Riparian Buffer Protection Ordinance

City of Graham, North Carolina

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Section 1. Authority
This Ordinance is adopted pursuant to the authority vested in the City of Graham 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, N.C. Gen. Stat §160A-174, 160A-193, Chapter 160A, Article 19, and any special legislation enacted by the General Assembly for the City of Graham.

Section 2. Purpose and Intent
The purposes of the City of Graham in adopting the following Ordinance is to protect and preserve existing riparian buffers throughout the Jordan Watershed as generally described in Rule 15A NCAC 02B .0262 (Jordan Water Supply Nutrient Strategy: Purpose and Scope), in order to maintain their nutrient removal and stream protection functions. Additionally this Ordinance will help protect the water supply uses of Jordan Reservoir and of designated water supplies throughout the Jordan watershed.

Buffers adjacent to streams provide multiple environmental protection and resource management benefits. Forested buffers enhance and protect the natural ecology of stream systems, as well as water quality through bank stabilization, shading, and nutrient removal. They also help to minimize flood damage in flood prone areas. Well-vegetated streamside riparian areas help to remove nitrogen and prevent sediment and sediment-bound pollutants such as phosphorous from reaching the streams.

Section 3. Title
This Ordinance shall be known as the *City of Graham Riparian Buffer Protection Ordinance*.

Section 4. Jurisdiction
This Ordinance shall be applied to all land in the planning jurisdiction of the City of Graham.

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
The requirements of this Ordinance shall supersede all locally implemented buffer requirements stated in Rules 15A NCAC 02B .0214 through .0216 as applied to WS-II, WS-III, and WS-IV waters in the Jordan watershed. 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: a surface water is defined as being present if the feature is approximately shown on any of the following:
   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, the City of Graham shall make an on-site determination. A City of Graham 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 establish that 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 or from the NC Division of Water Quality - 401 Oversight Express Permitting Unit, or its successor. The City of Graham 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 City of Graham. Upon request, a City of Graham 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 City of Graham 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. Grading and revegetating Zone Two is allowed provided that the health of the vegetation in Zone One is not compromised, the ground is stabilized and existing diffuse flow is maintained.

2. Projects or proposed development that are determined by the City of Graham 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 City of Graham prior to the effective date of this Ordinance.
   e. Projects that have a vested right per North Carolina General Statutes § 160A-385.1.

D. Zones of the Riparian Buffer

The protected riparian buffer shall have two zones as follows:

1. Zone One shall consist of a vegetated area that is undisturbed except for uses provided for in the Table of Uses, Section 8.(B) of this Ordinance. The location of Zone One shall be as follows:
   a. 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.
   b. 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 consist of a stable, vegetated area that is undisturbed except for uses provided for in the Table of Uses, Section 8.(B) of this Ordinance. 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 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.

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 Zone Two of 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. As set out in Sections 7.(D) and 8.(B) of this Ordinance, The Zones of the Riparian Buffer and Table of Uses respectively, no new stormwater conveyances are allowed through the buffers except for those specified in the Table of Uses, Section 8.(B) of this Ordinance, addressing stormwater management ponds, drainage ditches, roadside ditches, and stormwater conveyances.

Section 8. Potential Uses and Associated Requirements

A. Approval for New Development

City of Graham 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 requirements of this Ordinance;

2. Received an Authorization Certificate from the City of Graham pursuant to Section 9.A of this Ordinance;
3. For uses designated as Allowable with Mitigation in the Table of Uses in Section 8.(B), received approval of mitigation plan pursuant to Section 9.(C) of this Ordinance; and
4. Received a variance pursuant to Section 9.(B).

B. Table of Uses

The following chart sets out potential new uses within the buffer, or outside the buffer with impacts on the buffer, and categorizes them as exempt, allowable, or allowable with mitigation. All uses not categorized as exempt, allowable, or allowable with mitigation 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.(C) of this Ordinance, Variances. The requirements for each category are given in Section 8.(C) of this Section following the Table of Uses.

Use	Exempt *	Allowable *	Allowable with Mitigation*
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 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 • Pedestrian access trails that exceed 4 feet in width of buffer disturbance, the installation or use results in removal of trees as defined in this Ordinance or impervious surface is added to the riparian buffer	X	X	
Airport facilities: • Airport facilities that impact equal to or less than 150 linear feet or one-third of an acre of riparian buffer • Airport facilities that impact greater than 150 linear feet or one-third of an acre of riparian buffer • Activities necessary to comply with FAA requirements (e.g. radar uses or landing strips)[1]		X X	X
Archaeological activities	X		
Bridges		X	
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.	X		

* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 8.(C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
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 not covered under the U.S. Army Corps of Engineers Nationwide Permit No.3		X	

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Use	Exempt *	Allowable *	Allowable with Mitigation*
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.	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 nutrients and attenuate flow before the conveyance discharges through the riparian buffer		X	
• New drainage ditches, roadside ditches and stormwater conveyances applicable to linear projects that do not provide a stormwater management facility due to topography constraints provided that other practicable BMPs are employed.			X

* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 8.(C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Driveway crossings of streams and other surface waters subject to this Ordinance:			
• Driveway crossings on single family residential lots that disturb equal to or less than 25 linear feet or 2,500 square feet of riparian buffer	X		
• Driveway crossings on single family residential lots that disturb greater than 25 linear feet or 2,500 square feet of riparian buffer		X	
• In a subdivision that cumulatively disturb equal to or less than 150 linear feet or one-third of an acre of riparian buffer		X	
• In a subdivision that cumulatively disturb greater than 150 linear feet or one-third of an acre of riparian buffer			X
Driveway impacts other than crossing of a stream or other surface waters subject to this Ordinance			X
Fences:			
• Fences provided that disturbance is minimized and installation does not result in removal of trees as defined in this Ordinance	X		
• Fences provided that disturbance is minimized and installation results in removal of trees as defined in this Ordinance		X	
Fertilizer application: one-time application to establish vegetation	X		
Grading and revegetation in Zone Two provided that diffuse flow and the health of existing vegetation in Zone One is not compromised and disturbed areas are stabilized until they are revegetated.	X		

* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 8.(C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
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		
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 riparian buffers that meet the requirements of Sections 7.(D) and 7.(E) of this Ordinance are established adjacent to the relocated channels • Mining activities that are not covered by the Mining Act OR where new riparian buffers that meet the requirements of Sections 7.(D) and 7.(E) of this Ordinance are not established adjacent to the relocated channels • Wastewater or mining dewatering wells with approved NPDES permit	X	X	X
Playground equipment: • Playground equipment on single family lots provided that installation and use does not result in removal of vegetation • Playground equipment installed on lands other than single-family lots or that requires removal of vegetation	X	X	

* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 8.(C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Ponds created by impounding streams and not used as stormwater BMPs: • New ponds provided that a riparian buffer that meets the requirements of Sections 7.(D) and 7.(E) of this Ordinance is established adjacent to the pond • New ponds where a riparian buffer that meets the requirements of Sections 7.(D) and 7.(E) of this Ordinance is NOT established adjacent to the pond		X	X
Protection of existing structures, facilities and stream banks when this requires additional disturbance of the riparian buffer 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 40 linear feet of riparian buffer • Railroad crossings that impact greater than 40 linear feet but equal to or less than 150 linear feet or one-third of an acre of riparian buffer • Railroad crossings that impact greater than 150 linear feet or one-third of an acre of riparian buffer	X	X	X

* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 8.(C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Recreational and accessory structures in Zone Two:			
• Sheds and gazebos in Zone Two, provided they are not prohibited under local water supply ordinance:			
○ Total footprint less than or equal to 150 square feet per lot.		X	
○ Total footprint greater than 150 square feet per lot.			X
• Wooden slatted decks and associated steps, provided the use meets the requirements of Sections 7.(D) and 7.(E) of this Ordinance:			
○ Deck at least eight feet in height and no vegetation removed from Zone One.		X	
○ Deck less than eight feet in height or vegetation removed from Zone One.			X
Removal of previous fill or debris provided that diffuse flow is maintained and vegetation 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 40 linear feet of riparian buffer	X		
• Road crossings that impact greater than 40 linear feet but equal to or less than 150 linear feet or one-third of an acre of riparian buffer		X	
• Road crossings that impact greater than 150 linear feet or one-third of an acre of riparian buffer			X

- To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 8.(C) of this Ordinance

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Use	Exempt *	Allowable *	Allowable with Mitigation*
Road relocation: Relocation of existing private access roads associated with public road projects where necessary for public safety: • Less than or equal to 2,500 square feet of buffer impact • Greater than 2,500 square feet of buffer impact		X	X
Stormwater BMPs: • Wet detention, bioretention, and constructed wetlands in Zone Two if diffuse flow of discharge is provided into Zone One • Wet detention, bioretention, and constructed wetlands in Zone One		X	X
Scientific studies and stream gauging	X		
Streambank or shoreline stabilization		X	
Temporary roads, 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: At the end of five years the restored buffer shall comply with the restoration criteria in Section 9.(C)(7) of this Ordinance: • Less than or equal to 2,500 square feet of buffer disturbance • Greater than 2,500 square feet of buffer disturbance • Associated with culvert installation or bridge construction or replacement.	X	X X	

* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 8.(C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Temporary sediment and erosion control devices, 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. At the end of five years the restored buffer shall comply with the restoration criteria in Section 9.(C)(7) of this Ordinance:			
• In Zone Two provided ground cover is established within timeframes required by the Sedimentation and Erosion Control Act, vegetation in Zone One is not compromised, and runoff is released as diffuse flow in accordance with Section 7.(E) of this Ordinance.	X		
• In Zones one and two to control impacts associated with uses approved by the City of Graham or that have received a variance, provided that sediment and erosion control for upland areas is addressed, to the maximum extent practical, outside the buffer.		X	
• 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	
Utility, electric, aerial, perpendicular crossings of streams and other surface waters subject to this Ordinance[2,3,5]:			
• Disturb equal to or less than 150 linear feet of riparian buffer	X		
• Disturb greater than 150 linear feet of riparian buffer		X	

* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 8.(C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Utility, electric, aerial, other than perpendicular crossings[5]:			
• Impacts in Zone Two		X	
• Impacts in Zone One[2,3]			X
Utility, electric, underground, perpendicular crossings[3,4,5]:			
• Disturb less than or equal to 40 linear feet of riparian buffer	X		
• Disturb greater than 40 linear feet of riparian buffer		X	
Utility, electric, underground, other than perpendicular crossings[4]:			
• Impacts in Zone Two	X		
• Impacts in Zone One[1]	X		
Utility, non-electric, perpendicular crossings of streams and other surface waters subject to this Ordinance[3,5]:			
• 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	X		
• Disturb equal to or less than 40 linear feet of riparian buffer with a maintenance corridor greater than 10 feet in width		X	
• Disturb greater than 40 linear feet but equal to or less than 150 linear feet of riparian buffer with a maintenance corridor equal to or less than 10 feet in width		X	
• Disturb greater than 40 linear feet but equal to or less than 150 linear feet of riparian buffer with a maintenance corridor greater than 10 feet in width			X
• Disturb greater than 150 linear feet of riparian buffer			X

* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 8.(C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Utility, non-electric, other than perpendicular crossings[4.5]:			
• Impacts in Zone Two		X	
• Impacts in Zone One[1]			X
Vegetation management:			
• Emergency fire control measures provided that topography is restored	X		
• Mowing or harvesting of plant products in Zone Two	X		
• Planting vegetation to enhance the riparian buffer	X		
• Pruning forest vegetation provided that the health and function of the forest vegetation is not compromised	X		
• 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.	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. Dept. of Environment and Natural Resources. Division of Parks and Recreation. Raleigh, NC. Guideline #30*	X		
• 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 feet.		X	
• Water dependent structures as defined in 15A NCAC 02B .0202 where installation and use result in disturbance to riparian buffers.		X	

* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 8.(C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Water supply reservoirs: • New reservoirs where a riparian buffer that meets the requirements of Sections 7.(D) and 7.(E) of this Ordinance is established adjacent to the reservoir • New reservoirs where a riparian buffer that meets the requirements of Sections 7.(D) and 7.(E) of this Ordinance is not established adjacent to the reservoir		X X	
Water wells • Single family residential water wells • All other water wells	X	X	
Wetland, stream and buffer restoration that results in impacts to the riparian buffers: • Wetland, stream and buffer restoration that requires NC Division of Water Quality approval for the use of a 401 Water Quality Certification • Wetland, stream and buffer restoration that does not require Division of Water Quality approval for the use of a 401 Water Quality Certification	X	X	
Wildlife passage structures		X	

[1]Provided that:

- No heavy equipment is used in Zone One.
- 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.
- Zones one and two meet the requirements of Sections 7.(D) and 7.(E)

[2]Provided that, in Zone One, all of the following BMPs for overhead utility lines are used. If all of these BMPs are not used, then the overhead utility lines shall require a no practical alternative evaluation by the City of Graham, as defined in Section 9.(A).

- 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.
- 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.

[3]Provided that poles or aerial infrastructure shall not be installed within 10 feet of a water body unless the City of Graham completes a no practical alternative evaluation as defined in Section 9.(A).

[4]Provided that, in Zone One, all of the following BMPs for underground utility lines are used. If all of these BMPs are not used, then the underground utility line shall require a no practical alternative evaluation by the City of Graham, as defined in Section 9.(A).

- 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-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.

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

C. Requirements for Categories of Uses

Uses designated in Section 8.(B) of this Section as exempt, allowable, and allowable with mitigation within a riparian buffer shall have the following requirements:

1. Exempt.
   Uses designated as exempt are permissible without authorization by the City of Graham provided that they adhere to the limitations of the activity as defined in Section 8.(B) of this Section, the Table of Uses. In addition, 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 provided that there are no practical alternatives to the requested use pursuant to Section 9.(A) of this Section. This includes construction, monitoring, and maintenance activities. These uses require written authorization from the City of Graham.
3. Allowable with Mitigation.
   Uses designated as allowable with mitigation may proceed provided that there are no practical alternatives to the requested use pursuant to Section 9.(A) of this Section and an appropriate mitigation strategy has

been approved pursuant to Section 9.(C). These uses require written authorization from the City of Graham.

Section 9. Permits Procedures, Requirements, and Approvals

A. Determination of No Practical Alternatives / Request for Authorization Certificate

1. Persons who wish to undertake uses designated as allowable or allowable with mitigation shall submit a request for a "no practical alternatives" determination to the City of Graham. The applicant shall certify that the project meets all the following criteria for finding "no practical alternatives":
   a. 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;
   b. 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
   c. Best management practices shall be used if necessary to minimize disturbance, preserve aquatic life and habitat, and protect water quality.
2. The applicant shall also submit at least the following information in support of their assertion of "no practical alternatives":
   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.
3. Within 60 days of a submission that addresses Section 9.(A)(2) , the City of Graham shall review the entire project and make a finding of fact as to whether the criteria in Section 9.(A)(1) of this Section have been met. A finding of "no practical alternatives" shall result in issuance of an Authorization Certificate. Failure to act within 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:
   a. The applicant agrees, in writing, to a longer period;
   b. The City of Graham determines that the applicant has failed to furnish requested information necessary to the City of Graham decision;
   c. The final decision is to be made pursuant to a public hearing; or

d. The applicant refuses access to its records or premises for the purpose of gathering information necessary to the City of Graham's decision.

4. The City of Graham may attach conditions to the Authorization Certificate that support the purpose, spirit and intent of this Ordinance.
5. Any appeals of determinations regarding Authorization Certificates shall be referred 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.

B. Variances

1. Requirements for Variances.
   Persons who wish to undertake prohibited uses may pursue a variance. The City of Graham Board of Adjustments may grant minor variances. For major variances, the City of Graham 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 City of Graham Board of Adjustments 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 City of Graham Board of Adjustments 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.(A)(1) through Section 9.(A)(3) by the City of Graham pursuant to G.S. 153A-Article 18, or G.S. 160A-Article 19. The City of Graham 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 City of Graham 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 the City of Graham has determined that a major variance request meets the requirements in Section 9.(B)(1)) through 8.(C)(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 the City of Graham, 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.

C. Mitigation
1. This item shall apply to persons who wish to impact a riparian buffer in the Jordan watershed when one of the following applies:
d. A person has received an Authorization Certificate pursuant to Section 9.(A) of this Ordinance for a proposed use that is designated as "allowable with mitigation;" or
e. 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 City of Graham 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. Donation of real property or of an interest in real property pursuant to Section 9.(C)(6) of this Ordinance; or
c. Restoration or enhancement of a non-forested riparian buffer pursuant to the requirements of Section 9.(C)(7) of this Ordinance.

4. The Area of Mitigation
The City of Graham 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 City of Graham 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. Additional location requirements for the property donation option are enumerated in Section 9.(C)(6)(c)(i) of this Ordinance.

6. 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:
   a. The donation of real property interests may be used to either partially or fully satisfy the payment of a compensatory mitigation fee to the Riparian Buffer Restoration Fund pursuant to 15A NCAC 02B .0269. The value of the property interest shall be determined by an appraisal performed in accordance with Section 9.(C)(6)(d)(iv) of this Ordinance. 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 .0269, the applicant shall pay the remaining balance due.
   b. The donation of conservation easements to satisfy compensatory mitigation requirements shall be accepted only if the conservation easement is granted in perpetuity.
   c. Donation of real property interests to satisfy the mitigation determination shall be accepted only if such property meets all of the following requirements:
      i. In addition to the location requirements of Section 9.(C)(5) of this Ordinance, 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 Quality pursuant to G.S. 143-214.10;
      ii. 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 9.(7)(d) of this Ordinance;
      iii. The restorable riparian buffer on the property shall have a minimum length of 1000 linear feet along a surface water and a minimum width of 50 feet as measured horizontally on a line perpendicular to the surface water;
      iv. 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 9.(C)(4) of this Ordinance;

v. Restoration shall not require removal of man-made structures or infrastructure;

vi. The property shall be suitable to be successfully restored, based on existing hydrology, soils, and vegetation;

vii. The estimated cost of restoring and maintaining the property shall not exceed the value of the property minus site identification and transaction costs;

viii. 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;

ix. The property shall not contain any hazardous substance or solid waste;

x. 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;

xi. 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

xii. The property shall not have any encumbrances or conditions on the transfer of the property interests.

d. At the expense of the applicant or donor, the following information shall be submitted to the City of Graham with any proposal for donations or dedications of interest in real property:

i. Documentation that the property meets the requirements laid out in Section 9.(C)(6)(c) of this Ordinance;

ii. US Geological Survey 1:24,000 (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;

iii. 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;

iv. 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

v. A title certificate.

7. 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. The applicant shall first receive an Authorization Certificate for the proposed use according to the requirements of Section 9.(A) of this Ordinance. After receiving this determination, the applicant shall submit a restoration or enhancement plan for approval by the City of Graham. 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 City of Graham has approved the restoration or enhancement plan, the applicant shall present proof

to the City of Graham 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 City of Graham 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 the City of Graham 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 and buffer authorization.
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 the City of Graham, while that person is inspecting or attempting 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. The City of Graham shall have the power to conduct such investigations as deemed reasonably necessary to carry out the duties as prescribed in this Ordinance.
4. Notice of Violation

   a. If it is determined that a person has failed to comply with the requirements of this Ordinance, or rules, or orders adopted or issued pursuant to this Ordinance, a notice of violation shall be served upon that person. The notice may be served by any means authorized under G.S. 1A-1, rule 4. In the event service cannot be accomplished by registered or certified mail, it may be accomplished in any manner provided in rule (4)j of the North Carolina Rules of Civil Procedure.

   b. The notice shall specify the violation and inform the person of the actions that need to be taken to comply with this Ordinance, or rules or orders adopted pursuant to this Ordinance. The notice shall direct the person to correct the violation within a specified

reasonable time. The notice shall inform the person that any person who violates or fails to act in accordance with any of the provisions of this Ordinance or rules or orders adopted or issued pursuant to this Ordinance is subject to the civil and criminal penalties and other enforcement actions as provided in this Ordinance.

5. Power to Require Statements
   The City of Graham 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. Civil Penalties

1. Assessment of Penalties
   Any person who violates or fails to act in accordance with any of the provisions of this Ordinance or rules or orders adopted or issued pursuant to this Ordinance shall be subject to a civil penalty. A civil penalty for a violation may be assessed in an amount not to exceed ten thousand dollars ($10,000) per day. If any violation for which a penalty may be assessed is continuous, a civil penalty may be assessed for each day of the violation in an amount not to exceed twenty-five thousand dollars ($25,000) per day for as long as the violation occurs. Each day of a continuing violation shall constitute a separate violation under Section 10.(B)(1).
2. Notice of Civil Penalty Assessment
   The governing body of the City of Graham shall provide written notice of the civil penalty amount and the basis for the assessment to the person assessed. The notice of civil penalty assessment shall be served by any means authorized under G.S. 1A-1, Rule 4, and shall direct the violator to either pay the assessment or contest the assessment, within thirty (30) days after receipt of the notice of assessment by written demand for a hearing.
3. Hearing
   A hearing on the civil penalty shall be conducted by the City of Graham City Council within 30 days after the date the written demand for the hearing is received by the City of Graham City Council. The conducting the hearing shall make its recommendation to the governing body of the City of Graham within 30 days after the date of the hearing.
4. Final Decision.
   The governing body shall issue a final decision on the civil penalty within 30 days of the recommended decision. A copy of the final decision shall be served on the violator by any means authorized under G.S. 1A-1, Rule 4.
5. Appeal of Final Decision.
   Appeal form the final decision of the governing body shall be to the Superior Court of the county in which the violation occurred. Any appeal must be filed with thirty days of receipt of the final decision. A

copy of the appeal must be served on the (City manager/other appropriate person) by any means authorized under G.S. 1A-1, Rule 4.

6. Demand for Payment of Penalty
   An assessment that is not contested is due when the violator is served with a notice of assessment. The civil penalty must be paid within 30 days or the assessment, if not appealed, or within 30 days after the conclusion of the administrative or judicial review of the assessment. If payment is not received within 30 days after demand for payment is made, the City of Graham may institute a civil action to recover the amount of the assessment. The civil action may be brought in the Superior Court where the violation occurred, or the violator's residence or principal place of business is located. Such civil actions must be filed within three (3) years of the date the assessment was due.
7. Use of Penalties
   [Civil penalties collected pursuant to this Ordinance shall be credited to the general fund of the City of Graham as nontax revenue.]

C. Criminal Penalties
   1. A violation of the provisions of this Ordinance or a rule or order adopted pursuant to this ordinance shall be punished as provided for in the North Carolina General Statutes for the violation of local ordinances. See. E.g., Section 14-4 of the North Carolina General Statutes. Violation may also be punishable under the provisions of Section 143-215.6B of the North Carolina General Statutes.

D. Injunctive Relief
   1. Civil Action in Superior Court
      Whenever the governing body of the City of Graham has reasonable cause to believe that any person is violating or threatening to violate this Ordinance or any rule or order adopted or issued pursuant to this Ordinance, it may, either before or after the institution of any other action or proceeding authorized by this Ordinance, institute a civil action in the name of the City of Graham for injunctive relief to restrain the violation or threatened violation. The action shall be brought in the Superior Court of Alamance County.
   2. Order to Cease Violation
      Upon determination by a court that an alleged violation is occurring or is threatened, the court shall enter any order or judgment that is necessary to abate the violation, to ensure that restoration is performed, or to prevent the threatened violation. The institution of an action for injunctive relief under this section shall not relieve any party to the proceedings from any civil or criminal penalty prescribed for violations of this Ordinance.

E. 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.

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 City of Graham City Council.

Section 13. Revisions to this Ordinance
The City of Graham 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, the City of Graham 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. 'Airport Facilities' means all properties, facilities, buildings, structures, and activities that satisfy or otherwise fall within the scope of one 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); 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 or maintenance of an airport or restricted landing area; easements through, or interests in, air space over land or water, interests in airport hazards outside the 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 governmental entity such as an airport authority, in which case they are included in the definition of 'airport facilities'.

C. '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.

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

J. ‘High Value Tree’ means a tree that meets or exceeds the following standards: for pine species, 14-inch DBH or greater or 18-inch or greater stump diameter; or for hardwoods and wetland species, 16-inch DBH or greater or 24-inch or greater stump diameter.

K. ‘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.

L. ‘Jordan nutrient strategy’ or ‘Jordan water supply nutrient strategy’ means the set of Rules 15A NCAC 2B .0262 through .0273 and .0311(p).

M. ‘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).

N. ‘Jordan watershed’ means all lands and waters draining to B. Everett Jordan Reservoir.

O. New Development’ means any development project that does not meet the definition of existing development set out in this Ordinance.

P. ‘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.

Q. “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).

R. ‘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 primarily of “hard” engineering, such as concrete lined channels, riprap, or gabions, while providing bank stabilization, shall not be considered stream restoration.

S. ‘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. ‘Referenced’ or ‘referenced 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.

T. Stream" means a body of concentrated flowing water in a natural low area or natural channel on the land surface.
U. 'Stump diameter' means the diameter of a tree measured at six inches above the ground surface level.
V. "Surface waters" means all waters of the state as defined in G.S. 143-212 except underground waters
W. "Tree" means a woody plant with a DBH equal to or exceeding five inches or a stump diameter exceeding six inches.
X. '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.