

CHAPTER 8

Riparian Buffer Protection Ordinance for Lands within the Jordan Watershed

Rockingham County, North Carolina

Adopted November 8, 2010
Amended February 14, 2012

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Section 1. Authority

This Ordinance is adopted pursuant to the authority vested in Rockingham County by the Session Laws and the General Statutes of North Carolina, particularly Session Law 2009-216 (House Bill 239), Session Law 2009-484 (Senate Bill 838), N.C Gen. Stat §153A-121, 153A-140, Chapter 153A, Article 18, and any special legislation enacted by the General Assembly for Rockingham County.

Section 2. Purpose and Intent

The purpose of adopting the following Ordinance is to protect and preserve existing riparian buffers throughout the Jordan Watershed to maintain their nutrient removal and stream protection functions and to protect the water supply uses throughout the Jordan watershed.

Section 3. Title

This Ordinance shall be known as the *Rockingham County Riparian Buffer Protection Ordinance for Lands within the Jordan Watershed*.

Section 4. Jurisdiction

This Ordinance shall be applied to all land in the planning jurisdiction of Rockingham County that is located within the Jordan Reservoir Watershed.

Section 5. Applicability

This Ordinance applies to all landowners and other persons conducting activities in the area described in Section 4, with the exception of activities conducted under the authority of the State, the United States, multiple jurisdictions, or local units of government, and forest harvesting and agricultural activities. The NC Division of Water Quality shall administer the requirements of Rule 15A NCAC 02B .0267 and .0268 (Jordan Water Supply Nutrient Strategy: Protection of Existing Riparian Buffers and Mitigation of Existing Riparian Buffers, respectively) for these activities.

Section 6. Relation to Other Ordinances

If the provisions of this ordinance otherwise conflict with the provisions of any other validly enforceable ordinance(s) or laws, the most stringent provisions shall control. This Ordinance is not intended to interfere with, abrogate, or annul any other ordinance, rule, regulation, or other provision of law.

Section 7. Riparian Area Protection within the Jordan Reservoir Watershed

A. Buffers Protected

The following minimum criteria shall be used for identifying regulated buffers:

1. This Ordinance shall apply to activities conducted within, or outside of with hydrologic impacts in violation of the diffuse flow requirements set out in Section 7.(E) upon, 50-foot wide riparian buffers directly adjacent to surface waters in the Jordan watershed (intermittent streams, perennial streams, lakes, reservoirs and ponds), excluding wetlands.

2. Wetlands adjacent to surface waters or within 50 feet of surface waters shall be considered as part of the riparian buffer but are regulated pursuant to Rules 15A NCAC 2B .0230 and .0231, Rules 15A NCAC 2H .0500, 15A NCAC 2H .1300, and Sections 401 and 404 of the Federal Water Pollution Control Act.
3. For the purpose of this Ordinance, only one of the following types of maps shall be used for purposes of identifying a water body subject to the requirements of this ordinance:
 - a. The most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture.
 - b. The most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the United States Geologic Survey (USGS).
 - c. A map approved by the Geographic Information Coordinating Council and by the NC Environmental Management Commission. Prior to approving a map under this Item, the Commission shall provide a 30-day public notice and opportunity for comment. Alternative maps approved by the Commission shall not be used for buffer delineation on projects that are existing and ongoing within the meaning of Section 7.(C) of this Ordinance.
4. Where the specific origination point of a stream, regulated under this Item, is in question, upon request of the NC Division of Water Quality or another party, a Rockingham County representative, who has successfully completed the Division's *Surface Water Identification Training Certification* course, its successor, or other equivalent training curriculum approved by the Division, shall make an on-site determination. The representative, shall establish the origin point using the latest version of the Division publication, *Identification Methods for the Origins of Intermittent and Perennial Streams*, available at [http://h2o.enr.state.nc.us/ncwetlands/documents/NC Stream ID Manual.pdf](http://h2o.enr.state.nc.us/ncwetlands/documents/NC_Stream_ID_Manual.pdf) or from the NC Division of Water Quality - 401 Oversight Express Permitting Unit, or its successor. The County may accept the results of a site assessment made by another party who meets these criteria. Any disputes over on-site determinations made according to this Item shall be referred to the Director of the Division of Water Quality 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. 150B.
5. Riparian buffers protected by this Ordinance shall be measured pursuant to Section 7.(D) of this Ordinance.
6. Parties subject to this Ordinance shall abide by all State rules and laws regarding waters of the state including but not limited to Rules 15A NCAC 2B .0230 and .0231, Rules 15A NCAC 2H .0500, 15A NCAC 2H .1300, and Sections 401 and 404 of the Federal Water Pollution Control Act.

7. No new clearing, grading, or development shall take place nor shall any new building permits be issued in violation of this Ordinance.

B. Exemption Based on On-site Determination

When a landowner or other affected party including the Division believes that the maps have inaccurately depicted surface waters, he or she shall consult the County. Upon request, a Rockingham County representative who has successfully completed the Division of Water Quality's *Surface Water Identification Training Certification* course, its successor, or other equivalent training curriculum approved by the Division, shall make an on-site determination. The County may also accept the results of site assessments made by other parties who have successfully completed such training. Any disputes over on-site determinations shall be referred to the Director of the Division of Water Quality 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. 150B. Surface waters that appear on the maps shall not be subject to these buffer requirements if a site evaluation reveals any of the following cases:

1. Man-made ponds and lakes that are not part of a 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.)
2. Ephemeral streams.
3. The absence on the ground of a corresponding intermittent or perennial stream, lake, reservoir, or pond.
4. Ditches or other man-made water conveyances, other than modified natural streams.

C. Exemption when Existing Uses are Present and Ongoing

This Ordinance shall not apply to uses that are existing and ongoing; however, this Ordinance 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:

1. It was present within the riparian buffer as of the effective date of this Ordinance 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 structures or regular activity. Only the portion of the riparian buffer occupied by the footprint of the existing use is exempt from this Ordinance. 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 50 feet of the surface water where it did not previously exist as of the effective date of this Ordinance, and existing diffuse flow is maintained.

2. Projects or proposed development that are determined by the County to meet at least one of the following criteria:
 - a. Project requires a 401 Certification/404 Permit and these were issued prior to the effective date this Ordinance, and prior to the effective date of this Ordinance;
 - b. 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 had received all required state permits and certifications prior to the effective date of this Ordinance;
 - c. 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 and that have reached agreement with DENR on avoidance and minimization by the effective date of this Ordinance; or
 - d. 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 the written approval of the County prior to the effective date of this Ordinance.

D. Riparian Buffer Zone

The protected riparian buffer zone shall consist of a vegetated area that is undisturbed except for uses provided for in the *Table of Exempt Uses*, Appendix A of this Ordinance. For intermittent and perennial streams, the buffer shall begin at the top of the bank and extend landward a distance of 50 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, the buffer shall begin at the normal water level and extend landward a distance of 50 feet, measured horizontally on a line perpendicular to a vertical line marking the normal water level.

E. Diffuse Flow Requirements

Diffuse flow of runoff shall be maintained in the riparian buffer by dispersing concentrated flow prior to its entry into the buffer 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 riparian buffer;

2. Periodic corrective action to restore diffuse flow shall be taken as necessary and shall be designed to impede the formation of erosion gullies; and
3. No new stormwater conveyances are allowed through the riparian buffer except for those specified in the Table of Exempt Uses (See Section 8.(B) and Appendix A of this Ordinance).

Section 8. Potential Uses and Associated Requirements

A. Approval for New Development

Rockingham County shall issue an approval for new development only if the development application proposes to avoid impacts to riparian buffers defined in Section 7.(A) of this Ordinance, or where the application proposes to impact such buffers, it demonstrates that the applicant has done the following as applicable:

1. Determined the activity is exempt from the requirements of this Ordinance as listed in the Table of Exempt Uses in Appendix A; or
2. Receives a variance pursuant to Section 9.(B).

B. Table Exempt of Uses

The *Table of Exempt Uses*, found in Appendix A to this chapter, sets out potential new uses within the buffer, or outside the buffer with impacts on the buffer, that are categorized as exempt. All uses not categorized as exempt are considered prohibited and may not proceed within the riparian buffer or outside the buffer if the use would impact the buffer unless a variance is granted pursuant to Section 9 of this Ordinance.

C. Requirements for Exempt Uses

Uses designated in the *Table of Exempt Uses* are permissible without authorization by the County provided that they adhere to the limitations of the activity as defined in the *Table of Exempt Uses*. Additionally, 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.

Section 9. Variances

A. Riparian Buffer Zones

The riparian buffer shall consist of a vegetative area that is undisturbed except for uses provided for in the Table of Exempt Uses in Appendix A. For purposes of variances, the protected riparian buffer shall have two zones as follows:

1. The location of Zone One shall be as follows:
 - i. For intermittent and perennial streams, Zone One shall begin at the top of the bank and extend landward a distance of 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.
 - ii. 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 30 feet, measured horizontally on a line perpendicular to a vertical line marking the normal water level.
2. Zone Two shall begin at the outer edge of Zone One and extend landward 20 feet as measured horizontally on a line perpendicular to the surface water. The combined width of Zones One and Two shall be 50 feet on all sides of the surface water.

B. Variances

1. Requirements for Variances

Persons who wish to undertake prohibited uses that will impact any portion of the riparian buffer may pursue a variance. The County shall prepare preliminary findings and submit them to the Division of Water Quality, 401 Oversight Express Permitting Unit, or its successor for approval by the Environmental Management Commission. The variance request procedure shall be as follows:

- a. For any variance request, the County shall make a finding of fact as to whether there are practical difficulties or unnecessary hardships that prevent compliance with the riparian buffer protection requirements. A finding of practical difficulties or unnecessary hardships shall require that the following conditions are met:
 - i. 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, the County shall consider whether the variance is the minimum possible deviation from the terms of this Ordinance that shall make reasonable use of the property possible;
 - ii. The hardship results from application of this Ordinance to the property rather than from other factors such as deed restrictions or other hardship;
 - iii. 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 ordinance would not allow reasonable use of the property;
 - iv. The applicant did not cause the hardship by knowingly or unknowingly violating this Ordinance;
 - v. The applicant did not purchase the property after the effective date of this Ordinance, and then request a variance; and
 - vi. The hardship is rare or unique to the applicant's property.
- b. 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
- c. In granting the variance, the public safety and welfare have been assured, water quality has been protected, and substantial justice has been done.

2. Minor Variances

A minor variance request pertains to activities that will impact only Zone Two of the riparian buffer. Minor variance requests shall be reviewed and approved based on the criteria in Section 9 (B)(1) by the Rockingham County Board of Adjustment pursuant to G.S. 153A-Article 18. The Board may attach conditions to the variance approval that support the purpose, spirit and intent of the riparian buffer protection program. Request for appeals to decisions made by the Board shall be made in writing to the Director of the Division of Water Quality c/o the 401 Oversight Express Permitting Unit, or its successor. The Director's decision is subject to review as provided in G.S. 150B Articles 3 and 4.

3. 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 the riparian buffer. If Rockingham County has determined that a major variance request meets the requirements in Section 9.(B)(3), then it shall prepare a preliminary finding and submit it to the NC Environmental Management Commission c/o the Division of Water Quality, 401 Oversight Express Permitting Unit, or its successor, for approval. Within 90 days after receipt by Rockingham County, the Commission shall review preliminary findings on major variance requests and take one 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.

4. Variance Application

The applicant shall submit the following information in support of their variance request.

- a. The name, address and phone number of the applicant;
- b. The nature of the activity to be conducted by the applicant;
- c. The location of the activity, including the jurisdiction;
- d. 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 riparian buffers associated with the activity, and the extent of riparian buffers on the land;
- e. An explanation of why this plan for the activity cannot be practically accomplished, reduced or reconfigured to better minimize disturbance to the riparian buffer, preserve aquatic life and habitat and protect water quality; and
- f. Plans for any best management practices proposed to be used to control the impacts associated with the activity.
- g. Other information (i.e. information requested by Staff, unique physical nature of applicant's property, deed restrictions, etc)

C. Mitigation

1. This item shall apply to persons who wish to impact a riparian buffer in the Jordan watershed when a person has received a variance pursuant

to Section 9.(B) of this Ordinance and is required to perform mitigation as a condition of a variance approval.

2. Issuance of the Mitigation Approval

The County 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.

3. Options for Meeting the Mitigation Requirement

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

- a. Payment of a compensatory mitigation fee to the Riparian Buffer Restoration Fund pursuant to 15A NCAC 02B .0269 (Jordan Water Supply Nutrient Strategy: Riparian Buffer Mitigation Fees to the NC Ecosystem Enhancement Program) contingent upon acceptance of payments by the NC Ecosystem Enhancement Program, or to a private mitigation bank that complies with banking requirements of the US Army Corps of Engineers, currently set out at <http://www.saw.usace.army.mil/WETLANDS/Mitigation/mitbanks.html> or from the US Army Corps of Engineers, P.O. Box 1890, Wilmington, NC, 28402-1890, and the applicable trading criteria in Rule 15A NCAC 02B .0273;
- b. Restoration or enhancement of a non-forested riparian buffer pursuant to the requirements of Section 9.(C)(6) of this Ordinance.

4. The Area of Mitigation

The County shall determine the required area of mitigation, which shall apply to all mitigation options identified in Section 9.(C)(3) of this Ordinance and as further specified in the requirements for each option set out in this Section, according to the following:

- a. The impacts in square feet to each zone of the riparian buffer shall be determined by the County by adding the following:
 - i. The area of the footprint of the use causing the impact to the riparian buffer;
 - ii. The area of the boundary of any clearing and grading activities within the riparian buffer necessary to accommodate the use; and
 - iii. The area of any ongoing maintenance corridors within the riparian buffer associated with the use.
- b. The required area of mitigation shall be determined by applying the following multipliers to the impacts determined in Section 9(4)(a) of this Ordinance to each zone of the riparian buffer:
 - i. Impacts to Zone One of the riparian buffer shall be multiplied by three;
 - ii. Impacts to Zone Two of the riparian buffer shall be multiplied by one and one-half; and
 - iii. Impacts to wetlands within Zones One and Two of the riparian buffer that are subject to mitigation under 15A NCAC 2H .0506 shall comply with the mitigation ratios in 15A NCAC 2H .0506.

5. The Location of Mitigation

For any option chosen, 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 buffer impact and mitigation

6. Riparian Buffer Restoration or Enhancement

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

- a. The applicant may restore or enhance a non-forested riparian buffer if either of the following applies:
 - i. The area of riparian buffer restoration is equal to the required area of mitigation determined pursuant to Section 9.(C)(4) of this Ordinance; or
 - ii. The area of riparian buffer enhancement is three times larger than the required area of mitigation determined pursuant to Section 9.(C)(4) of this Ordinance;
- b. The location of the riparian buffer restoration or enhancement shall comply with the requirements in Section 9.(C)(5) of this Ordinance;
- c. The riparian buffer restoration or enhancement site shall have a minimum width of 50 feet as measured horizontally on a line perpendicular to the surface water;
- d. 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, that is greater than or equal to 100 trees per acre but less than 200 trees per acre, a buffer may be enhanced. Where existing woody vegetation is absent, that is less than 100 trees per acre, a buffer may be restored;
- e. If the applicant is required to perform mitigation as a condition of a variance approval, the applicant shall submit a restoration or enhancement plan for approval by the County. The restoration or enhancement plan shall contain the following:
 - i. A map of the proposed restoration or enhancement site;
 - ii. A vegetation plan. The vegetation plan shall include a minimum of at least two native hardwood tree species planted at a density sufficient to provide 320 trees per acre at maturity;
 - iii. A grading plan. The site shall be graded in a manner to ensure diffuse flow through the riparian buffer;
 - iv. A fertilization plan; and

- v. A schedule for implementation;
- f. Within one year after the restoration or enhancement plan has been approved, the applicant shall present proof to Rockingham County 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 and the Rockingham County riparian buffer protection program;
- g. The mitigation area shall be placed under a perpetual conservation easement that will provide for protection of the property's nutrient removal functions; and
- h. The applicant shall submit annual reports for a period of five 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-year period.

Section 10. Compliance and Enforcement

A. Site Inspections

1. Agents, officials, or other qualified persons authorized by Rockingham County may periodically inspect riparian buffers to ensure compliance with this ordinance.
2. Notice of the right to inspect shall be included in the letter of approval of each variance.
3. Authority to Enter Property and Conduct Investigations and Inspections
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 riparian buffer. No person shall willfully resist, delay, or obstruct an authorized representative, employee, or agent of Rockingham County, while that person inspects or attempts to inspect a riparian buffer nor shall any person obstruct, hamper or interfere with any such representative while in the process of carrying out their official duties. Rockingham County shall have the power to conduct such investigations as deemed reasonably necessary to carry out the duties as prescribed in this Ordinance.
4. Power to Require Statements
Rockingham County shall also have the power to require written statements, or the filing of reports under oath, with respect to pertinent questions relating to land-disturbing activities.

B. Compliance with Requirements

Any person engaged in new activities as defined by this Ordinance who fails to meet the requirements of this Ordinance shall be deemed in violation of this Ordinance.

- C. Appeals, Judicial Review, Notice of Violation, Penalties, and Remedies
Appeals, judicial review, penalties, and remedies for the Riparian Buffer Protection Ordinance will be handled in accordance with Chapter 2, Articles XIV, XV, and XVI of the Zoning Ordinance.

Section 11. Severability

If any one or more sections or portions thereof of this Ordinance are held to be invalid or unenforceable, all other sections and portions thereof shall nevertheless continue in full force and effect.

Section 12. Effective Date

This Ordinance will become effective upon approval by the NC Environmental Management Commission and adoption by the Rockingham County Board of Commissioners.

Section 13. Revisions to this Ordinance

Rockingham County shall review any revisions to the Riparian Buffer Protection Ordinance made by the Environmental Management Commission and, within 60 days of receipt of the recommended revisions, submit draft amendments to the Commission for its consideration and comments. Within 90 days after receipt of the Commissions' comments, Rockingham County will incorporate amendments into this ordinance.

Section 14. Definitions

For the purpose of this Ordinance, these terms shall be defined as follows:

- A. **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.
- B. **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.
- C. **County** means Rockingham County, North Carolina. Where this ordinance refers to any territory, land area or property within the "county", the term "county" shall include unincorporated areas within the jurisdiction of Rockingham County, North Carolina. Where appropriate, the term shall also include any personnel or agent of Rockingham County.
- D. **DBH** means diameter at breast height of a tree measured at 4.5 feet above ground surface level.
- E. **Development** means the same as defined in Rule 15A NCAC 2B .0202(23).
- F. **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.
- G. **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.

- H. **Existing development** means development, other than that associated with agricultural or forest management activities, that meets one 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 in built-upon area.
- I. **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.
- J. **Jordan nutrient strategy** or **Jordan water supply nutrient strategy** means the set of Rules 15A NCAC 2B .0262 through .0273 and .0311(p).
- K. **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 in Rule 15A NCAC 2B .0262(4).
- L. **Jordan watershed** means all lands and waters draining to B. Everett Jordan Reservoir.
- M. **New Development** means any development project that does not meet the definition of existing development set out in this Ordinance.
- N. **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.
- O. **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).

- P. **Perpendicular crossing** means any crossing that intersects the surface water at an angle between 75 degrees and 105 degrees.
- Q. **Stream** means a body of concentrated flowing water in a natural low area or natural channel on the land surface.
- R. **Surface waters** means all waters of the state as defined in G.S. 143-212 except underground waters
- S. **Tree** means a woody plant with a DBH equal to or exceeding five inches or a stump diameter exceeding six inches.
- T. **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.

APPENDIX A

Table of Exempt Uses

Use
Access trails: Pedestrian access trails, leading to the surface water, docks, fishing piers, boat ramps and other water dependent activities, are restricted to the minimum width practicable and do not exceed 4 feet in width of buffer disturbance, and provided that installation and use does not result in removal of trees as defined in this Ordinance and no impervious surface is added to the riparian buffer
Archaeological activities
Canoe Access provided that installation and use does not result in removal of trees as defined in this Ordinance and no impervious surface is added to the buffer.
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
Drainage ditches, roadside ditches and stormwater conveyances through riparian buffers: New stormwater flows to existing drainage ditches, roadside ditches, and stormwater conveyances provided 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.
Drainage of a pond in a natural drainage way provided that a new riparian buffer that meets the requirements of Items (7) and (8) of this Rule is established adjacent to the new channel
Driveway crossings of streams and other surface waters on single family residential lots subject to this Ordinance that disturb equal to or less than 25 linear feet or 2,500 square feet of riparian buffer
Fertilizer application: one-time application to establish vegetation
Historic preservation
Mining activities: Wastewater or mining dewatering wells with approved NPDES permit
Railroad crossings of streams and other surface waters subject to this Ordinance where impact is equal to or less than 40 linear feet of riparian buffer
Removal of previous fill or debris provided that diffuse flow is maintained and vegetation is restored
Road crossings of streams and other surface waters subject to this Ordinance where impact is equal to or less than 40 linear feet of riparian buffer
Scientific studies and stream gauging
Temporary roads with less than or equal to 2,500 square feet of buffer disturbance, provided that the disturbed area is restored to pre-construction topographic and hydrologic conditions immediate after construction is complete and replanted immediately with comparable vegetation except that tree planting may occur during the dormant season. A one time application of fertilizer may be used to establish vegetation. The applicant shall submit annual reports for a period of five years after the restoration showing that the trees planted have survived and that the diffused flow through the riparian buffer has been maintained. The applicant shall replace trees that do not survive and restore diffuse flow if needed during the five-year period.

<p>Use</p>
<p>Temporary 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, provided that the disturbed area is restored to pre-construction 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. A one-time application of fertilizer may be used to establish vegetation.</p>
<p>Utility, electric, aerial, perpendicular crossing of streams and other surface waters subject to this ordinance that disturb equal to or less than 150 feet of linear feet of riparian buffer</p> <p>Provided that all of the following BMPs for overhead utility lines are used. A minimum zone of 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.</p> <ul style="list-style-type: none"> • 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 where trees are cut. • Riprap shall not be used unless it is necessary to stabilize a tower. • No fertilizer shall be used other than a one-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. • Poles or aerial infrastructure shall not be installed within 10 feet of a water body.
<p>Utility, electric, underground, perpendicular crossings that disturb less than or equal to 40 linear feet of riparian buffer:</p> <p>Provided that all of the following BMPs for underground utility lines are used. Woody vegetation shall be cleared by hand. No land grubbing or grading is allowed.</p> <ul style="list-style-type: none"> • 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-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. • Measures shall be taken upon completion of construction and during routine maintenance to ensure diffuse flow of stormwater through the buffer. • In wetlands, mats shall be utilized to minimize soil disturbance. • Poles or aerial infrastructure shall not be installed within 10 feet of a water body.

Use
<p>Utility, electric, underground, other than perpendicular crossings: Provided that:</p> <ul style="list-style-type: none"> • No heavy equipment is used. • Vegetation in undisturbed portions of the buffer is not compromised. • Felled trees are removed by chain. • No permanent felling of trees occurs in protected buffers or streams. • Stumps are removed only by grinding. • At the completion of the project the disturbed area is stabilized with native vegetation. • The requirements of Sections 7.(D) and 7.(E) can be met. <p>And provided that all of the following BMPs for underground utility lines are used. Woody vegetation shall be cleared by hand. No land grubbing or grading is allowed.</p> <ul style="list-style-type: none"> • 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-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. • Measures shall be taken upon completion of construction and during routine maintenance to ensure diffuse flow of stormwater through the buffer. • In wetlands, mats shall be utilized to minimize soil disturbance.
<p>Utility, non-electric, perpendicular crossings of streams and other surface waters subject to this Ordinance that disturb equal to or less than 40 linear feet of riparian buffer with a maintenance corridor equal to or less than 10 feet in width: Provided that, all of the following BMPs for underground utility lines are used. Woody vegetation shall be cleared by hand. No land grubbing or grading is allowed.</p> <ul style="list-style-type: none"> • 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-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. • Measures shall be taken upon completion of construction and during routine maintenance to ensure diffuse flow of stormwater through the buffer. • In wetlands, mats shall be utilized to minimize soil disturbance. • Poles or aerial infrastructure shall not be installed within 10 feet of a water body.

Use
<p>Vegetation management:</p> <ul style="list-style-type: none"> • Emergency fire control measures provided that topography is restored • Planting vegetation to enhance the riparian buffer • Pruning forest vegetation provided that the health and function of the forest vegetation is not compromised • Removal of individual trees that are in danger of causing damage to dwellings, other structures or human life, or are imminently endangering stability of the streambank. • Removal of individual trees which are dead, diseased or damaged. • Removal of poison ivy • Removal of invasive exotic vegetation as defined in: <i>Smith, Cherri L. 1998. Exotic Plant Guidelines. Dept. of Environment and Natural Resources. Division of Parks and Recreation. Raleigh, NC. Guideline #30</i>
<p>Wetland, stream and buffer restoration that results in impacts to the riparian buffers:</p> <ul style="list-style-type: none"> • Wetland, stream and buffer restoration that requires NC Division of Water Quality approval for the use of a 401 Water Quality Certification