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Chapter 14: ENVIRONMENTAL REGULATION

14.1 GENERAL PROVISIONS

14.1.1 Purposes

In addition to promoting the general purposes outlined in Section 1.3 of this ordinance, the purposes of this chapter include:

(A) To encourage the proper use of the land by promoting an appropriate balance between the built environment and the preservation of open space, environmentally sensitive lands, and natural resources;

(B) To protect private and public investment by preserving open space; protecting natural resources including the existing tree canopy and forests; reducing heat and air pollution; capturing carbon; and protecting water quality in our streams and waterways;

(C) To protect and promote the health and economic value of streams, waterways, trees, forests, open space, and natural lands; and

(D) To promote water quality benefits through preserving natural areas and encouraging good soil management.

14.1.2 Authority

This chapter is adopted pursuant to, among other authorities, G.S. Part 2, Article 9 of Chapter 160D; Article 8 of Chapter 160A, and Part 6, Article 21 of Chapter 143.

(Ord. No. 2022-LDO-03, 10-27-22)

14.2 NUISANCE AND HAZARD CONTROL STANDARDS

14.2.1 Purpose and Applicability

This section is intended to ensure that industrial, research, and other business activities are established and maintained with proper appearance from streets and adjoining properties, and to ensure that such activities are good neighbors to adjoining properties by controlling the emission of noise, odors, glare, vibration, smoke, dust, liquid wastes, radiation, radioactivity, and similar pollutants. Accordingly, this section states the performance standards and conditions with which Cary expects the construction and operation of industrial, research, and other business activities to comply. These performance standards, like all other provisions of this Ordinance, are continuing obligations, and all industrial, research, and other business uses will be expected to operate in compliance with these standards. Any land use that fails to comply with these standards shall be in violation of this Ordinance.

14.2.2 General Standards and Measures for Compliance

(A) All uses shall be conducted so as to preclude any nuisance, hazard, or commonly-recognized offensive condition or characteristics of the use, including the creation or emission on other properties of dust, gas, smoke, noise, fumes, odors, vibrations, particulate matter, chemical compounds, toxic matter, fire, explosions, electrical disturbance, heat, glare, or excessive night illumination. At any time before or after a building is used or occupied, the Planning Director may require that adequate control measures be provided in accordance with the

requirements or standards of the appropriate state or federal government agency responsible for regulating that condition or pollutant, in order to protect the public health, safety, comfort, convenience, and general welfare from any such nuisance, hazard, condition, or pollutant.

(B) Federal and State environmental regulations may also apply to one or more of the features governed by the standards in Section 14.2.3 below. The intent is for the standards of this section to supplement and complement, not supersede or replace, any applicable Federal and State regulations. If any standard herein conflicts with an applicable Federal or State standard, then the Federal or State standard shall control.

14.2.3 Performance Standards

(A) Landscaping

All required front yards, side yards, and rear yards shall be open, landscaped green areas or left in their natural state. Where landscaped, such yards shall be planted attractively with lawn, trees, shrubs, and the like in accordance with the development plan which Cary has approved for the use. Any areas left in their natural state shall be properly maintained in a sightly and well-kept condition. Parking areas also shall be maintained in a sightly and well-kept condition.

(B) Noise

Noise shall be muffled so as not to become objectionable at or beyond the property line due to intermittent beat frequency, shrillness, or intensity.

(C) Odors

Odors from any use shall not exceed the standards established by the State of North Carolina.

(D) Glare

Direct or reflected glare, such as from floodlights or high temperature processes, and as differentiated from general illumination, shall not be visible at or beyond any property line.

(E) Smoke

Smoke emissions shall not exceed the maximum limits established by the State of North Carolina.

(F) Dust and Other Particulate Matter

Solid or liquid particulate matter shall not be emitted at any point in a concentration exceeding three-tenths (0.3) grains per cubic foot of the conveying gas or air.

(G) Gases

Fumes or gases shall not be emitted at any point in concentrations or amounts that are noxious, toxic, corrosive, or in excess of any applicable maximum limits established by State or Federal regulations.

(H) Fire and Explosion Hazards

All operations shall be carried out in accordance with the Cary Fire Code and with reasonable precautions against fire and explosive hazards.

(I) Radiation and Radioactivity

Operations shall cause no radiation or radioactivity at or beyond any property line that exceeds any applicable standards or regulations established by the U. S. Nuclear Regulatory Commission or by other federal or state agencies or laws.

(J) Electrical Radiation

Any electrical radiation shall not at any point adversely affect or interfere with any operations or equipment other than those of the person, company, or other entity emitting the radiation. Avoidance of adverse effects or interference from electrical radiation by appropriate single or mutual scheduling of operations is permitted.

(K) Wastewater and Industrial Wastes

All wastewater and industrial wastes shall be treated and disposed in such a manner as to comply with the water quality standards applicable to the classification assigned to the receiving waters by the State of North Carolina. Approval by the State of North Carolina of all plans for waste disposal facilities shall be required before the issuance of any building permit. All uses connected to Cary's sanitary sewer system also shall comply with all applicable requirements established in Chapter 36 of the Code of Ordinances of Cary.

(L) Underground and Above-Ground Storage Tanks

All storage tanks which are placed above or below the ground shall be designed and installed so as to prevent the infiltration of their contents into groundwater or surface waters, and to comply with all applicable State regulations promulgated by the North Carolina Department of Health, Environment and Natural Resources.

14.2.4 Effects of Concurrent Operations on Different Properties

The sum total of the effects of concurrent operations on two (2) or more parcels measured at any property line shall not be greater or more offensive to the senses than the standards contained in this section. Compliance with the provisions of this section may occur by independent or mutual changes in operational levels, scheduling of operations, and other adjustments.

14.2.5 Determination of Violation of Performance Standards

(A) The Planning Director shall have the authority to determine violations of the standards set forth in this section.

(B) Where determination of a violation of these standards requires the use of personnel or instruments not available to Cary, and a violation exists in the opinion of the Planning Director, the following procedures shall be followed:

(1) The Planning Director shall give written notice of the alleged violation by registered or certified mail, return receipt requested, to the owner or occupant of the property. The

notice shall describe the alleged violation, state the reasons why the Director believes there is a violation, and require that the owner or occupant answer the allegation within thirty (30) days of receiving the notice.

(2) After the thirty (30)-day period passes, if a dispute still exists between the Director and the alleged violator regarding the existence of a violation, then the alleged violator may appeal to the Zoning Board of Adjustment. The Director shall then transmit to the Board a copy of the notice given to the alleged violator, along with any recommendations as to alterations, modifications, or securing the services of a consultant to determine whether a standard has been violated. The Board then shall make a determination as to whether a violation exists.

(3) If the Zoning Board of Adjustment finds the alleged violation to exist, then the costs of making that determination shall be charged to the owner or occupant of the property responsible for the violation. If the Zoning Board of Adjustment determines that no violation exists, then Cary shall cover the costs of making the determination.

(4) If a violation is not removed or corrected as directed by the Zoning Board of Adjustment, then the Director may:

(a) Void any occupancy permits previously issued to the violator and require the operator to cease operation until the violation is removed, corrected, or otherwise remedied; and/or

(b) Initiate further enforcement actions under Chapter 11 of this Ordinance.

(C) Where determination of a violation of these standards does not require the use of personnel or instruments not available to Cary, the Director may initiate enforcement actions under Chapter 11 of this Ordinance.

(Ord. No. 2022-LDO-03, 10-27-22)

14.3 ILLEGAL DISCHARGES TO THE STORM SEWER SYSTEM

14.3.1 Purpose

The purpose of this section 14.3 is to provide for the health, safety, and general welfare of the citizens of Cary through the regulation of non-storm water discharges to the storm drainage system to the maximum extent practicable as required by federal and state law. This section establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system (MS4) in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process. The objectives of this section are:

(A) To regulate the contribution of pollutants to the MS4 by storm water discharges by any user.

(B) To prohibit illicit connections and discharges to the MS4.

(C) To establish legal authority to carry out all inspection, surveillance, monitoring, and enforcement procedures necessary to ensure compliance with this section.

14.3.2 Applicability

This section 14.3 shall apply to all water entering the storm drain system generated on any developed and undeveloped lands unless explicitly exempted by Cary.

14.3.3 Responsibility for Administration

The Town Manager shall administer, implement, and enforce the provisions of this section 14.3. Any powers granted or duties imposed upon the Town Manager may be delegated by the Town Manager to persons or entities acting in the beneficial interest of or in the employ of Cary.

14.3.4 Compatibility With Other Regulations

This section 14.3 is not intended to modify or repeal any other ordinance, rule, regulation, or other provision of law. The requirements of this section are in addition to the requirements of any other ordinance, rule, regulation, or other provision of law, and where any provision of this section 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 health or the environment shall control.

14.3.5 Severability

The provisions of this section 14.3 are hereby declared to be severable. If any provision, clause, sentence, or paragraph of this section or the application thereof to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions or application of this section.

14.3.6 Ultimate Responsibility

The standards set forth herein and promulgated pursuant to this section 14.3 are minimum standards; therefore, this section does not intend or imply that compliance by any person will ensure that there will be no contamination, pollution, or unauthorized discharge of pollutants.

14.3.7 Discharge Prohibitions

(A) Prohibition of Illegal Discharges

No person shall throw, drain, or otherwise discharge, cause, or allow others under its control to throw, drain, or otherwise discharge into the MS4 any pollutants or waters containing any pollutants, other than stormwater. The commencement, conduct or continuance of any illegal discharge to the storm drain system is prohibited except as described as follows:

(1) The following discharges are exempt from discharge prohibitions established by this ordinance: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water.

(2) Discharges or flow from firefighting, and other discharges specified by the Town as being necessary to protect public health and safety.

(3) Discharges associated with dye testing; however, this activity requires a verbal notification to the Town prior to the time of the test.

(4) The prohibition shall not apply to any non-stormwater discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the United States Environmental Protection Agency (EPA), provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the storm drain system.

(B) Prohibition of Illicit Connections

(1) The construction, use, maintenance, or continued existence of illicit connections to the storm drain system is prohibited.

(2) This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

(3) A person is considered to be in violation of this ordinance if the person connects a line conveying sewage to the MS4 or allows such a connection to continue.

(4) Improper connections in violation of this ordinance must be disconnected and redirected, if necessary, to an approved onsite wastewater management system or the sanitary sewer system upon approval of the Town.

(5) Any drain or conveyance that has not been documented in plans, maps or equivalent, and which may be connected to the storm sewer system, shall be located by the owner or occupant of that property upon receipt of written notice of violation requiring that such locating be completed. Such notice will specify a reasonable time period within which the location of the drain or conveyance is to be determined, that the drain or conveyance be identified as storm sewer, sanitary sewer or other, and that the outfall location or point of connection to the storm sewer system, sanitary sewer system or other discharge point be identified. Results of these investigations are to be documented and provided to the Town.

14.3.8 Watercourse Protection

Every person owning property through which a watercourse passes, or such person's lessee, shall keep and maintain that part of the watercourse within the property free of trash, debris, excessive vegetation, and other obstacles that would pollute, contaminate, or significantly retard the flow of water through the watercourse. In addition, the owner or lessee shall maintain existing privately owned structures within or adjacent to a watercourse, so that such structures will not become a hazard to the use, function, or physical integrity of the watercourse.

14.3.9 Industrial or Construction Activity Discharges

(A) Submission of Notice of Intent to Cary

(1) Any person subject to an industrial or construction activity NPDES stormwater discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the Town prior to the allowing of discharges to the MS4.

(2) The operator of a facility, including construction sites, required to have an NPDES permit to discharge stormwater associated with industrial activity shall submit a copy of the Notice of Intent (NOI) to the Town at the same time the operator submits the original Notice of Intent to the EPA as applicable.

(3) The copy of the Notice of Intent may be delivered to the Stormwater Manager in person or by mailing it to: Notice of Intent to Discharge Stormwater, Stormwater Manager, 316 N. Academy Street, Cary, NC 27513.

(4) A person commits an offense if the person operates a facility that is discharging storm water associated with industrial activity without having submitted a copy of the Notice of Intent to do so to the Town.

14.3.10 Compliance Monitoring

(A) Right of Entry: Inspection and Sampling

The Stormwater Manager shall be permitted to enter and inspect facilities subject to regulation under this ordinance as often as may be necessary to determine compliance with this ordinance.

(1) If a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to representatives of Cary.

(2) Facility operators shall allow the Town ready access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records that must be kept under the conditions of an NPDES permit to discharge stormwater, and the performance of any additional duties as defined by state and federal law.

(3) The Town Manager or is/her designee shall have the right to set up on any permitted facility such devices as are necessary in the opinion of the Town to conduct monitoring and/or sampling of the facility's stormwater discharge. The monitoring and/or sampling of the facility's stormwater shall be at the facility's expense.

(4) Cary has the right to require the discharger to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All devices used to measure stormwater flow and quality shall be calibrated to ensure their accuracy.

(5) Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the operator at the written or oral request of the Town and shall not be replaced. The costs of clearing such access shall be borne by the operator.

(6) Unreasonable delays in allowing Cary access to a permitted facility is a violation of a storm water discharge permit and of this ordinance. A person who is the operator of a facility with an NPDES permit to discharge storm water associated with industrial activity commits an offense if the person denies Cary reasonable access to the permitted facility for the purpose of conducting any activity authorized or required by this ordinance.

(B) Search Warrants

If the Town has been refused access to any part of the premises from which stormwater is discharged, then the Town may seek issuance of a search warrant.

14.3.11 Requirement to Prevent, Control, and Reduce Stormwater Pollutants by the Use of Best Management Practices

Cary will adopt requirements identifying Best Management Practices (BMPs) for any activity, operation, or facility which may cause or contribute to pollution or contamination of stormwater, the storm drain system, or waters of the United States. The owner or operator of such activity, operation, or facility shall provide, at their own expense, reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses through the use of these structural and non-structural BMPs. Further, any person responsible for a property or premise that is, or may be, the source of an illicit discharge, may be required to implement, at said person's expense, additional structural and non-structural BMPs to prevent the further discharge of pollutants to the MS4. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of storm water associated with industrial activity, to the extent practicable, shall be deemed in compliance with the provisions of this section. These BMPs shall be part of a Stormwater Management Plan (SWMP) as necessary for compliance with requirements of the NPDES permit.

14.3.12 Notification of Spills

Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into storm water, the storm drain system, or waters of the United States, said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials said person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, said person shall notify the Stormwater Manager in person or by phone or facsimile no later than the next business day. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the Stormwater Manager within two (2) business days of the phone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least five (5) years. Failure to provide notification of a release as provided above is a violation of this ordinance.

14.3.13 Violations, Enforcement, and Penalties

(A) Violations

It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of this section 14.3. Any person who has violated or continues to violate the provisions of this section, may be subject to the enforcement actions outlined in this section or may be restrained by injunction or otherwise abated in a manner provided by law.

In the event the violation constitutes an immediate danger to public health or public safety, the Town is authorized to enter upon the subject private property, without giving prior notice, to take any and all measures necessary to abate the violation and/or restore the property. Town Manager is authorized to seek costs of the abatement as outlined in section 14.3.16.

(B) Warning Notice

When the Town finds that any person has violated, or continues to violate, any provision of this section 14.3, or any order issued hereunder, the Town may serve upon that person a written Warning Notice, specifying the particular violation believed to have occurred and requesting the discharger to immediately investigate the matter and to seek a resolution whereby any offending discharge will cease. Investigation and/or resolution of the matter in response to the Warning Notice in no way relieves the alleged violator of liability for any violations occurring before or after receipt of the Warning Notice. Nothing in this subsection shall limit the authority of Cary to take any action, including emergency action or any other enforcement action, without first issuing a Warning Notice.

(C) Notice of Violation

Whenever the Town finds that a person has violated a prohibition or failed to meet a requirement of this section 14.3, the Town may order compliance by written notice of violation to the responsible person. The Notice of Violation shall contain:

(1) The name and address of the alleged violator;

(2) The address when available or a description of the building, structure or land upon which the violation is occurring, or has occurred;

(3) A statement specifying the nature of the violation;

(4) A description of the remedial measures necessary to restore compliance with this ordinance and a time schedule for the completion of such remedial action;

(5) A statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed;

(6) A statement that the determination of violation may be appealed by filing a written notice to the Stormwater Manager within five (5) days of service of notice of violation; and

(7) A statement specifying that, should the violator fail to restore compliance within the established time schedule, the work will be done by a designated governmental agency or a contractor and the expense thereof shall be charged to the violator.

Such notice may require without limitation:

(a) The performance of monitoring, analyses, and reporting;

(b) The elimination of illicit connections or discharges;

(c) That violating discharges, practices, or operations shall cease and desist;

(d) The abatement or remediation of storm water pollution or contamination hazards and the restoration of any affected property;

(e) Payment of a fine to cover administrative and remediation costs; and

(f) The implementation of source control or treatment BMPs.

(D) Compensatory Action

In lieu of enforcement proceedings, penalties, and remedies authorized by this ordinance, Cary may impose upon a violator alternative compensatory action, such as storm drain stenciling, attendance at compliance workshops, creek cleanup, etc.

(E) Suspension of MS4 Access

(1) ***Emergency Cease and Desist Orders***

When the Town finds that any person has violated, or continues to violate, any provision of this section 14.3, or any order issued hereunder, or that the person's past violations are likely to recur, and that the person's violation(s) has (have) caused or contributed to an actual or threatened discharge to the MS4 or waters of the United States which reasonably appears to present an imminent or substantial endangerment to the health or welfare of persons or to the environment, the Stormwater Manager may issue an order to the violator directing it immediately to cease and desist all such violations and directing the violator to:

(a) Immediately comply with all ordinance requirements; and

(b) Take such appropriate preventive action as may be needed to properly address a continuing or threatened violation, including immediately halting operations and/or terminating the discharge.

Any person notified of an emergency order directed to it under this Subsection shall immediately comply and stop or eliminate its endangering discharge. In the event of a discharger's failure to immediately comply voluntarily with the emergency order, Cary may take such steps as deemed necessary to prevent or minimize harm to the MS4 or waters of the United States, and/or endangerment to persons or to the environment, including immediate termination of a facility's water supply, sewer connection, or other municipal utility services. Cary may allow the person to recommence its discharge when it has demonstrated to the satisfaction of the Stormwater Manager that the period of endangerment has passed, unless further termination proceedings are initiated against the discharger. A person that is responsible, in whole or in part, for any discharge presenting imminent endangerment shall submit a detailed written statement, describing the causes of the harmful discharge and the measures taken to prevent any future occurrence, to the Town within thirty (30) days of receipt of the emergency order. Issuance of an emergency cease and desist order shall not be a bar against, or a prerequisite for, taking any other action against the violator.

(2) ***Suspension due to Illicit Discharges in Emergency Situations***

The Town Manager may, without prior notice, suspend MS4 discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the MS4 or waters of the United States. If the violator fails to comply with a suspension order issued in an emergency, the Town Manager may take such steps as deemed necessary to prevent or minimize damage to the MS4 or waters of the United States, or to minimize danger to persons.

(3) ***Suspension due to the Detection of Illicit Discharge***

Any person discharging to the MS4 in violation of this ordinance may have their MS4 access terminated if such termination would abate or reduce an illicit discharge. The Town will notify a violator of the proposed termination of its MS4 access. The violator may petition the Town Manager for a reconsideration and hearing. A person commits an offense if the person reinstates MS4 access to premises terminated pursuant to this Section, without the prior approval of the Town.

(F) Civil Penalties

In the event the alleged violator fails to take the remedial measures set forth in the notice of violation or otherwise fails to cure the violations described therein within five (5) days, or such greater period as the Stormwater Manager shall deem appropriate, after the Stormwater Manager has taken one or more of the actions described above, the Stormwater Manager may impose a penalty not to exceed one thousand dollars ($1,000) (depending on the severity of the violation) for each day the violation remains unremedied after receipt of the notice of violation.

(G) Criminal Prosecution

Any person that has violated or continues to violate this ordinance shall be liable to criminal prosecution to the fullest extent of the law and shall be subject to a criminal penalty of one thousand dollars ($1,000) per violation per day and/or imprisonment for a period of time not to exceed thirty (30) days. Each act of violation and each day upon which any violation shall occur shall constitute a separate offense.

14.3.14 Appeal of Notice of Violation

Any person receiving a Notice of Violation may appeal the determination. The notice of appeal must be received within five (5) days from the date of the Notice of Violation and must specify with particularity the grounds for the appeal. Hearing on the appeal before the court of appropriate jurisdiction shall take place within thirty (30) days from the date of receipt of the notice of appeal. The decision of the municipal authority or their designee shall be final.

14.3.15 Enforcement Measures After Appeal

If the violation has not been corrected pursuant to the requirements set forth in the Notice of Violation, or, in the event of an appeal, within thirty (30) days of the decision upholding the NOV, then representatives of Cary shall enter upon the subject private property and are authorized to take any and all measures necessary to abate the violation and/or restore the property. It shall be unlawful for any person, owner, agent or person in possession of any premises to refuse to allow the government agency or designated contractor to enter upon the premises for the purposes set forth above.

14.3.16 Cost of Abatement of the Violation

Within thirty (30) days after abatement of the violation, the owner of the property will be notified of the cost of abatement, including administrative costs. The property owner may file a written protest objecting to the amount of the assessment within thirty (30) days. If the amount due is not paid within a timely manner as determined by the decision of the municipal authority or by the expiration of the time in which to file an appeal, the charges shall become a special assessment against the

property and shall constitute a lien on the property for the amount of the assessment. Any person violating any of the provisions of this article shall become liable to Cary by reason of such violation. The liability shall be paid in not more than ten (10) equal payments. Interest at the rate of eight percent (8%) per annum shall be assessed on the balance beginning on the first day following discovery of the violation.

14.3.17 Violations Deemed a Public Nuisance

In addition to the enforcement processes and penalties provided, any condition caused or permitted to exist in violation of any of the provisions of this section 14.3 is a threat to public health, safety, and welfare, and is declared and deemed a nuisance, and may be summarily abated or restored at the violator's expense, and/or a civil action to abate, enjoin, or otherwise compel the cessation of such nuisance may be taken.

14.3.18 Remedies Not Exclusive

The remedies listed in this section 14.3 are not exclusive of any other remedies available under any applicable federal, state or local law and it is within the discretion of the Stormwater Manager to seek cumulative remedies. Cary may recover all attorney's fees, court costs and other expenses associated with enforcement of this ordinance, including sampling and monitoring expenses.

(Ord. No. 2022-LDO-03, 10-27-22)

14.4 SOIL EROSION AND SEDIMENTATION CONTROL

14.4.1 Purposes

This section is adopted for the purpose of regulating land-disturbing activities in order to control accelerated erosion and sedimentation and accordingly to prevent water pollution from sedimentation, to prevent accelerated erosion and sedimentation of lakes and natural watercourses, and to prevent damage to public and private property by sedimentation during and after construction.

14.4.2 Permit and Approval Requirements

Land-disturbing activities shall be subject to the requirements and procedures set forth in Section 3.13 of this Ordinance for obtaining grading permits and the approval of erosion control plans and required permits by the U.S. Army Corps of Engineers or other federal or state agencies responsible for regulating development in wetlands. Any required state and/or federal permits must be obtained prior to the issuance of a grading permit.

14.4.3 General Erosion and Sedimentation Control Standards

All persons conducting land-disturbing activities shall take all reasonable measures to protect all public and private property from damage by such activities. Any and all state and/or federal standards apply and must be met. In situations where state and/or federal rules conflict with the provisions of this section, the more restrictive shall apply. All land-disturbing activities, except for those exempted by Section 3.13.1 of this Ordinance, shall meet the following standards:

(A) Conveyance Channels

(1) Stream banks and drainageway channels downstream from any land-disturbing activity shall be protected from increased degradation by accelerated erosion caused by increased velocity of runoff from the land-disturbing activity. The land-disturbing activity

shall be planned and conducted such that the velocity of stormwater runoff in the receiving watercourse at the point of discharge resulting from a ten (10)-year storm after development shall not exceed the greater of:

(a) The velocity as determined from Table 14.4-1 below; or

(b) The velocity in the receiving watercourse determined for the ten (10)-year storm prior to development.

TABLE 14.4-1: MAXIMUM PERMITTED VELOCITIES FOR STORMWATER DISCHARGES

Material	Feet per Second	Meters per Second*
Fine sand (noncolloidal)	2.5	0.8
Sandy loam (noncolloidal)	2.5	0.8
Silt loam (noncolloidal)	3.0	0.9
Ordinary firm loam	3.5	1.1
Fine gravel	5.0	1.5
Stiff clay (very colloidal)	5.0	1.5
Graded, loam to cobbles (noncolloidal)	5.0	1.5
Graded, silt to cobbles (colloidal)	5.5	1.7
Alluvial silts (noncolloidal)	3.5	1.1
Alluvial silts (colloidal)	5.0	1.5
Coarse gravel (noncolloidal)	6.0	1.8
Cobbles and shingles	5.5	1.7
Shales and hard pans	6.0	1.8

* These values are for channels with straight alignment. For sinuous channels: multiply allowable velocity by 0.95 for slightly sinuous channels; by 0.9 for moderately sinuous channels; and by 0.8 for highly sinuous channels.

(2) If the requirements of paragraph (1) above cannot be met, then the channel below the discharge point shall be designed and constructed to withstand the expected velocity. Any channel stabilization activities involving stream bank stabilization may not be approved without the required state and/or federal permits.

(3) Alternative and innovative measures to satisfy the intent of this paragraph (A), applied either alone or in combination, may be used if there are no objectionable secondary consequences and the applicant can demonstrate to the Stormwater Manager that such measures have the potential to keep stormwater discharge velocities from creating an erosion problem in the receiving watercourse. Some alternative measures include:

(a) Avoiding increases in surface runoff volume and velocity by including measures to promote infiltration to compensate for increased runoff from areas rendered impervious;

(b) Avoiding increases in stormwater discharge velocities by using vegetated or roughened swales or waterways in lieu of closed drains and high-velocity paved sections;

(c) Providing energy dissipators, which may range from simple rip-rapped sections to complex structures, at the outlets of storm drainage facilities to reduce flow velocities to the point of discharge; and/or

(d) If the watercourse velocity is greater than 2.0 F.P.S., improving cross-sections and installing erosion-resistant linings.

(B) Slopes Left Exposed

Slopes left exposed shall be planted or otherwise provided with ground cover, devices, or structures sufficient to restrain erosion within fifteen (15) calendar days after completion of any phase of grading.

(C) Design Requirements

Erosion and sedimentation control measures, structures, and devices shall be planned, designed, and constructed to provide protection from the calculated maximum peak rate of runoff from the ten (10)-year storm. Runoff rates shall be calculated in accordance with Cary's Standard Specifications and Details Manual. Calculations shall be submitted with the plans and shall be drafted and organized in a neat and readable manner.

(D) Protective Cover Required

All uncovered areas shall be provided with protective cover unless the Planning Director has granted an extension of time, for good cause shown, upon written request of the developer or landowner. This cover shall be installed within fifteen (15) working days (exclusive of days where seedbed preparation is not possible due to weather as determined by the Stormwater Manager) or ninety (90) calendar days following completion of any phase of grading, whichever period is shorter. Ground cover is not required on cleared land forming the future basin of a planned reservoir.

(E) Activity Near Watercourse

All land-disturbing activities near a lake or natural watercourse shall provide erosion and sedimentation control measures. An undisturbed buffer may be used as an erosion/ sedimentation control measure, provided that the undisturbed zone shall be of sufficient width to confine visible siltation within the twenty-five percent (25%) of the undisturbed zone nearer to the land-disturbing activity. This requirement shall not apply to land-disturbing activities for the construction of facilities to be located on, over, or under a lake or natural watercourse.

(F) Protection During Construction

During construction, soil erosion and sedimentation control practices and devices shall be employed that are sufficient to retain the sediment generated by the land-disturbing activity within the boundaries of the tract during construction upon and development of said tract in accordance with plans approved by Cary.

(G) Limits on Single-Unit Residential Lot Grading

Grading and Erosion Control Plans submitted as part of a development plan associated with residential development that has a gross density of three (3) units per acre or less are limited to clearing and disturbing only the land area required to install the infrastructure to serve the development (e.g., sewer and water lines, roads, storm water devices, greenways, and similar infrastructure). Until a building permit is issued for a lot, each lot must remain undisturbed, with the exception of portions of a lot impacted by the installation of infrastructure. Exceptions to grade upon a lot prior to the issuance of a building permit may be granted as a modification to the original plan approved by Cary, if there is sufficient justification (e.g., problematic drainage issues and/or severe topographic issues).

(H) Limit on Grading Area for Medium Density Residential Developments

Development plans containing residential development with a gross density not exceeding eight (8) units per acre shall not grade more than twenty-five (25) acres per phase or section of development. Each twenty-five (25) acre phase or section of development must be stabilized and seeded meeting the requirements of this ordinance prior to grading an additional phase or section of development. Exceptions to this requirement may be granted as a modification to the original plan approved by Cary if compliance is not practicable due to physical site constraints, such as topography, presence of stream buffers or other natural features, or lot dimensions; or due to presence of existing development or infrastructure.

(I) Installation of Required Landscape After Grading

See Section 7.2.3, Requirements for Perimeter Buffers and Landscape Areas, for the specific requirements.

(J) Compliance with Town Manual

In addition to the standards set forth in this section, all soil erosion and sedimentation control measures shall conform to the applicable minimum standards set forth in Cary's Standard Specifications and Details Manual.

14.4.4 Basic Control Objectives for Erosion Control Plans

In addition to meeting the standards of this Section 14.4.3 above, all erosion control plans submitted for approval under Section 3.13 of this Ordinance shall be developed and implemented in accordance with the following objectives:

(A) Identify Especially Vulnerable Areas

On-site areas that are subject to severe erosion, and off-site areas that are especially vulnerable to damage from erosion and/or sedimentation, shall be identified and receive special attention.

(B) Limit Time of Exposure

All land-disturbing activities shall be planned and conducted to limit exposure to the shortest feasible time.

(C) Limit Exposed Area

All land-disturbing activities shall be planned and conducted to minimize the size of the area to be exposed at any one (1) time.

(D) Control Surface Water

Surface water runoff originating upgrade of exposed areas should be controlled to reduce erosion and sediment loss during the period of exposure.

(E) Control Sedimentation

All land-disturbing activities shall be planned and conducted so as to prevent off-site sedimentation damage.

(F) Manage Stormwater Runoff

When the increase in the velocity of stormwater runoff resulting from a land-disturbing activity is sufficient to cause accelerated erosion of the receiving watercourse, erosion control plans shall include measures to control the velocity at the point of discharge so as to minimize accelerated erosion of the site and increased sedimentation of the stream.

14.4.5 Borrow and Waste Areas

When the person conducting the land-disturbing activity is also the person conducting the borrow or waste disposal activity, areas from which borrow is obtained and which are not regulated by the Mining Act of 1971 (G.S. 74-46 et seq., as amended), and waste areas for surplus materials other than landfills regulated by the N. C. Department of Human, Environment, and Natural Resources, Division of Solid Waste Management, shall be considered as part of the land-disturbing activity from where the borrow material is being used or from which the waste material originated. When the person conducting the land-disturbing activity is not the person obtaining the borrow and/or disposing of the waste, these areas shall be considered a separate land-disturbing activity.

14.4.6 Access and Haul Roads

Temporary access and haul roads, other than public roads, constructed or used in connection with any land-disturbing activity shall be considered a component of such activity.

14.4.7 Operations in Lakes or Natural Watercourses

Land-disturbing activities for construction in, on, over, or under a lake or natural watercourse shall be planned and conducted so as to minimize the extent and duration of disturbance of the stream channel or lakebed. Where relocation of a stream is an essential component of the proposed activity, the relocation shall be planned and executed so as to minimize changes in the stream flow characteristics, except where the developer or landowner demonstrates to the Planning Director that significant alteration to the flow characteristics is justified.

14.4.8 Non-Compliance

Failure to comply with the provisions of this section shall constitute a violation of this Ordinance, and shall subject an offending party to enforcement as provided in section 11.4 of this Ordinance.
(Ord. No. 2022-LDO-03, 10-27-22)

14.5 TREE CLEARING CERTIFICATE

14.5.1 Purpose

This section implements the enabling legislation granted to Cary by the North Carolina General Assembly. The purposes of these regulations are to:

(A) Protect existing trees and shrubs located upon undeveloped sites for use as future buffers and streetscapes to meet development plan requirements;

(B) Preserve existing tree and vegetative cover to protect and promote the health, safety, and welfare of the public by preserving the visual and aesthetic qualities of Cary; maintaining property values; maximizing the physical, mental, and social health benefits provided by trees and forests; providing shade and reducing surface temperatures; reducing air pollution and road noise; sequestering carbon; controlling erosion; and reducing sediment and other pollutant runoff into streams and waterways in an effort to protect water quality; and

(C) Create a process whereby some properties are required to obtain a tree clearing certificate, recognize some properties are exempted from the requirement to obtain a tree clearing certificate prior to the removal of vegetation, and establish penalties for removal of all or substantially all of the required vegetation within required vegetation protection areas.

14.5.2 Applicability

The requirements for obtaining a Tree Clearing Certificate and penalties for non-compliance are applicable to all undeveloped properties that are zoned for residential or non-residential use located within Cary limits and/or extraterritorial jurisdiction (ETJ). For the purposes of the section, "undeveloped properties" shall include any property within Cary's jurisdiction that is not subject to an approved development plan.

14.5.3 Exemptions

A Tree Clearing Certificate shall not be required for the activities listed below.

(A) Normal forestry activities taking place on property that is taxed under the present-use value standard or conducted pursuant to a forestry management plan prepared or approved by a forester registered pursuant to G.S. Chapter 89B, and provided such activities are accomplished in compliance with this Ordinance.

(B) Properties with a Cary-approved development plan provided such plan has not expired and that any clearing or vegetation removal is done in strict accordance with the approved development plan.

(C) The removal of vegetation by public or private agencies within the lines of any public street rights-of-way, utility easements, or other Cary property, as may be necessary to ensure public safety, to obtain clear visibility at driveways or intersections, to perform authorized field survey work, or to preserve or enhance the symmetry and beauty of such Cary property.

(D) The Cary-initiated or approved removal of any vegetation which is in an unsafe condition, constitutes a nuisance or noxious weed, or which by its nature is injurious to sanitary sewers, electrical power lines, gas lines, water lines, stream or conveyance channels, or other public improvements, or vegetation which is infected with any injurious fungus, insect, or other pest.

(E) The removal of vegetation on property located within an approved residential subdivision that is zoned for single-unit residential use, and provided such vegetation is not a portion of a required streetscape or other landscaping buffer.

(F) The removal of less than fifty percent (50%) of vegetation on property of three (3) acres in size or less which is vacant and zoned for residential purposes.

14.5.4 Required Buffers and Vegetation Protection Areas

Other than that necessary to gain reasonable access to the property, clearing and/or removal of trees and other vegetation shall be prohibited in the areas listed below. In situations where one (1) or more buffer zones or vegetation protection areas overlap on the same site, then the more restrictive requirement shall apply.

(A) A perimeter streetscape zone having a width of fifty (50) feet as measured from all ultimate property boundaries that adjoin existing roadways as depicted in the Cary Transportation Plan or as required in Section 7.2.4, Streetscape and Streetfront Landscaping. For the purposes of this section, the term "ultimate property boundary" of a parcel or tract shall mean the final demarcation line around the perimeter of a parcel excluding all areas that must be dedicated to Cary for use as rights-of-way.

(B) A perimeter buffer zone having a width of sixty-five (65) feet as measured from all property boundaries that adjoin developed property or vacant property with an approved development plan.

(C) A perimeter buffer zone having a width of thirty-two (32) feet as measured from all property boundaries that adjoin undeveloped property or vacant property without an approved development plan.

(D) Any other areas necessary for the protection of existing vegetation as indicated within this Ordinance (e.g., Urban Transition Buffers).

14.5.5 Application Requirements

(A) An application for a Tree Clearing Certificate may be filed only by all the owners of the property or by such owners' authorized agent.

(B) An application for a Tree Clearing Certificate shall be filed with the Planning Department. The application form shall be accompanied by a Vegetation Protection Plan that shall include, at a minimum, the following information on a sheet size no larger than twenty-four (24) by thirty-six (36) inches at a minimum scale of one (1) inch equals fifty (50) feet:

(1) Vicinity map showing the location of the tract at a readable scale.

(2) A map of the entire tract, including the property boundary of the entire tract by courses and distances with references to true meridian and the location and dimension of all on-site and adjacent off-site easements (e.g., drainage, utility, public access, aerial utility, conservation, permanent and temporary construction easements).

(3) General information about the tract, including but not limited to the owner of the tract; the current zoning of the tract, the area of the tract, and the conditional-use zoning conditions, planned unit development master plan requirements, if applicable.

(4) The location and use(s) of all existing building(s) on the tract.

(5) The owner, current zoning, and present use of all contiguous properties (including property on opposite side of adjoining streets).

(6) The general classification of all existing and proposed adjacent roadways (as depicted in the Cary Transportation Plan) and the ultimate right-of-way boundaries associated with these roadways.

(7) The location and width of all future/existing buffers and associated vegetation protection areas, including Urban Transition Buffers, perimeter buffers and perimeter streetscapes.

(8) The proposed limits of timbering activities, including the location and extent of all tree protection fencing as required under Chapter 7 of this Ordinance.

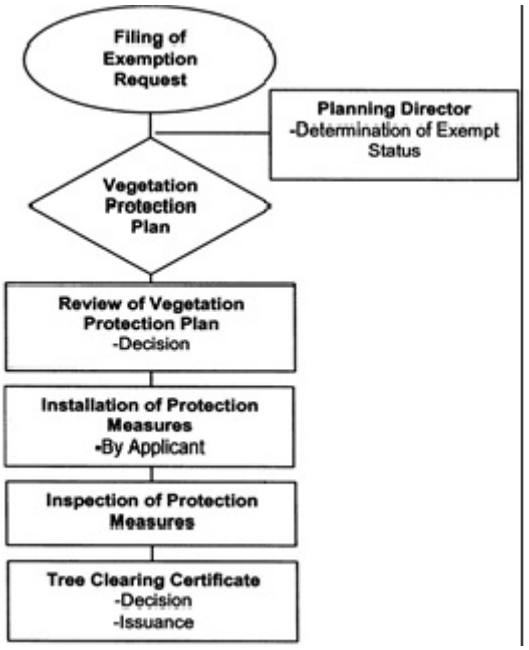
(C) The Planning Director may reduce or waive the requirements for a Vegetation Protection Plan in situations where it can be demonstrated that all vegetation removal will take place outside of required vegetation protection areas.

14.5.6 Procedure

Prior to the commencement of any vegetation clearing or removal on any undeveloped property, the owner or the owner's agent must demonstrate exemption from the requirements of this section or submit the required application materials and applicable fees for a Tree Clearing Certificate.

(A) Upon receipt of documentation that a property is exempted from obtaining a Tree Clearing Certificate, the Planning Director shall review all materials and make a determination if a property is exempted from the requirements or if the requirements apply. In situations where exemption status is claimed based on forestry use, this documentation shall include proof that the property is taxed under the present-use value standard, or a copy of the valid forestry management plan prepared or approved by a North Carolina registered forester. The decision of the Planning Director may be appealed to the Zoning Board of Adjustment pursuant to Section 3.21.

(B) If a property is not exempted from the provisions pertaining to a Tree Clearing Certificate, then such application materials shall include a Vegetation Protection Plan consistent with the requirements listed in Section 14.5.5(B) above.



(C) The Vegetation Protection Plan shall be reviewed by the Planning Director based upon the provisions of 3.9 of this Ordinance.

(D) An applicant for a Tree Clearing Certificate shall be notified upon approval of the Vegetation Protection Plan and shall be free to erect or install any and all barriers necessary to protect existing vegetation within required buffer areas and vegetation protection areas from damage during tree clearing and/or removal activities. Failure to protect these areas shall result in penalties as indicated in Section 7.2.13, Maintenance Responsibility, Replacement of Damaged Vegetation, and Associated Fines.

(E) Once all barriers for the protection of existing vegetation have been installed, a property owner or agent shall request inspection of such barriers for compliance with the requirements of this Ordinance.

(F) Upon a passing inspection of vegetation protection barriers, the Director of Planning shall issue a Tree Clearing Certificate, and authorized vegetation clearing and/or removal may commence.

14.5.7 Non-Compliance

Failure to comply with the provisions of this section shall constitute a violation of this Ordinance, and shall subject an offending party to a series of actions listed in Chapter 11 of this Ordinance.
(Ord. No. 2022-LDO-03, 10-27-22)

14.6 URBAN TRANSITION BUFFER REGULATIONS

14.6.1 The Purpose and Intent of Urban Transition Buffers

Urban Transition Buffers (UTBs or "buffers") provide a transition from waterbodies and environmentally sensitive areas associated with waterbodies to areas which are less fragile and appropriate for more intense uses and development. Some of the benefits of UTBs are minimizing danger to lives and properties from flooding, preserving the water carrying capacity of the waterbodies, preserving tree canopy, reducing temperatures, capturing carbon, improving air quality, providing open spaces, limiting intense uses adjacent to waterbodies and environmentally sensitive areas associated with waterbodies, and maintaining the aesthetic qualities and appearance of Cary. As part of the Cary's Land Development Ordinance, UTBs implement many of Cary's responsibilities under State and Federal law and regulations regarding stormwater management and watershed preservation and are designed to work in conjunction with erosion and sedimentation control regulations. Cary's water utility system uses surface water to provide drinking water to its citizens and the preservation of this resource is important to Cary and its citizens. General UTBs are uniform and comprehensive zoning buffers which accomplish these important benefits and purposes as well as regulating and restricting the location of buildings, structures, and land, providing yards and open spaces, all for the promotion of health, safety and the general welfare of Cary's citizens. Specialized UTBs exist to address concerns which are not present in Cary's entire zoning jurisdiction.

14.6.2 Establishing General Urban Transition Buffers

(A) This Section 14.6 shall apply to activities conducted within, or outside of with hydrologic impacts in violation of the diffuse flow requirements set out in Section 14.6.2(C)(1)(c), the following basins/watershed as designated on the most recent officially adopted version of maps maintained by the North Carolina Environmental Management Commission:

(1) ***Cape Fear Basin/Jordan Watershed***

(a) A one hundred (100) foot wide buffer directly adjacent to all surface waters (intermittent streams, perennial streams, lakes, reservoirs, and ponds) as approximately indicated on the most recent version of the 1:24,000 scale {seven and one-half (7.5) minute} quadrangle topographic maps prepared by the United States Geological Survey (USGS).

(b) A fifty (50) foot wide buffer approximately adjacent to any surface waters (intermittent streams, perennial streams, lakes, reservoirs and ponds) shown on the most recent version of the Soil Survey of Wake or Chatham or Durham County, North Carolina prepared by the Natural Resources Conservation Service of the United States Department of Agriculture and not shown on a USGS quadrangle topographic map, or shown on a map approved by the Geographic Information Coordinating Council and by the NC Environmental Management Commission pursuant to 15A NCAC.0267.

(2) ***Neuse River Basin***

(a) A fifty foot (50') wide buffer beginning at the landward boundary of any Neuse River Riparian Buffer mandated by regulations adopted by the Environmental Management Commission of the State of North Carolina and established

adjacent to surface waters (intermittent streams, perennial streams, lakes, reservoirs and ponds) as approximately indicated on the most recent version of the 1:24,000 scale {seven and one-half (7.5) minute} quadrangle topographic maps prepared by the United States Geological Survey (USGS).

(3) Wetlands adjacent to surface waters or within fifty (50) feet of surface waters shall be considered as part of the UTB but are regulated pursuant to Rules 15A NCAC 2B .0230 and .0231, Rules 15A NCAC 2H .0500, 15 NCAC 2H .1300, and Sections 401 and 404 of the Federal Water Pollution Control Act.

(B) General UTBs are applied to specific properties as follows:

(1) Where the specific origination point of a stream regulated under subsection (A)(1) is in question upon request of the NC Division of Water Resources ("Division") or another party, Cary shall make an on-site determination. Cary representative who has the training required by 15A NCAC 02B .0267 shall establish that point using the methods described by 15A NCAC 02B .0267. Any disputes over said on-site determinations shall be referred to the Director of the Division of Water Resources c/o the 401 Oversight Express Permitting Unit or its successor in writing. The Director's determination is subject to review as provided in Articles 3 and 4 of G.S. Chapter 150B.

(2) When a landowner or other affected party including the Division believes that the maps referenced in subsection (A)(1) have inaccurately depicted surface waters, he or she shall consult Cary. Upon request the Cary representative who has the training required by 15A NCAC 02B .0267 shall make an on-site determination. Any disputes over said on-site determination shall be referred to the Director of the Division of Water Resources c/o the 401 Oversight Express Permitting Unit or its successor, in writing. A determination of the Director as to the accuracy or application of the maps is subject to review as provided in Articles 3 and 4 of G.S. Chapter 150B. Surface waters that appear on maps shall not be subject to these requirements if a site evaluation reveals any of the following cases:

(a) Man-made ponds and lakes that are not part of the natural drainage way that is classified in accordance with 15A NCAC 2B .0100 including ponds and lakes created for animal watering, irrigation, or other agricultural uses. (A pond or lake is part of a natural drainage way when it is fed by an intermittent or perennial stream or when it has a direct discharge point to an intermittent or perennial stream).

(b) Ephemeral streams

(c) The absence on the ground of a corresponding intermittent or perennial stream, lake, reservoir, or pond.

(d) Ditches or other man-made water conveyances, other than modified streams.

(C) General UTBs shall have zones as follows:

General UTBs may have as many as three (3) regulatory zones. The purpose of the different regulatory zones is to provide transition within General UTBs from the most fragile areas to less fragile areas and to provide some flexibility to Cary in administering of the UTBs. The regulatory zones shall be:

(1) ***Cape Fear River Basin/Jordan Watershed***

(a) UTBs established pursuant to Section 14.6.2(A)(1)(a) shall have three (3) zones:

1. Zone One shall consist of a stable, vegetated area that is undisturbed except for uses provided in subsection 14.6.5 and Table 14.6-2. The locations of Zone One shall be as follows: For intermittent and perennial streams, Zone One shall begin at the top of bank and extend landward a distance of thirty (30) feet on all sides of the surface water, measured horizontally on a line perpendicular to a vertical line marking the top of the bank. For ponds, lakes and reservoirs located within a natural drainage way. Zone One shall begin at the normal water level and extend landward a distance of thirty (30) feet, measured horizontally on a line perpendicular to a vertical line marking the normal water level.

2. Zone Two shall consist of a stable, vegetated area that is undisturbed except for uses provided in subsection 14.6.5 and Table 14.6-2. Zone Two shall begin at the outer edge of Zone One and extend landward twenty (20) feet as measured horizontally on a line perpendicular to the surface water. The combined width of Zones One and Two shall be fifty (50) feet on all sides of the surface water.

3. Zone Three shall consist of a stable, vegetated area that is undisturbed except for uses provided for in subsection 14.6.5 and Table 14.6-2. Zone Three shall begin at the outer edge of Zone Two and extend landward fifty (50) feet as measured horizontally on a line perpendicular to the surface water. The combined width of Zones One, Two and Three shall be one hundred (100) feet on all sides of the surface water.

(b) UTBs established pursuant to Section 14.6.2(A)(1)(b) shall have two (2) zones:

1. Zone One shall consist of a stable, vegetated area that is undisturbed except for uses provided in subsection 14.6.5 and Table 14.6-2. The locations of Zone One shall be as follows: For intermittent and perennial streams, Zone One shall begin at the top of bank and extend landward a distance of thirty (30) feet on all sides of the surface water, measured horizontally on a line perpendicular to a vertical line marking the top of the bank. For ponds, lakes and reservoirs located within a natural drainage way, Zone One shall begin at the normal water level and extend landward a distance of thirty (30) feet, measured horizontally on a line perpendicular to a vertical line marking the normal water level.

2. Zone Two shall consist of a stable, vegetated area that is undisturbed except for uses provided in subsection 14.6.5 and Table 14.6-2. Grading and revegetating in Zone Two is allowed provided that the health of the vegetation in Zone One is not compromised. Zone Two shall begin at the outer edge of Zone One and extend landward twenty (20) feet as measured horizontally on a line perpendicular to the surface water. The combined width of Zones One and Two shall be fifty (50) feet on all sides of the surface water.

(c) Diffuse Flow Requirement: Diffuse flow of runoff shall be maintained in the UTBs established pursuant to Section 14.6.2(A) by dispersing concentrated flow prior to its entry into the UTB and reestablishing vegetation as follows:

1. Concentrated runoff from new ditches or man-made conveyances shall be converted to diffuse flow at non-erosive velocities before the runoff enters the UTB.

2. Periodic corrective action to restore diffuse flow shall be taken as necessary and shall be designed to impede the formation of gullies; and

3. No new stormwater conveyances are allowed through the UTBs except for those specified in subsection 14.6.5 and Table 14.6-2 addressing stormwater management ponds, drainage ditches, roadside ditches, and stormwater conveyances.

(2) ***Neuse River Basin***

General UTBs established pursuant to Section 14.6.2(A)(2) shall have one (1) zone: Zone Three. Zone Three shall consist of a stable, vegetated area that is undisturbed except for uses provided for in subsection 14.6.5 and Table 14.6-2. Zone Three shall begin at the outer edge of the Neuse Riparian Buffer and extend landward fifty (50) feet as measured horizontally on a line perpendicular to the surface water. The combined width of the Neuse Riparian Buffer and Zone Three shall be one hundred (100) feet on all sides of the surface water.

14.6.3 Establishing Specialized Urban Transition Buffers

(A) Property within Watershed Protection Overlay

In addition to the General UTBs established above, Specialized UTBs are required by Cary's Watershed Protection Overlay (Section 4.4.6). Specialized UTBs shall overlay General UTBs, as opposed to being situated adjacent to General UTBs. The Specialized UTBs are as follows:

(1) ***Low Density Development Option***

In the event the Landowner elects to develop his property under the Low Density Development Option, as provided in Section 4.4.6(F)(1), a Specialized UTB thirty (30) feet wide shall be established adjacent to all perennial surface waters including perennial streams, lakes, reservoirs, and ponds as approximately indicated on the most recent versions of USGS 1:24,000 scale {seven and one-half (7.5) minute} quadrangle topographic maps prepared by the United States Geological Survey (USGS).

(2) ***High Density Development Option***

In the event the Landowner elects to develop his property under the High Density Development Option, as provided in Section 4.4.6(F)(2), a Specialized UTB one hundred feet (100') wide shall be established adjacent to all perennial surface waters including perennial streams, lakes, reservoirs and ponds as approximately indicated on the most recent versions of USGS 1:24,000 scale {seven and one-half (7.5) minute} quadrangle topographic maps prepared by the United States Geological Survey (USGS).

(B) Uses Allowed Within Specialized UTBs

The uses allowed within Specialized UTBs are described in Table 14.6-2.

(C) Measurement of Specialized UTBs

Specialized UTBs shall be measured from a point perpendicular to the bank of the perennial waters.

14.6.4 Overlap or Conflict between Urban Transition Buffers established by Cary and buffers established by State of North Carolina or Federal Regulations

(A) In the event of an overlap or conflict between a General UTB and a Specialized UTB, the more restrictive buffer shall govern. It is the intent of Cary that General UTBs shall provide the minimum urban transition buffer for all properties located in Cary's zoning jurisdiction.

(B) In the event of an overlap or conflict between any buffer established by this Section and any buffer or other requirement established by another law, rule or regulation administered by the State of North Carolina or the Federal Government, the more restrictive law, rule or regulation shall govern.

Table 14.6-1 below graphically depicts Cary's UTBs and their zones.

TABLE 14.6-1 CARY GENERAL AND SPECIALIZED UTBs

Type of Buffers	General UTBs			Watershed Overlay Buffers	
Zones of Buffers	**ZONE 1**	**ZONE 2**	**ZONE 3**	**Low Density Option**	**High Density Option**
Cape Fear River Basin					
Not in Watershed overlay district					
Shown on USGS map	Yes	Yes	Yes	N/A	N/A
Shown on county soil map	Yes	Yes	No	N/A	N/A
In watershed overlay district					
Shown on USGS map	Yes	Yes	Yes	Yes[1]	Yes[2]
Shown on county soil map	Yes	Yes	No	N/A	N/A
Neuse River Basin					
Not in Watershed overlay district					
Shown on USGS map	No[3]	No[3]	Yes	N/A	N/A
Shown on county soil map	No[3]	No[3]	No	N/A	N/A
In watershed overlay district					
Shown on USGS map	No[3]	No[3]	Yes	Yes[1]	Yes[2]
Shown on county soil map	No[3]	No[3]	No	No	No

[1] Minimum thirty (30) foot wide vegetative buffer and other regulations apply. See Section 4.4.6 of the LDO.
[2] Minimum one hundred (100) foot wide vegetative buffer and other regulations apply. See Section 4.4.6 of the LDO.
[3] Regulated by State of North Carolina.

14.6.5 Activities Prohibited and Permitted in Urban Transition Buffers

(A) Any activity which disturbs the soil or vegetation within any Urban Transition Buffer is prohibited unless expressly permitted by this Section 14.6.5 and Table 14.6-2. Table 14.6-2 describes the uses permitted in each UTB established by this Section 14.6.5.

(B) Uses designated as exempt, allowable, allowable with mitigation and prohibited shall have the following requirements:

(1) ***EXEMPT***

Uses designated as exempt are allowed within the Urban Transition Buffer provided that they adhere to the limitations of the activity as defined in subsection 14.6.5(A) and Table 14.6-2 below. Exempt uses shall be designed, constructed, and maintained to minimize soil disturbance and to provide the maximum water quality protection practicable including construction, monitoring, and maintenance activities.

(2) ***ALLOWABLE***

Uses designated as allowable may proceed within the Urban Transition Buffer provided that there are no practical alternatives to the requested use as determined pursuant to Section 14.6.9. This includes construction, monitoring, and maintenance activities. These uses require written authorization from Cary.

(3) ***ALLOWABLE WITH MITIGATION***

Uses designated as allowable with mitigation may proceed within the Urban Transition Buffer provided that there are no practical alternatives to the requested use as determined pursuant to Section 14.6.9 and mitigation approval has been obtained pursuant to Section 14.6.12. These uses require written authorization from Cary.

(4) ***PROHIBITED***

Uses designated as prohibited or not designated as exempt, allowable, or allowable with mitigation, may not proceed within the Urban Transition Buffer unless a variance is granted pursuant to this Section 14.6.

TABLE 14.6-2 CARY GENERAL AND SPECIALIZED UTBs				
Activity	**Exempt**	**Allowable**	**Allowable with Mitigation**	**Prohibited**
Access Trails: Pedestrian access trails leading to the surface water, docks, fishing piers, boat ramps and other water dependent activities				
Pedestrian Access trails that are restricted to the minimum width practicable and do not exceed four (4) feet in width of buffer disturbance, and provided that installation and use does not result in the removal of trees as defined in this Ordinance and no impervious surface is added to the UTB	X			
Pedestrian Access trails that exceed four (4) feet in width of buffer disturbance, the installation or use results in the removal of trees as defined in this Ordinance or impervious surface is added to the UTB		X		
Airport facilities:				
Airport facilities that impact equal to or less than one hundred and fifty (150) linear feet of UTB		X		
Airport facilities that impact greater than one hundred and fifty (150) linear feet of UTB			X	
Activities necessary to comply with FAA requirements (e.g. radar uses or landing strips)1		X		
Archaeological activities	X			
Bridges		X		
Canoe Access provided that installation and use does not result in the removal of trees as defined in this Ordinance and no impervious surface is added to the UTB	X			
Dam Maintenance activities:				
Dam maintenance activities that do not cause additional buffer disturbance beyond the footprint of the existing dam or those covered under the U.S. Army Corps of Engineers Nationwide Permit No. 3	X			
Dam maintenance activities that do cause additional buffer disturbance beyond the footprint of the existing dam or those covered under the U.S. Army Corps of Engineers Nationwide Permit No. 3		X		

Activity	Exempt	Allowable	Allowable with Mitigation	Prohibited
Drainage ditches, roadside ditches, and stormwater conveyances through buffers:				
New stormwater flows to existing drainage ditches, roadside ditches, and stormwater outfalls provided that flows do not alter or result in the need to alter the conveyance and are managed to minimize the sediment, nutrients and other pollution that convey to waterbodies	X			
Realignment of existing roadside drainage ditches retaining the design dimensions, provided that no additional travel lanes are added, and the minimum required roadway typical section is used based on traffic and safety considerations		X		
New or altered drainage ditches, roadside ditches and stormwater outfalls provided that a stormwater management facility is installed to control nitrogen and attenuate flow before the conveyance discharges through the buffer		X		
New drainage ditches, roadside ditches and stormwater conveyances applicable to linear projects that do not provide stormwater management facility due to topography constraints provided that other practicable BMPs are employed.			X	
New drainage ditches, roadside ditches and stormwater outfalls that do not provide control for nitrogen before discharging into the UTB				X
Excavation of the streambed in order to bring it to the same elevation as the invert of a ditch				X
Driveway crossings of streams and other surface waters subject to this Ordinance:				
Driveway crossings on single-unit residential lots that disturb equal to or less than twenty-five (25) linear feet of UTB	X			
Driveway crossings on single-unit residential lots that disturb greater than twenty-five (25) linear feet of UTB		X		
In a subdivision that cumulatively disturb equal to or less than one hundred and fifty (150) linear feet of UTB		X		
In a subdivision that cumulatively disturb greater than one hundred and fifty (150) linear feet of UTB			X	

Activity	Exempt	Allowable	Allowable with Mitigation	Prohibited
Fences provided that disturbance is minimized, and installation does not result in removal of forest vegetation	X			
Fences provided that disturbance is minimized, and installation does result in removal of trees as defined in this Ordinance		X		
Forest harvesting [refer to 15A NCAC 02B.0233 (11) and 15A NCAC 02B .0267(14)]				
Fertilizer application:				
One-time fertilizer application to establish re-planted vegetation	X			
Ongoing fertilizer application				X
Grading and revegetation in Zone 2 and 3 only provided that diffuse flow and the health of existing vegetation in Zone 1 is not compromised and disturbed areas are stabilized		X		
Greenway/hiking trails designed, constructed and maintained to maximize nutrient removal and erosion protection, minimize adverse effects on aquatic life and habitat and protect water quality to the maximum extent practical		X		
Historic preservation	X			
Landfills as defined by G.S. 130A-290	X			
Maintenance Access on modified natural streams: a grassed travel way on one side of the water body when less impacting alternatives are not practical. The width and specifications of the travel way shall be only that needed for equipment access and operation. The travel way shall be located to maximize stream shading.		X		
Mining activities:				
Mining activities that are covered by the Mining Act provided that new UTBs that meet the requirements of 14.6.2(C)(1) of this Ordinance are established adjacent to the relocated channels		X		
Mining activities that are not covered by the Mining Act OR where new UTBs that meet the requirements of 14.6.2(C)(1) of this Ordinance are not established adjacent to the relocated channels			X	
Wastewater or mining dewatering wells with approved NPDES permit	X			

Activity	Exempt	Allowable	Allowable with Mitigation	Prohibited
Non-electric utility lines:				
Impacts other than perpendicular crossings in Zones 2 and 3 only[3]	X			
Impacts other than perpendicular crossings in Zone 1[3]			X	
Non-electric utility line perpendicular crossing of streams and other surface waters subject to this Ordinance:[3]				
Perpendicular crossings that disturb equal to or less than forty (40) linear feet of UTB with a maintenance corridor equal to or less than ten (10) feet in width	X			
Perpendicular crossings that disturb equal to or less than forty (40) linear feet of UTB with a maintenance corridor greater than ten (10) feet in width		X		
Perpendicular crossings that disturb greater than forty (40) linear feet but equal to or less than one hundred and fifty (150) linear feet of UTB with a maintenance corridor equal to or less than ten (10) feet in width		X		
Perpendicular crossings that disturb greater than forty (40) linear feet but equal to or less than one hundred and fifty (150) linear feet of UTB with a maintenance corridor greater than ten (10) feet in width		X		
Perpendicular crossings that disturb greater than one hundred and fifty (150) linear feet of UTB			X	
On-site sanitary sewage systems - new ones that use ground absorption				X
Overhead electric utility lines:				
Impacts other than perpendicular crossings in Zones 2 and 3 only[3]		X		
Impacts other than perpendicular crossings in Zone 1[1,2,3]			X	
Overhead electric utility line perpendicular crossings of streams and other surface waters subject to this Ordinance[3]				
Perpendicular crossings that disturb equal to or less than one hundred and fifty (150) linear feet of UTB[1, 3]	X			
Perpendicular crossings that disturb greater than one hundred and fifty (150) linear feet of UTB[1,2, 3]		X		

Activity	Exempt	Allowable	Allowable with Mitigation	Prohibited
Periodic maintenance of modified natural streams such as canals and a grassed travel way on one (1) side of the surface water when alternative forms of maintenance access are not practical		X		
Piping of a stream under a permit issued by the US Army Corps of Engineers		X		
Playground equipment:				
Playground equipment on single-unit residential lots provided that installation and use does not result in removal of vegetation	X			
Playground equipment installed on lands other than single-unit residential lots or that requires removal of vegetation		X		
Ponds created by impounding streams and not used as Stormwater Control Measures (SCM):				
New ponds provided that an UTB that meets the requirements of Section 14.6.2(C)(1) of this Ordinance is established adjacent to the pond		X		
New ponds where an UTB that meets the requirements of Section 14.6.2(C)(1) of this Ordinance is NOT established adjacent to the pond			X	
Ponds: Drainage of a pond in a natural drainage way provided that a new riparian buffer that meets the requirements of 14.6.2(A)(1), 14.6.2(C)(1)(c), 14.6.2(B), 14.6.2(C)(1), 14.6.5, 14.6.8, and Table 14.6-2 of this rule is established adjacent to the new channel	X			
Protection of existing structures, facilities and streambanks when this requires additional disturbance of the UTB or the stream channel		X		
Railroad impacts other than crossings of streams and other surface waters subject to this Ordinance			X	
Railroad crossings of streams and other surface waters subject to this Ordinance:				
Railroad crossings that impact equal to or less than forty (40) linear feet of UTB	X			
Railroad crossings that impact greater than forty (40) linear feet but equal to or less than one hundred and fifty (150) feet of UTB		X		
Railroad crossings that impact greater than one hundred and fifty (150) linear feet of UTB			X	
Recreational and accessory structures in the UTB				X

Activity	Exempt	Allowable	Allowable with Mitigation	Prohibited
Removal of previous fill or debris provided that diffuse flow is maintained, and any vegetation removed is restored	X			
Road impacts other than crossings of streams and other surface waters subject to this Ordinance			X	
Road crossings of streams and other surface waters subject to this Ordinance:				
Road crossings that impact equal to or less than forty (40) linear feet of UTB	X			
Road crossings that impact greater than forty (40) linear feet but equal to or less than one hundred and fifty (150) linear feet		X		
Road crossings that impact greater than one hundred and fifty (150) linear feet			X	
Road Relocation: Road relocation of existing private access roads associated with public road projects where necessary for public safety:				
Relocations that are less than or equal to twenty-five (25) linear feet of UTB width		X		
Relocations that are more than twenty-five (25) linear feet of UTB width			X	
Scientific studies and stream gauging	X			
Stormwater Control Measures:				
Wet detention, bioretention and constructed wetlands in Zone Two and Three if diffuse flow of discharge is provided		X		
Wet detention, bioretention and constructed wetlands in Zone One			X	
Stream restoration		X		
Streambank or shoreline stabilization		X		
Temporary roads:				
Temporary roads that disturb less than or equal to twenty-five (25) linear feet of UTB provided that vegetation is restored to preconstruction topographic and hydrologic conditions immediately after construction is complete and replanted immediately with comparable vegetation, except that tree planting may occur during the dormant season; at the end of five (5) years the restored UTB shall comply with the restoration criteria of Section 14.6.12 below	X			

Activity	Exempt	Allowable	Allowable with Mitigation	Prohibited
Temporary roads that disturb greater than twenty-five (25) linear feet of UTB provided that vegetation is restored to preconstruction topographic and hydrologic conditions immediately after construction is complete and replanted immediately with comparable vegetation, except that tree planting may occur during the dormant season; at the end of five (5) years the restored UTB shall comply with the restoration criteria of Section 14.6.12 below		X		
Temporary roads used for culvert installation or bridge construction or replacement provided that restoration to preconstruction topographic and hydrologic conditions immediately after construction is complete and replanted immediately with comparable vegetation, except that tree planting may occur during the dormant season; at the end of five (5) years the restored UTB shall comply with the restoration criteria of Section 14.6.12 below		X		
Temporary sediment and erosion control devices:				
In Zone 2 and 3 only provided that the vegetation in Zone 1 is not compromised and that discharge is released as diffuse flow is restored to preconstruction topographic and hydrologic conditions immediately after construction is complete and replanted immediately with comparable vegetation, except that tree planting may occur during the dormant season; at the end of five (5) years the restored UTB shall comply with the restoration criteria of Section 14.6.12 below	X			
In Zones 1, 2, and 3 to control impacts associated with uses approved by Cary or that have received a variance provided that sediment and erosion control for upland areas is addressed to maximum extent practical outside the UTB and restored to preconstruction topographic and hydrologic conditions immediately after construction is complete and replanted immediately with comparable vegetation, except that tree planting may occur during the dormant season; at the end of five (5) years the restored UTB shall comply with the restoration criteria of Section 14.6.12 below		X		

Activity	Exempt	Allowable	Allowable with Mitigation	Prohibited
In-stream temporary erosion and sediment control measures for work within a stream channel that is authorized under Sections 401 and 404 of the Federal Water Pollution Control Act	X			
In-stream temporary erosion and sediment control measures for work within a stream channel		X		
Underground electric utility lines:				
Impacts other than perpendicular crossings in Zone 2 and Zone 3[3]	X			
Impacts other than perpendicular crossings in Zone 1[3,4]	X			
Underground electric utility line perpendicular crossings of streams and other surface waters subject to this Ordinance:[3]				
Perpendicular crossings that disturb less than or equal to forty (40) linear feet of UTB[3,4]	X			
Perpendicular crossings that disturb greater than forty (40) linear feet of UTB[3,4]		X		
Vegetation management:				
Emergency fire control measures provided that topography is restored	X			
Periodic mowing and harvesting of plant products in Zone 2 and 3 only	X			
Planting vegetation to enhance the UTB	X			
Pruning forest vegetation provided that the health and function of the forest vegetation is not compromised	X			
Removal of individual trees which are in danger of causing damage to dwellings, other structures or human life or are imminently endangering stability of the streambank	X			
Removal of individual trees which are dead, diseased or damaged	X			
Removal of poison ivy	X			
Removal of invasive exotic vegetation as defined in: Smith, Cherri L. 1998. Exotic Plant Guidelines. Department of Environment and Natural Resources. Division of Parks and Recreation. Raleigh, NC. Guideline #30	X			

Activity	Exempt	Allowable	Allowable with Mitigation	Prohibited
Vehicular access roads leading to water-dependent structures as defined in 15A NCAC 02B .0202, provided they do not cross the surface water and have minimum practicable width not exceeding ten (10) feet and where installation and use result in disturbance of UTB		X		
Water-dependent structures as defined in 15A NCAC 02B .0202 where the installation and use result in the disturbance of UTB		X		
Water supply reservoirs:				
New reservoirs provided that an UTB that meets the requirements of 14.6.2(C)(1) of this Ordinance is established adjacent to the reservoir		X		
New reservoirs where an UTB that meets the requirements of 14.6.2(C)(1) of this Ordinance is NOT established adjacent to the reservoir			X	
Wells on single-unit residential lots	X			
All other wells		X		
Wetland, stream and buffer restoration that results in impacts to the UTB				
Wetland, stream and buffer restoration that requires Division approval for the use of a 401 Water Quality Certification	X			
Wetland, stream and buffer restoration that does not require approval for the use of a 401 Water Quality Certification		X		
Wildlife passage structures		X		
Wooden slatted decks and associated steps in the UTB, provided the use meets the requirements of Sections 14.6.4 and 14.6.5 of this Ordinance				
Deck at least eight (8) feet in height and no vegetation removed		X		
Deck less than eight (8) feet in height or vegetation removed			X	

[1] Provided that, in Zone 1, all of the following WQBMPs for overhead utility lines are used. If all of these WQBMPs are not used, then the overhead utility lines shall require a no practical alternatives evaluation by Cary (Cape Fear Basin/Jordan Watershed) or Division of Water Resources (Neuse River Basin).

A minimum zone of ten (10) feet wide immediately adjacent to the water body shall be managed such that only vegetation that poses a hazard or has the potential to grow tall enough to interfere with the line is removed.

Woody vegetation shall be cleared by hand. No land grubbing or grading is allowed.

Vegetation root systems shall be left intact to maintain the integrity of the soil. Stumps shall remain where trees are cut. Rip rap shall not be used unless it is necessary to stabilize a tower.

No fertilizer shall be used other than a one (1) time application to re-establish vegetation.

Construction activities shall minimize the removal of woody vegetation, the extent of the disturbed area, and the time in which areas remain in a disturbed state.

Active measures shall be taken after construction and during routine maintenance to ensure diffuse flow of stormwater through the buffer.

In wetlands, mats shall be utilized to minimize soil disturbance.

[2] Provided that poles or towers shall not be installed within ten (10) feet of a water body unless Cary (Cape Fear Basin/Jordan Watershed) or Division of Water Resources (Neuse River Basin) completes a no practical alternatives evaluation.

[3] Perpendicular crossings are those that intersect the surface water at an angle between 75 degrees and 105 degrees.

[4] Provided that, in Zone 1, all of the following WQBMPs for underground utility lines are used. If all of these WQBMPs are not used then the underground utility line shall require a no practical alternatives evaluation by Cary (Cape Fear Basin/Jordan Watershed) or Division of Water Resources (Neuse River Basin).

Woody vegetation shall be cleared by hand. No land grubbing or grading is allowed.

Vegetative root systems shall be left intact to maintain the integrity of the soil. Stumps shall remain, except in the trench, where trees are cut.

Underground cables shall be installed by vibratory plow or trenching.

The trench shall be backfilled with the excavated soil material immediately following cable installation. No fertilizer shall be used other than a one (1) time application to re-establish vegetation.

Construction activities shall minimize the removal of woody vegetation, the extent of the disturbed area, and the time in which areas remain in a disturbed state.

Active measures shall be taken after construction and during routine maintenance to ensure diffuse flow of stormwater through the buffer.

In wetlands, mats shall be utilized to minimize soil disturbance.

14.6.6 Description of Buffers on Development Plans

All UTBs shall be shown on all development plans and subdivision plats submitted for approval within Cary's planning jurisdiction. In addition to UTBs, State of North Carolina and U.S. Army Corps of Engineers' jurisdictional wetlands waters and buffers shall be shown on the inventory of natural resources required as part of development plan approval.

14.6.7 Exclusion of Urban Transition Buffer and Riparian Buffer from Lots

Generally, no single-unit residential lots may encroach upon any required or established riparian buffer or UTB, except that single-unit residential lots platted prior to July 27, 2000, shall be exempt from Zone Three of the Urban Transition Buffer requirements. Notwithstanding the foregoing, single-unit residential lots platted after July 27, 2000, may encroach upon a required or established riparian buffer or UTB when all of the following conditions are met:

(A) The total area of a parcel under single ownership is not greater than five (5) acres and the Landowner establishes that he/she is unable to use any cluster development option that may be available;

(B) The proposed subdivision consists of fewer than ten (10) lots and has no homeowners association;

(C) There is no other reason for the formation of a homeowner's association (e.g., covenant, other common areas, common facilities, engineered stormwater control structures);

(D) The area of the UTB or riparian buffer is subject to a permanent conservation easement or other legal instrument dedicated to a not-for-profit conservation entity approved by Cary. All documents required for such a conveyance to a not-for-profit conservation entity shall be provided to and approved by Cary, in writing on such instruments, prior to recording any plat showing property proposed to be conveyed.

14.6.8 Exemption when Existing Uses are Present and Ongoing

This Section 14.6 shall not apply to uses that are existing and ongoing; however, this Section 14.6 shall apply at the time an existing, ongoing use is changed to another use. Change of use shall involve the initiation of any activity that does not meet either of the following criteria for existing, ongoing activity:

(A) It was present within the UTB as of July 27, 2000 and has continued to exist since that time. Existing uses shall include agriculture, buildings, industrial facilities, commercial areas, transportation facilities, maintained lawns, utility lines and on-site sanitary sewage systems any of which involve either specific, periodic management of vegetation or displacement of vegetation by use is exempt from this Section. Change of ownership through purchase or inheritance is not a change of use. Activities necessary to maintain uses are allowed provided that the site remains similarly vegetated, no impervious surface is added within fifty (50) feet of the surface water where it did not previously exist as of July 27, 2000, and existing diffuse flow is maintained.

(B) Projects or proposed development that are determined by Cary to meet at least one (1) of the following criteria:

(1) Project requires a 401 Certification/404 Permit, and these were issued prior to July 27, 2000.

(2) Projects that require a state permit, such as landfills, NPDES wastewater discharges, land application of residuals and road construction activities, have begun construction or are under contract to begin construction and received all required state permits and certifications prior to July 27, 2000.

(3) Projects that are being reviewed through the Clean Water Act Section 404/National Environmental Policy Act Merger 01 Process (published by the US Army Corps of Engineers and Federal Highway Administration, 2003) or its immediate successor if a Finding of No Significant Impact has been issued for the project and the project has written approval of Cary prior to July 27, 2000; or

(4) Projects that are not required to be reviewed by the Clean Water Act Section 404/National Environmental Policy Act Merger 01 Process (published by the US Army Corps of Engineers and Federal Highway Administration, 2003) or its immediate successor if a Finding of No Significant Impact has been issued for the project and the project has written approval of Cary prior to July 27, 2000; or

14.6.9 Determinations of No Practical Alternatives/Request for Authorization Certificate

(A) Persons who wish to undertake uses designated as allowable or allowable with mitigation shall submit a request for a "no practical alternatives" determination to Cary. The applicant shall certify that the project meets all the following criteria for finding "no practical alternatives."

(1) The basic project purpose cannot be practically accomplished in a manner that would better minimize disturbance, preserve aquatic life and habitat, and protect water quality;

(2) The use cannot practically be reduced in size or density, reconfigured, or redesigned to better minimize disturbance, preserve aquatic life and habitat, and protect water quality; and

(3) Best management practices shall be used if necessary to minimize disturbance, preserve aquatic life and habitat, and protect water quality.

(B) The applicant shall also submit at least the following information in support of its assertion of "no practical alternatives":

(1) The name, address and phone number of the applicant;

(2) The nature of the activity to be conducted by the applicant;

(3) The location of the activity, including the jurisdiction;

(4) A map of sufficient detail to accurately delineate the boundaries of the land to be utilized in carrying out the activity, the location and dimensions of any disturbance in UTBs associated with the activity, and the extent of UTBs on the land;

(5) An explanation of why this plan for the activity cannot be practically accomplished, reduced or reconfigured to better minimize disturbance to the UTB, preserve aquatic life and habitat and protect water quality; and

(6) Plans for any best management practices proposed to be used to control the impacts associated with the activity.

(C) Within sixty (60) days of a complete submission, Cary shall review the entire project and make a finding of fact as to whether the criteria of this Section 14.6.9 have been met. A finding of "no practical alternatives" shall result in issuance of an Authorization Certificate. Failure to act within sixty (60) days shall be construed as a finding of "no practical alternatives" and an Authorization Certificate shall be issued to the applicant unless one of the following occurs:

(1) The applicant agrees, in writing, to a longer period;

(2) Cary determines that the applicant has failed to furnish requested information necessary to Cary's decision;

(3) The final decision is to be made pursuant to a public hearing; or

(4) The applicant refuses access to its records or premises for the purpose of gathering information necessary to Cary's decision.

(5) Cary may attach conditions to the Authorization Certificate that support the purpose, spirit and intent of this Section 14.6.

(6) Any appeals of determinations regarding Authorization Certificates for activities in Zones One and Two shall be referred to the Stormwater Manager of the Town Managers Office, or its successor. The Stormwater Manager’s decision is subject to review as provided in G.S. Chapter 150B, Articles 3 and 4. Any appeals of determinations regarding Authorization Certificates for activities taking place only in Zone Three shall be pursuant to Sections 3.21 and 11.2 of this Ordinance.

14.6.10 Modification of Urban Transition Buffers as part of Approving Development Plans

UTBs are part of Cary's overall zoning, land subdivision and land use regulations. Cary has collected these regulations together in Cary's Land Development Ordinance (LDO). UTBs are intended to assist Cary in accomplishing the broad and important purposes of the LDO stated in 1.3 of the LDO as well as the specific purposes stated in Sections 1.3.1-1.3.12 and 14.6.1. In any specific development plan, Cary’s reviews the entire proposed development and determines whether the proposed development in its entirety satisfies the LDO. Cary recognizes that UTBs will affect different property and projects differently and that all circumstances or applications of UTBs cannot be foreseen. Therefore, Cary has established a process by which the width of Zone 3 of the UTB may be modified in certain limited circumstances based upon review and approval of an applicant's application for modification which shall include the overall development plan. Any modification granted shall be conditioned upon the implementation of the related development plan and shall be conditioned upon the applicant providing mitigation as set forth below.

(A) Procedures for Requesting Modifications to Zone Three

The Zoning Board of Adjustment, after receiving comment from various Cary departments which review the proposed development plan pursuant to the LDO, may reduce the total area of Zone Three after establishing the following at a quasi-judicial hearing:

(1) The reduction will have a minimal impact upon the purposes of the General UTBs stated in Section 14.6.1 and is consistent with general purposes of the LDO stated in Section 1.3; and

(2) The mitigation of impacts offered by the applicant as part of the proposed development plan significantly outweighs the impacts of the reduction to the General UTBs proposed by the applicant; and

(3) The impact of the reduction in the General UTB is balanced by mitigation, as required below:

(a) Mitigation on a 1:1 ratio for restoration of a degraded buffer or for protection of ephemeral streams contiguous to protected streams; or

(b) Mitigation on a 3:1 ratio for preservation of an existing buffer; or

(c) Mitigation on a 10:1 ratio for preservation of open space.

(4) The requirements of Section 14.6.12(G)(3), (4), (5), (6) and (7) shall apply to any mitigation required by Section 14.6.10(A)(3) above. In addition, the applicant shall submit a restoration or enhancement plan meeting the requirements of Section 14.6.12(G)(5) together with its request for modification.

(5) The preferred mitigation area is off-site. However, in some cases mitigation requirements may be met by protecting land on-site which would otherwise not be protected through another avenue such as buffer, wetlands, floodplain, or open space requirements.

(B) In addition to the mitigation required and the considerations provided above, the Zoning Board of Adjustment may consider other factors such as the following:

(1) Whether a substantial conflict exists between the General UTBs and other provisions and provisions of the LDO (e.g., the appropriate layout of streets in a proposed development conflicts with the location of the General UTBs);

(2) Whether approvals of other governmental agencies impede the effectiveness of the General UTBs or otherwise impact the layout or development of the proposed development; or

(3) Any other information which may be relevant to the Zoning Board of Adjustment determination that the development plan otherwise satisfies the purposes and goals of the LDO.

(C) Notwithstanding the foregoing, in the event the applicant provides written evidence that the State of North Carolina has granted the applicant a variance to the riparian buffer required

by the State of North Carolina, or if Cary has granted a minor variance as described below in section 14.6.11, the Planning Director shall grant a modification to the UTBs applicable to such applicant sufficient to permit such applicant to utilize the State variance granted.

14.6.11 Variances

(A) Except where General UTBs are modified pursuant to Section 14.6.10 above, General UTBs shall not be modified or varied unless the applicant is granted a variance pursuant to this Section 14.6.11.

(B) Requirements for Variances

Persons who wish to undertake prohibited uses may pursue a variance. Cary may grant minor variances. For major variances, Cary shall prepare preliminary findings and submit them to the Stormwater Division, or its successor for approval by the Environmental Management Commission. The variance request procedure shall be as follows:

(1) For any variance request, Cary shall make a finding of fact as to whether there are practical difficulties or unnecessary hardships that prevent compliance with the UTB requirements. A finding of practical difficulties or unnecessary hardships shall require that the following conditions are met:

(a) If the applicant complies with the provisions of this Ordinance, he/she can secure no reasonable return from, nor make reasonable use of, his/her property. Merely proving that the variance would permit a greater profit from the property shall not be considered adequate justification for a variance. Moreover, Cary shall consider whether the variance is the minimum possible deviation from the terms of this Section 14.6 that shall make reasonable use of the property possible;

(b) The hardship results from application of this Section 14.6 to the property rather than from other factors such as deed restrictions or other hardship;

(c) The hardship is due to the physical nature of the applicant's property, such as its size, shape, or topography, such that compliance with provisions of this Section 14.6 would not allow reasonable use of the property;

(d) The applicant did not cause the hardship by knowingly or unknowingly violating this Section 14.6;

(e) The applicant did not purchase the property after July 14, 2011 (the effective date of this Ordinance), and then request a variance; and

(f) The hardship is rare or unique to the applicant's property.

(g) The variance is in harmony with the general purpose and intent of the State's riparian buffer protection requirements and this Ordinance and preserves its spirit; and

(h) In granting the variance, the public safety and welfare have been assured, water quality has been protected, and substantial justice has been done.

(C) Minor Variances

A minor variance request pertains to activities that will impact Zone Two of the UTB. Minor variance requests shall be reviewed and approved based on the criteria in Section 14.6.11(B). Cary may attach conditions to the variance approval that support the purpose, spirit, and intent of the UTB program. Request for appeals to decisions made by Cary shall be made in writing to the Director of Water Quality, 401 Oversight Express Permitting Unit, or its successor. The Directors decision is subject to review as provided in G.S. Chapter 150B, Articles 3 and 4.

(D) Major Variances

A major variance request pertains to activities that will impact any portion of Zone One or any portion of both Zones One and Two of UTB. If Cary has determined that a major variance request meets the requirements in Section 14.6.11(B), then it shall prepare a preliminary finding and submit it to the NC Environmental Management Commission c/o the Division of Water Resources, 401 Oversight Express Permitting Unit, or its successor, for approval. Within ninety (90) days after receipt by Cary, the Commission shall review preliminary findings on major variance requests and take one (1) of the following actions: approve, approve with conditions and stipulations, or deny the request. Appeals from a Commission decision on a major variance request are made on judicial review to Superior Court.

(E) Any use allowed by a variance which requires mitigation as a condition of variance approval shall not be undertaken until a Mitigation Approval is issued pursuant to Section 14.6.12.

14.6.12 Mitigation

(A) This item shall apply to persons who wish to impact a UTB when one (1) of the following applies:

(1) A person has received an Authorization Certificate pursuant to Section 14.6.9 for a proposed use that is designated as "allowable with mitigation"; or

(2) A person has received a variance pursuant to Section 14.6.11 and is required to perform mitigation as a condition of a variance approval; or

(3) A person has requested a modification pursuant to Section 14.6.10.

(B) Issuance of the Mitigation Approval

Cary shall issue a mitigation approval upon determining that a proposal meets the requirements set out in this Ordinance. The approval shall identify at a minimum the option chosen, the required and proposed areas, and either the mitigation location or the offset payment amount as applicable.

(C) Options for Meeting the Mitigation Requirement

The mitigation requirement may be met through one (1) of the following options:

(1) Payment of a mitigation fee pursuant to 15A NCAC 2B .0269 for impacts to Zone 1 and Zone 2 of the UTB only;

(2) Donation of real property or of an interest in real property pursuant to Section 14.6.12(F); or

(3) Restoration or enhancement of a non-forested riparian buffer pursuant to the requirements of Section 14.6.12(G).

(4) Other alternative buffer mitigation options for impacts to the UTB as approved by the Town. Other alternative riparian buffer mitigation options not specified within this Section may be submitted to the Town for review. Any proposal submitted under this Section shall provide documentation or calculations to demonstrate that the proposed alternative mitigation option removes an equal or greater annual mass load of nutrients to surface waters as a riparian buffer.

(D) The Area of Mitigation

Cary shall determine the required area of mitigation, which shall apply to all mitigation options identified in Section 14.6.11(C) and as further specified in the requirements for each option set out in this Section, according to the following:

(1) The impacts in square feet to each zone of the UTB shall be determined by Cary by adding the following:

(a) The area of the footprint of the use causing the impact to the UTB;

(b) The area of the boundary of any clearing and grading activities within the UTB necessary to accommodate the use; and

(c) The area of any ongoing maintenance corridors within the UTB associated with the use.

(2) The required area of mitigation shall be determined by applying the following multipliers to the impacts determined in Section 14.6.11(D) of this Ordinance to each zone of the UTB:

(a) Impacts to Zone One of the UTB shall be multiplied by three (3);

(b) Impacts to Zone Two of the UTB shall be multiplied by one and one-half (1.5); and

(c) Impacts to wetlands within the UTB that are subject to mitigation under 15A NCAC 2H .0506 shall comply with the mitigation ratios in 15A NCAC 2H .0506.

(E) The Location of Mitigation

For any option chosen for impacts in the Jordan watershed, the mitigation effort shall be located within the same subwatershed of the Jordan watershed, as defined in 15A NCAC 02B.0262, and the same distance from the Jordan Reservoir as the proposed impact, or closer to the Reservoir than the impact, and as close to the location of the impact as feasible. Alternatively, the applicant may propose mitigation anywhere within the same subwatershed of the Jordan watershed, as defined in 15A NCAC 02B.0262, provided that the mitigation proposal accounts for differences in delivery of nutrients to the affected arm of

Jordan Reservoir resulting from differences between the locations of the impact and mitigation. Additional location requirements for the property donation option are enumerated in Section 14.6.12(F)(3)(a).

(F) Donation of Property

Persons who choose to satisfy their mitigation determination by donating real property or an interest in real property shall meet the following requirements:

(1) The donation of real property interests may be used to either partially or fully satisfy the payment of a mitigation fee to the Riparian Buffer Restoration Fund pursuant to 15A NCAC 02B .0272 for impacts to Zone 1 and Zone 2. The value of the property interest shall be determined by an appraisal performed in accordance with Section 7.2.14(L)(6)(d)4. The donation shall satisfy the mitigation determination if the appraised value of the donated property interest is equal to or greater than the required fee. If the appraised value of the donated property interest is less than the required fee calculated pursuant to 15A NCAC 02B .0272, the applicant shall pay the remaining balance due.

(2) The donation of conservation easements to satisfy mitigation requirements shall be accepted only if the conservation easement is granted in perpetuity.

(3) Donation of real property interests to satisfy the mitigation determination shall be accepted only if such property meets all of the following requirements:

(a) In addition to the location requirements of Section 14.6.12(E) for impacts in the Jordan watershed, the property shall be located within an area that is identified as a priority for restoration in, or is otherwise consistent with the goals of, the Basinwide Wetlands and Riparian Restoration Plan for the Cape Fear River Basin developed by NC Division of Water Resources pursuant to G.S. 143-214.10;

(b) The property shall contain riparian buffers not currently protected by the State's riparian buffer protection program that are in need of restoration as defined in Section 14.6.12 (G);

(c) The restorable riparian buffer on the property shall have a minimum length of one thousand (1,000) linear feet along a surface water and a minimum width of fifty (50) feet as measured horizontally on a line perpendicular to the surface water;

(d) The size of the restorable riparian buffer on the property to be donated shall equal or exceed the area of mitigation responsibility determined pursuant to Section 14.6.12 (D):

(e) Restoration shall not require removal of man-made structures or infrastructure;

(f) The property shall be suitable to be successfully restored, based on existing hydrology, soils, and vegetation;

(g) The estimated cost of restoring and maintaining the property shall not exceed the value of the property minus site identification and transaction costs;

(h) The property shall not contain any building, structure, object, site, or district that is listed in the National Register of Historic Places established pursuant to Public Law 89-665, 16 U.S.C. 470 as amended;

(i) The property shall not contain any hazardous substance or solid waste;

(j) The property shall not contain structures or materials that present health or safety problems to the general public. If wells, septic, water or sewer connections exist, they shall be filled, remediated or closed at owner's expense in accordance with state and local health and safety regulations;

(k) The property and adjacent properties shall not have prior, current, and known future land use that would inhibit the function of the restoration effort; and

(l) The property shall not have any encumbrances or conditions on the transfer of the property interests.

(4) At the expense of the applicant or donor, the following information shall be submitted to Cary with any proposal for donations or dedications of interest in real property:

(a) Documentation that the property meets the requirements laid out in Section 14.6.12(F)(3);

(b) US Geological Survey 1:24,000 {seven and one-half (7.5) minute} scale topographic map, county tax map, USDA Natural Resource Conservation Service County Soil Survey Map, and county road map showing the location of the property to be donated along with information on existing site conditions, vegetation types, presence of existing structures and easements;

(c) A current property survey performed in accordance with the procedures of the North Carolina Department of Administration, State Property Office as identified by the State Board of Registration for Professional Engineers and Land Surveyors in "Standards of Practice for Land Surveying in North Carolina." Copies may be obtained from the North Carolina State Board of Registration for Professional Engineers and Land Surveyors, 3620 Six Forks Road, Suite 300, Raleigh, North Carolina 27609;

(d) A current appraisal of the value of the property performed in accordance with the procedures of the North Carolina Department of Administration, State Property Office as identified by the Appraisal Board in the "Uniform Standards of Professional North Carolina Appraisal Practice." Copies may be obtained from the Appraisal Foundation, Publications Department, P.O. Box 96734, Washington, D.C. 20090-6734; and

(e) A title certificate.

(G) Riparian Buffer Restoration or Enhancement

Persons who choose to meet their mitigation requirement through riparian buffer restoration or enhancement shall meet the following requirements:

(1) The applicant may restore or enhance a non-forested riparian buffer if either of the following applies:

(a) The area of riparian buffer restoration is equal to the required area of mitigation determined pursuant to Section 14.6.12(D); or

(b) The area of riparian buffer enhancement is three (3) times larger than the required area of mitigation determined pursuant to Section 14.6.12(D);

(2) The location of the riparian buffer restoration or enhancement shall comply with the requirements in Section 14.6.12(E5);

(3) The riparian buffer restoration or enhancement site shall have a minimum width of fifty (50) feet as measured horizontally on a line perpendicular to the surface water;

(4) Enhancement and restoration shall both have the objective of establishing a forested riparian buffer according to the requirements of this Item. Enhancement shall be distinguished from restoration based on existing buffer conditions. Where existing trees are sparse, defined as greater than or equal to one hundred (100) trees per acre but less than two hundred (200) trees per acre, a buffer may be enhanced. Where existing woody vegetation is absent, defined as less than one hundred (100) trees per acre, a buffer may be restored;

(5) The applicant shall submit a restoration or enhancement plan for approval by Cary after receiving an Authorization Certificate for the proposed use according to the requirements of Section 14.6.9; after receiving a variance for the proposed use according to the requirements of Section 14.6.12; or prior to requesting a modification for the proposed use according to the requirements of Section 14.6.10. The restoration or enhancement plan shall contain the following:

(a) A map of the proposed restoration or enhancement site;

(b) A vegetation plan. The vegetation plan shall include a minimum of at least two (2) native hardwood tree species planted at a density sufficient to provide three hundred twenty (320) trees per acre at maturity;

(c) A grading plan. The site shall be graded in a manner to ensure diffuse flow through the riparian buffer;

(d) A fertilization plan; and

(e) A schedule for implementation.

(6) Within one (1) year after Cary has approved the restoration or enhancement plan, the applicant shall present proof to Cary that the riparian buffer has been restored or enhanced. If proof is not presented within this timeframe, then the person shall be in violation of both the State's riparian buffer protection program and this Section 14.6;

(7) The mitigation area shall be placed under a perpetual conservation easement that will provide for protection of the property's nutrient removal functions; and

(8) The applicant shall submit annual reports for a period of five (5) years after the restoration or enhancement showing that the trees planted have survived and that diffuse flow through the riparian buffer has been maintained. The applicant shall replace trees that do not survive and restore diffuse flow if needed during that five (5)-year period.

14.6.13 Site Inspections

Agents, officials, or other qualified persons authorized by Cary may periodically inspect UTBs to ensure compliance with this ordinance. Notice of the right to inspect shall be included in the letter of approval of each variance and authorization certificate. Authorized agents, officials or other qualified persons shall have the authority, upon presentation of proper credentials, to enter and inspect at reasonable times any property, public or private, for the purpose of investigating and inspecting the site of any UTB. No person shall willfully resist, delay, or obstruct an authorized representative, employee, or agent of Cary, while that person is inspecting or attempting to inspect a UTB nor shall any person obstruct, hamper or interfere with any such representative while in the process of carrying out their official duties. Cary shall have the power to conduct such investigations as deemed reasonably necessary to carry out the duties as prescribed in this Section 14.6.

14.6.14 Violations; Fines; Enforcement

(A) This Section 14.6 shall be enforced by the Town Manager. Any person who fails to comply with any provision of this Section 14.6 shall be in violation of this Ordinance for each occurrence or non-compliance. The disturbance or damage of vegetation within the UTB shall constitute a violation of this Ordinance. For purposes of this Section 14.6, "disturbance" shall be defined as any action that results in injury or harm to required trees, shrubbery, or other vegetation. The owner(s) of the property which term includes their agents, heirs, and assigns, shall be fined and shall replace the disturbed or damaged vegetation as set forth in subsections 14.6.14(B) and 14.6.14(C). In addition, Cary may assess civil penalties in accordance with Chapter 11 of the LDO. Each day that the violation continues shall constitute a separate offense.

(B) The area disturbed or damaged shall be revegetated to re-establish the natural landscape. The person to whom a notice of violation is issued must submit a vegetation plan which shall include a minimum of at least two (2) native hardwood tree species planted at a density sufficient to provide three hundred twenty (320) trees per acre at maturity. In addition, any tree with a dbh of at least six (6) inches that is damaged or removed shall be replaced with one (1) or more trees that have a caliper of at least two (2) inches and a cumulative dbh equal to or greater than the original tree.

(C) A fine of between two dollars ($2.00) and four dollars ($4.00) for every square foot area used by the disturbed or damaged vegetation within the UTB shall be imposed. In determining the amount of the fine, the Town Manager shall consider the degree and extent of harm caused by the violation, the cost of rectifying the damage, and whether the violation was committed willfully. Fines imposed pursuant to this subsection may be appealed pursuant to Section 11.2.2(D).

14.6.15 Delegation of Authority

Any act authorized by this Section 14.2.2 to be carried out by or at the direction of Cary may be carried out by the Town Manager or designee.

14.6.16 Definitions

For the purpose of Section 14.6, these terms shall be defined as follows:

“Access Trails" means pedestrian trails constructed of pervious or impervious surfaces and related structures to access a surface water, including boardwalks, steps, rails, and signage.

"Airport Facilities" means all properties, facilities, buildings, structures, and activities that satisfy or otherwise fall within the scope of one (1) or more of the definitions or uses of the words or phrases "air navigation facility" , "airport", or "airport protection privileges" under G.S. 63-1; the definition of "aeronautical facilities" in G.S. 63-79(1); the phrase "airport facilities" as used in G.S. 159-48(b)(1); and the phrase "aeronautical facilities" as defined in G.S. 159-81 and G.S. 159-97; and the phrase "airport facilities and improvements" as used in Article V, Section 13, of the North Carolina Constitution, which shall include, without limitation, any and all of the following: airports, airport maintenance facilities, clear zones, drainage ditches, fields, hangars, landing lighting, airport and airport-related offices, parking facilities, related navigational and signal systems, runways, stormwater outfalls, terminals, terminal shops, and all appurtenant areas used or suitable for airport buildings or other airport facilities, and all appurtenant rights-of-way; restricted landing areas; any structures, mechanisms, lights, beacons, marks, communicating systems, or other instrumentalities or devices used or useful as an aid, or constituting an advantage or convenience to the safe taking off, navigation, and landing of aircraft, or the safe and efficient operation and maintenance of an airport or restricted landing area; easements through, or interests in, air space over land or water, interests in airport hazards outside boundaries of airports or restricted landing areas, and other protection privileges, the acquisition or control of which is necessary to ensure safe approaches to the landing areas of airports and restricted landing areas, and the safe and efficient operation thereof and any combination of any or all of such facilities. Notwithstanding the foregoing, the following shall not be included in the definition of "airport facilities":

(1) Satellite parking facilities

(2) Retail and commercial development outside of the terminal area, such as rental car facilities; and

(3) Other secondary development, such as hotels, industrial facilities, free-standing offices and other similar buildings, so long as these facilities are not directly associated with the operation of the airport, and are not operated by a unit of government or special government entity such as an airport authority, in which case they are included in the definition of "airport facilities".

"Channel" means a natural water-carrying trough cut vertically into low areas of the land surface by erosive action of concentrated flowing water or a ditch or canal excavated for the flow of water.

"DBH" means the diameter at breast height of a tree measured at four and one-half (4.5) feet above ground level surface.

"Development" means the same as defined in Rule 15A NCAC 2B .0202(23).

"Ditch or canal" means a man-made channel other than a modified natural stream constructed for drainage purposes that is typically dug through inter-stream divide areas. A ditch or canal may have flows that are perennial, intermittent, or ephemeral and may exhibit hydrological and biological characteristics similar to perennial or intermittent streams.

"Ephemeral Stream" means a feature that carries only stormwater in direct response to precipitation with water flowing only during and shortly after large precipitation events. An ephemeral stream may or may not have a well-defined channel, the aquatic bed is always above the water table, and stormwater runoff is the primary source of water. An ephemeral stream typically lacks the biological, hydrological, and physical characteristics commonly associated with the continuous or intermittent conveyance of water.

"Existing Development" means development, other than that associated with agricultural or forest management activities that meets one (1) of the following criteria:

(1) It either is built or has established a vested right based on statutory or common law as interpreted by the courts, for projects that do not require a state permit, as of the effective date of either local new development stormwater programs implemented under Rule 15A NCAC 2B .0265 (Jordan Water Supply Nutrient Strategy: Stormwater Management for New Development) or, for projects requiring a state permit, as of the applicable compliance date established in Rule 15A NCAC 2B .0271 (Jordan Water Supply Nutrient Strategy: Stormwater Management for New Development), Items (5) and (6); or

(2) It occurs after the compliance date set out in Sub-Item (4)(d) of Rule .0265 (Jordan Water Supply Nutrient Strategy: Stormwater Management for New Development) but does not result in a net increase built-upon area.

"Greenway / Hiking Trails" means pedestrian trails constructed of pervious or impervious surface and related structures including but not limited to boardwalks, steps, rails, and signage, and that generally run parallel to the shoreline.

"High Value Tree" means a tree that meets or exceeds the following standards: for pine species, fourteen (14)-inch DBH or greater or eighteen (18)-inch or greater stump diameter; or for hardwoods and wetland species, sixteen (16)-inch DBH or greater or twenty-four (24)-inch or greater stump diameter.

"Intermittent Stream" means a well-defined channel that contains water for only part of the year, typically during winter and spring when the aquatic bed is below the water table. The flow may be heavily supplemented by stormwater runoff. An intermittent stream often lacks the biological and hydrological characteristics commonly associated with the continuous conveyance of water.

"Jordan Nutrient Strategy" or **"Jordan water supply nutrient strategy"** means the set of Rules 15A NCAC 2B .0262 through .0273 and .0311(p).

"Jordan Reservoir" means the surface water impoundment operated by the US Army Corps of Engineers and named B. Everett Jordan Reservoir, as further delineated for purposes of the Jordan Nutrient strategy rule in Rule 15A NCAC 2B .0262(4).

"Jordan watershed" means all lands and waters draining to B. Everett Jordan Reservoir.

"New Development" means any development project that does not meet the definition of existing development set out in Section 14.6.

"Perennial Stream" means a well-defined channel that contains water year-round during a year of normal rainfall with the aquatic bed located below the water table for most of the year. Groundwater is the primary source of water for a perennial stream, but it also carries stormwater runoff. A perennial stream exhibits the typical biological, hydrological, and physical characteristics commonly associated with the continuous conveyance of water.

"Perennial waterbody" means a natural or man-made basin, including lakes, ponds, and reservoirs, that stores surface water permanently at depths sufficient to preclude growth of rooted plants. For the purpose of the State's riparian buffer protection program, the waterbody must be part of a natural drainage way (i.e., connected by surface flow to a stream).

"Referenced / reference reach" means a stable stream that is in dynamic equilibrium with its valley and contributing watershed. A reference reach can be used to develop natural channel design criteria for stream restoration projects.

"Shoreline stabilization" is the in-place stabilization of an eroding shoreline. Stabilization techniques which include "soft" methods or natural materials (such as root wads, or rock vanes) may be considered as part of a restoration design. However, stabilization techniques that consist of "hard" engineering, such as concrete lined channels, riprap, or gabions, while providing bank stabilization, shall not be considered stream restoration.

"Stream restoration" is defined as the process of converting an unstable, altered or degraded stream corridor, including adjacent riparian zone and flood-prone areas to its natural or referenced, stable conditions considering recent and future watershed conditions. This process also includes restoring the geomorphic dimension, pattern, and profile as well as biological and chemical integrity, including transport of water and sediment produced by the stream's watershed in order to achieve dynamic equilibrium.

"Stream" means a body of concentrated flowing water in a natural low area or natural channel on the land surface.

"Stump diameter" means the diameter of a tree measured at six (6) inches above the ground surface level.

"Surface Waters" means all waters of the state as defined in G.S. 143-212 except underground waters.

"Tree" means a woody plant with a DBH equal to or exceeding five (5) inches or a stump diameter exceeding six (6) inches.

"Temporary road" means a road constructed temporarily for equipment access to build or replace hydraulic conveyance structures such as bridges, culverts, pipes or water dependent structures or to maintain public traffic during construction.

(Ord. No. 2022-LDO-03, 10-27-22)

14.7 FLOOD DAMAGE PREVENTION

14.7.1 Purpose; Enforcement

(A) The Special Flood Hazard Area (SFHA) is subject to periodic inundation that could result in loss of life and property, hazards to public health and safety, disruption of commerce and governmental services, damage to and disruption of public utilities, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

These losses and hazards are caused by the cumulative effect of obstructions in floodplains, which increase flood heights and velocities, and by the occupancy in flood-prone areas by uses that are vulnerable to floods, or hazardous to other properties, because they are inadequately elevated, flood proofed, or otherwise protected from flood damages. Therefore, the regulations set forth in this section are designed to:

(1) Restrict or prohibit uses that are dangerous to health, safety, and property due to water or erosion or increased flood heights or velocities;

(2) Require that uses that are vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction;

(3) Control the alteration of natural floodplains, stream channels, and natural protective barriers that accommodate and restrain floodwaters;

(4) Prevent or control filling, grading, dredging, and other development that may increase erosion or flood damage;

(5) Prevent or regulate the construction of flood barriers that will unnaturally divert floodwaters or that may increase flood hazards to other lands;

(B) Objectives

The objectives of this ordinance are to:

(1) Protect human life, safety, and health;

(2) Minimize expenditure of public money for costly flood control projects;

(3) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

(4) Minimize prolonged business losses and interruptions;

(5) Minimize damage to public facilities and utilities (i.e. water and gas mains, electric, telephone, cable and sewer lines, streets, and bridges) that are located in flood prone areas;

(6) Minimize damage to private and public property due to flooding;

(7) Make flood insurance available to the community through the National Flood Insurance Program;

(8) Maintain the natural and beneficial functions of floodplains;

(9) Help maintain a stable tax base by providing for the sound use and development of flood prone areas; and

(10) Ensure that potential buyers are aware that property is in a Special Flood Hazard Area.

(C) The degree of flood protection required by this section is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This section does not imply that land outside the Special Flood Hazard Area will be free from flooding or flood damages. Neither shall this section create liability on the part of Cary or by any officer or employee thereof for any flood damages that result from reliance on this section, or any administrative decision lawfully made hereunder.

(D) In the interpretation and application of this section, all provisions shall be considered as minimum requirements, shall be liberally construed in favor of Cary, and shall be deemed neither to limit nor repeal any other powers granted to Cary under state statutes.

(E) This Section 14.7 shall be enforced by the Town Manager or designee. Any person who fails to comply with any provision of this Section 14.7 shall be in violation of this Ordinance.

14.7.2 Applicability

(A) Applicability

This section 14.7 shall apply to the Special Flood Hazard Area (SFHA) and the Future Conditions Flood Hazard Area. Additionally, section 14.7.9 (Downstream Impact Analysis) shall apply to all development that requires a stormwater management plan under 7.3 of this ordinance.

(B) Exemptions

(1) All new residential construction and substantial residential improvements proposed on a parcel of land that has no buildable area outside the Special Flood Hazard Area or Future Conditions Flood Hazard Area, and that was platted prior to June 1978, shall be exempt from the requirements for residential construction set forth in this section, but shall be developed in strict accordance with the requirements for non-residential construction.

(2) Residential subdivision plats submitted for review prior to May 10, 2001, shall be exempted from the requirements prohibiting the platting of lands located within Special Flood Hazard Areas and Future Conditions Flood Hazard Areas, provided the subdivision complies with the requirements in place prior to May 10, 2001, and shall be developed in strict accordance with the requirements for non-residential construction.

(3) Development plans submitted prior to May 10, 2001, and all new residential construction or substantial residential improvements proposed on a platted lot that is located within the Special Flood Hazard Area or Future Conditions Flood Hazard Area, but was not so located at the time it was platted, shall be exempt from the requirement to obtain a special use permit for filling in the flood fringe portion of the Special Flood Hazard Area or the Future Conditions Flood Hazard Area but shall submit a floodplain development permit application and shall be developed in strict accordance with the requirements for non-residential construction.

(4) Development plans or plats submitted after May 10, 2001, may not plat residential lots within Special Flood Hazard Areas or Future Conditions Flood Hazard Areas unless one of the following is true:

(a) The residential subdivision is within an approved Planned Development District and the master plan and/or conditions have exempted lots from this provision; or

(b) The Zoning Board of Adjustment finds, after an evidentiary hearing, that all the following conditions are met:

1. The Special Flood Hazard Area or Future Conditions Flood Hazard Area impacts a limited section of the subdivision (i.e., less than ten percent (10%) of the total land area of the subdivision);

2. There is no other reason for the formation of a homeowner's association to retain ownership and maintenance responsibility for the Special Flood Hazard Area or Future Conditions Flood Hazard Area (e.g., covenant, other common areas); and

3. The Special Flood Hazard Area or Future Conditions Flood Hazard Area is placed in a permanent maintenance easement prior to plat recordation.

(C) Study Required

Residential development that contains a watercourse that has a contributory drainage area of fifty (50) acres or greater shall require the applicant to provide a signed and sealed engineered study prepared by a qualified professional that determines the extent of the Special Flood Hazard Area.

14.7.3 Development Restrictions and Related Standards In and Near Special Flood Hazard Areas and Future Conditions Flood Hazard Areas

(A) Development Restrictions

In general, no development is allowed in Special Flood Hazard Areas or Future Conditions Flood Hazard Areas unless one or more of the following are met:

(1) A special use is approved;

(2) The property/use is exempted from this requirement; and/or

(3) The development is for roads, greenways, pedestrian crossings, park-related equipment, or public utilities and facilities such as wastewater, gas, electrical, and water systems that are located and constructed to minimize flood damage.

Structures for pedestrian crossings (e.g., footbridges, etc.), playground equipment, and other similar items may be permitted if the applicant provides certification by a professional registered engineer, architect, or landscape architect that these encroachments will not result in any increase in flood levels during the base flood.

(B) Development Standards

No structure or land shall hereafter be located, extended, converted, altered, or developed in any way without full compliance with the terms of this ordinance and other applicable regulations.

If development or encroachments are permitted, the following standards shall apply in Special Flood Hazard Areas and Future Conditions Flood Hazard Areas.

(1) An engineering study must be performed to determine whether an adverse impact will result from development in the flood fringe portion of the Special Flood Hazard Area or Future Conditions Flood Hazard Area and must be submitted with the floodplain development permit application. For purposes of this Section 14.7.3 an "adverse impact" includes, but is not limited to, a reduction of floodplain storage greater than ten percent (10%), an increase in one hundred (100) year average channel velocities greater than ten percent (10%), any increase in one hundred (100) year water surface

elevation, the potential for aggravating a known existing drainage problem or creating a new drainage problem, as determined by the Stormwater Manager.

(2) All new non-residential construction and substantial improvements to existing non-residential construction shall be:

(a) Anchored to prevent flotation, collapse, or lateral movement of the structure; and

(b) Constructed with materials and utility equipment resistant to flood damage; and

(c) Constructed by methods and practices that minimize flood damage.

(3) All new and replacement electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and constructed to prevent water from entering or accumulating in or on the components.

(4) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.

(5) New and replacement sanitary sewer systems shall be designed to minimize or eliminate infiltration of floodwaters into the system and discharges from the system into flood waters.

(6) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

(7) Nothing in this ordinance shall prevent the repair, reconstruction, or replacement of a building or structure existing on the effective date of this ordinance and located totally or partially within the floodway, non-encroachment area, or stream setback, provided there is no additional encroachment below the regulatory flood protection elevation in the floodway, non-encroachment area, or stream setback, and provided that such repair, reconstruction, or replacement meets all of the other requirements of this ordinance.

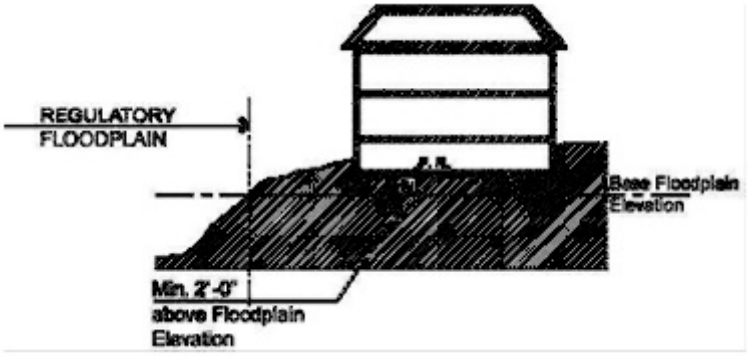
(8) New solid waste disposal facilities and sites, hazardous waste management facilities, salvage yards, and chemical storage facilities shall not be permitted in Special Flood Hazard Areas or Future Conditions Flood Hazard Areas, except by variance as specified in Section 3.20. A structure or tank for chemical or fuel storage incidental to an allowed use or to the operation of a water treatment plant or wastewater treatment facility may be located in a Special Flood Hazard Area or a Future Conditions Flood Hazard Area only if the structure or tank is either elevated or floodproofed to at least the regulatory flood protection elevation and certified according to Section 14.7.3(D)(3) of this ordinance.

(C) Additional Development Standards and Restrictions for Areas with Established Base Flood Elevation Data

(1) ***Residential Construction***

(a) New construction of or substantial improvements to any residential structure shall be located outside Special Flood Hazard Areas and Future Conditions

Flood Hazard Areas and shall have the lowest floor, including basement, elevated no lower than the regulatory flood protection elevation as defined. "Substantial improvement" is defined in Chapter 12.



Residential Construction 2'-0" Above Base Flood Elevation

(b) No proposed building lot that is wholly or partly subject to flooding shall be approved unless there is established on the final plat a line representing an actual contour as determined by field survey at elevation of the regulatory flood protection elevation as determined by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps, or by other studies approved by Cary. Such a line shall be known and identified on the development plan and final plat as the "Building Restriction Flood Line."

(c) Placement of fill within the floodway, non-encroachment area, and/or flood fringe is prohibited unless such activities are authorized through a Special Use Permit.

(2) ***Non-Residential Construction Approved within Special Flood Hazard Areas and Future Conditions Flood Hazard Areas***

(a) New construction of or substantial improvements to any commercial, industrial, or other non-residential structure shall have the lowest floor, including basement, elevated no lower than the regulatory flood protection elevation as defined in Chapter 12, with attendant utilities and sanitary facilities flood-proofed.

(b) For all new construction and substantial improvements, fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on the exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must be certified by a registered Professional Engineer or architect, or must meet or exceed the following minimum criteria:

1. A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided;

2. The bottom of all openings shall be no higher than one (1) foot above grade;

3. Openings may be equipped with screens, louvers, or other coverings or devices, provided that they permit the automatic entry and exit of floodwaters; and

4. A registered professional engineer or architect shall certify to the Floodplain Administrator that the standards of this section are satisfied.

(D) Application Requirements

(1) Application for a floodplain development permit shall be made to the Floodplain Administrator prior to any development activities located within Special Flood Hazard Areas and Future Conditions Flood Hazard Areas. The following items shall be presented to the Floodplain Administrator to apply for a floodplain development permit:

(a) A plot plan drawn to scale which shall include, but shall not be limited to, the following specific details of the proposed floodplain development:

1. the nature, location, dimensions, and elevations of the area of development/disturbance; existing and proposed structures, utility systems, grading/pavement areas, fill materials, storage areas, drainage facilities, and other development;

2. the boundary of the Special Flood Hazard Area or Future Conditions Flood Hazard Area as delineated on the FIRM or other flood map as determined in Section 14.7.2(A), or a statement that the entire lot is within the Special Flood Hazard Area or Future Conditions Flood Hazard Area;

3. flood zone(s) designation of the proposed development area as determined on the FIRM or other flood map as determined in Section 14.7.2(A);

4. the boundary of the floodway(s) or non-encroachment area(s) as determined in Section 14.7.2(A);

5. the Base Flood Elevation (BFE) or Future Conditions Flood Elevation where provided as set forth in Section 14.7.2;

6. the old and new location of any watercourse that will be altered or relocated as a result of proposed development;

7. certification of the plot plan by a registered land surveyor or professional engineer.

(b) Proposed elevation, and method thereof, of all development within a Special Flood Hazard Area or Future Conditions Flood Hazard Area including but not limited to:

1. Elevation in relation to NAVD 1988 of the proposed reference level (including basement) of all structures;

2. Elevation in relation to NAVD 1988 to which any non-residential structure in Zone AE, A or X (Future) will be flood-proofed; and

3. Elevation in relation to NAVD 1988 to which any proposed utility systems will be elevated or floodproofed;

(c) If floodproofing, a Floodproofing Certificate (FEMA Form 81-65) with supporting data and an operational plan that includes, but is not limited to, installation, exercise, and maintenance of floodproofing measures.

(d) A Foundation Plan, drawn to scale, which shall include details of the proposed foundation system to ensure all provisions of this ordinance are met. These details include but are not limited to:

1. The proposed method of elevation, if applicable (i.e., fill, solid foundation perimeter wall, solid backfilled foundation, open foundation on columns/ posts/piers/piles/shear walls);

2. Openings to facilitate equalization of hydrostatic flood forces on walls in accordance with Section 14.7.3(E)(1)(c) 1 through 6, when solid foundation perimeter walls are used in the SFHA;

(e) Usage details of any enclosed areas below the regulatory flood protection elevation.

(f) Plans and/or details for the protection of public utilities and facilities such as sewer, gas, electrical, and water systems to be located and constructed to minimize flood damage;

(g) Copies of all other Local, State and Federal permits required prior to floodplain development permit issuance (Wetlands, Endangered Species, Erosion and Sedimentation Control, Mining, etc.)

(h) Documentation for placement of Recreational Vehicles and/or Temporary Structures, when applicable, to ensure Section 14.7.3(F)(5)(b) ordinance are met.

(i) A description of proposed watercourse alteration or relocation, when applicable, including an engineering report on the effects of the proposed project on the flood-carrying capacity of the watercourse and the effects to properties located both upstream and downstream; and a map (if not shown on plot plan) showing the location of the proposed watercourse alteration or relocation.

(2) ***Permit Requirements***

The floodplain development permit shall include, but not be limited to:

(a) A complete description of all the development to be permitted under the floodplain development permit. (e.g. house, garage, pool, septic, bulkhead, cabana, pier, bridge, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials, etc.).

(b) The Special Flood Hazard Area or Future Conditions Flood Hazard Area determination for the proposed development per available data specified in Section 14.7.3(A).

(c) The regulatory flood protection elevation required for the reference level and all attendant utilities.

(d) The regulatory flood protection elevation required for the protection of all public utilities.

(e) All certification submittal requirements with timelines.

(f) A statement that no fill material or other development shall encroach into the floodway or non-encroachment area of any watercourse, as applicable.

(g) The flood openings requirements, if in SFHA.

(h) Limitations of below RFPE enclosure uses (i.e., parking, building access and limited storage only) if applicable.

(i) A statement, that all materials below RFPE must be flood resistant materials.

(3) ***Certification Requirements***

(a) Elevation Certificates

1. An Elevation Certificate (FEMA Form 81-31) or a Cary Lowest Floor Certificate within non-FEMA SFHA, is required prior to the actual start of any new construction. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the elevation of the reference level, in relation to NAVD 1988. The Floodplain Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder prior to the beginning of construction. Failure to submit the certification or failure to make required corrections shall be cause to deny a floodplain development permit.

2. An Elevation Certificate (FEMA Form 81-31) or a Cary Lowest Floor Certificate within non-FEMA SFHA, is required after the reference level is established. Within seven (7) calendar days of establishment of the reference level elevation, it shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the elevation of the reference level, in relation to NAVD 1988. Any work done within the seven (7) day calendar period and prior to submission of the certification shall be at the permit holder's risk. The Floodplain Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further work being permitted to proceed. Failure to submit the certification or failure to make required corrections shall be cause to issue a stop-work order for the project.

3. A final as-built Elevation Certificate (FEMA Form 81-31) or a Cary Lowest Floor Certificate within non-FEMA SFHA, is required after construction is completed and prior to Certificate of Compliance/Occupancy issuance. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of final as-built construction of the elevation of the reference level and all attendant utilities in relation to NAVD 1988. The

Floodplain Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to Certificate of Compliance/ Occupancy issuance. In some instances, another certification may be required to certify corrected as-built construction. Failure to submit the certification or failure to make required corrections shall be cause to withhold the issuance of a Certificate of Compliance/Occupancy.

(b) ***Floodproofing Certificate***

1. If non-residential floodproofing is used to meet the regulatory flood protection elevation requirements, a Floodproofing Certificate (FEMA Form 81-65), with supporting data and an operational plan, is required prior to the actual start of any new construction. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the floodproofed design elevation of the reference level and all attendant utilities, in relation to NAVD 1988. Floodproofing certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. The Floodplain Administrator shall review the certificate data and plan. Deficiencies detected by such review shall be corrected by the applicant prior to permit approval. Failure to submit the certification or failure to make required corrections shall be cause to deny a floodplain development permit. Failure to construct in accordance with the certified design shall be cause to withhold the issuance of a Certificate of Compliance/Occupancy.

2. A final Finished Construction Floodproofing Certificate (FEMA Form 086-0-34), with supporting data, an operational plan, and an inspection and maintenance plan are required prior to the issuance of a Certificate of Compliance/Occupancy. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the floodproofed design elevation of the reference level and all attendant utilities, in relation to NAVD 1988. Floodproofing certificate shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. The Floodplain Administrator shall review the certificate data, the operational plan, and the inspection and maintenance plan. Deficiencies detected by such review shall be corrected by the applicant prior to Certificate of Occupancy. Failure to submit the certification or failure to make required corrections shall be cause to deny a floodplain development permit. Failure to construct in accordance with the certified design shall be cause to deny a Certificate of Compliance/Occupancy.

(c) If a manufactured home is placed within the SFHA and the elevation of the chassis is more than thirty-six (36) inches in height above grade, an engineered foundation certification is required per Section 14.7.7(A), (B) and (C).

(d) If a watercourse is to be altered or relocated, a description of the extent of watercourse alteration or relocation; a professional engineer's certified report on the effects of the proposed project on the flood-carrying capacity of the watercourse and the effects to properties located both upstream and downstream; and a map showing the location of the proposed watercourse alteration or relocation shall all be submitted by the permit applicant prior to issuance of a floodplain development permit.

(e) ***Certification Exemptions***

The following structures, if located within the SFHA, are exempt from the elevation/floodproofing certification requirements specified in items (a) and (b) of this subsection:

1. recreational Vehicles meeting requirements of Section 14.7.3(F)(5);

2. temporary Structures meeting requirements of Section 14.7.3(F)(6); and

3. accessory Structures less than one hundred fifty (150) square feet meeting requirements of Section 14.7.3(H).

(4) ***Determinations for existing buildings and structures***

For applications for building permits to improve buildings and structures, including alterations, movement, enlargement, replacement, repair, change of occupancy, additions, rehabilitations, renovations, substantial improvements, repairs of substantial damage, and any other improvement of or work on such buildings and structures, the Floodplain Administrator, in coordination with the Building Official, shall:

(a) Estimate the market value, or require the applicant to obtain an appraisal of the market value prepared by a qualified independent appraiser, of the building or structure before the start of construction of the proposed work; in the case of repair, the market value of the building or structure shall be the market value before the damage occurred and before any repairs are made;

(b) Compare the cost to perform the improvement, the cost to repair a damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, if applicable, to the market value of the building or structure;

(c) Determine and document whether the proposed work constitutes substantial improvement or repair of substantial damage; and

(d) Notify the applicant if it is determined that the work constitutes substantial improvement or repair of substantial damage and that compliance with the flood resistant construction requirements of the NC Building Code and this ordinance is required.

(E) Additions/Improvements

(1) ***Elevated Buildings***

Fully enclosed area, of new construction and substantially improved structures, which is below the lowest floor:

(a) shall not be designed or used for human habitation, but shall only be used for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment (standard exterior door), or entry to the living area (stairway or elevator). The interior portion of such enclosed area

shall not be finished or partitioned into separate rooms, except to enclose storage areas;

(b) shall be constructed entirely of flood resistant materials below the regulatory flood protection elevation;

(c) shall include, in the SFHA, flood openings to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters. To meet this requirement, the openings must either be certified by a qualified professional or meet or exceed the following minimum design criteria;

1. a minimum of two (2) flood openings on different sides of each enclosed area subject to flooding;

2. the total net area of all flood openings must be at least one (1) square inch for each square foot of enclosed area subject to flooding;

3. if a building has more than one (1) enclosed area, each enclosed area must have flood openings to allow floodwaters to automatically enter and exit;

4. the bottom of all required flood openings shall be no higher than one (1) foot above the adjacent grade;

5. flood openings may be equipped with screens, louvers, or other coverings or devices, provided they permit the automatic flow of floodwaters in both directions; and

6. enclosures made of flexible skirting are not considered enclosures for regulatory purposes, and, therefore, do not require flood openings. Masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires flood openings as outlined above.

(F) Additions/Improvements to Existing Structures

(1) For additions and/or improvements to pre-FIRM structures located within the Special Flood Hazard Area or Future Flood Conditions Hazard Area when the addition and/or improvements in combination with any interior modifications to the existing structure are:

(a) not a substantial improvement, the addition and/or improvements must be designed to minimize flood damages and must not be any more non-conforming than the existing structure.

(b) a substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards for new construction contained in Section 14.7.3(B) and (C).

(2) Additions to post-FIRM structures located within the Special Flood Hazard Area or Future Flood Conditions Hazard Area with no modifications to the existing structure other than a standard door in the common wall shall require only the addition to comply with the standards for new construction contained in Section 14.7.3(B) and (C).

(3) Additions and/or improvements to post-FIRM structures located within the Special Flood Hazard Area or Future Flood Conditions Hazard Area when the addition and/or improvements in combination with any interior modifications to the existing structure are:

(a) not a substantial improvement, the addition and/or improvements only must comply with the standards for new construction contained in Section 14.7.3(B) and (C).

(b) a substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards for new construction contained in Section 14.7.3(B) and (C).

(4) For either a pre-FIRM or post-FIRM structure located within the Special Flood Hazard Area or Future Flood Conditions Hazard Area, where an independent perimeter load-bearing wall is provided between the addition and the existing building, the addition(s) shall be considered a separate building and only the addition must comply with the standards for new construction contained in Section 14.7.3(B) and (C).

(5) ***Recreational Vehicles***

Recreational vehicles shall either:

(a) be on site for fewer than one hundred and eighty (180) consecutive days and be fully licensed and ready for highway use (a recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities, and has no permanently attached additions); or

(b) meet all the requirements for new construction.

(6) ***Temporary Non-Residential Structures***

Prior to the issuance of a Floodplain Development Permit for a temporary structure, the applicant must submit to the Floodplain Administrator a plan for the removal of such structure(s) in the event of a hurricane, flash flood or other type of flood warning notification. The following information shall be submitted in writing to the Floodplain Administrator for review and written approval;

(a) a specified time period for which the temporary use will be permitted. Time specified may not exceed three (3) months, renewable up to one (1) year;

(b) the name, address, and phone number of the individual responsible for the removal of the temporary structure;

(c) the time frame prior to the event at which a structure will be removed (i.e., minimum of seventy-two (72) hours before landfall of a hurricane or immediately upon flood warning notification);

(d) a copy of the contract or other suitable instrument with the entity responsible for physical removal of the structure; and

(e) designation, accompanied by documentation, of a location outside the Special Flood Hazard Area or Future Conditions Flood Hazard Area, to which the temporary structure will be moved.

(G) Accessory Structures

When accessory structures (sheds, detached garages, etc.) are to be placed within a Special Flood Hazard Area or Future Conditions Flood Hazard Area, the following criteria shall be met:

(1) Accessory structures shall not be used for human habitation (including working, sleeping, living, cooking or restroom areas);

(2) Accessory structures shall not be temperature-controlled;

(3) Accessory structures shall be designed to have low flood damage potential;

(4) Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters;

(5) Accessory structures shall be firmly anchored in accordance with Section 14.7.3(C)(2);

(6) All service facilities such as electrical shall be installed in accordance with Section 14.7.3(C)(2)(a);

(7) Flood openings to facilitate automatic equalization of hydrostatic flood forces shall be provided below regulatory flood protection elevation in conformance with Section 14.7.3(C)(2)(b)1 through 6.

An accessory structure with a footprint less than one hundred fifty (150) square feet that satisfies the criteria outlined above does not require an elevation or floodproofing certificate. Elevation or floodproofing certifications are required for all other accessory structures in accordance with Section 14.7.3(D)(3).

14.7.4 Limitations on Encroachments in Floodways and Non-Encroachment Areas

Floodways and non-encroachment areas, located within the Special Flood Hazard Area or Future Conditions Flood Hazard Areas, are extremely hazardous areas due to the velocity of flood waters that carry debris, potential projectiles, and the potential for erosion. Therefore, encroachments, including fill, in floodways or non-encroachment areas are permitted only in limited circumstances and only under the following restrictions:

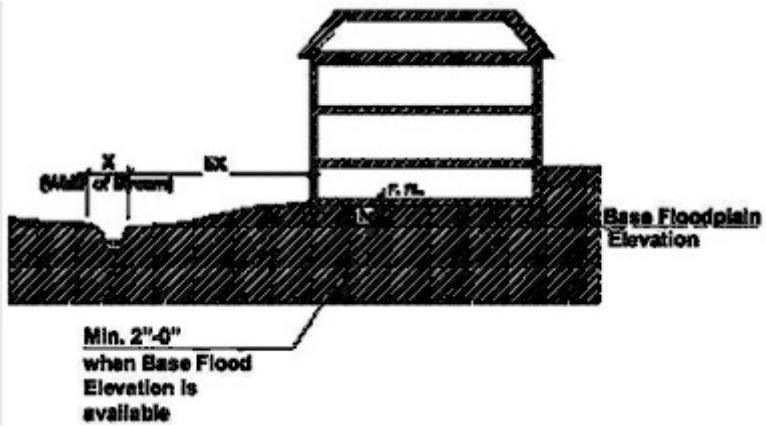
(A) There shall be no encroachment, including fill, unless the applicant has received a Special Use Permit (see Section 3.8) or the use is permitted under Section 14.7.3(A). The applicant for a special use involving the floodway portion of a Special Flood Hazard Area or Future Conditions Flood Hazard Area shall provide certification by a professional registered engineer, architect, or landscape architect that the encroachment will not result in any increase in flood levels during the discharge of the base flood or provide a Conditional Letter or Map Revision (CLOMR) issued by the Federal Emergency Management Agency. A Letter of Map Revision (LOMR) must also be obtained within six (6) months of completion of the proposed encroachment.

(B) Once paragraph (A) above is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction requirements of this section.

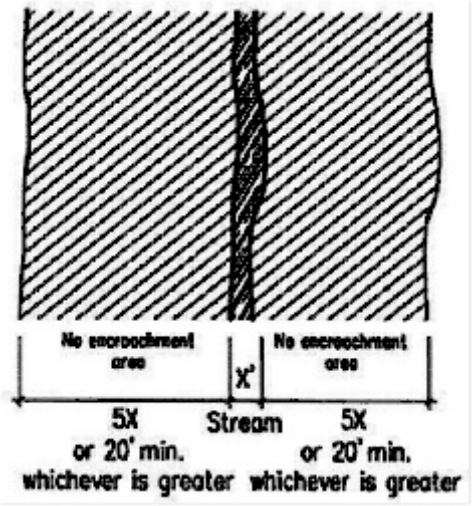
14.7.5 Standards for Streams without Established Base Flood Elevations

Located within Special Flood Hazard Areas are small streams where no base flood data has been provided. The following provisions apply within such areas:

(A) No encroachments, including fill, new construction, substantial improvements, or new development, shall be permitted within a distance of the stream bank equal to five (5) times the width of the stream at the top of the bank or twenty (20) feet each side from the top of the bank, whichever is greater, unless a special use is approved or the use is permitted.



New Construction near Streams



Standards for Streams without Established Base Flood Elevations

(B) In cases where the streams lacking base flood data are USGS or County Soils Map streams, then the limitations upon encroachments shall apply to the entire area within the associated UTBs, or an area five (5) times the width of the stream at the top of the bank, whichever is greater.

(C) If paragraph (A) above is satisfied, and base flood elevation data is available from other sources, all new construction and substantial improvements within such areas shall comply with all applicable flood hazard ordinance provisions of this Section and shall be elevated or flood-proofed in accordance with elevations established under Section 14.7.2. When base flood elevation data is not available from a federal, state, or other source, the lowest floor, including basement, shall be elevated to or above the regulatory flood protection elevation as defined in Chapter 12.

14.7.6 Cross Drainage Area Standards and Restrictions

For any new proposed development subject to flooding which includes, but is not limited to, those lots along any significant watercourse, whether or not the stream or water course is enclosed with a pipe or culvert; the applicant shall make a determination of the crest elevation of the flood expected to be equaled or exceeded that has a one percent (1%) chance of annual occurrence in accordance with generally accepted engineering practice, which is to be submitted with the seal and signature of a Professional Engineer to Cary. Any new construction of, or substantial improvements (see Chapter 12, Definitions) to, any residential or non-residential structure shall comply with Section 14.7.3(B).

14.7.7 Special Requirements for Manufactured Homes

(A) No manufactured home shall be placed in Special Flood Hazard Areas or Future Conditions Flood Hazard Areas, except when located within an existing manufactured home park. In existing manufactured home parks, all manufactured homes to be placed or substantially improved within the SFHA or Future Conditions Flood Hazard Area, shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is no lower than the regulatory flood protection elevation as defined in Chapter 12 and shall be securely anchored to an adequate foundation system in accordance with the most current edition of the State of North Carolina Regulations for Manufactured Homes adopted by the Commissioner of Insurance pursuant to G.S. 143-143.15.

(B) Manufactured homes may not be placed in the floodway.

(C) All manufactured homes within Special Flood Hazard Areas or Future Conditions Flood Hazard Areas shall be anchored to resist flotation, collapse, or lateral movement in accordance with the Regulations for Mobile Homes and Modular Housing adopted by the Commissioner of Insurance pursuant to G.S. 143-15. Where the required elevation can be met by elevating the chassis no more than thirty-six (36) inches above grade at the site, the chassis shall be supported by reinforced piers or other foundation of equivalent strength. When the elevation of the chassis is above thirty-six (36) inches in height an engineering certification is required.

14.7.8 Special Requirements for Development Proposals Requiring Development Plan Approval

For purposes of this section only, the boundaries of the Special Flood Hazard Area or Future Conditions Flood Hazard Area for a development or a discrete phase of a development are established if all of the following conditions are met:

(A) The development is approved for construction;

(B) A substantial investment is made in constructing the development.

(C) In addition to satisfying the other requirements of this Ordinance, all proposals for development plans shall:

(1) Be consistent with the need to minimize flood damage;

(2) Have public utilities and facilities, such as wastewater, gas, electrical, and water systems, located and constructed so as to minimize flood damage;

(3) Have all proposed residential structures located outside the Special Flood Hazard Area or Future Conditions Flood Hazard Area, with the lowest floor, including basement, elevated at least two (2) feet above the base flood elevation;

(4) Have all proposed non-residential structures located outside of the Special Flood Hazard Area or Future Conditions Flood Hazard Area, with the lowest floor, including basement, located at least two (2) feet above the base flood elevation. (Note that an approved special use may permit structures in a flood fringe - see Section 3.12.3).

(5) Have all drainage structures located within the Flood Hazard Area designed to accommodate the one percent (1%) annual chance flood without causing increased base flood elevations on properties other than that for which development approval is being requested;

(6) Shall provide base flood elevation data along with the development plan, which is submitted to Cary for approval.

14.7.9 Downstream Impact Analysis

(A) A Downstream Impact Analysis shall be submitted at the time of development plan submission for all proposed development that requires development plan approval. Development plans that are not subject to the stormwater management regulations of LDO Section 7.3 are exempt from this section 14.7.9.

(B) The Downstream Impact Analysis shall calculate the pre- and post-development discharges for each discharge point from the area subject to the development plan.

(1) If the calculated post-development discharge is less than the calculated pre-development discharge for the two (2), five (5), ten (10) and one hundred (100)-year peak discharges at each discharge point, then no further analysis is needed.

(2) If the calculated post-development discharge is greater than the calculated pre-development discharge for the two (2), five (5), ten (10) or one hundred (100)-year peak discharges at any discharge point, then one of the options below shall be required.

(a) Provide onsite detention to fully mitigate each storm event to calculated pre-development discharge; or

(b) Provide an engineering model demonstrating no adverse impacts from the development on downstream properties and infrastructure.

14.7.10 Non-Compliance

Failure to comply with the provisions of this section shall constitute a violation of this Ordinance and shall subject an offending party to a series of actions listed in Chapter 11 of this Ordinance.

(Ord. No. 2022-LDO-03, 10-27-22)