline and deleting the language shown in strikethrough:

A. Exemptions

Subject to the additional runoff controls required in Sec. 9.2.2.E.3 and the impervious surface limitations and other regulations of subsection A.4 below, the following are exempt from the active stormwater control measures required by Sec. 9.2.2:

1. Grandfathered Lots

a. Defined

Any lot which was either recorded prior to May 1, 2001 (the first application of the Stormwater Management Ordinance) or lawfully recorded later as part of a subdivision approved prior to May 1, 2001. Such grandfathering shall apply only to compliance with this Article.

b. Use Standards

i. A grandfathered lot of any size one acre or less, including grandfathered lots that are recombined with other grandfathered lots, used for any detached house or tiny house used for single-unit living or any attached house, tiny house or two

unit townhouse development used for two- unit living, including accessory uses and is not part of a larger common plan of development approved after May1, 2001.

- ii. A grandfathered lot of greater than one acre, including lots that are recombined with other grandfathered lots, used for any detached house used for single-unit living or any attached house used for two- unit living, including accessory uses that is not part of a larger common plan of development approved after May 1, 2001 and with less than 5% built-upon area coverage in development or expansion of existing development.
- ii. iii. A grandfathered lot of one-half acre or less that has not been altered to be larger than one-half acre in size, used for any other lawful use requiring a site plan and is not part of a larger common plan of development approved after May 1, 2001.

2. Subdivided Lots

a. Defined

A lot created by a subdivision approved after May 1, 2001.

b. Use Standards

- i. Any detached house or tiny house used for single-unit living or any attached house used, tiny house or two unit townhouse development used for two-unit living, including their accessory uses, situated on a subdivided lot that was part of a subdivision of one acre or less in aggregate size, including subdivided lots that are recombined with other similar subdivided lots and are not part of a larger common plan of development approved after May 1, 2001.
- ii. Any other lawful use requiring a site plan situated on a subdivided lot that was part of a subdivision of one-half acre or less in aggregate size and is not part of a larger common plan of development approved after May 1, 2001.

3. Other Exemptions

- a. Existing development or redevelopment shall be exempt from the provisions of this Article.
- b. Land-disturbing activities, not otherwise exempted, that do not require a land-disturbing permit under Sec. 9.4.6 are exempted provided that, upon application of any impervious surfaces this exemption shall not apply.
- e. b. Substitution of impervious surfaces built-upon area when all the standards of Sec.

10.3.4.E are met.

- d. c. Substitution of impervious surfaces built-upon area with approved pervious surfaces.
- d. Except as otherwise allowed in 15A NCAC 02B .0711(4)(f) and .0712, agricultural activities are not exempt from Article 9.2.

. . .

Section 3. Section 9.2.2.B of the Part 10 Raleigh Unified Development Ordinance, Nitrogen Reduction, is hereby amended by adding the language shown in underline and deleting the language shown in strikethrough:

B. Nitrogen Reduction

1. General Requirements

- a. Any new <u>development</u> or expansion of existing development, not in compliance with the stormwater control master plan approved for its drainage basin, <u>shall</u> not contribute a nitrogen export load exceeding 3.6 pounds per acre per year.
- b. The nitrogen loading standards in this Article are supplemental to, not replacements for, stormwater standards otherwise required by federal, state or local law, including without limitation any riparian buffer requirements applicable to the location of the development.
- c. The project area used for nutrient calculation and stormwater requirements shall be the site area less any existing built-upon area.
- d. The project density used for determining stormwater requirements shall be the amount of the built-upon area subject to this Article at project completion divided by the project area.
- e. A project with existing development may use the calculation method in Sec. 9.2.2.B.1.d. or shall have the option of calculating project density as the total built-upon area for the site divided by the total site area.
- f. The developer shall determine the nitrogen load and loading rate generated from the project area without stormwater control measures and determine the needed nitrogen

load reduction to meet nutrient targets by using the approved accounting tool.

- g. Stormwater control measures shall be designed to control and treat the volume of runoff generated from all built-upon area by one inch of rainfall or equivalent runoff volume.
- h. Stormwater runoff from off-site areas and existing development shall not be required to be treated in the stormwater control measure. Runoff from off-site areas or existing development that is not bypassed shall be included in the sizing of the on-site stormwater control measure at its full built-out potential.
- i. When new built-upon area is added to existing development or existing development is replaced with new built-upon area, only the area of net increase shall be subject to this Article.
- b. j. Compliance with stormwater control master plan must include the installation within the development of all stormwater control measures shown on the stormwater control master plan, payment of fees in lieu of installation, when allowed by the City and payment of any applicable drainage fees.
- e. k. Stormwater control measures shown on the stormwater control master plan for a new development or expansion of existing development that are demonstrated to control stormwater on a runoff volume basis will be deemed to meet the nitrogen export load requirement, provided that the post-development volume of stormwater leaving the site is equal to or less than the pre-development volume of stormwater leaving the site based on the 90th percentile storm. For the purpose of meeting this requirement for new development sites, the pre-development land cover must be assumed to be forested for the entire development site. For expansion of existing development redevelopment of a developed site, any impervious built-upon area added as part of the redevelopment expansion of existing development must be assumed to be forested in the pre- development condition. In any case, output from appropriate Nutrient Sensitive Waters methodology shall be provided to the City for purposes of recordkeeping and reporting.

2. Methods to Meet Nutrient Control Requirements

<u>Projects subject to this Article shall meet nitrogen loading targets through a combination of the following methods:</u>

- a. Projects may reduce export of nitrogen through any combination of stormwater control measures treating runoff on the site, in an approved off-site regional stormwater control measure, or through the acquisition of permanent nutrient off-set credits. The development shall calculate the nitrogen reduction provided by these controls using the approved accounting tool.
 - i. Projects with less than or equal to 24% built-upon area may meet nutrient target rates entirely by nutrient off-sets.
 - ii. Projects with greater than 24% built-upon area shall provide onsite stormwater treatment or shall use dedicated offsite regional stormwater control measures for stormwater treatment covering multiple otherwise unrelated projects. Stormwater control measures shall be designed to control and treat volume of runoff generated from all built-upon area by one inch of rainfall or equivalent runoff volume in one or more primary stormwater control measure. Nutrient reduction needs not achieved following treatment requirements can be covered with nutrient off-sets.
- b. Proposed development undertaken by a local government solely as a public road expansion or public sidewalk project, or proposed development subject to the jurisdiction of the Surface Transportation Board, may meet nitrogen reduction needs for the project entirely through the use of permanent nutrient off-set credits pursuant to the Nutrient Offset Credit Trading Rule, 15A NCAC 02B .0703.

2. Payment In Lieu Option 3. Nutrient Off-set Credits

The nitrogen export load limitations for a development may be off-set through a payment made to the North Carolina Riparian Buffer Restoration Fund or private mitigation bank. The payment shall be based on the latest fee adopted by the State and shall meet the following requirements.

a. In General

- i. Installation of City approved stormwater control measures or payment in lieu option or a combination of both may be used to satisfy the nitrogen load requirement.
- ii. a. For subdivisions with an approved stormwater control plan, all payments shall be made prior to issuance of a land disturbance permit. Where no land disturbance permit is required, fees shall be due prior to recording of the plat. For all other developments, payments shall be paid to the North Carolina Riparian Buffer Restoration Fund prior to the issuance of applicable development permits.

- b. Excess permanent nutrient off-set credits acquired beyond what is required for the development shall not be applied to any other development.
 - iii. For all other developments, payments shall be paid to the North Carolina Riparian Buffer Restoration Fund prior to the issuance of applicable development permits.

b. Residential Development

- i. For any detached house used for single-unit living or any attached house used for two-unit living, a one-time offset payment may be paid to the North Carolina Riparian Buffer Restoration Fund to reduce the nitrogen export load of up to 6 pounds per acre per year to 3.6 pounds per acre per year.
- ii. All residential development that exceeds nitrogen export loads of 6 pounds per acre per year must install City-approved stormwater control measures to reduce the nitrogen export load of their development to 6 pounds per acre per year limitation to become eligible for the payment in lieu option.

c. Mixed Use and Nonresidential Development

- i. For mixed use and nonresidential development, a one-time offset payment may be paid to the North Carolina Riparian Buffer Restoration Fund to reduce the nitrogen export load of up to 10 pounds per acre per year to 3.6 pounds per acre per year.
- ii. Mixed use and nonresidential development that exceeds nitrogen export loads of 10 pounds per acre per year must install City-approved stormwater control measures to reduce the nitrogen export load of their development to 10 pounds per acre per year limitation to become eligible for the payment in lieu option.

Section 4. Section 9.2.2.C. of the Part 10 Raleigh Unified Development Ordinance, Stormwater Control Permits, is hereby amended by adding the language shown in underline and deleting the language shown in strikethrough:

C. Stormwater Control Permits

- 1. No development, expansion of existing development or the placement of more than 12,000 square feet of any impervious surface built-upon area, may occur on a site without an issued stormwater control permit from the Development Services Department City.
- 2. No stormwater control permit may be approved until a stormwater control plan is first approved by the City in accordance with Sec. 9.2.2.D.
- 3. No stormwater control permit may be issued except in strict conformity with the provisions of this Article, the Raleigh Stormwater Management Design Manual.

- 4. No stormwater control permit may be issued until the boundaries of any watercourse buffer, riparian surface water buffer or transitional protective yard in a -MPOD, UWPOD, -FWPOD or -SWPOD or CM District and permanently protected undisturbed open space areas which are adjacent to or encompass a work site are clearly and accurately demarcated by a protective fence in the field. Protection measures must be field verified by a Professional Land Surveyor.
- 5. The stormwater control permit shall govern the design, installation, and construction of stormwater management and control practices on the site, including stormwater control measures and elements of the site design for stormwater management other than stormwater control measures.

Section 5. Section 9.2.2.D. of the Part 10 Raleigh Unified Development Ordinance, Stormwater Control Plans, is hereby amended by adding the language shown in underline and deleting the language shown in strikethrough:

D. Stormwater Control Plans

1. General Requirements

- a. Stormwater control plans must be prepared by a qualified registered North Carolina professional engineer, surveyor, soil scientist or landscape architect shall perform services only in their area of competence and shall verify that the design of all stormwater control measures and practices meet the submittal requirements for complete applications, that the designs and plans are sufficient to comply with applicable standards and policies found in adopted documents per Sec. 9.2.1.B., and that the design and plans ensure compliance with this Article.
- b. <u>Stormwater control plans shall be submitted by the landowner, a lessee or person</u> holding an option or contract to purchase or lease land, or an agent of the landowner.
- b. c. All parts of a stormwater control plan, including data calculation, design and installation of stormwater control measures and devices shall be in compliance with the Raleigh Stormwater Control and Watercourse Buffer Manual.
- e. <u>d.</u> Stormwater control plans must show how nitrogen reduction and stormwater runoff control requirements are being met and how watercourse buffers are being protected.
- d. e. A surety equal to 125% of the cost of construction of a stormwater device shall be paid to the City prior to permit issuance. If the amount of impervious surfaces built-upon area for the bonded area exceeds 15%, the City may cash the surety.

2. Maintenance Manual and Budget

- a. The stormwater control plan must be accompanied by a stormwater operations maintenance manual and budget.
- b. Prior to either grading any portion of the development or submitting construction drawing plans of any applicable stormwater control facility to the City, whichever event first occurs, a stormwater operations maintenance and budget shall be submitted to Engineering Services.
- c. The maintenance manual shall contain a narrative describing each installed measure and device and its design specifications.
- d. The maintenance manual shall describe which lots are served by each device.
- e. The maintenance manual shall indicate for each installed measure and device what operation and maintenance actions are needed and what specific quantitative criteria will be used to determine when these actions will be taken. The area considered shall include the stormwater conveyance system, perimeter of the device, inlet(s), pretreatment measures, main treatment area, outlet, vegetation and discharge point.
- f. The maintenance manual must indicate the steps that will be taken to restore a measure or device to the design specifications if a failure occurs.
- g. The maintenance manual must contain a statement about the expected repair life of each stormwater control facility and a replacement schedule derived by dividing the initial construction cost of each stormwater control facility by the expected life of that stormwater control facility.
- h. The maintenance manual shall require the owner to maintain, repair and, if necessary, reconstruct the stormwater control measure(s), and shall state the terms, conditions, and schedule of maintenance for the stormwater control measure(s).
- i. The maintenance manual shall be signed by the owner and notarized. The owner shall keep maintenance records and these shall be available upon the request of the City.
- h. j. The budget shall include annual costs such as routine maintenance, periodic sediment removal and replenishment of rip-rap, insurance premiums associated with the stormwater control facilities, taxes levied against the stormwater control facilities, mowing and reseeding, replacing vegetation as necessary and required inspections.

3. As-Built Plans and Certification

Stormwater control plans must be followed by as-built plans certified under seal, that the stormwater <u>control</u> measures and devices and their installation are in compliance with the <u>Raleigh</u> Stormwater Management Design Manual and the City- approved or modified

stormwater control plan. No certificate of compliance or occupancy may be issued by the Developmental Services City without approved as-built plans, except where multiple units are served by the stormwater control measure(s), in which case the City may elect to withhold a percentage of permits or certificates of occupancy until as-built plans are submitted and approved by the City. At a minimum, the as-built plans must contain the following information:

- a. The name and address of the land owner;
- b. The final design specifications for all stormwater control measures and practices;
- c. <u>The field location, size, depth, and planted vegetation (when applicable) of all</u> stormwater control measures and devices, as installed;
- b. d. The recorded book and page number of the lot of each required stormwater control facility and required open space area;
- e. e A statement that all inspected stormwater control facilities and open space areas are in compliance with the approved stormwater control plan, the applicable maintenance manual required and the Raleigh Stormwater Management Design Manual; and
- d. f. The original signature and seal of the engineer, surveyor or landscape architect.

Section 6. Section 9.2.2.E.2. of the Part 10 Raleigh Unified Development Ordinance, Stormwater Runoff Controls, Exemptions, is hereby amended by adding the language shown in underline and deleting the language shown in strikethrough:

2. Exemptions

The stormwater runoff control requirements do not apply to sites with any of the following conditions.

- a. The development complies with the stormwater control master plan approved for its drainage basin.
- b. The increase in peak stormwater runoff between pre-development and post-development conditions for the two-year and 10-year and 25-year storms is 10% or less at each point of discharge.
- c. The maximum impervious surface built-upon area coverage of the lot, including any existing impervious built-upon area surfaces, is no more than 10% and the remaining pervious portions of the lot are utilized to convey and control the stormwater runoff of the lot to the maximum extent practical. In the event that the site is subsequently

- subdivided, reduced by recombination or the impervious surface built-upon area is equal to or exceeds 15% the site may no longer be exempt.
- d. Compliance with Sec. 9.2.2.E.1. above, would result in greater adverse downstream impact, such as local flooding, as determined by City- approved engineering studies.
- e. Compliance with the 10-year storm and 25-year storm runoff limitations in Sec. 9.2.2.E.1. above results in no benefit to current and future downstream development, as determined by City-approved engineering studies.

. . .

Section 7. Section 9.2.3.A.4.c. of the Part 10 Raleigh Unified Development Ordinance, Watercourse Buffers, Natural Resource Buffers, Urban Water Supply Watershed Protection Overlay District Watercourse Buffers, is hereby amended by adding the language shown in underline and deleting the language shown in strikethrough:

. . .

- c. Within -UWPOD, these natural resource buffers do not apply to:
 - i. New detached houses on a nonconforming lot of record;
 - ii. Redevelopment Expansion of existing development of on lots containing detached houses; and
 - iii. Activity in a single development that disturbs less than 1 acre.

. . .

Section 8. Section 9.2.5.F. of the Part 10 Raleigh Unified Development Ordinance, Enforcement, Specific Civil Penalties, is hereby amended by adding the language shown in underline:

F. Specific Civil Penalties

Civil penalties for specific violations of Article 9.2. Stormwater Management shall be assessed as follows.

- 1. Work without a Permit
 - \$5,000 per day for failure to secure a valid required stormwater control permit or watercourse buffer permit prior to conducting any land-disturbing activity, any development or expansion of existing development, any placement of built-upon area or impervious surfaces or any new use or construction.
- 2. Failure to Follow Plan \$3,000 per day for failure to conduct a land-disturbing activity, placement of <u>built-upon</u> area or impervious surfaces, development or expansion <u>of existing development</u> in accordance with the provisions of an approved stormwater control plan.

• • •

Section 9. Article 9.2. of the Part 10 Raleigh Unified Development Ordinance, Stormwater Management, is hereby amended by adding the following subsection:

Sec. 9.2.6. Variances and Appeals

A. Any variance request or appeal of an administrative decision of a regulation contained within this Article must be presented before the Board of Adjustment. All procedural requirements of Sec. 10.2.10 and Sec. 10.2.11, respectively, shall apply.

Section 10. Section 11.4.1. of the Part 10 Raleigh Unified Development Ordinance, Enforcement Provisions, Permit Requirements is hereby amended adding the language shown in underline:

. . .

J. Stormwater Control Permit

A stormwater control permit is required for projects with a change in built-upon area or impervious surface.

Section 11. All laws and clauses of laws in conflict herewith are repealed to the extent of such conflict.

Section 12. If this ordinance or application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of the ordinance which can be given separate effect and to this end the provisions of this ordinance are declared to be severable.

Section 13. This text change has been reviewed by the Raleigh City Planning Commission.

Section 14. This ordinance has been adopted following a duly advertised public hearing of the Raleigh City Council.

Section 15. This ordinance has been provided to the North Carolina Capital Planning Commission as required by law.

Section 16. This ordinance shall be enforced as provided in N.C.G.S. 160A-175 or as provided in the Raleigh City Code.

Section 17. This ordinance is effective May 1, 2023.

ADOPTED: April 18, 2023

EFFECTIVE: May 1, 2023

DISTRIBUTION: Planning & Development – Young, Bowers, Walter, Ray, Rametta,

McDonald, Sheppard

Engineering Services – Miles, Brown, Hoyt, Witherspoon City Attorney – Tatum, Hofmann, York, Hargrove-Bailey

Department Heads

Transcription Svcs – Taylor

Prepared by the Department of Planning and Development.