

## 6.1 PURPOSE AND INTENT

The general intent of this section is to provide standards for development to help ensure the safe and convenient development of land on sites and in locations adequate for the uses proposed. No Zoning Compliance Permit or Certificate of Occupancy shall be issued for uses of land, structures and/or buildings, or for a change in the use, unless the requirements of this Chapter are met. The standards set forth in this section are to be used in conjunction with the other sections of this Ordinance in the development of projects and submittal of site plans.

For the purpose of Section 6.20.16 Riparian Buffers, “development” includes any impact or use within the riparian buffer or outside the riparian buffer with hydrological impacts on the riparian buffer.

## 6.20 STORMWATER MANAGEMENT

### 6.20.16 RIPARIAN BUFFERS

#### 6.20.16.1 Purpose and Intent

In order to minimize sedimentation and pollution of surface waters within the planning jurisdiction, riparian buffers shall be provided along all surface waters identified in *Section 6.20.16.3, Applicability*. Undisturbed natural areas along surface waters act as a filter for sedimentation control and as a stabilizing agent for the banks of surface waters. In addition, these areas filter storm water run-off which may carry significant amounts of bacteria, excess nutrients and heavy metals into surface waters. The buffer areas, along with controls on impervious surfaces, provide a good measure of water quality protection for the Eno River.

The Neuse River Basin Nutrient Sensitive Waters Management Strategy riparian buffer protection rules (Neuse Rules) of 15A NCAC 02B .0714, apply to all lands within the Town of Hillsborough’s planning jurisdiction. For the purpose of Section 6.20.16 Riparian Buffers, “development” includes any impact or use within the riparian buffer or outside the riparian buffer with hydrological impacts on the riparian buffer. Wherever standards of the Neuse Rules and the standards listed in this ordinance differ, the more restrictive provisions shall apply.

#### 6.20.16.2 Delegated Authority

The ~~North Carolina Environmental Management Commission~~ North Carolina Division of Water Resources (NCDWR) has jurisdiction to the exclusion of the Planning Director or designee to implement the requirements of the State’s program for the following types of activities:

**6.20.16.2.a** Activities undertaken by the State.

**6.20.16.2.b** Activities undertaken by the United States.

**6.20.16.2.c** Activities undertaken by multiple jurisdictions.

**6.20.16.2.d** Activities undertaken by local units of government; and

**6.20.16.2.e** Forestry Operations

### 6.20.16.3 Applicability

A riparian buffer shall be established directly adjacent to surface waters (i.e. intermittent streams, perennial streams, lakes and ponds) identified by any of the following means:

**6.20.16.3.a** Surface water shown as solid blue or purple lines or as broken blue or purple lines on the most recent version of USGS Quadrangle maps.

**6.20.16.3.b** Surface water shown in the ~~most recent~~ published version of the Orange County Soil Survey; or

**6.20.16.3.c** A surface water identified in a field determination made by Hillsborough staff trained in surface water identification through the North Carolina ~~Department of Environmental Quality (NCDEQ)~~ Division of Water Resources (NCDWR). ~~Disputes pertaining to water feature decisions by staff shall be filed directly to the Director of NCDEQ. If a party disputes the presence of a subject feature, then a request should be made to Hillsborough staff to conduct a field evaluation.~~

### 6.20.16.4 Exemption Based upon an On-site Determination

When a landowner or other affected party including ~~NCDEQ-NCDWR~~ believes that the maps inaccurately depict surface waters, they may request an On-site determination conducted by Hillsborough staff who has successfully completed the ~~NCDEQ's~~ NCDWR's Surface Water Identification Training Certification course, its successor, or other equivalent training curriculum approved by ~~NCDEQ NCDWR~~. Any disputes over on-site determinations shall be referred to the Director of ~~NCDEQ-NCDWR~~ in writing. A determination of the Director of ~~NCDEQ-NCDWR~~ 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 *Section 6.20.16, Riparian Buffers* ~~is-if~~ a site evaluation reveals any of the following cases:

**6.20.16.4.a** Man-made ponds and lakes that are not part of a natural drainage way that is classified in accordance with 15A NCAC 02B .0101, 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.

**6.20.16.4.b** Ephemeral streams.

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

**6.20.16.4.d** Ditches or other man-made water conveyances, other than modified natural streams.

### 6.20.16.5 Exemption when Existing Uses are Present and Ongoing

*Section 6.20.16, Riparian Buffers* does not apply to portions of the riparian buffer where a use is considered existing and ongoing according in accordance with 15A NCAC 02B .0714 (6) (a). A use is considered existing if it was present within the riparian buffer as of July 22, 1997. Existing uses shall include, but not be limited to, agriculture, buildings, industrial facilities, commercial areas, transportation facilities, maintained lawns, utility lines and on-site

sanitary sewage systems. Only the portion of the riparian buffer that contains the footprint of the existing use is exempt from *Section 6.20.16, Riparian Buffers*.

#### **6.20.16.6 Calculations for Width of Riparian Buffers**

A buffer of fifty (50) feet in width as defined in *Section 6.20.16.7* is required on all sides of the surface water as identified in *Section 6.20.16.3, Applicability*. For streams within the PW and PWCA zoning districts (see *Section 4.5, Other Zoning Districts*), the width of the stream is calculated as outlined in *Section 4.5.3.8.d, Calculating Width of Riparian Buffer*.

#### **6.20.16.7 Zones of the Riparian Buffer**

**6.20.16.7.a** Zone 1 shall consist of a vegetated area that is undisturbed except for uses provided for in sections 6.20.16.8, ~~*Permitted Uses within Riparian Buffers*~~ and 6.20.16.11, *Stormwater Runoff Through the Riparian Buffer*. The location of Zone 1 shall be as follows:

- (i) For intermittent and perennial streams, Zone 1 shall begin at the most landward limit of the top of bank or the rooted herbaceous vegetation and extend landward a distance of 30 feet on all sides of the stream, measured horizontally on a line perpendicular to the stream (where an intermittent or perennial stream begins or ends, including when it goes underground, enters or exits a culvert, or enters or exits a wetland, the required distance shall be measured as a radius around the beginning or the end).
- (ii) For ponds, lakes and reservoirs, Zone 1 shall begin at the normal water level and extend landward a distance of 30 feet, measured horizontally on a line perpendicular to the surface water.

**6.20.16.7.b** Zone 2 shall consist of a stable, vegetated area that is undisturbed except for activities and uses provided for in sections 6.20.16.8, ~~*Permitted Uses within Riparian Buffers*~~ and 6.20.16.11, *Stormwater Runoff Through the Riparian Buffer*. Grading and revegetating Zone 2 is allowed provided that the health of the vegetation in Zone 1 is not compromised. Zone 2 shall begin at the outer edge of Zone 1 and extend landward 20 feet as measured horizontally on a line perpendicular to the surface water. The combined width of Zones 1 and 2 shall be 50 feet on all sides of the surface water.

#### **6.20.16.8 ~~Permitted Uses Within Riparian Buffers~~**

Uses within the riparian buffer, or outside the riparian buffer with hydrological impacts on the riparian buffer, shall be designated as deemed allowable, allowable upon authorization, allowable with mitigation upon authorization, ~~allowable with exception~~ or prohibited. Potential new uses shall have the following requirements.

**6.20.16.8.a Deemed Allowable.** Uses designated as deemed allowable in ~~*Table 6.20.16.8, Permitted Uses within Riparian Buffers*~~ and ~~*6.20.16.11, Stormwater Runoff Through the Riparian Buffer*~~ may occur within the riparian buffer. Deemed allowable uses shall be designed, constructed and maintained to minimize vegetation and soil disturbance and to provide the maximum water quality protection practicable, including construction, monitoring, and maintenance

activities. In addition, deemed allowable uses shall meet all requirements listed in *Table 6.20.16.8, ~~Permitted-Uses within Riparian Buffers~~* for the specific use.

- 6.20.16.8.b Allowable Upon Authorization.** Uses designated as allowable upon authorization in *Table 6.20.16.8, ~~Permitted-Uses within Riparian Buffers~~* and *6.20.16.11, ~~Stormwater Runoff Through the Riparian Buffer~~* require a written Authorization Certificate for impacts within the riparian buffer pursuant to *Section 6.20.16.9, Basis for “No Practical Alternatives”* and *Section 6.20.16.10, Written Authorization Required*.
- 6.20.16.8.c Allowable with Mitigation Upon Authorization.** Uses designated as allowable with mitigation upon authorization in *Table 6.20.16.8, ~~Permitted-Uses within Riparian Buffers~~* require a written Authorization Certificate for impacts within the riparian buffer pursuant to *Section 6.20.16.9, Basis for “No Practical Alternatives”* and *Section, 6.20.16.10, ~~Written Authorization Required~~*. In addition, an appropriate mitigation strategy is required pursuant to *Section 6.20.16.12, Mitigation*.
- 6.20.16.8.d Prohibited.** Uses designated as prohibited in *Table 6.20.16.8, ~~Permitted-Uses within Riparian Buffers~~* may not proceed within the riparian buffer unless a variance is granted by the North Carolina Environmental Management Commission pursuant to 15A NCAC 02B .0226. Mitigation may be required as a condition of variance approval.

**Table 6.20.16.8 ~~Permitted~~ Uses within Riparian Buffers**

| Riparian Buffer Use/Activity  | Deemed Allowable | Allowable Upon Authorization | Allowable with Mitigation Upon Authorization | Prohibited |
|---|------------------|------------------------------|--|------------|
| <u>a) Airport Facilities</u>  |                  |                              |  |            |
| <u>i) Vegetation removal activities necessary to comply with Federal Aviation Administration requirements (e.g., line of sight requirements) provided the disturbed areas are stabilized and revegetated</u>  | X                |                              |  |            |
| <u>ii) Airport facilities that impact equal to or less than one-third of an acre of riparian buffer</u>   |                  | X                            |  |            |
| <u>iii) Airport facilities that impact greater than one third of an acre of riparian buffer</u>   |                  |                              | X  |            |
| <u>a)b) Archaeological activities</u>   |                  |                              |  |            |
|   | X                |                              |  |            |
| <u>b)c) Bridges:</u>  |                  |                              |  |            |
| <u>i) Impact equal to or less than one-tenth of an acre of riparian buffer</u>  | X                |                              |  |            |
| <u>ii) Impact greater than one-tenth of an acre of riparian buffer</u>  |                  | X                            |  |            |
| <u>e)d) Dam maintenance activities:</u>   |                  |                              |  |            |
| <u>i) Dam maintenance activities that do not cause additional riparian buffer disturbance beyond the footprint of the existing dam</u>  | X                |                              |  |            |
| <u>ii) Dam maintenance activities that do cause additional riparian buffer disturbance beyond the footprint of the existing dam</u>   |                  | X                            |  |            |
| <u>e)e) Drainage of a pond subject to Section 6.20.16.3, Applicability provided that a new riparian buffer is established by natural regeneration or planting, within 50 feet of any stream which naturally forms or is constructed within the drained pond area. Drained ponds shall be allowed to naturalize for a minimum of six months from completion of the draining activity before a stream determination is conducted pursuant to Section 6.20.16.3.c.</u> |                  |                              |  |            |
|   | X                |                              |  |            |
| <u>e)f) Fences:</u>   |                  |                              |  |            |
| <u>i) Fencing livestock out of surface waters</u>   | X                |                              |  |            |
| <u>ii) Installation does not result in removal of trees from Zone 1</u>   | X                |                              |  |            |
| <u>iii) Installation results in removal of trees from Zone 1</u>  |                  | X                            |  |            |

**Table 6.20.16.8 ~~Permitted~~ Uses within Riparian Buffers (continued)**

| Riparian Buffer Use/Activity   | Deemed Allowable | Allowable Upon Authorization | Allowable with Mitigation Upon Authorization | Prohibited |
|--|------------------|------------------------------|--|------------|
| <u>f)g)</u> Fertilizer application:  |                  |                              |  |            |
| i) One-time fertilizer application at agronomic rates in the riparian buffer to establish replanted vegetation. No runoff from this one-time application in the riparian buffer is allowed in the surface water  | X                |                              |  |            |
| ii) Ongoing fertilizer application   |                  |                              |  | X          |
| <u>h)</u> <del>Forest harvesting – see 15A NCAC 02B .0612</del>  |                  |                              |  |            |
| <u>g)l)</u> Grading only in Zone 2 provided that the health of existing vegetation in Zone 1 is not compromised, <i>Section 6.20.16.11, Stormwater Through the Riparian Buffer</i> is complied with, and disturbed areas are stabilized and revegetated  |                  | X                            |  |            |
| <u>h)j)</u> Greenways, trails, sidewalks or linear pedestrian/bicycle transportation systems:  |                  |                              |  |            |
| i) In Zone 2 provided that no built-upon area is added within the riparian buffer  | X                |                              |  |            |
| ii) In Zone 1 provided that no built-upon area is added within the riparian buffer and the installation does not result in the removal of tree(s)  | X                |                              |  |            |
| iii) When built-upon area is added to the riparian buffer, equal to or less than 10 feet wide with two foot wide shoulders. Shall be located outside Zone 1 unless there is no practical alternative   |                  | X                            |  |            |
| iv) When built-upon area is added to the riparian buffer, greater than 10 feet wide with two foot wide shoulders. Shall be located outside Zone 1 unless there is no practical alternative   |                  |                              | X  |            |
| <u>i)k)</u> Historic preservation  | X                |                              |  |            |
| <u>j)l)</u> New Landfills as defined by NC G.S. 130A-290   |                  |                              |  | X          |
| <u>m)</u> <del>Maintenance access on modified natural streams or canals: a grassed travelway on one side of the waterbody when less impacting alternatives are not practical. The width and specifications of the travelway shall be only that needed for equipment access and operation. The travelway shall be located to maximize stream shading.</del> |                  | X                            |  |            |

**Table 6.20.16.8 Permitted-Uses within Riparian Buffers (continued)**

| Riparian Buffer Use/Activity   | Deemed Allowable | Allowable Upon Authorization | Allowable with Mitigation Upon Authorization | Prohibited |
|--|------------------|------------------------------|--|------------|
| <u>k)n</u> ) Mining activities:  |                  |                              |  |            |
| i) Mining activities that are covered by the Mining Act provided that new riparian buffers that meet the requirements in sections 6.20.16.7, <i>Zones of the Riparian Buffer</i> and 6.20.16.11, <i>Stormwater Runoff Through the Riparian Buffer</i> are established adjacent to any relocated channels |                  | X                            |  |            |
| ii) Mining activities that are not covered by the Mining Act OR where new riparian buffers that meet the requirements in sections 6.20.16.7, <i>Zones of the Riparian Buffer</i> and 6.20.16.11, <i>Stormwater Runoff Through the Riparian Buffer</i> are not established                                |                  |                              | X  |            |
| iii) Wastewater or mining dewatering wells with approved NPDES permit  | X                |                              |  |            |
| <u>h)o</u> ) On-site sanitary sewage systems - new ones that use ground absorption   |                  |                              |  | X          |
| <u>m)p</u> ) Pedestrian access trails and associated steps leading to a surface water, dock, canoe or kayak access, fishing pier, boat ramp or other water dependent structure:  |                  |                              |  |            |
| i) Equal to or less than six feet wide that does not result in the removal of tree(s) within the riparian buffer and does not result in the addition of built-upon area to the riparian buffer   | X                |                              |  |            |
| ii) Equal to or less than six feet wide that results in the removal of tree(s) or the addition of built-upon area to the riparian buffer   |                  | X                            |  |            |
| iii) Greater than six feet wide  |                  |                              | X  |            |
| <u>n)q</u> ) Playground equipment:   |                  |                              |  |            |
| i) Playground equipment on single-family lots provided that installation and use does not result in removal of vegetation  | X                |                              |  |            |
| ii) Playground equipment on single-family lots where installation or use results in the removal of vegetation  |                  | X                            |  |            |
| iii) Playground equipment installed on lands other than single-family lots   |                  | X                            |  |            |
| <u>e)r</u> ) Ponds created or modified by impounding streams subject to riparian buffers pursuant to Section 6.20.16.3, <i>Applicability</i> and not used as stormwater control measures (SCMs):   |                  |                              |  |            |
| i) New ponds provided that a riparian buffer that meets the requirements of sections 6.20.16.7, <i>Zones of the Riparian Buffer</i> and 6.20.16.11, <i>Stormwater Runoff Through the Riparian Buffer</i> is established adjacent to the pond   |                  | X                            |  |            |
| ii) New ponds where a riparian buffer that meets the requirements of sections 6.20.16.7, <i>Zones of the Riparian Buffer</i> and 6.20.16.11, <i>Stormwater Runoff Through the Riparian Buffer</i> is NOT established adjacent to the pond  |                  |                              | X  |            |

**Table 6.20.16.8 ~~Permitted~~ Uses within Riparian Buffers (continued)**

| Riparian Buffer Use/Activity  | Deemed Allowable | Allowable Upon Authorization | Allowable with Mitigation Upon Authorization | Prohibited |
|---|------------------|------------------------------|--|------------|
| <u>p)s</u> ) Protection of existing structures and facilities when this requires additional disturbance to the riparian buffer  |                  | X                            |  |            |
| <u>q)t</u> ) Public Safety - Publicly owned spaces where it has been determined by the head of the local law enforcement agency with jurisdiction over that area that the riparian buffers pose a risk to public safety. The head of the local law enforcement agency shall notify the local government with land use jurisdiction over the publicly owned space and the Division of Water Resources of any such determination in writing   | X                |                              |  |            |
| <u>r)u</u> ) Removal of previous fill or debris provided that <i>Section 6.20.16.11, Stormwater Runoff Through the Riparian Buffer</i> is complied with and any vegetation removed is restored  |                  | X                            |  |            |
| <u>s)v</u> ) Residential Properties: Where application of this Rule would preclude construction or expansion of a single-family residence and necessary infrastructure, the single-family residence may encroach in the buffer if all of the following conditions are met: (1) the residence is set back the maximum feasible distance from the top of the bank, rooted herbaceous vegetation, normal high-water level, or normal water level, whichever is applicable, on the existing lot; (2) the residence is designed to minimize encroachment into the riparian buffer; (3) the residence complies with <i>Section 6.20.16.11, Stormwater Runoff Through the Riparian Buffer</i> ; and (4) if the residence will be served by an on-site wastewater system, no part of the septic tank or drainfield may encroach into the riparian buffer: |                  |                              |  |            |
| i) The residence or necessary infrastructure only impact Zone 2   |                  | X                            |  |            |
| ii) The residence or necessary infrastructure impact Zone 1   |                  |                              | X  |            |
| iii) Impacts other than the residence or necessary infrastructure   |                  |                              | X  |            |
| <u>t)w</u> ) Restoration or enhancement (wetland, stream) as defined in 33 CFR Part 332 available free of charge on the internet at:<br><a href="http://water.epa.gov/lawsregs/guidance/wetlands/wetlandsmitigation_index.cfm">http://water.epa.gov/lawsregs/guidance/wetlands/wetlandsmitigation_index.cfm</a> :   |                  |                              |  |            |
| i) Wetland or stream restoration is part of a compensatory mitigation bank, nutrient offset bank, or the In Lieu Fee program  | X                |                              |  |            |
| ii) Wetland or stream restoration other than those listed above   |                  | X                            |  |            |



**Table 6.20.16.8 ~~Permitted~~ Uses within Riparian Buffers (continued)**

| Riparian Buffer Use/Activity   | Deemed Allowable | Allowable Upon Authorization | Allowable with Mitigation Upon Authorization | Prohibited |
|--|------------------|------------------------------|--|------------|
| w)x) Road, driveway or railroad - impacts other than perpendicular crossings of streams and other surface waters subject to this Rule  |                  |                              | X  |            |
| v)y) Road, driveway or railroad - perpendicular crossings of streams and other surface waters subject to this Rule   |                  |                              |  |            |
| i) Impact equal to or less than one-tenth of an acre of riparian buffer  | X                |                              |  |            |
| ii) Impact greater than one-tenth of an acre but equal to or less than one-third of an acre of riparian buffer   |                  | X                            |  |            |
| iii) Impact greater than one-third of an acre of riparian buffer   |                  |                              | X  |            |
| iv) Driveway crossings in a residential subdivision that cumulatively impact equal to or less than one-third of an acre of riparian buffer   |                  | X                            |  |            |
| v) Driveway crossings in a residential subdivision that cumulatively impact greater than one-third of an acre of riparian buffer   |                  |                              | X  |            |
| vi) Farm roads and forest roads that are exempt from permitting from the U.S. Army Corps of Engineers per Section 404(f) of the Federal Clean Water Act  | X                |                              |  |            |
| w)z) Road relocation of existing private access roads associated with public road projects where necessary for public safety:  |                  |                              |  |            |
| i) Less than or equal to 2,500 square feet of riparian buffer impact   |                  | X                            |  |            |
| ii) Greater than 2,500 square feet of riparian buffer impact   |                  |                              | X  |            |
| x)aa) Scientific studies and stream gauging  | X                |                              |  |            |
| y)bb) Slatted uncovered decks, including steps and support posts, which are associated with a dwelling, provided that it meets the requirements of sections 6.20.16.7, <i>Zones of the Riparian Buffer</i> and 6.20.16.11, <i>Stormwater Runoff Through the Riparian Buffer</i> and: |                  |                              |  |            |
| i) Installation does not result in removal of vegetation in Zone 1   |                  | X                            |  |            |
| ii) Installation results in removal of vegetation in Zone 1  |                  |                              | X  |            |
| z)cc) Stormwater Control Measure (SCM) as defined in 15A NCAC 02H .1002:   |                  |                              |  |            |
| i) In Zone 2 if <i>Section 6.20.16.11, Stormwater Runoff Through the Riparian Buffer</i> is complied with  |                  | X                            |  |            |
| ii) Installation results in removal of vegetation in Zone 1  |                  |                              | X  |            |

**Table 6.20.16.8 ~~Permitted~~ Uses within Riparian Buffers (continued)**

| Riparian Buffer Use/Activity   | Deemed Allowable | Allowable Upon Authorization | Allowable with Mitigation Upon Authorization | Prohibited |
|--|------------------|------------------------------|--|------------|
| <del>aa</del> dd) Streambank or shoreline stabilization  |                  | X                            |  |            |
| <del>bb</del> ee) Temporary roads, provided that the disturbed area is restored to pre-construction topographic and hydrologic conditions and replanted with comparable vegetation within two months of when construction is complete. Tree planting may occur during the dormant season. At the end of five years, any restored wooded riparian buffer shall comply with the restoration criteria in 15A NCAC 02B .0295:                              |                  |                              |  |            |
| i) Less than or equal to 2,500 square feet of riparian buffer disturbance  | X                |                              |  |            |
| ii) Greater than 2,500 square feet of riparian buffer disturbance  |                  | X                            |  |            |
| iii) Associated with culvert installation or bridge construction or replacement  |                  | X                            |  |            |
| <del>cc</del> ff) Temporary sediment and erosion control devices provided that the disturbed area is restored to preconstruction topographic and hydrologic conditions and replanted with comparable vegetation within two months of when construction is complete. Tree planting may occur during the dormant season. At the end of five years, any restored wooded riparian buffer shall comply with the restoration criteria in 15A NCAC 02B .0295: |                  |                              |  |            |
| i) In Zone 2 provided that ground cover is established within the timeframes required by the Sedimentation and Erosion Control Act, vegetation in Zone 1 is not compromised, and that discharge is released in accordance with <i>Section 6.20.16.11, Stormwater Runoff Through the Riparian Buffer</i>  | X                |                              |  |            |
| ii) In Zones 1 and 2 to control impacts associated with uses identified in this table or uses that have received an Authorization Certificate with Exception provided that sediment and erosion control for upland areas is addressed outside the riparian buffer  |                  | X                            |  |            |
| iii) 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 Clean Water Act   | X                |                              |  |            |
| <del>dd</del> gg) Utility Lines - Streambank stabilization for the protection of publicly owned utility lines (not including new line installation):   |                  |                              |  |            |
| i) Less than 150 feet of streambank disturbance  | X                |                              |  |            |
| ii) Greater than 150 feet of streambank disturbance  |                  | X                            |  |            |

**Table 6.20.16.8 ~~Permitted~~ Uses within Riparian Buffers (continued)**

| Riparian Buffer Use/Activity  | Deemed Allowable | Allowable Upon Authorization | Allowable with Mitigation Upon Authorization | Prohibited |
|---|------------------|------------------------------|--|------------|
| <u>ee)hh)</u> Utility – Sewer lines – Sanitary Sewer Overflows:   |                  |                              |  |            |
| i) Emergency sanitary sewer overflow response activities, provided that the disturbed area within the riparian buffer outside of the existing utility line maintenance corridor is the minimum necessary to respond to the emergency overflow, is restored to pre-construction topographic and hydrologic conditions, and is replanted with comparable vegetation (e.g. grass with grass, hardwoods with hardwoods) within two months of when disturbance is complete                   | X                |                              |  |            |
| ii) Emergency sanitary sewer overflow response activities that do not meet the listing above. For any new proposed permanent impacts that are not a "Deemed Allowable" activity, an application for an Authorization Certificate shall be submitted to the Authority no later than 30 calendar days of conclusion of the emergency response activities  |                  | X                            |  |            |
| <u>ff)jj)</u> Utility - Sewer Lines – Vegetation maintenance activities that remove forest vegetation from existing sewer utility right of ways (not including new line installation) outside of the existing utility line maintenance corridor:  |                  |                              |  |            |
| i) Zone 2 impacts   | X                |                              |  |            |
| ii) Zone 1 impacts: For lines that have not been maintained, the vegetation can be mowed, cut or otherwise maintained without disturbance to the soil structure for a maintenance corridor that is equal to or less than 30 feet wide   | X                |                              |  |            |
| iii) Zone 1 impacts other than those listed above   |                  | X                            |  |            |
| <u>gg)jj)</u> Utility - Sewer Lines –Replacement/Rehabilitation of existing sewer lines within, or adjacent to, an existing right of way but outside of an existing utility line maintenance corridor provided that comparable vegetation (e.g. grass with grass, hardwoods with hardwoods) is allowed to regenerate in disturbed riparian buffers outside of the permanent maintenance corridor and riparian buffers outside of the permanent maintenance corridor are not maintained: |                  |                              |  |            |
| i) Permanent maintenance corridor equal to or less than 30 feet wide provided there is no grading and/or grubbing within 10 feet of the top of bank when the sewer line is parallel to the stream   | X                |                              |  |            |
| ii) Grading and/or grubbing within 10 feet of the top of bank when the sewer line is parallel to the stream and permanent maintenance corridor equal to or less than 30 feet wide   |                  | X                            |  |            |

**Table 6.20.16.8 ~~Permitted~~-Uses within Riparian Buffers (continued)**

| Riparian Buffer Use/Activity  | Deemed Allowable | Allowable Upon Authorization | Allowable with Mitigation Upon Authorization | Prohibited |
|---|------------------|------------------------------|--|------------|
| iii) Permanent maintenance corridor greater than 30 feet wide. For impacts other than perpendicular crossings, mitigation is only required for Zone 1 impacts. For perpendicular crossings that disturb equal to or less than 40 linear feet, no mitigation is required. For perpendicular crossings that disturb greater than 40 linear feet, mitigation is only required for Zone 1 impacts   |                  |                              | X  |            |
| <del>hh)kk)</del> Utility - Sewer Lines – New Line Construction/Installation Activities – Perpendicular crossings of streams and other surface waters subject to <i>Section 6.20.16</i> , or perpendicular entry into the riparian buffer that does not cross a stream or other surface water subject to <i>Section 6.20.16</i> , provided that vegetation is allowed to regenerate in disturbed areas outside of the permanent maintenance corridor: |                  |                              |  |            |
| i) Construction corridor of less than or equal to 40 linear feet wide and a permanent maintenance corridor that is equal to or less than 30 feet wide   | X                |                              |  |            |
| ii) Construction corridor of greater than 40 linear feet wide and less than or equal to 150 linear feet wide and a permanent maintenance corridor that is equal to or less than 30 feet wide  |                  | X                            |  |            |
| iii) Construction corridor of greater than 150 linear feet wide and a permanent maintenance corridor that is equal to or less than 30 feet wide   |                  |                              | X  |            |
| iv) Permanent maintenance corridor greater than 30 feet wide. For impacts other than perpendicular crossings, mitigation is only required for Zone 1 impacts. For perpendicular crossings that disturb equal to or less than 40 linear feet, no mitigation is required. For perpendicular crossings that disturb greater than 40 linear feet, mitigation is only required for Zone 1 impacts  |                  |                              | X  |            |
| <del>ii)ll)</del> Utility - Sewer Lines – New Line Construction/Installation Activities – Impacts other than perpendicular crossings provided that vegetation is allowed to regenerate in disturbed areas outside of the permanent maintenance corridor:  |                  |                              |  |            |
| i) Zone 2 impacts   | X                |                              |  |            |
| ii) Zone 1 impacts to less than 2,500 square feet when impacts are solely the result of tying into an existing utility line and when grubbing or grading within 10 feet immediately adjacent to the surface water is avoided  |                  | X                            |  |            |
| iii) Zone 1 impacts other than those listed above   |                  |                              | X  |            |

**Table 6.20.16.8 ~~Permitted~~ Uses within Riparian Buffers (continued)**

| Riparian Buffer Use/Activity  | Deemed Allowable | Allowable Upon Authorization | Allowable with Mitigation Upon Authorization | Prohibited |
|---|------------------|------------------------------|--|------------|
| <p><del>jj</del>mm) Utility - Non-sewer Underground Lines – Vegetation maintenance activities that remove forest vegetation from existing utility right of ways (not including new line installation) outside of the existing utility line maintenance corridor:</p>  |                  |                              |  |            |
| i) Zone 2 impacts   | X                |                              |  |            |
| ii) Zone 1 impacts: For lines that have not been maintained, the vegetation can be mowed, cut or otherwise maintained without disturbance to the soil structure for a maintenance corridor that is equal to or less than 30 feet wide   | X                |                              |  |            |
| iii) Zone 1 impacts other than those listed above   |                  | X                            |  |            |
| <p><del>kk</del>nn) Utility – Non-Sewer Underground Lines – Perpendicular crossings of streams and other surface waters subject to <i>Section 6.20.16</i>, or perpendicular entry into the riparian buffer that does not cross a stream or other surface water subject to <i>Section 6.20.16</i>, provided that vegetation is allowed to regenerate in disturbed areas outside of the permanent maintenance corridor:</p> |                  |                              |  |            |
| i) Construction corridor of less than or equal to 50 linear feet wide and a permanent maintenance corridor that is equal to or less than 30 feet wide   | X                |                              |  |            |
| ii) Construction corridor of greater than 50 linear feet wide and less than or equal to 150 linear feet wide and a permanent maintenance corridor that is equal to or less than 30 feet wide  |                  | X                            |  |            |
| iii) Construction corridor of greater than 150 linear feet wide and a permanent maintenance corridor that is equal to or less than 30 feet wide   |                  |                              | X  |            |
| iv) Permanent maintenance corridor that is greater than 30 linear feet wide (mitigation is required only for Zone 1 impacts)  |                  |                              | X  |            |
| <p><del>ll</del>oo) Utility – Non-Sewer Underground Lines – Impacts other than perpendicular crossings provided that vegetation is allowed to regenerate in disturbed areas outside of the permanent maintenance corridor:</p>  |                  |                              |  |            |
| i) Zone 2 impacts   | X                |                              |  |            |
| ii) Zone 1 impacts to less than 2,500 square feet when impacts are solely the result of tying into an existing utility line and when grubbing or grading within 10 feet immediately adjacent to the surface water is avoided  |                  | X                            |  |            |
| iii) Zone 1 impacts other than those listed above   |                  |                              | X  |            |

**Table 6.20.16.8 ~~Permitted~~ Uses within Riparian Buffers (continued)**

| Riparian Buffer Use/Activity  | Deemed Allowable | Allowable Upon Authorization | Allowable with Mitigation Upon Authorization | Prohibited |
|---|------------------|------------------------------|--|------------|
| <u>mm)pp)</u> Utilities – Non-sewer aerial lines - Perpendicular crossings of streams and other surface waters subject to <i>Section 6.20.16</i> , or perpendicular entry into the riparian buffer that does not cross a stream or other surface water subject to <i>Section 6.20.16</i> :  |                  |                              |  |            |
| i) Disturb equal to or less than 150 linear feet wide of riparian buffer provided that a minimum zone of 10 feet wide immediately adjacent to the waterbody is managed such that only vegetation that poses a hazard or has the potential to grow tall enough to interfere with the line is removed, that no land grubbing or grading is conducted in Zone 1, and that poles or aerial infrastructure are not installed within 10 feet of a waterbody | X                |                              |  |            |
| ii) Disturb greater than 150 linear feet wide of riparian buffer  |                  | X                            |  |            |
| <u>nn)qq)</u> Utilities – Non-sewer Aerial Lines - Impacts other than perpendicular crossings of streams and other surface waters subject to this <i>Section 6.20.16</i> , or perpendicular entry into the riparian buffer that does not cross a stream or other surface water subject to this <i>Section 6.20.16</i> :   |                  |                              |  |            |
| i) Impacts in Zone 2 only   | X                |                              |  |            |
| ii) Impacts in Zone 1 provided that a minimum zone of 10 feet wide immediately adjacent to the waterbody is managed such that only vegetation that poses a hazard or has the potential to grow tall enough to interfere with the line is removed, that no land grubbing or grading is conducted in Zone 1, and that poles or aerial infrastructure are not installed within 10 feet of a waterbody  |                  | X                            |  |            |
| <u>oo)rr)</u> Vegetation management:  |                  |                              |  |            |
| i) Emergency fire control measures provided that topography is restored   | X                |                              |  |            |
| ii) Periodic mowing and harvesting of plant products only in Zone 2   | X                |                              |  |            |
| iii) Placement of mulch ring around restoration plantings for a period of five years from the date of planting  | X                |                              |  |            |
| iv) Planting non-invasive vegetation to enhance the riparian buffer   | X                |                              |  |            |
| v) Pruning forest vegetation provided that the health and function of the forest vegetation is not compromised  | X                |                              |  |            |
| vi) Removal of individual trees, branches or limbs which are in danger of causing damage to dwellings, existing utility lines, other structures or human life, or are imminently endangering stability of the streambank provided that the stumps are left or ground in place without causing additional land disturbance   | X                |                              |  |            |

**Table 6.20.16.8 ~~Permitted~~-Uses within Riparian Buffers (continued)**

| Riparian Buffer Use/Activity  | Deemed Allowable | Allowable Upon Authorization | Allowable with Mitigation Upon Authorization | Prohibited |
|---|------------------|------------------------------|--|------------|
| vii) Removal of individual trees that are dead, diseased or damaged   | X                |                              |  |            |
| viii) Removal of poison ivy, oak or sumac. Removal can include application of pesticides within the riparian buffer if the pesticides are certified by EPA for use in or near aquatic sites and are applied in accordance with the manufacturer's instructions. If removal is significant, then the riparian buffer shall be replanted with non-invasive species  |                  | X                            |  |            |
| ix) Removal of understory nuisance vegetation as defined in: Smith, Cherri L. 2008. Invasive Plants of North Carolina. Dept. of Transportation. Raleigh, NC. Removal can include application of pesticides within the riparian buffer if the pesticides are certified by EPA for use in or near aquatic sites and are applied in accordance with the manufacturer's instructions. If removal is significant then the riparian buffer shall be replanted with non-invasive species |                  | X                            |  |            |
| x) Removal of woody vegetation in Zone 1 provided that <i>Section 6.20.16.11, Stormwater Runoff Through the Riparian Buffer</i> is complied with  |                  |                              | X  |            |
| <del>pp)ss)</del> Vehicle access roads and boat ramps (excluding parking areas) leading to surface water, docks, fishing piers, and other water dependent activities:   |                  |                              |  |            |
| i) Single vehicular access road and boat ramp to the surface water but not crossing the surface water that are restricted to the minimum width practicable not to exceed 15 feet wide   |                  | X                            |  |            |
| ii) Vehicular access roads and boat ramps to the surface water but not crossing the surface water that are restricted to the minimum width practicable and exceed 15 feet wide  |                  |                              | X  |            |
| <del>qq)tt)</del> Water dependent structures (except for boat ramps) as defined in 15A NCAC 02B .0202   |                  | X                            |  |            |
| <del>rr)uu)</del> Water supply reservoirs:  |                  |                              |  |            |
| i) New reservoirs provided that a riparian buffer that meets the requirements of sections 6.20.16.7, <i>Zones of the Riparian Buffer</i> and 6.20.16.11, <i>Stormwater Runoff Through the Riparian Buffer</i> is established adjacent to the reservoir  |                  | X                            |  |            |
| ii) New reservoirs where a riparian buffer that meets the requirements of sections 6.20.16.7, <i>Zones of the Riparian Buffer</i> and 6.20.16.11, <i>Stormwater Runoff Through the Riparian Buffer</i> is NOT established adjacent to the reservoir   |                  |                              | X  |            |
| <del>ss)vv)</del> Water wells   | X                |                              |  |            |
| <del>tt)ww)</del> Wildlife passage structures   |                  | X                            |  |            |

#### **6.20.16.9 Basis for “No Practical Alternatives”**

Where written authorization is required in *Section 6.20.16.8, ~~Permitted~~ Uses Within Riparian Buffers*, the applicant must demonstrate “no practical alternatives.” The determination of “no practical alternatives” will be made by the Planning Director or designee based upon the following:

- 6.20.16.9.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.
- 6.20.16.9.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.
- 6.20.16.9.c** Best management practices shall be used if necessary to minimize disturbance, preserve aquatic life and habitat, and protect water quality.

#### **6.20.16.10 Written Authorization Required**

Where written authorization is required in *Section 6.20.16.8, ~~Permitted~~ Uses Within Riparian Buffers*, proposed impacts to the riparian buffer may not commence until written authorization is provided by the Planning Director or designee. Use authorization may include conditions specific to the proposed activity. Unauthorized impacts to riparian buffers are subject to enforcement penalties as outlined in *Section 8, Enforcement*.

Prior to any land disturbing activity within a designated riparian buffer, the property owner shall provide written notification of the location and nature of the proposed use to the Planning Director or designee for review. Written notification must include the following:

- 6.20.16.9.a** The name, address and phone number of the applicant.
- 6.20.16.9.b** The nature of the activity to be conducted by the applicant.
- 6.20.16.9.c** The location of the activity.
- 6.20.16.9.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 the riparian buffers associated with the activity, and the extent of the riparian buffers on the land; and
- 6.20.16.9.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.
- 6.20.16.9.f** Plans for any best management practices proposed to be used to control the impacts associated with the activity.

#### **6.20.16.11 Stormwater Runoff Through the Riparian Buffer**

**6.20.16.11.a** Stormwater runoff into the riparian buffer shall meet dispersed flow as defined in 15A NCAC 02H .1002 except as otherwise described in this section. Drainage conveyances include drainage ditches, roadside ditches, and stormwater conveyances.

The following stormwater conveyances through the riparian buffer are either deemed allowable or allowable upon authorization, as defined in *Section 6.20.16.8, ~~Permitted~~ Uses within Riparian Buffers*, provided that they do not



erode through the riparian buffer and do not cause erosion to the receiving waterbody. Stormwater conveyances through the riparian buffer that are not listed below ~~shall be allowable with exception as defined in Section 6.20.16.8.e;~~ Allowable with Exception are not allowable.

**6.20.16.11.b** The following are deemed allowable as defined in *Section 6.20.16.8.a, Deemed Allowable*:

- i. New drainage conveyances from a Primary SCM, as defined in 15A NCAC 02H .1002, when the Primary SCM is designed to treat the drainage area to the conveyance and that comply with a stormwater management plan reviewed and approved under a state stormwater program or a state-approved local government stormwater program; and
- ii. New stormwater flow to existing drainage conveyances provided that the addition of new flow does not result in the need to alter the conveyance.

**6.20.16.11.c** The following are allowable upon authorization as defined in *Section 6.20.16.8.b, Allowable Upon Authorization*:

- i. New drainage conveyances from a Primary SCM as defined in 15A NCAC 02H .1002 when the Primary SCM is provided to treat the drainage area to the conveyance but are not required to be approved under a state stormwater program or a state-approved local government stormwater program;
- ii. New drainage conveyances when the drainage area to the conveyance is demonstrated via approved nutrient calculation methodologies to meet the nutrient loading goal of 2.2 pounds per acre per year of Nitrogen (N) and 0.33 pounds per acre per year of Phosphorus (P);
- iii. New drainage conveyances when the flow rate of the conveyance is less than 0.5 cubic feet per second during the peak flow from the 0.75 inch per hour storm;
- iv. New stormwater runoff that has been treated through a level spreader-filter strip that complies with 15A NCAC 02H .1059;
- v. Realignment of existing drainage conveyances applicable to publicly funded and maintained linear transportation facilities when retaining or improving 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;
- vi. Realignment of existing drainage conveyances retaining or improving the design dimensions provided that the size of the drainage area and the percent built-upon area within the drainage area remain the same;
- vii. New or altered drainage conveyances applicable to publicly funded and maintained linear transportation facilities provided that SCMs, or BMPs from the NCDOT Stormwater Best Management Practices Toolbox, are employed;
- viii. New drainage conveyances applicable to publicly funded and maintained linear transportation facilities that do not provide a stormwater

management facility due to topography constraints provided other measures are employed to protect downstream water quality to the maximum extent practical; and

- ix. New drainage conveyances where the drainage area to the conveyance has no new built-upon area as defined in 15A NCAC 02H .1002 and the conveyance is necessary for bypass of existing drainage only.

#### **6.20.16.12 Mitigation**

Where mitigation is required pursuant to the permitted uses listed in *Section 6.20.16.8, ~~Permitted-Uses Within Riparian Buffers~~* and *Table 6.20.16.8, ~~Permitted-Uses within Riparian Buffers~~*, mitigation shall follow the standards set out in the state's consolidated Riparian Buffer Mitigation Rule, 15A NCAC 02B .0295.

#### **6.20.16.13 Riparian Buffer and Minimum Lot Requirements**

The riparian buffer may be used in meeting the required minimum lot areas set forth in the Ordinance.