OVERLAY DISTRICTS

6.1 WATERSHED PROTECTION OVERLAY DISTRICTS

6.1.1 Purpose, Authority, and Enactment

The purpose of the Watershed Protection Overlay Districts is to ensure the availability of public water supplies at a safe and acceptable level of water quality, to ensure protection of public water supplies for recreational and aesthetic purposes, to minimize sedimentation of streams, and to protect the environment, health, and general welfare of present and future residents of the Town and the Triangle Region under the authority set forth in Article 1, Sec. 1.2 AUTHORITY of this ordinance and in N.C.G.S. 160A-174. In addition, the Legislature of the State of North Carolina has, in Chapter 143, Article 21 of the North Carolina General Statutes, entitled Water and Air Resources, directed local governmental units to adopt regulations designed to promote the public health, safety, and general welfare pursuant to the more specific requirements set forth in 15A NCAC 2B .0100, 15A NCAC 2B .0200, and in the Jordan Water Supply Watershed Nutrient Management Strategy Rules, 15A NCAC 2B .0262 through .0273 and .0311(p). Also pursuant to the Federal Water Pollution Control Act of 1972, federal Phase II Stormwater rules promulgated under it, and N.C.G.S. 143-215.1 and S.L. 2006-246, the Town is required to obtain a Phase II National Pollutant Discharge Elimination System (NPDES) permit for stormwater management for its municipal separate storm sewer system and to adopt, among other things, requirements and procedures to control the adverse effects of increased post development stormwater runoff and nonpoint and point source pollution associated with new development and redevelopment. (Additional specific purposes may be found in the Swift Creek Land Management Plan, the 2025 Land Use Plan Update, and the Growth Management Plan.) In furtherance of these goals and under such authorities, the Town of Apex promulgated this Sec. 6.1, *Watershed Protection Overlay Districts*.

6.1.2 Primary and Secondary Watershed Protection Overlay Districts

Except for those lands and uses exempted pursuant to Sec. 6.1.3 *Exemptions*, the Watershed Protection Overlay Districts shall encompass all lands within the Town of Apex and its extraterritorial jurisdiction as established in Article 1, Sec. 1.2.2 *Authority to Regulate Zoning, Subdivision And Building Practices in ETJ*. The boundaries for the Town's extraterritorial jurisdiction area (hereinafter "ETJ") are delineated on the Town of Apex's "Official Zoning District Map." A copy of this map shall be on record in the office of the Town Clerk and in the Planning Department for inspection by the general public during normal business hours.

The Town and its ETJ shall be divided into two districts for the purpose of watershed protection. The Primary Watershed Protection District shall consist of all lands identified by the state as water supply watershed protected areas. The Secondary Watershed Protection District shall consist of the remainder of lands within the Town and its ETJ. These two districts shall be identified on the Town of Apex's "Watershed Protection Overlay District Map." A copy of this map shall be on record in the office of the Town Clerk and in the Planning Department for inspection by the general public during normal business hours. All subsequent changes to the area that is identified by the state as water supply watershed protected area are herein adopted by reference, and the Planning Department shall cause such changes to be reflected on said map. A portion of the Jordan Lake Watershed, which consists of all lands and waters draining to the B. Everette Jordan Reservoir, is located within the Town's Primary Watershed Protection District and a portion is located within the Secondary Watershed Protection District as also depicted on the Town's Watershed Protection Overlay District Map.

The Town shall also maintain a "Structural BMP Map" of the Town and its ETJ that depicts the geographic location of all the structural BMPs approved under Sec. 6.1, and the map shall be updated as necessary to accurately reflect the location of such structures. A copy of this map shall be on record in the office of the Town Clerk and in the Planning Department for inspection by the general public during normal business hours.

6.1.3 Exemptions

This section does not apply to Sec. 6.1.11 *Riparian Buffers*.
The following activities are exempted from the requirements of Sec. 6.1 *Watershed Protection Overlay Districts*:

A) Development that cumulatively disturbs less than one acre and is not part of a larger common plan of development;

B) Redevelopment that cumulatively disturbs less than one acre and is not part of a larger common plan or development or sale;

C) *Development Existing as of the Effective Date of this Section*

1) *Date built*. The continued use of structures that were built prior to the effective date of this Section;

2) *Substantial expenditures*. The completion of development for which the developer prior to the effective date of this Section made substantial expenditures of resources (e.g. time, labor, money) based on a good faith reliance on a valid permit received from the Town;

3) *Outstanding building permit*. The construction of any structure for which a developer has an outstanding valid building permit in compliance with N.C.G.S. Sec. 160A-385.1 prior to the original effective date of this Section.

4) *Vested right*. The completion of development for which a vested right, as defined in N.C.G.S. Sec. 160A-385.1(b)(6), was obtained prior to the original effective date of this Section.

D) **Expansions to Existing Development**

Any expansion to a lot or project that is exempt from the requirements of Sec. 6.1 pursuant to Sec. 6.1.3(C) *Development Existing as of the Effective Date of this Section* and disturbs greater than one acre must comply with the requirements of Sec. 6.1. The built-upon area of the existing development shall be included in the built-upon area calculations for any proposed expansion to any such lot or project. Provided, however, that the built-upon area of any school facility owned by the Wake County Public School System or any qualified nonpublic school that is exempt from the requirements of Sec. 6.1 pursuant to Sec. 6.1.3(C) Development Existing as of the Effective Date of this Section is not required to be included in the built-upon area calculations for any expansion to such existing development. For purposes of this section, "school facility" means any building, structure or other facility used by the Wake County Public School System or any qualified nonpublic school for educational purposes. For purposes of this section, "qualified nonpublic school" means a school having an enrollment of one hundred (100) or more students, and that has one or more of the characteristics set out in N.C.G.S. Sec. 115C-555.

E) **Developments and Uses Exempted by State Law**
Any use, development, or activity that has been specifically exempted by any applicable state law from local regulations of the type established by this ordinance.

F) **Complete Applications**
All projects for which a complete application for site plan or master subdivision plan was submitted and accepted by the Town on or before the effective date of Sec. 6.1 shall be exempt from complying with all provisions of Sec. 6.1 if the application is approved and development occurs in conformity with the permit terms. However, the project is not exempt from the watershed regulations in effect at the time of submittal.

6.1.4 General

A) **Development Review**
All development within the Watershed Protection Overlay Districts shall comply with the watershed protection standards of this Sec. 6.1 *Watershed Protection Overlay Districts*, and shall demonstrate compliance concurrent with the submission for approval of a site plan (major or minor) (Sec. 2.3.6), master plan for subdivision (Sec. 2.3.7(D)) or development plan for MEC-CZ, PUD-CZ or TND-CZ (Sec. 2.3.4), whichever occurs first.

B) **Compliance Prior to Approval of Certificate of Occupancy**
Prior to approval of a final plat (with respect to a subdivision), issuance of a certificate of occupancy (with respect to a site plan), or commencement of a use, in addition to meeting all other requirements of this ordinance, all of the watershed protection standards required by Sec. 6.1 must be met, all required facilities must be in place, be operational, and be approved by the Environmental Programs Manager.

C) **Definitions**
Certain words in this Section have meanings that are specific for the purposes of Sec. 6.1 *Watershed Protection Overlay Districts*. Such words shall be defined in Article 12, *Definitions*.

6.1.5 Uses

The uses allowed within the Watershed Protection Overlay Districts shall be governed by the use regulations permitted in the base zoning district within which the land is located as set forth in the Sec. 4.2.2 *Use Table*.

6.1.6 Low-Density Development Option

A) **General**
All development within both the Primary Watershed Protection District and the Secondary Watershed Protection District shall be designed to comply with the standards of the low-density development option unless the Town Council approves a plan of development pursuant to the procedures and standards for the high-density development option, or unless a minor or major variance is approved pursuant to Sec. 6.1.13, *Modifications by Variance*.

B) **Standards**
All development under the low-density development option shall meet the following standards:

1) *Within the Primary Watershed Protection District*

a) *Built-Upon Area*
Within the Primary Watershed Protection District, built-upon area for a development shall not exceed 12 percent of the total lot(s) area.

b) *Vegetated Conveyances*
Stormwater runoff from the development shall be transported from the development by vegetated conveyances to the maximum extent practicable provided that the standards of Article 7.5.4(B)(4) are met.

c) *Riparian Buffers for Perennial Streams*
Within the Primary Watershed Protection District, a vegetative buffer with a width of not less than 100 feet shall be maintained along each side of a perennial stream (defined for purposes of this Section in Article 12, *Definitions*). All buffers shall meet the requirements of Sec. 6.1.11 *Riparian Buffers*.

d) *Riparian Buffers for Intermittent Streams*
Within the Primary Watershed Protection District, a vegetative buffer with a width of not less than fifty (50) feet shall be maintained along each side of an intermittent stream (defined for purposes of this Section in Article 12, *Definitions*). All buffers shall meet the requirements of Sec. 6.1.11 *Riparian Buffers*.

e) *Riparian Buffers for Lakes and Ponds That Are Part of a Natural Drainage Way*
Within the Primary Watershed Protection District, a vegetative buffer with a width of not less than fifty (50) feet shall be maintained around any lake or pond, provided, however, that any lake or pond that joins with a perennial stream shall have a vegetative buffer width of not less than one hundred (100) feet around the lake or pond. All buffers shall meet the requirements of Sec. 6.1.11 *Riparian Buffers*.

2) *Within the Secondary Watershed Protection District*

a) *Built-Upon Area, Vegetated Conveyances and Riparian Buffers for Intermittent Streams*
Within the Secondary Watershed Protection District, the standards for Built-Upon Area, Vegetated Conveyances and Riparian Buffers for Intermittent Streams for the Low Density Development option are the same as those in Sec. 6.1.6 (B)(1)(a), (b) and (d) for within the Primary Watershed Protection District. As addressed below in Sec. 6.1.6 (B)(2)(b) and (c), the difference in standards in the Secondary Watershed Protection District pertaining to a required vegetative buffer for perennial streams, or a lake or pond that joins with a perennial stream, is that in the Secondary Watershed Protection District the buffer may average one hundred (100) feet.

b) *Riparian Buffers for Perennial Streams*
Within the Secondary Watershed Protection District, a vegetative buffer with an average width of not less than one hundred (100)

feet shall be maintained along each side of a perennial stream. At no point shall the buffer width along each side of a perennial stream be less than fifty (50) feet. All variable width buffers must be delineated with monuments. All buffers shall meet the requirements of Sec. 6.1.11 *Riparian Buffers*.

c) *Riparian Buffers for Lakes and Ponds That Are Part of a Natural Drainage Way*
Within the Secondary Watershed Protection District, a vegetative buffer with a width of not less than fifty (50) feet shall be maintained around any lake or pond, provided, however, that any lake or pond that joins with a perennial stream shall have a vegetative buffer with an average width of not less than one hundred (100) feet maintained along each side of the lake or pond. At no point shall the buffer width around the lake or pond be less than fifty (50) feet. All variable width buffers must be delineated with monuments. All buffers shall meet the requirements of Sec. 6.1.11 *Riparian Buffers*.

6.1.7 High-Density Development Option

Developers wishing to exceed the built-upon limitations for low-density development within either the Primary Watershed Protection District or the Secondary Watershed Protection District, as set forth in Sec. 6.1.6 (B) *Standards*, shall submit an appropriate development plan per Section 2.3 Development Approvals, which shall meet the following standards:

A) **Within the Primary Watershed Protection District**

1) *Built-Upon Area*
Within the Primary Watershed Protection District, all development shall comply with the built-upon area limitations for the underlying district found in Sec. 5.1 *Table of Intensity and Dimensional Standards*.

2) *Vegetated Conveyances*
Stormwater runoff from the development may be transported from the development by vegetated conveyances to the maximum extent practicable provided that the standards of Article 7.5.4(B)(4) are met.

3) *Structural BMPs*
Within the Primary Watershed Protection District, structural BMPs shall be used to collect and hold the runoff from the first one-inch of rainfall. These storm water control structures shall meet the requirements in Sec. 6.1.12 *Structural BMPs*.

In addition, the post-development peak runoff rate shall be limited to the pre-development peak runoff rate for the 1-year, 24-hour and the 10-year, 24-hour storms. Detention volumes stored to reduce peak flows shall drain within seventy-two (72) hours to allow for subsequent storms.

A storm water impact statement shall be prepared by a qualified professional engineer registered to practice in North Carolina and submitted with the initial application for any development or activity that is not exempt from the requirements of Sec. 6.1 *Watershed Protection Overlay Districts* showing the impacts from the development site to the confluence point downstream where the area of the proposed development is less than 10% of the total drainage area (the “10%

point"). The impact statement shall verify the effects of detention on the downstream hydrographs to ensure that the peaks do not increase for a given storm. The impact statement shall list the infrastructure (ditches, culverts, etc.) and indicate all the adverse effects and impacts (to roads, culverts, businesses, homes, lawns, etc.) from the development to the 10% point. If backwater from detention appears to be a problem, then the impact statement shall also consider potential effects on upstream properties for the 100-year, 24-hour storm.

4) *Riparian Buffers for Perennial Streams*
Within the Primary Watershed Protection District, a vegetative buffer of not less than 100 feet shall be maintained along each side of a perennial stream. All buffers shall meet the requirements in Sec. 6.1.11 *Riparian Buffers*.

5) *Riparian Buffers For Intermittent Streams*
Within the Primary Watershed Protection District, a vegetative buffer with a width of not less than fifty (50) feet shall be maintained along each side of an intermittent stream. All buffers shall meet the requirements in Sec. 6.1.11 *Riparian Buffers*.

6) *Riparian Buffers For Lakes and Ponds That Are Part of a Natural Drainage Way*
Within the Primary Watershed Protection District a vegetative buffer with a width of not less than fifty (50) feet shall be maintained around any lake or pond, provided, however, that any lake or pond that joins with a perennial stream shall have a vegetative buffer width of not less than one hundred (100) feet around the lake or pond. All buffers shall meet the requirements of Sec. 6.1.11 *Riparian Buffers*.

B) **Within the Secondary Watershed Protection District**

1) *Built-Upon Area, Vegetated Conveyances, Structural BMPs and Riparian Buffers For Intermittent Streams*
Within the Secondary Watershed Protection District, the standards for Built-Upon Area, Vegetated Conveyances, Structural BMPs and Riparian Buffers for Intermittent Streams for the High Density Development option are the same as those in Sec. 6.1.7 (A)(1) – (3) and (5) for within the Primary Watershed Protection District. As addressed below in Sec. 6.1.7 (B)(2) and (3), the difference in standards in the Secondary Watershed Protection District pertaining to a required vegetative buffer for perennial streams, or a lake or pond that joins with a perennial stream, is that in the Secondary Watershed Protection District the buffer may average one hundred (100) feet.

2) *Riparian Buffers for Perennial Streams*
Within the Secondary Watershed Protection District, a vegetative buffer with an average width of not less than one hundred (100) feet shall be maintained along each side of a perennial stream. At no point shall the buffer width along each side of a perennial stream be less than fifty (50) feet. All variable width buffers must be delineated with monuments. All buffers shall meet the requirements in Sec. 6.1.11 *Riparian Buffers*.

3) *Riparian Buffers for Lakes and Ponds That Are Part of a Natural Drainage Way*

Within the Secondary Watershed Protection District, a vegetative buffer with a width of not less than fifty (50) feet shall be maintained around any lake or pond, provided, however, that any lake or pond that joins with a perennial stream shall have a vegetative buffer with an average width of not less than one hundred (100) feet maintained along each side of the lake or pond. At no point shall the buffer width around the lake or pond be less than fifty (50) feet. All variable width buffers must be delineated with monuments. All buffers shall meet the requirements of Sec. 6.1.11 *Riparian Buffers*.

6.1.8 Clustered Development Option

Clustering of development is allowed under either the low-density development option or the high-density development option under Sec. 2.3.4 *Planned Development Districts*, if the development complies with the following additional standards:

A) **Density**

The overall density of the development shall not exceed the density allowed in the underlying base zoning district found in Sec. 5.1 *Table of Intensity and Dimensional Standards* (for the high-density development option) or the density limitation of the low-density development option for the Primary or Secondary Watershed Protection District;

B) **Built-Upon Areas**

Built-upon areas shall be designed and sited to minimize storm water runoff volume and velocity and the overall impact of storm water runoff on receiving streams; and

C) **Plat Certificate**

No plat shall be approved until the developer has caused the final plat to be certified as follows:

"This is a clustered development pursuant to the *Town of Apex Unified Development Ordinance* and may not be further subdivided or developed."

6.1.9 Definition of Built-Upon Area

For the purposes of complying with the standards and requirements of the Watershed Protection Overlay Districts, calculation of the built-upon area within the proposed development shall include, but not be limited to, all existing public and private streets, proposed public streets, sidewalks, driveways, rooftops, parking lots, patios, and all other impervious and partially impervious surfaces, including CABC and gravel within the development. The water area of swimming pools and wooden slatted decks shall not be included in the calculation of the built-upon area.

6.1.10 Calculation of Built-Upon Area

For the purposes of complying with the standards and requirements of the Watershed Protection Overlay Districts, built-upon area calculations shall be made based on the total acreage of built-upon area within a proposed development, divided by the total acreage of the lot area. Density calculations for expansions shall be based on the total acreage of built-upon area proposed for expansion, divided by the total acreage of lot area proposed for expansion. A certificate of occupancy shall not be granted, nor shall any final plat be recorded until a developer has caused all information pertaining to the percentage of the built-upon area on a property to be shown on the final plat for the property.

6.1.11 Riparian Buffers

No new clearing, grading or development shall take place nor shall any new building pemits be issued in violation of this section. No exemptions shall be permitted from this

section except for any use, development, or activity that has been specifically exempted by any applicable state law from local regulations of the type established by this ordinance, or as provided in Sec. 6.1.11(J) *Exemption When Existing Uses are Present and Ongoing*. The following activities impacting Zone 1 and/or 2 of a riparian buffer in the Jordan Lake Watershed or in the Neuse River Basin shall be administered by the Division of Water Quality of the N.C. Department of Environment and Natural Resources ("Division of Water Quality"): (i) activities conducted under the authority of the State, the United States, multiple jurisdictions, or local units of government, (ii) forest harvesting or (iii) agricultural activities.

A) **Relationship to Resource Conservation Areas**
The area of land on a property that is located within the riparian buffer may be counted by the developer, with the approval of the Planning Director, in accordance with Sec. 8.1.2 *Resource Conservation Area*, when calculating the amount of RCA that is required on that property by said Section.

B) **Measurement of Riparian Buffers**
The buffer width at a particular point along a stream shall be measured on a line perpendicular to a vertical line marking the top of the stream bank to the landward edge of the buffer. For ponds and lakes the buffer shall begin at the normal water level and extend landward on a line perpendicular to a vertical line marking the normal water level.

C) **Classification of Surface Waters on Property**
Riparian buffers shall be maintained for all perennial and intermittent streams, lakes, and ponds as set forth in Sec. 6.1.6 *Low-Density Development Option*, and Sec. 6.1.7 *High-Density Development Option* of this ordinance. Classifications of surface waters as perennial or intermittent streams, as ephemeral streams (a classification requiring no buffer under the requirements of Sec. 6.1 *Watershed Protection Overlay Districts*), or as a lake or pond shall be as indicated on the most recent version of the U.S.G.S. 1:24,000 (7.5 minute) scale topographic maps, the most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture, or a map approved by the Geographic Information Coordinating Council and the Environmental Management Commission. In the event that there exists a discrepancy among any of these maps that would affect a required buffer, the classification requiring the most stringent buffer shall be applied. However, an alternative map approved by the Environmental Management Commission shall not be used for buffer delineation on projects that are existing and ongoing within the meaning of Sec. 6.1.11(J).

D) **Appeals of Stream Classification**
Because the Neuse River is protected by a state-wide buffer program, which is managed by the Division of Water Quality, the authority to hear appeals of stream classifications for that portion of the Town of Apex and its ETJ that lies within the Neuse River Basin, which shall be indicated on the Town of Apex's "Watershed Protection Overlay District Map," rests within the sole jurisdiction of the Division of Water Quality unless the Town of Apex is delegated the authority to maintain its Neuse Buffer Program locally. Therefore, appeals of stream classifications shall be handled in the following manner:

1) *Within the Neuse River Basin*
When any affected party within the Neuse River Basin believes that the maps have inaccurately depicted surface waters, he or she shall consult the Division of Water Quality as set forth in 15A N.C.A.C. 2B .0233(3).

In the event that the Town of Apex is delegated the authority to maintain Neuse buffers locally, the Town of Apex Environmental Programs Manager shall make decisions and interpretations regarding stream classifications in accordance with all applicable state criteria and the best available scientific information. Any disputes over such on-site determination shall be referred to the Director of the Division of Water Quality 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.

2) *Within the Jordan Lake Watershed*

When any affected party within the Jordan Lake Watershed believes that the maps have inaccurately depicted surface waters, the Town of Apex Environmental Programs Manager, or his or her designee, shall make decisions and interpretations regarding stream classifications in accordance with the protocol in Sec. 6.1.11(D)(4) and all applicable state criteria and the best available scientific information. Any disputes over such on-site determination made by the Town of Apex shall be referred to the Director of the Division of Water Quality 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.

3) *In All Remaining Areas Within Both the Primary Watershed Protection District and the Secondary Watershed Protection District*
In all remaining areas, the Town of Apex Environmental Programs Manager, or his or her designee, shall make decisions and interpretations regarding stream classifications in accordance with the protocol in Sec. 6.1.11(D)(4) and all applicable state criteria and the best available scientific information. Any person aggrieved by a decision of the Town regarding such on-site determination may appeal such decision to the Town of Apex Board of Adjustment.

4) *Exemption Based On On-Site Determination*
A Town representative who makes an on-site stream classification shall have 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 of Water Quality. The specific origination point of a stream shall be established using the latest version of the Division publication, *Methodology for Identification of Intermittent and Perennial Streams and Their Orgins,* available at http://portal.ncdenr.org/web/wq/swp/ws/401/waterresources/streamdeterminations. or from the NC Division of Water Quality – 401 Oversight Express Permitting Unit, or its successor.
Surface waters that appear on the maps used to determine surface water classifications shall not be subject to the requirements of Sec. 6.1.11 if a site evaluation reveals any of the following cases:

a) 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.

b) Ephemeral streams.

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

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

E) **Diffuse Flow Requirement**
Diffuse flow of runoff shall be maintained in the riparian buffer by dispersing concentrated flow and reestablishing vegetation.

1) Concentrated runoff from new ditches or manmade conveyances shall be converted to diffuse flow before the runoff enters the riparian buffer.

2) Periodic corrective action to restore diffuse flow shall be taken if necessary to impede the formation of erosion gullies.

3) As set out in Sec. 6.1.11(E) and (G)(1) of this Ordinance, Zones of the Riparian Buffer and Table of Uses respectively, no new stormwater conveyences are allowed through the buffers except for those specified in the Table of Uses, Sec. 6.1.11(G)(1) of this Ordinance.

F) **Zones of the Riparian Buffer**

1) Perennial Streams: The protected riparian buffer for perennial streams shall have three zones as follows:

a) Zone 1 shall consist of a vegetated area that is undisturbed except for uses provided in TABLE OF USES 6.1.11(G)(1). Zone 1 shall begin at the most landward limit of the top of bank and extend landward a distance of thirty (30) feet on all sides of the surface water.

b) Zone 2 shall consist of a vegetated area that is undisturbed except for uses provided in TABLE OF USES 6.1.11(G)(1). Zone 2 shall begin at the outer edge of Zone 1 and extend landward a distance of twenty (20) feet. The combined width of Zones 1 and 2 shall be fifty (50) feet on all sides of the surface water.

c) Zone 3 shall consist of a vegetated area that is undisturbed except for the same uses provided in TABLE OF USES 6.1.11(G)(1) that are permitted in Zone 2. In the Primary Watershed Protection District, Zone 3 shall begin at the outer edge of Zone 2 and extend landward a distance of fifty (50) feet. The combined width of Zones 1, 2 and 3 in the Primary Watershed Protection District shall be one hundred (100) feet on all sides of the surface water. In the Secondary Watershed Protection District, Zone 3 shall begin at the outer edge of Zone 2 and extend landward an average distance of fifty (50) feet. The combined width of Zones 1, 2 and 3 in the Secondary Watershed Protection District shall average one hundred (100) feet on all sides of the surface water.

2) Intermittent Streams: The protected riparian buffer for intermittent streams shall have two zones as follows:

a) Zone 1 shall consist of a vegetated area that is undisturbed except for uses provided in TABLE OF USES 6.1.11(G)(1). Zone 1 shall begin at the most landward limit of the top of bank and extend landward a distance of thirty (30) feet on all sides of the surface water.

b) Zone 2 shall consist of a vegetated area that is undisturbed except for uses provided in TABLE OF USES 6.1.11(G)(1). Zone 2 shall begin at the outer edge of Zone 1 and extend landward a distance of twenty (20) feet. The combined width of Zones 1 and 2 shall be fifty (50) feet on all sides of the surface water.

3) Lakes and Ponds: The protected riparian buffer for lakes and ponds that are part of a natural drainage way shall have Zones 1 and 2 as described below, unless the lake or pond joins with a perennial stream in which case the riparian buffer shall have Zones 1, 2, and 3 as follows:

a) Zone 1 shall consist of a vegetated area that is undisturbed except for uses provided in TABLE OF USES 6.1.11(G)(1). Zone 1 shall begin at the most landward limit of the top of bank and extend landward a distance of thirty (30) feet on all sides of the surface water.

b) Zone 2 shall consist of a vegetated area that is undisturbed except for uses provided in TABLE OF USES 6.1.11(G)(1). Zone 2 shall begin at the outer edge of Zone 1 and extend landward a distance of twenty (20) feet. The combined width of Zones 1 and 2 shall be fifty (50) feet on all sides of the surface water

c) Zone 3, where a lake or pond joins a perennial stream in the Primary Watershed Protection District, shall consist of a vegetated area that is undisturbed except for the same uses provided in TABLE OF USES 6.1.11(G)(1) that are permitted in Zone 2. Zone 3 shall begin at the outer edge of Zone 2 and extend landward a distance of fifty (50) feet. The combined width of Zones 1, 2 and 3 shall be one hundred (100) feet on all sides of the surface water. Where a lake or pond joins a perennial stream in the Secondary Watershed Protection District, Zone 3 shall begin at the outer edge of Zone 2 and extend landward an average distance of fifty (50) feet. The combined width of Zones 1, 2 and 3 shall average one hundred (100) feet on all sides of the surface water.

G) **Uses Permitted Within the Riparian Buffer**

This section shall apply to activities conducted within, or outside of with hydrologic impacts in violation of the diffuse flow requirements set out in Sec. 6.1.11(E) upon, a riparian buffer regulated by this section. The Town shall issue an approval for new development only if the proposed development will avoid impacts to riparian buffers regulated by this section or, if an impact to any such

buffer is proposed, in accordance with the requirements in Sec. 6.1.11(G)(1) or (2) below, as applicable, the applicant has demonstrated that: (i) the proposed activity is exempt, (ii) the proposed activity is allowable or allowable with mitigation, and the requirements of this section for proceeding such designated use have been met, or (iii) a variance authorizing the proposed activity has been obtained.

1) *Within Zones 1 and 2 of the Neuse River Basin*
Riparian buffers within the Neuse River Basin shall be maintained and protected per 15A NCAC 2B .0233 Neuse River Basin: Nutrient Sensitive Waters Management Strategy: Protection and Maintenance of Existing Riparian Buffers. Development activity may take place within Zone 1 or Zone 2 of a riparian buffer provided that the landowner has one of the following:

   a) For any use, other than one specified as exempt, an authorization certificate that documents that the North Carolina Division of Water Quality has approved an allowable use, or an allowable use with mitigation, as described in 15A NCAC 2B .0233 Neuse River Basin: Nutrient Sensitive Waters Management Strategy: Protection and Maintenance of Existing Riparian of Existing Riparian Buffers.

   b) An opinion from the North Carolina Division of Water Quality that vested rights has been established for that activity.

   c) A letter from the North Carolina Division of Water Quality documenting that a variance has been granted for the proposed activity.

2) *Within Zone 3 of a Riparian Buffer in the Neuse River Basin and All Other Remaining Areas of Both the Primary Watershed Protection District and the Secondary Watershed Protection District*
Within all areas, other than Zones 1 and 2 or the Neuse River Basin, the following land disturbing activities and uses shall be permitted within any required riparian buffer:

   a) Those activities and uses that are specifically listed as exempt, allowable, or allowable with mitigation in THE TABLE OF USES shown below in Table 6.1.11(G)(1). The requirements for each category are given in Sec. 6.11(G)(4) below.

   b) 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 Sec. 6.1.13 below.

Table 6.1.11(G)(1)

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	X		
• 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	
Airport facilities:			
• Airport facilities that impact equal to or less than 150 linear feet or one-third of an acre of riparian buffer		X	
• Airport facilities that impact greater than 150 linear feet or one-third of an acre of riparian buffer			X
• Activities necessary to comply with FAA requirements (e.g. radar uses or landing strips)[1]		X	
Archaeological activities	X		
Bridges		X	
Canoe Access provided that installation and use does not result in 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 Sec. 6.1.11(G)(3) 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	

* 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 Sec. 6.1.11(G)(3) of this Ordinance.

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		
• High flow bypass from structural BMPs.		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
• Drainage of a pond in a natural way provided that a new riparian buffer that meets the requirements of Sec. 6.1.11(E) and (F) of this Ordinance is established adjacent to the new channel (except within Jordan Lake Watershed).	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 Sec. 6.1.11(G)(3) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Driveway crossings of streams and other surface waters subject to this Rule:			
• 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 Rule			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	
• Forest harvesting – see 15A NCAC 2B .0267(14) for requirements.[6]			
Fertilizer application: one-time application to establish vegetation	X		
Grading and revegetation in Zones Two and Three 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 Sec. 6.1.11(G)(3) 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 Sec. 6.1.11(E) and (F) of this Rule 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 Sec. 6.1.11(E) and (F) of this Rule 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 Sec. 6.1.11(G)(3) 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 Sec. 6.1.11(E) and (F) of this Ordinance is established adjacent to the pond • New ponds where a riparian buffer that meets the requirements of Sec. 6.1.11(E) and (F) 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 Sec. 6.1.11(G)(3) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Recreational and accessory structures in Zones Two and Three:			
• Sheds and gazebos in Zones Two and Three, except along perennial waters in Neuse River Basin where high density development option is utilized:			
○ 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 Sec. 6.1.11(E) and (F) 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 Sec. 6.1.11(G)(3) of this Ordinance.

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		X	
• Greater than 2,500 square feet of buffer impact			X
Stormwater BMPs:			
• Wet detention, bioretention, and constructed wetlands in Zones Two and Three if diffuse flow of discharge is provided into Zone One		X	
• Wet detention, bioretention, and constructed wetlands in Zone One			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 Item (8) of Rule 15A NCAC 02B.0268:			
• Less than or equal to 2,500 square feet of buffer disturbance	X		
• Greater than 2,500 square feet of buffer disturbance		X	
• Associated with culvert installation or bridge construction or replacement.		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 Sec. 6.1.11(G)(3) 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 Item (8) of Rule 15A NCAC 02B.0268:			
• In Zones Two and Three 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 Sec. 6.1.11(E) of this Ordinance.	X		
• In Zones One, Two and Three to control impacts associated with uses approved by the local government 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 Sec. 6.1.11(G)(3) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Utility, electric, aerial, other than perpendicular crossings[5]:			
• Impacts in Zones Two and Three		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 Zones Two and Three	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 Sec. 6.1.11(G)(3) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Utility, non-electric, other than perpendicular crossings[4,5]:			
• Impacts in Zones Two and Three		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 Zones Two and Three	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 Sec. 6.1.11(G)(3) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Water supply reservoirs: • New reservoirs where a riparian buffer that meets the requirements of Sec. 6.1.11(E) and (F) of this Ordinance is established adjacent to the reservoir • New reservoirs where a riparian buffer that meets the requirements of Sec. 6.1.11(E) and (F) 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 Division approval for the use of a 401 Water Quality Certification • Wetland, stream and buffer restoration that does not require Division approval for the use of a 401 Water Quality Certification	X X		
Wildlife passage structures		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 Sec. 6.1.11(G)(3) of this Ordinance.

[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, Two and Three meet the requirements of Sec. 6.1.11(E) and (F) of this Ordinance

[2] Provided that, in Zone 1 of the buffer, 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 alternatives evaluation by the Town.
- 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.
- Rip rap 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 towers shall not be installed within 10 feet of a water body unless the Town completes a no practical alternatives evaluation.

[4] Provided that, in Zone 1 of the buffer, 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 alternatives evaluation by the Town of Apex.
- 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.
- 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.

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

[6.] Requirements are administered by the Division of Water Quality in Zones 1 and 2 in the Jordan Lake Watershed and in Zones 1 and 2 in the Neuse River Basin, but the Town shall be notified in advance of forest harvesting activity in those buffer areas. Requirements are administered by the Town in Zone 3 in the Jordan Lake Watershed and the Neuse River Basin, and in Zones 1, 2 and 3 in the Cape Fear River Basin outside of the Jordan Lake Watershed. The requirements in 15A NCAC 2B .0267(14) that are applicable to Zone 2 shall also apply to Zone 3.

3) Requirements for Categories of Uses.
Uses designated as exempt, allowable, and prohibited in Sec. 6.1.11 (G)(1) *Uses Permitted Within the Riparian Buffer* shall have the following requirements:

a) EXEMPT. Uses designated as exempt are allowed within the riparian buffer without written authorization from the Town of Apex. 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.

b) ALLOWABLE. Uses designated as allowable may proceed within the riparian buffer provided that there are no practical alternatives to the requested use pursuant to Sec. 6.1.11(G)(4) *Determination of "No Practical Alternatives".* This includes, construction, monitoring, and maintenance activities. These uses require written authorization from the Town of Apex.

c) ALLOWABLE WITH MITIGATION. Uses designated as allowable may proceed within the riparian buffer provided that there are no practical alternatives to the requested use pursuant

to Sec. 6.1.11(G)(4) *Determination of "No Practical Alternatives"* and an appropriate mitigation strategy has been approved pursuant to Sec. 6.1.14 below. These uses require written authorization from the Town of Apex.

4) *Determination of "No Practical Alternatives"*
Persons who wish to undertake uses designated as allowable, or allowable with mitigation, in TABLE OF USES 6.1.11(G)(1) shall submit a request for a "no practical alternatives" determination to the Town of Apex Environmental Programs Manager. The applicant shall certify that the project meets the criteria identified in this Sec. 6.1.11(G)(4)(a)(i) – (iii). The Town of Apex shall grant an Authorization Certificate upon making a "no practical alternatives" determination. The Town may attach conditions to the Authorization Certificate that support the purpose, spirit and intent of Sec. 6.1.11. The procedure for making a decision whether to grant an Authorization Certificate shall be as follows:

a) For any request for a "no practical alternatives" determination for which the applicant has made a complete submission of all information set forth in Sec. 6.1.11(G)(4)(c), the Town of Apex shall review the entire project and make a finding of fact as to whether the following criteria have been met in support of such determination:

(i) 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.

(ii) 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.

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

b) Requests for a "no practical alternatives" determination shall be reviewed and either approved or denied within 60 days of receipt of a complete submission that includes the information set forth in Sec. 6.1.11 (G)(4)(c). Failure to issue an approval or denial within 60 days of an applicant's submission shall constitute a determination that the applicant has demonstrated "no practical alternatives" and an Authorization Certificate shall be issued to the applicant unless one of the following occurs:

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

(ii) The Town of Apex determines that the applicant has failed to furnish requested information necessary to the Town's decision;

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

(iv) The applicant refuses access to its records or premises for the purpose of gathering information necessary for the Town's decision. The Town may attach conditions to the Authorization Certificate that support the purpose, spirit and intent of the riparian buffer protection program.

c) Complete submissions shall include at least the following information in support of a "no practical alternatives" determination:

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

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

(iii) The location of the activity;

(iv) 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;

(v) 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;

(vi) Plans for any best management practices proposed to be used to control the impacts associated with the activity; and

(vii) The applicant's certification that the project meets all of the criteria in Sec. 6.1.11(G)(4)(a)(i) – (iii) for finding "no practical alternatives."

d) Any person aggrieved by a decision of the Town of Apex Environmental Programs Manager pertaining to issuance of an Authorization Certificate for a riparian buffer within the Jordan Lake Watershed may appeal such decision 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. Appeals of an Authorization Certificate decision by the Town's Environmental Programs Manager pertaining to a riparian buffer that is not within the Jordan Lake Watershed shall be to the Town of Apex Board of Adjustment.

5) Mitigation

Persons who wish to undertake uses designated as allowable with mitigation shall meet the following requirements in order to proceed with their proposed use:

a) Obtain an Authorization Certificate pursuant to Sec. 6.1.11(G)(4); and

b) Obtain approval for a mitigation proposal pursuant to Sec. 6.1.14.

H) **Minimization of Impact**
All uses and activities that are permitted within any required riparian buffer shall be designed to minimize impact on water quality.

I) **Notification on Site Plan and Subdivision Plan and Recording of Information**
Where required, stream buffers shall be shown on all site plans and subdivision plans approved pursuant to Sec. 6.1.4 of this Ordinance. A certificate in the form established in the *Town of Apex Design and Development Manual* shall be lettered on the face of the site plan or the recorded subdivision map. Prior to approval of a final plat (with respect to a subdivision), issuance of a certificate of occupancy (with respect to a site plan), or commencement of a use, a developer shall first cause all information pertaining to required riparian buffers to be shown on the final plat for the property.

J) **Exemption When Existing Uses are Present and Ongoing.**
This Sec. 6.1.11 shall not apply to uses that are existing and ongoing; however, this section shall apply at the time an existing, ongoing use is changed to another use. Change of use shall mean 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 Sec. 6.1.11 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 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 Sec. 6.1.11. Change of ownership 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 the required buffer area where it did not previously exist as of the effective date of this section, and existing diffuse flow is maintained. Grading and revegetating Zones Two and Three 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 Town 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 of Sec. 6.1.11;

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 Sec. 6.1.11;

c) Projects that are being reviewed through 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 Sec. 6.1.11; 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 Town prior to the effective date of Sec. 6.1.11.

6.1.12 Structural BMPs

A) **Professional Design**

All structural BMPs and any alterations thereof shall be designed by a North Carolina registered professional with qualifications appropriate for the type of system required and shall be in accordance with the NC DWQ Stormwater BMP Manual, the Town of Apex Standard Specifications and Standard Details and, when applicable, the Town Design and Development Manual; these registered professionals are defined as professional engineers, landscape architects (to the extent that G.S. Chapter 89A allows), and land surveyors (to the extent that the design represents incidental drainage within a subdivision, as provided in G.S. 89C-3(7)).

B) **Design, Location, and Landscaping of Structural BMPs**

The following specific design criteria shall be met by these systems:

1) Specific requirements for structural BMPs shall be in accordance with the NC DWQ Stormwater BMP Manual and the Town of Apex Standard Specifications and Standard Details;

2) Structural BMPs shall be designed to remove 85% of total suspended solids in the permanent pool and store runoff from a one-inch rainfall from the site above the permanent pool;

3) The designed runoff storage volume shall be above the permanent pool;

4) The discharge rate from these systems following the one-inch rainfall design storm shall be such that the runoff does not draw down to the permanent pool level in less than two days and that the pond is drawn down to the permanent pool level within at least five days;

5) The mean permanent pool depth shall be a minimum of three feet;

6) The inlet structures shall be designed to minimize turbulence using baffles or other appropriate design features;

7) Retention basins, detention basins, headwalls, outlet structures, concrete flow channels, rip rap channels, and other drainage improvements shall be screened with plant material and/or berms and situated in the least

visible location or, if visible, incorporated into the natural curves of the land;

8) Detention and retention basin embankments and the detention or retention basin itself shall be extensively landscaped with wet tolerant plant materials with the intention of re-creating a seasonal high water wet eco-structure; a list of guidelines for preferred plant materials can be found in the Town of Apex Design and Development Manual;

9) Detention or retention facilities shall be sized to accommodate the future growth of vegetation planted in the basin; and

10) In lieu of peripheral fencing, detention and retention basin edges shall be contoured and shaped to form low angles at primary water line thereby ensuring greater pedestrian safety.

C) **Identification on Site Plan/Subdivision Plan/Final Plat of Structural BMP**
A legal description of the area containing the structural BMP shall be delineated on the site plan (major or minor), subdivision plan, and recorded final plat along with any easements necessary for access to the structural BMP. The described area shall include sufficient area to perform inspections. The described area shall include, but is not limited to, the detention pond, vegetative filters, all pipes and water control structures, berms and dikes. Prior to approval of a final plat (with respect to a subdivision), issuance of a certificate of occupancy (with respect to a site plan), or commencement of a use, a developer shall first cause all information pertaining to required structural BMPs to be shown and certified by the Town of Apex Environmental Programs Manager on the final plat for the property. Such final, approved plat to be recorded shall also contain the following language: “All future development or redevelopment activities on this property shall be consistent with this approved plan. No changes to this plan shall be permitted without the Town of Apex’s prior written approval.”

D) **Operation and Maintenance Agreement**
The owner shall have an operation and maintenance agreement for all structural BMPs approved by the Environmental Programs Manager prior to approval of a final plat (with respect to a subdivision) or issuance of a certificate of occupancy (with respect to a site plan) for any development upon which a structural BMP is required. The operation and maintenance agreement, which must be executed by the owner and shall be binding on all subsequent owners of the site, portions of the site, and lots or parcels served by the structural BMP, shall clearly indicate (i) what operation and maintenance actions are needed and what specific quantitative standards will be used for determining when those actions need to be taken, (ii) the steps that will be taken for restoring a structural BMP if a failure occurs, and (iii) how cost will be apportioned among lot owners served. The operation and maintenance agreement must be recorded in the Wake County Register of Deeds office and referenced on the final plat. A copy of the recorded operation and maintenance agreement shall be provided to the Environmental Programs Manager within fourteen (14) days following its recordation.

E) **Changes or Amendments to Plans and Specifications and/or Operation and Maintenance Agreement**
Any changes or amendments to the plans and specifications of a structural BMP, or the operation and maintenance agreement for a structural BMP shall meet all of the requirements of this rule regarding design and approval.

F) **Compliance Prior to Receiving Plat Approval or Certificate of Occupancy**

Prior to approval of a final plat (with respect to a subdivision), issuance of a certificate of occupancy (with respect to a site plan), or commencement of a use for any development upon which a structural BMP is required, the Environmental Programs Manager or his designee shall inspect the structural BMP and the owner shall demonstrate that the required structure is in place, that it is operational, that it complies with all relevant portions of Sec. 6.1.12 *Structural BMPs*, and shall submit to the Environmental Programs Manager actual "as built" plans for the structure, which shall include the information listed in Section 1.06(c), Stormwater Drainage System, of the Town of Apex Standard Specifications and Standard Details, certifying completion of the same.

G) **Maintenance**

1) *Maintenance and defects guarantee*. Prior to approval of a final plat (with respect to a subdivision) or issuance of a certificate of occupancy (with respect to a site plan), a maintenance and defects guarantee shall be provided by the owner in the amount equal to 25 percent of the total construction cost of the structural BMP to ensure proper maintenance.

2) *Duration of maintenance and defects guarantee for site plan*. For site plans, the maintenance and defects guarantee shall be in effect for one year from the date of the issuance of the last certificate of occupancy. Temporary or conditional certificates of occupancy shall not suffice to commence the one-year period for release of the guarantee.

3) *Duration of maintenance and defects guarantee for subdivision*. For subdivisions, the maintenance and defects guarantee shall be in effect for one year after certificates of occupancy have been granted for 90 percent of the lots within the subdivision. If the subdivision is to be phased, the Construction Management Department shall release a maintenance and defects guarantee for any structure required for a phase when that phase is complete. Subsequent phases shall be required to post new guarantees.

4) *Default*. Upon failure of the owner to maintain the structural BMP as required, the Town may obtain and use all or any portion of the maintenance and defects guarantee necessary to continue maintenance of the structure.

H) **Inspection**

1) *Inspect once a year*. On an annual basis after completion of construction of a structural BMP, the owner shall submit to the Environmental Programs Manager an inspection report for that structure from a qualified registered North Carolina professional engineer, surveyor, or landscape architect performing services only in their area of competence. The inspection report shall be on a form provided by the Environmental Programs Manager. An initial inspection report shall be provided to the Environmental Programs Manager beginning one year from the date of submittal of the certified as-built plans to the Town and each year thereafter on or before the date of the as-built certification.

2) *Inspection by Town of Apex*. All property within the Primary Watershed Protection District and/or the Secondary Watershed Protection District shall also be subject to inspection by the Environmental Programs Manager or his designee. Such inspections may include, but are not limited to, reviewing maintenance and repair records, sampling

discharges, surface water, groundwater, and material or water in structural BMPs, and evaluating the condition of structural BMPs.

3) *Corrective action*. If at any time the Town of Apex determines that corrective actions or improvements to a structural BMP are required, the Town of Apex shall notify the owner of the needed corrections and of the date by which the work is to be completed. All corrective work shall be consistent with the approved operation and maintenance agreement.

4) Authorization prior to repair or reconstruction of structure. With the exception of general landscaping and grounds maintenance, the owner of the structural BMP shall obtain authorization from the Town prior to any repair or reconstruction of the structure. All improvements and repairs shall be consistent with the approved maintenance and operation agreement. In a bona fide emergency, necessary measures may be taken immediately in order to minimize damage to the structure and ensure its continued operation. Such measures must be promptly reported to the Environmental Programs Manager.

6.1.13 Modifications by Variance

A) **General**

Requests for minor and major variances from the standards of the Watershed Protection Overlay Districts shall be made to the Board of Adjustment, except for variance requests pertaining to impacts within Zone 1 and/or Zone 2 of a riparian buffer within the Neuse River Basin which shall be made to the Director of the Division of Water Quality as specified below in Sec. 6.1.13(B)(1)(b) and (B)(2)(c). Due to certain process differences in State statutes or rules for decisionmaking and appeals based on which basin or watershed a proposed project is located, a separate variance provision is set forth below for each of the following basins or watersheds: (i) the Neuse River Basin, (ii) the Jordan Lake Watershed portion of the Cape Fear River Basin and (iii) the Cape Fear River Basin outside of the Jordan Lake Watershed.

Sec 6.1.13(F) sets forth an alternative variance process that is available for, but not required to be used by, an applicant seeking a variance from Sec. 6.1 density requirements for a project located in the Secondary Watershed Protection District and/or from Town Buffer requirements. Town Buffers and State Buffers are defined in Sec. 6.1.14(C). The purpose of this alternative variance process is to provide additional design flexibility for a project that provides a unique or additional benefit to the Town or surrounding area that would not be available from a traditional development located in areas within the Town or its ETJ where the applicable requirements of Sec. 6.1 are not part of a State authorized program, or where separate State rules do not apply.

All applications for variances made to the Board of Adjustment shall be reviewed by the Board of Adjustment, which shall approve, approve with conditions (which may include mitigation requirements), or disapprove the variance after a public hearing noticed pursuant to Sec. 2.2.11, *Public Notification*, and conducted pursuant to Sec. 2.2.18, *Public Hearing Procedures*, based on the applicable standards in Sec. 6.1.13(E) or (F).

B) **Variances for Activities in the Neuse River Basin**

1) Minor Variances

a) *Minor Variance Requests that are to be Submitted to the Board of Adjustment.* A variance request for an activity in the Neuse River Basin shall be considered minor and a decision on such request shall be made by the Board of Adjustment when:

(i) In a development that is subject to the low-density option, it results in a total built-upon area of no more than 26.4 percent (which represents a 10 percent variation from the applicable state numerical standard of 24 percent); or

(ii) In a development that is subject to the high-density option, it results in a total built-upon area of no more than 73.5 percent (which represents a 5 percent variation from the applicable state numerical standard of 70 percent) and no variation in stormwater management requirements; or

(iii) It pertains to activities that will impact Zone 3 of a riparian buffer located within the Neuse River Basin. However, if the impacted area is also within the Neuse River Basin's Primary Watershed Protection District and along perennial waters within a high density development option area, the area of proposed impacts in the buffer also shall not exceed five percent of the buffer area. If such proposed activity within the Neuse River Basin requiring a variance for Zone 3 also includes impacts to Zone 2 that require a variance, then as specified in Sec. 6.1.13(B(1)(b)(i) the Director of the Division of Water Quality shall consider the variance request as it pertains to Zone 2 impacts, and a separate variance request shall be submitted to the Board of Adjustment pertaining to Zone 3 impacts.

An appeal of a minor variance decision made by the Board of Adjustment regarding a proposed project in the Neuse River Basin shall be subject to review in Superior Court by proceedings in the nature of certiorari in accordance with G.S. 160A-388.

b) *Minor Variance Requests that are to be Submitted to the Division of Water Quality.* A variance request for an activity in the Neuse River Basin shall be considered minor and a decision on such request shall be made by the Division of Water Quality when:

(i) It pertains to activities that will impact Zone 2 of a riparian buffer located within the Neuse River Basin. However, if the impacted area is also within the Neuse River Basin's Primary Watershed Protection District and along perennial waters within a high density development option area, the proposed impacts to the buffer also shall not exceed five percent of the buffer area. If such proposed activity within the Neuse River Basin requiring a variance for Zone 2 also includes

impacts to Zone 3 that require a variance, then the Director of the Division of Water Quality shall consider the variance request as it pertains to Zone 2 impacts, and as specified in Sec. 6.1.13(B)(1)(a)(iii) a separate variance request shall be submitted to the Board of Adjustment pertaining to Zone 3 impacts.

Pursuant to 15A NCAC 2B .0233(9)(b), a minor variance application for activities that will impact Zone 2 of a Neuse River Basin riparian buffer shall be submitted to the Division of Water Quality, and an appeal of a decision by the Director of the Division of Water Quality shall be to the Office of Administrative Hearings.

2) Major Variances

a) *Major Variance Requests Submitted to the Board of Adjustment That Will Be Decided by the Board of Adjustment*. A request for a variance for an activity in the Neuse River Basin shall be considered major, and the variance application shall be filed with the Board of Adjustment for final decision by the Board of Adjustment when it pertains to impacts within the Secondary Watershed Protection District portion of the Neuse River Basin and:

(i) In a development exercising the low-density option, it results in a total built-upon area of greater than 26.4 percent; or

(ii) In a development exercising the high-density option, it results in a total built-upon area of greater than 73.5 percent, or it consists of any variation in stormwater management requirements.

An appeal of a major variance decision made by the Board of Adjustment within the scope of this Sec. 6.1.13(B)(2)(a) shall be subject to review in Superior Court by proceedings in the nature of certiorari in accordance with G.S. 160A-388.

b) *Major Variance Requests Submitted to the Board of Adjustment That Will Be Forwarded to the Environmental Management Commission Upon Approval*. A request for a variance for an activity in the Neuse River Basin shall be considered major, and the variance application shall be filed with the Board of Adjustment for initial review and recommendation, and then forwarded to the Environmental Management Commission if the Board of Adjustment determines that the variance should be granted, when the request pertains to impacts within the Primary Watershed Protection District portion of the Neuse River Basin and:

(i) In a development exercising the low-density option, it results in a total built-upon area of greater than 26.4 percent (which represents a variation of greater than 10 percent from the applicable state numerical standard of 24 percent); or

(ii) In a development exercising the high-density option, and it results in a total built-upon area of greater than 73.5 percent (which represents a variation of greater than 5 percent from the applicable state numerical standard of 70 percent), or it consists of any variation in stormwater management requirements; or

(iii) It pertains to activities that will impact Zone 3 of a riparian buffer for perennial waters within a development exercising the high-density option, and more than five percent of the riparian buffer will be impacted.

Following a public hearing on an application within the scope of this Sec. 6.1.13(B)(2)(b), the Board of Adjustment shall provide its recommendation to the Environmental Management Commission if the Board of Adjustment determines that the variance should be granted. After the Board of Adjustment reviews and recommends approval of the application for the major variance, the Planning Director shall prepare and forward to the Environmental Management Commission for consideration the following materials relevant to the application:

(i) The application for major variance;

(ii) The public hearing notice;

(iii) The transcript of the public hearing on the application for major variance prepared by or certified by the town clerk; and

(iv) Recommendation of the Board of Adjustment on the application, including all proposed conditions, which may also include mitigation requirements.

An appeal of the Environmental Management Commission's determination shall be in accordance with the applicable state statute and rules governing the Commission's determination of that major variance request.

c) *Major Variance Requests to be Submitted Directly to the Division of Water Quality for Determination either by the Division or by the Environmental Management Commission*. A request for a variance for an activity in the Neuse River Basin shall be considered major, and pursuant to 15A NCAC 2B .0233(9)(c) an application shall be filed directly with the Division of Water Quality, and the Division will either determine that the major variance request meets the applicable requirements and submit its preliminary findings to the Environmental Management Commission, or determine that such requirements have not been met when:

i) It pertains to activities that will impact any portion of Zone 1, or Zones 1 and 2, of a riparian buffer within the Neuse River Basin. If such proposed activity requiring a variance for Zone 1, or Zones 1 and 2, of a riparian buffer within the Neuse River Basin also includes

impacts to Zone 3 that require a variance, then the Director of the Division of Water Quality shall consider the variance request as it pertains to Zone 1, or Zones 1 and 2, impacts, and a separate variance request shall be submitted to the Board of Adjustment pertaining to Zone 3 impacts.

An appeal of either the Environmental Management Commission's determination, or of the Division of Water Quality's determination that the variance requirements have not been met, shall be to the Office of Administrative Hearings.

C) **Variances for Activities in the Jordan Lake Watershed Portion of the Cape Fear River Basin**

1) Minor Variances

a) *Minor Variance Requests that are to be Submitted to the Board of Adjustment.* A variance request for an activity in the Jordan Lake Watershed Portion of the Cape Fear River Basin shall be considered minor and a decision on such request shall be made by the Board of Adjustment when:

(i) In a development that is subject to the low-density option, it results in a total built-upon area of no more than 26.4 percent (which represents a 10 percent variation from the applicable state numerical standard of 24 percent); or

(ii) In a development that is subject to the high-density option, it results in a total built-upon area of no more than 73.5 percent (which represents a 5 percent variation from the applicable state numerical standard of 70 percent) and no variation in stormwater management requirements; or

(iii) It pertains to activities that will impact Zone 2 and/or Zone 3 of a riparian buffer located in the Jordan Lake Watershed

An appeal of a minor variance decision made by the Board of Adjustment pertaining to allowable density within the Jordan Lake Watershed, or to an activity impacting only Zone 3 of the riparian buffer in that watershed, shall be subject to review in Superior Court by proceedings in the nature of certiorari in accordance with G.S. 160A-388. An appeal of a minor variance decision made by the Board of Adjustment pertaining to an activity impacting Zone 2, or Zones 2 and 3, of a riparian buffer in the Jordan Lake Watershed shall be 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.

2) Major Variances

a) *Major Variance Requests Submitted to the Board of Adjustment That Will Be Decided by the Board of Adjustment*. A request for a variance for an activity in the Jordan Lake Watershed Portion of the Cape Fear River Basin shall be considered major, and the variance application shall be filed with the Board of Adjustment for final decision by the Board of Adjustment when it pertains to impacts that are within the Secondary Water Supply Watershed Protection District portion of the Jordan Lake Watershed and:

(i) In a development exercising the low-density option, it results in a total built-upon area of greater than 26.4 percent; or

(ii) In a development exercising the high-density option, it results in a total built-upon area of greater than 73.5 percent, or it consists of any variation in stormwater management requirements.

An appeal of a major variance decision made by the Board of Adjustment within the scope of this Sec**.** 6.1.13(C)(2)(a) shall be subject to review in Superior Court by proceedings in the nature of certiorari in accordance with G.S. 160A-388.

b) *Major Variance Requests Submitted to the Board of Adjustment That Will Be Forwarded to the Environmental Management Commission Upon Approval.* A request for a variance for an activity in the Jordan Lake Watershed Portion of the Cape Fear River Basin shall be considered major, and the variance application shall be filed with the Board of Adjustment for initial review and recommendation, and then forwarded to the Environmental Management Commission if the Board of Adjustment determines that the variance should be granted, when it pertains to impacts within the Primary Watershed Protection District portion of the Jordan Lake Watershed and:

(i) In a development exercising the low-density option, it results in a total built-upon area of greater than 26.4 percent (which represents a variation of greater than 10 percent from the applicable state numerical standard of 24 percent); or

(ii) In a development exercising the high-density option, it results in a total built-upon area of greater than 73.5 percent (which represents a variation of greater than 5 percent from the applicable state numerical standard of 70 percent) or it consists of any variation in stormwater management requirements; or

(iii) It pertains to activities that will impact Zone 1, Zones 1 and 2, or Zones 1, 2 and 3, of a riparian buffer anywhere in the Jordan Lake Watershed.

Following a public hearing on an application within the scope of this Sec. 6.1.13(C)(2)(b), the Board of Adjustment shall provide its recommendation to the Environmental Management Commission if the Board of Adjustment determines that the variance should be granted.

After the Board of Adjustment reviews and recommends approval of the application for the major variance, the Planning Director shall prepare and forward to the Environmental Management Commission for consideration the following materials relevant to the application:

(i) The application for major variance;

(ii) The public hearing notice;

(iii) The transcript of the public hearing on the application for major variance prepared by or certified by the town clerk; and

(iv) Recommendation of the Board of Adjustment on the application, including all proposed conditions, which may also include mitigation requirements.

An appeal of the Environmental Management Commission's determination shall be in accordance with the applicable state statute and rules governing the Commission's determination of that major variance request.

D) **Variances for Activities in the Cape Fear River Basin outside of the Jordan Lake Watershed**

1) *Minor Variances*

a) *Minor Variance Requests that are to be Submitted to the Board of Adjustment.* A variance request for an activity in the Cape Fear River Basin outside of the Jordan Lake Watershed shall be considered minor and a decision on such request shall be made by the Board of Adjustment when:

(i) In a development that is subject to the low-density option, it results in a total built-upon area of no more than 26.4 percent (which represents a 10 percent variation from the applicable state numerical standard of 24 percent); or

(ii) In a development that is subject to the high-density option, it results in a total built-upon area of no more than 73.5 percent (which represents a 5 percent variation from the applicable state numerical standard of 70 percent) and no variation in stormwater management requirements; or

(iii) It pertains to activities that will impact Zone 2 and/or Zone 3 of a riparian buffer located in the Cape Fear River Basin outside of the Jordan Lake Watershed.

An appeal of a minor variance decision made by the Board of Adjustment shall be subject to review in Superior Court by proceedings in the nature of certiorari in accordance with G.S. 160A-388.

2) *Major Variances*

a) *Major Variance Requests that are to be Submitted to the Board of Adjustment.* A variance request for an activity in the Cape Fear River Basin outside of the Jordan Lake Watershed shall be considered major and a decision on such request shall be made by the Board of Adjustment when:

(i) In a development exercising the low-density option, it results in a total built-upon area of greater than 26.4 percent; or

(ii) In a development exercising the high-density option, it results in a total built-upon area of greater than 73.5 percent, or it consists of any variation in stormwater management requirements; or

(iii) It pertains to activities that will impact Zone 1, or Zones 1 and 2, or Zones 1, 2 and 3, of a riparian buffer.

Appeals of major variance decisions made by the Board of Adjustment within the scope of this Sec**.** 6.1.13(D)(2) shall be subject to review in Superior Court by proceedings in the nature of certiorari in accordance with G.S. 160A-388.

E) **Standards.**

1) *General*. The standards set forth in Sec. 6.1.13(E)(2) – (3) shall be applicable to all variance requests submitted to the Board of Adjustment, except for a request submitted pursuant to the alternative variance process in Sec. 6.1.13(F).

2) The Board of Adjustment shall make a finding of fact as to whether there are practical difficulties or unnecessary hardships that prevent compliance with the requirements at issue. A finding of practical difficulties or unnecessary hardships shall require that the following conditions are met:

a) If the applicant complies with the requirements at issue, 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 Board of Adjustment shall consider whether the variance is the minimum possible deviation from applicable requirements that shall make reasonable use of the property possible;

b) The practical difficulties or unnecessary hardships result from application Section 6.1 to the property rather than from other factors such as deed restrictions or other hardship;

c) The practical difficulties or unnecessary hardships is due to the physical nature of the applicant's property, such as its size, shape, or topography, such that compliance with Sec. 6.1 would not allow reasonable use of the property;

d) The applicant did not cause the practical difficulties or unnecessary hardships by knowingly or unknowingly violating Sec. 6.1;

e) The applicant did not purchase the property after the effective date of Sec. 6.1, and then request a variance; and

f) The practical difficulties or unnecessary hardships are rare or unique to the applicant's property.

3) The Board of Adjustment shall also make findings of fact as to:

a) whether the variance is in harmony with the general purpose and intent of the Town's Watershed Protection Overlay Districts and preserves its spirit; and

b) whether, in granting the variance, the public safety and welfare have been assured, water quality has been protected, and substantial justice has been done.

F) **Alternative Process and Standards for Variance From Density Requirements in Secondary Watershed Protection District and/or From Impacts to Town Buffers.**

1) An applicant seeking a variance from the density requirements in Sec. 6.1, which may include stormwater management requirements, for a project located in the Secondary Watershed Protection District, and/or from buffer requirements applicable to a Town Buffer as defined in Sec. 6.1.14(C)(1), may elect to, but is not required to, seek such variance pursuant to the process and standards set forth in this Sec. 6.1.13(F). The purpose of this alternative variance process is to provide additional design flexibility for a project that provides a unique or additional benefit to the Town or surrounding area that would not be available from a traditional development in areas where the applicable Ordinance requirements are not part of a State authorized program or where separate State rules do not apply.

2) The Board of Adjustment shall make a finding of fact as to whether there are practical difficulties or unnecessary hardships that prevent compliance with the requirements at issue. A finding of practical difficulties or unnecessary hardships shall require that the following conditions are met:

a) the project provides a unique or additional benefit to the Town or surrounding area that would not be available from a traditional development;

b) the strict application of the requirements of Sec. 6.1 create practical difficulties or unnecessary hardships;

c) the practical difficulties or unnecessary hardships result from the application of Sec. 6.1 to the property rather than from other factors such as deed restrictions or other hardship;

d) the applicant did not cause the practical difficulties or unnecessary hardships by knowingly or unknowingly violating Sec. 6.1;

e) the development plan for which the variance is sought (including specific proposed mitigation) provides an overall level of environmental protection that meets or exceeds that provided by the requirements in Sec. 6.1, including consideration of stormwater management, nutrient removal and stream and other surface water protection functions, sedimentation, and downstream water quality and quantity.;

3) The Board of Adjustment shall also make findings of fact as to:

a) whether the variance is in harmony with the general purpose and intent of the Town's Watershed Protection Overlay Districts and preserves its spirit; and

b) whether, in granting the variance, the public safety and welfare have been assured, water quality has been protected, and substantial justice has been done.

4) *Prior Approvals Required Before Submitting a Variance Request Under Sec. 6.1.13(F)*

a) Prior to submitting a variance request to the Board of Adjustment pursuant to this Sec. 6.1.13(F), the applicant shall first have obtained all required permits and approvals for the proposed development from the DENR and/or US Army Corps of Engineers, as may be applicable, with regard to any proposed dredging or filling of surface waters within the proposed development, and with regard to any proposed impacts to State Buffers in the Neuse River Basin (i.e. Zone 1 or Zone 2) or in the Cape Fear River Basin outside of the Jordan Lake Watershed (i.e. Zone 1).

(i) Although the Board of Adjustment may approve a variance request for impacts to Zone 1 of a riparian buffer in the Cape Fear River Basin outside of the Jordan Lake Watershed pursuant to the variance process in Sec. 6.1.13(D)(2), advance DENR approval will be required for such impacts to Zone 1 of a riparian buffer in the Cape Fear River Basin outside of the Jordan Lake Watershed if the impacts are part of a project for which a variance is being sought pursuant to this Sec. 6.1.13(F).

b) If the proposed project will impact any State Buffer in the Jordan Lake Watershed (i.e. Zone 1 or Zone 2) then, prior to submitting a variance request to the Board of Adjustment under this Sec. 6.1.13(F) for the remainder of the project, the applicant shall first submit a separate variance request to the Board of Adjustment pursuant to the applicable process and standards set forth in Sec. 6.1.13(C) and (E) pertaining to such impacts to Zone 1 and/or Zone 2, and the applicant shall have obtained approval of this request. Pursuant to Sec. 6.1.13(C)(1)(iii) a minor

variance request pertaining to Zone 2 of a buffer in the Jordan Lake Watershed will be determined by the Board of Adjustment. Pursuant to Sec. 6.1.13(C)(2)(b)(iii), a major variance request pertaining to Zone 1, or Zone 1 and 2, of a buffer in the Jordan Lake Watershed shall first be considered by the Board of Adjustment, and the Board of Adjustment shall provide its recommendation to the Environmental Management Commission for final decision if the Board determines that the variance should be granted.

5) An applicant for a variance who is electing to proceed pursuant to this Sec. 6.1.13(F) shall clearly state that intent in the application and shall provide written confirmation with the application that all prior approvals required pursuant to Sec. 6.1.13(F)(4) above have been obtained, or that no such approvals are required.

6) The application shall then be reviewed by the Board of Adjustment, which shall approve, approve with conditions (which may include mitigation requirements), or disapprove the variance after a public hearing noticed pursuant to Sec. 2.2.11, *Public Notification*, and conducted pursuant to Sec. 2.2.18, *Public Hearing Procedures*, based on the standards in Sec. 6.1.13(F)(2) and (3).

G) **Annual Report**

Town shall make an annual report to the Environmental Management Commission, as required by the state, of all variances that have been granted within the state identified watershed protected areas including the type of variance and the reasons for granting the variance.

6.1.14 Mitigation For Riparian Buffers

A) **Applicability**

1) This section applies to persons who wish to impact a riparian buffer within the Town or its ETJ when one of the following applies:

a) The person has received an Authorization Certificate pursuant to Sec. 6.1.11(G)(5) for a proposed use that is designated as "allowable with mitigation"; or

b) The person has received a variance pursuant to Sec. 6.1.13 and is required to perform mitigation as a condition of a variance approval.

2) The mitigation provisions of this Sec. 6.1.14 apply to all buffer requirements in the Town or its ETJ, except that in the area of the Town or its ETJ in the Neuse River Basin the buffer mitigation requirements for Zones 1 and 2 shall be administered by the N.C. Department of Environment and Natural Resources.

B) **Issuance of the Mitigation Approval.**
The Town shall issue a mitigation approval upon determining that a proposal meets the requirements set out in this Sec. 6.1.14. The approval shall identify at

a minimum the option chosen for meeting the mitigation requirement, the required area of mitigation, and either the mitigation location or the offset payment amount as applicable.

C) **Options for meeting the Mitigation Requirements.**
The mitigation requirement may be met through one of the following options:

1) *State Buffers*. The mitigation requirements for State Buffers (defined herein as buffers required by the State laws and/or rules, or approved by the State as a State authorized program) may be met through one of options a), b), or c) below. More specifically, State Buffers are: the 50-foot buffer required in the Neuse River Basin area of the Town and its ETJ; the 50-foot buffer required in the Jordan Lake Watershed area of the Town and its ETJ; the 30-foot buffer required by Phase 2 stormwater rules throughout the Town and its ETJ; the 30-foot buffer required adjacent to perennial waters in the Primary Watershed Protection District for developments utilizing the low-density option; and the 100-foot buffer required adjacent to perennial waters in the portion of the Primary Watershed Protection District within the Neuse River Basin for developments utilizing the high-density option. All other buffers in the Town and its ETJ regulated by Sec. 6.1 are referred to as "Town Buffers."

a) Payment of a compensatory mitigation fee either (i) to the State Riparian Buffer Restoration Fund pursuant to State rules applicable to the location of the State Buffer that is lost, contingent upon acceptance of payments by the NC Ecosystem Enhancement Program, or (ii) 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 State rules applicable to the location of the impacted State Buffer;

b) Donation of real property or of an interest in real property pursuant to Sec. 6.1.14(F); or

c) Restoration or enhancement of a non-forested riparian buffer pursuant to the requirements of Sec. 6.1.14(G).

2) *Town Buffers*. The mitigation requirement for Town Buffers may be met through one of the following options.

a) Construction of an alternative measure or combination of measures that reduce nutrient loading as well or better than the riparian buffer that is lost, that is located in the same river basin as the riparian buffer that is lost, and that is approved by the Town. Such measures may include stormwater best management practices and other means of capturing and controlling nutrients and other pollutants and shall be located on the site of the riparian buffer that is lost, if practicable, or as close to that location as is practicable;

b) Payment of a compensatory mitigation fee either: (i) to a Town Riparian Buffer Restoration Fund established by the Town, if such fund is established and available at the time, and such fee shall be calculated using the same fee per square foot or acre as established in the State rules for a buffer in the same basin or watershed as the Town Buffer at issue, but the applicable multiplier to determine the required area of mitigation shall be determined pursuant to Sec. 6.1.14(D)(2), or (ii) to to a private mitigation bank that complies with banking requirements of the US Army Corps of Engineers, currently as 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 State rules applicable to the location of the State Buffer that is lost;

c) Donation of real property, or of an interest in real property, pursuant to Section 6.1.14(F); or

d) Restoration or enhancement of a non-forested riparian buffer pursuant to the requirements of Sec. 6.1.14(G).

D) **The Area of Mitigation**

The Town shall determine the required area of mitigation for all mitigation options identified above in Sec. 6.1.14(C) and as further specified in the requirements for each option set out in this Sec. 6.1.14, according to the following:

1) The impacts in square feet to each zone of the riparian buffer shall be determined by the Town by adding the following information which shall be provided by the applicant:

a) The area of the footprint of the use causing the impact to the riparian buffer;

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

c) The area of any ongoing maintenance corridors the maintenance of which is not in compliance with the applicable buffer requirements within the riparian buffer associated with the use.

2) The required area of mitigation shall be determined by applying the following multipliers to the area of the impacts determined according to Sec. 6.1.14(D)(1) for each zone of the riparian buffer:

a) Impacts to Zone 1 of the riparian buffer shall be multiplied by three;

b) Impacts to Zone 2 of the riparian buffer shall be multiplied by one and one-half; and

c) Impacts to Zone 3 of the riparian buffer shall be multiplied by one, and

d) Impacts to wetlands within Zones 1 and 2 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.

E) **The Location of Mitigation of Buffer Impacts**

1) *State Buffers*. For any option chosen for mitigation of State Buffer impacts, the mitigation effort shall be located within the same subwatershed where the impacted property is located and the same distance or closer to the closest public water supply reservoir as the proposed impact, and as close to the location of the impact as feasible. Alternatively, the applicant may propose mitigation anywhere within the Town's corporate limits or ETJ provided that the mitigation proposal accounts for differences in delivery of nutrients to the affected reservoir resulting from differences between the locations of the buffer impact and mitigation. Additional location requirements for the property donation option are enumerated below in Sec. 6.1.14(F)(3)(a).

2) *Town Buffers*. For any option chosen for mitigation of Town buffer impacts, the mitigation effort shall be located within the same river basin where the impacted property is located. Additional location requirements for the property donation option are enumerated below in Sec. 6.1.14(F)(3)(a).

F) **Donation of Property**

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

1) The donation of real property interests may be used to either partially or fully satisfy the payment of a compensatory mitigation fee to either the State Riparian Buffer Restoration Fund for impacts to a State Buffer or to a Town Riparian Buffer Restoration Fund, if established and available at the time, for impacts to a Town Buffer. The value of the property interest shall be determined by an appraisal performed in accordance with Sec. 6.1.14(F)(4)(d). The donation shall satisfy the mitigation determination if the appraised value of the donated property interest is equal to or greater than the required mitigation fee calculated pursuant to 15A NCAC 2B .0269. If the appraised value of the donated property interest is less than the required fee, the applicant shall pay the remaining balance due.

2) A donation in the form of a conservation easement shall be accepted only if the conservation easement is granted in perpetuity.

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

a) In addition to the location requirements for mitigation of buffer impacts for State Buffers and Town Buffers, as applicable in Sec. 6.1.14(E), 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 Basin developed by the Department of Environment and Natural Resources pursuant to N.C.G.S. 143-214.10 for the basin in which the property is located;

b) The property shall contain riparian buffers not currently protected by the State's riparian buffer protection program that are in need of restoration as defined in Sec. 6.1.14(G)(4);

c) 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;

d) The size of the restorable riparian buffer on the property to be donated shall equal or exceed the area of mitigation responsibility determined pursuant to Sec. 6.1.14(D);

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

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

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

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

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

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

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

l) The property shall not have any encumbrances or conditions on the transfer of the property that limit or impede its use for the required mitigation purposes.

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

a) Documentation that the property meets the requirements laid out in Sec. 6.1.14(F)(3);

b) 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;

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

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

e) A title certificate.

G) **Riparian Buffer Restoration or Enhancement**
Persons who choose to meet their mitigation requirement through riparian buffer restoration or enhancement shall meet the following requirements:

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

a) The area of riparian buffer restoration is equal to the required area of mitigation determined pursuant to Sec. 6.1.14(D); or

b) The area of riparian buffer enhancement is three times larger than the required area of mitigation determined pursuant to Sec. 6.1.14(D);

2) The location of the riparian buffer restoration or enhancement shall comply with the requirements in Sec. 6.1.14(E);

3) The riparian buffer restoration or enhancement site shall have a minimum width of 50 feet or equal to the width of the impacted buffer, which ever is greater, as measured on a line perpendicular to the surface water;

4) Enhancement and restoration shall both have the objective of establishing a forested riparian buffer according to the requirements this Section. 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;

5) The applicant shall first receive an Authorization Certificate for the proposed use according to the requirements of Sec. 6.1.11(G)(5), or a variance pursuant to Sec. 6.1.13. After receiving this Certificate or

variance, the applicant shall submit a restoration or enhancement plan for approval by the Town. The restoration or enhancement plan shall contain the following:

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

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

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

d) A fertilization plan; and

e) A schedule for implementation;

6) Within one year after the Town has approved the restoration or enhancement plan, the applicant shall present proof to the Town 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, where applicable, and the Town's riparian buffer protection program and shall be subject to civil penalties pursuant to Sec. 6.15;

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

8) The applicant shall submit annual reports for a period of five 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.

6.1.15 Civil Penalties

A) **Notification of Violation**
When any subdivision, development, and/or land use is found to be in violation of any provision of Sec. 6.1 *Watershed Protection Overlay Districts*, the person responsible for the violation shall be notified by the Public Works & Utilities Director. Such notification shall take the following form:

1) It shall be made in writing.

2) It shall indicate the nature of the violation.

3) It shall order any of the following that is applicable:

a) *The discontinuance of the illegal use of land, buildings or structures,*

b) *The removal of illegal buildings or structures,*

c) *The removal of additions, alterations, or structural changes to illegal buildings or structures,*

d) *The discontinuance of any illegal work being done, or*

e) Any other action that is deemed necessary at that time to correct the violation.

B) **Civil Penalties**
Following notification of a violation of Sec. 6.1 *Watershed Protection Overlay Districts*, civil penalties may be imposed by the Public Works & Utilities Director on the person responsible for the violation. Civil penalties will be imposed in accordance with Sec. 11.4.4 *Civil Penalties*.

6.1.16 Criminal Penalties
Violation of Sec. 6.1 *Watershed Protection Overlay Districts* shall not be a crime under G.S. §14-4 or other law.

6.1.17 Remedies
In addition to the imposition of civil penalties, the Town may take action in accordance with Sec. 11.4.1 *Permit Revocation, Sec*. 11.4.2 *Disapproval of Subsequent Permits and Development Approvals*, and/or Sec. 11.4.3 *Injunction and Abatement Order* in order to prevent, stop, penalize, restrain, correct, or abate any violation of Sec. 6.1 *Watershed Protection Overlay Districts*.