



4 OPEN SPACE AND CONSERVATION

4.1 PURPOSE AND INTENT

4.1.1 PURPOSE AND INTENT

In accordance with the provisions of NCGS 160D-702 (b), the requirements of this Chapter are intended to provide for preservation, improvement, and/or enhancement of Open Spaces for recreational amenities, Tree Preservation Areas, public recreation, and natural resource conservation concurrent with land Use and development activity in the Town and its Extraterritorial Jurisdiction. Pursuant to the standards and limitations of this Chapter, new Subdivision and development Projects may be required to provide some or all of the various Open Space and conservation types listed below.

- A. On-Site Private Open Space.** The Town requires new development Projects (or expansions thereof) and Major Subdivisions to provide On-Site Private Open Space to serve their tenants, residents, and/or patrons. These provisions are intended to conserve Open Space/natural resources and to create private (or semi-private) Park spaces for passive and active recreational Use. Based on the Zoning District and the proposed land Use, On-Site Private Open Space may be required to include a combination of Tree Preservation Areas, Active Recreation Areas, and in some cases, Urban Civic Space; these components are described below. As an alternative method, Conservation Subdivisions may provide On-Site Private Open Space as general conservation land.

CONTENTS

4.1	PURPOSE AND INTENT	4-1
4.2	CONSOLIDATED OPEN SPACE AND CONSERVATION REQUIREMENTS	4-3
4.3	ON-SITE PRIVATE OPEN SPACE STANDARDS	4-6
4.4	TREE PRESERVATION AREAS.....	4-10
4.5	ACTIVE RECREATIONAL AREAS.....	4-14
4.6	URBAN CIVIC SPACE.....	4-15
4.7	PUBLIC PARK LAND	4-15
4.8	CONSERVATION BUFFER AREAS	4-18
4.9	FORESTRY ACTIVITY, TIMBERING OPERATIONS, AND SITE CLEARING	4-33

1. **Tree Preservation Areas.** The Town finds that the presence of trees and the protection of the forest canopy: mitigates the effects of climate change; improves air quality; conserves energy; provides wildlife habitat; reduces soil erosion; enhances storm water detention and drainage; assures the presence of healthy, mature vegetation to comply with the landscape requirements of this UDO; and reduces the environmental and visual impacts of development by preserving Specimen Trees, native hardwood forest stands, and ecologically significant landscapes. Tree preservation is required for all Residential Use Districts and certain Commercial & Mixed-Use Districts. The Town's policy is to balance the private property rights of landowners with the public health, safety, and welfare that is promoted by the existence and maintenance of trees in its jurisdiction. The resulting designated Tree Preservation Areas may warrant tree planting (or replanting) of cleared areas to achieve a canopy at maturity.
2. **Active Recreation Areas.** The Town finds that recreational amenities which are near to residents, tenants, and patrons positively contribute to quality of life and increase physical activity which improves public health. Pursuant to the District, new development Projects and Major Subdivisions shall designate a portion of the subject property as Active Recreation Areas that are improved (at the developer's expense) with Parks and/or recreational amenities that serve the Project's occupants. Said areas are normally dedicated to the associated property owners'/homeowners' association for perpetual ownership and maintenance.
3. **Urban Civic Space.** The Town finds that quality commercial, employment, and civic Uses shall include usable outdoor Open Space amenities for community gathering. Based on the Zoning District, new and expansions of commercial & mixed-use and certain employment/campus Use Projects shall provide Urban Civic Spaces concurrent with development to allow for outdoor gathering areas for tenants and patrons.
- B. **Public Park Land.** The Town finds that new residential Projects shall provide land and/or a cash payment to off-set their impact on the public Parks system and to maintain the Town's adopted level of service for Parks. New Projects that contain residential Dwelling Units (including all Subdivisions) shall dedicate public Park land and/or provide a payment in lieu (subject to the limitations of Section 4.7) to the Town for the creation and development of public Parks and recreation serving its residents. Public Park Land is required for Projects that contain new residential units in addition to On-Site Private Open Space standards that may be necessary with said Projects.
- C. **Conservation Areas.** The Town finds that conservation buffers and Use restrictions are warranted along riparian corridors, designated greenways, and other critical environmental features to ensure their perpetual ecological and habitat functions. The conservation buffer standards are intended to protect natural resources (including riparian corridors and wetlands), specific watersheds, and areas along major roadway corridors and are intended to mostly remain in their natural state; where applicable, the buffers shall be enhanced with native trees and vegetation. Conservation Areas may be required in addition to On-Site Private Open Space and Public Park Land requirements.

4.1.2 APPLICABILITY

- A. **General.** All Subdivisions and development Projects (i.e., new construction, Building additions, Parking Area expansions, etc.) shall conform to the requirements of this Chapter subject to the exceptions in this subsection.
- B. **Open Space Allowed.** All required Open Space that may be required pursuant to this Chapter shall be considered a permitted Use in all Zoning Districts. On-site Private Open Space and Conservation Areas shall be considered accessory to the development/Subdivision in which they are a part. The following standards may also apply:

1. The Recreation Uses listed in Table 3.2.A – Table of Permitted Uses shall be subject to the UDO-permits, limitations, and review procedures that may be established therein.
2. In addition to the standards herein, Active Recreation Areas, Urban Civic Space and other related Open Space areas are subject to the additional Use provisions outlined in Section 3.3.7 of this UDO.

C. Exemptions.

1. Projects less than 2 acres in size are exempt from the Tree Preservation Area requirements, except as required in the Downtown Village District (Section 4.1.2). The minimum On-Site Private Open Space requirement may be met by providing additional Active Recreation Area, Urban Open Space, or by voluntarily providing Tree Preservation Areas as required by the Chapter.
2. Minor Residential Subdivisions and individual Buildings not a part of a larger Project or Subdivision (e.g., infill Project on previously subdivided Lot) with 4 or fewer units (i.e., Quadruplex/small multi-family Building) are exempt from all On-Site Private Open Space requirements but remain subject to Public Park Land and Conservation Area standards.
3. Downtown Village District – Land Use & Character Plan Exemption. Subdivisions and/or development Projects located within the Downtown Village District Future Land Use category (from the Comprehensive Plan) are subject to the following modified standards:
 - a. Residential Use Districts: Exempt from the On-Site Private Open Space requirements of this Chapter except for Tree Preservation Area requirements as modified by 4.1.2.C.3.b.
 - b. Non-Residential Use Districts: Subject to all On-Site Private Open Space requirements of this Chapter, but subject to the following modified Tree Preservation Area requirements:

- i. The removal of any tree 20 inches or greater diameter at breast height (DBH) must be approved through a Type 1 review procedure or through a Development Plan. The proposed tree removal activities shall not be in conflict with any condition of approval that may have been imposed on the site/development.
- ii. Existing tree canopies shall be prioritized in meeting the minimum On-Site Private Open Space requirements (e.g. required Active Recreation Areas and/or Urban Civic Spaces).

4.2 CONSOLIDATED OPEN SPACE AND CONSERVATION REQUIREMENTS

4.2.1 MINIMUM OPEN SPACE AREA DEDICATION

- A. **Minimum Dedication.** Subdivisions and development Projects shall provide the minimum dedicated areas for On-Site Private Open Space, Public Park Land, and/or Conservation Areas pursuant to Table 4.2-A for each zone unless specifically exempted in subsection 4.1.2.
- B. **Other Standards.** The subsequent sections of this Chapter provide additional requirements for the various Open Space and conservation types (i.e., On-Site Private Open Space, Public Park Land, and Conservation Areas). Those standards are required in addition to those listed in Table 4.2-A.

TABLE 4.2-A – MINIMUM OPEN SPACE REQUIREMENTS BY USE DISTRICT TABLE

		RESIDENTIAL USE DISTRICTS					COMMERCIAL & MIXED-USE DISTRICTS				EMPLOYMENT/CAMPUS USE DISTRICTS			
		RR	SR	NR	NCR	MXR	NMX	DMX	RMX	CB	SP	IVMX	BRT	HI
ON-SITE PRIVATE OPEN SPACE														
Method 1: Standard Projects (N1, N2 & N3)														
Total Minimum Required (% of total Project Area)		30%	30%	30%	15%	15%	12%	1%	15%	15%	10%	1%	3%	3%
The <i>Total Minimum Required Open Space</i> may include a combination of 3 components: Tree Preservation, Active Recreation, and/or Urban Civic Space in accordance with the minimums listed below, as applicable.														
<i>Component 1. Tree Preservation Area (minimum) (N5)</i>		25%	20%	20%	10%	10%	10%	0%	0%	10%	0%	0%	0%	0%
<i>Component 2. Active Recreation Area (minimum) (N5)</i>		0%	5%	5%	5%	5%	0%	0%	2%	2%	0%	0%	2%	2%
<i>Component 3. Urban Civic Space (minimum)</i>		n/a	n/a	n/a	n/a	n/a	200 sf/0.5% (N4)	200 sf/0.5% (N4)	200 sf/0.5% (N4)	200 sf/0.5% (N4)	200 sf/0.5% (N4)	200 sf/0.5% (N4)	n/a	n/a
<i>Flexible Space</i>		5%	5%	5%	0%	0%	1.5%	0.5%	12.5%	2.5%	9.5%	0.5%	1%	1%
Method 2: Conservation Subdivision (N6)														
Total Minimum Required (% of net Project Area)		50%	40%	40%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
The <i>Total Minimum Required Open Space</i> requires Tree Preservation Area in accordance with the minimum listed below. Flexible space may include Active Recreation Area, Urban Civic Space, or additional Tree Preservation Area.														
<i>Component 1. Tree Preservation Area</i>		40%	30%	30%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Flexible Space</i>		10%	10%	10%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PUBLIC PARK LAND REQUIREMENT (RESIDENTIAL DWELLING UNITS) (N7)														
Public Park Land (required in addition to On-Site Private Open Space minimum)		Refer to Section 4.7 Public Park Land												
CONSERVATION BUFFER AREA REQUIREMENT (WHERE PRESENT)														
Minimum Conservation Buffer Area		Conservation Buffer Areas shall be provided where natural features (such as riparian corridors and designated greenways) exist on the subject Lot pursuant to subsection 4.8 of this Chapter. Required Conservation Buffer Areas may be used to meet portions of On-Site Private Open Space requirements.												
N1	Non-residential Uses located in a Residential Use District shall follow the requirements listed for the NMX District.													
N2	On-site Private Open Space is required for all Major Subdivisions - Residential where the resulting plat/Subdivision action results in 5 or more Lots and Development Plans that include Attached or Apartment Dwellings													
N3	The total minimum required On-site Private Open Space is inclusive of other requirements including Tree Preservation Areas, Conservation Buffer Areas, floodplains, Perimeter Buffers, landscaping, etc.													
N4	Where 2 standards are listed in the table for a specific Use District and Open Space type, the greater standard shall apply. Infrastructure Uses shall not be required to provide Urban Civic Space.													
N5	For Projects that could be considered in multiple Open Space categories, the most stringent requirements shall apply. Infrastructure Uses shall not be required to provide Active Recreation Area.													
N6	Refer to UDO Section 8.5, Subdivision Lot Design Standards for Conservation Subdivision requirements. Total Minimum Required based on net Project Area after removing constrained land areas (slopes more than 35 percent of at least 5,000 sf contiguous area; the 100-year floodplain; bodies of open water; and wetlands).													
N7	Applicant may pay the Town a payment in lieu of providing Public Park Space pursuant to the limits outlined in this table and the standards outlined in Section 4.7.2.													

4.2.2 PRIORITIZATION OF OPEN SPACE

- A. Applicants shall prioritize the following land areas, environmental features, and topographic characteristics on the subject site to meet the minimum Tree Preservation and Active Recreational Area components of On-Site Private Open Space and the Public Park Land requirements for the subject development/ Subdivision Project.
1. Specimen Trees
 2. Mature native tree canopies
 3. Riparian areas and uplands adjacent to wetlands outside of required zones
 4. Existing tree canopies surrounding designated greenways (as specified in the Comprehensive Plan)
 5. Rock outcroppings
 6. Natural viewsheds

4.2.3 DEDICATION AND MAINTENANCE

- A. **Documentary Assurances.** Where this Chapter (or other provisions of this UDO) requires dedication of Open Space as part of a Development Plan or Subdivision Plan, the applicant shall provide documentary assurance that said lands will be dedicated and maintained by specific entities and in accordance with the associated Development Plan or Subdivision Plan or other applicable Town approval. These documents shall also include a management plan that specifies that the Open Space will be made available to the residents, owners, and users of the Project at a reasonable and non-discriminatory rate of charge prior to obtaining a UDO Permit or Final Plat approval. Documentary assurance may include, but not limited to, notes on a Final Plat, deed materials, or purchase/sales agreements.
- B. **Cost and Responsibility.** Unless accepted for dedication or otherwise agreed to by the Town, another unit of government, or a private non-profit land conservancy, the cost and responsibility of maintaining such Open Space and any associated facilities shall be borne by the property owner.

- C. **Land Recordation.** Such documentary assurances shall be recorded with the Wake County Register of Deeds or otherwise provided for through legally binding perpetual agreements as approved by Town Council.
- D. **Perpetuity Clause.** Such Open Space shall perpetually run with the Project and shall not be developed or separated from the Project at a later date (unless no development of any portion of the Project which is benefited by or required to provide such Open Space has occurred and the entire area of the Project is presented for a new Development Plan or Subdivision Plan approval, the effect of which will be to nullify the prior approval).
- E. **Maintenance and Alteration.**
1. **Plan Compliance.** Required Open Space areas may be modified to improve their appearance, functionality, or overall condition, but only in a manner that complies with the associated Development Plan or Subdivision Plan.
 2. **Tree Preservation and Conservation Areas.** Designated Tree Preservation Areas and Conservation Areas (or Buffer) are expected to remain in a natural, undisturbed state (e.g., Tree Preservation Areas, conservation buffers). Routine management, weeding, and pruning are permitted activities.
 - a. When not specified in the associated Development Plan or Subdivision Plan, the Administrator may authorize the following activities pursuant to a Type 1 Review: reforestation; woodland management; pasture or cropland management; any Buffer Area landscaping; Stream bank protection; and/or wetlands management.
 3. **Significant Changes.** Significant changes, modifications, and/or alterations to required Open Space areas are contingent on a Minor or Major Modification approval pursuant to Table 11.4-A and Section 11.4 of this UDO.

4.3 ON-SITE PRIVATE OPEN SPACE STANDARDS

4.3.1 GENERAL STANDARDS AND METHODOLOGY

- A. **General.** The provisions in this section apply to the required On-Site Private Open Space features within the subject development Project/Subdivision. Additional standards and requirements are established for each component in the subsequent sections of this Chapter.
- B. **Minimum Dedication.** All Projects shall provide On-Site Private Open Space within the subject site pursuant to the minimum percentages listed in Table 4.2-A pursuant to Method 1 or 2 based on the type of Project (i.e., Method 1 is applicable to standard Projects, whereas Method 2 is applied to Conservation Subdivisions).
- C. **Calculation Methodology.** The following standards shall be used to calculate the minimum required On-Site Private Open Space areas for new Subdivisions/development Projects.
 1. **Site Percentage.** The minimum required On-Site Private Open Space is calculated as the percentage of the total gross site area. Minimum required On-Site Private Open Space is inclusive of other requirements including tree preservation/conservation areas, floodplains, Perimeter Buffers, landscaping, and other natural resources.
 2. **Method 1 – Standard Projects.** Each development/Subdivision Project shall provide the “Total Minimum Required” pursuant to Method 1 in Table 4.2-A. For some Use Districts, a proportion of the minimum On-Site Private Open Space shall be provided as a combination of the following components
 - a. Tree Preservation Area,
 - b. Active Recreation Area, and/or
 - c. Urban Civic Space.
 - d. The minimum percentages for each On-Site Private Open Space component shall be provided pursuant to UDO Table 4.2-A.
3. **Method 2 - Conservation Subdivisions.** For residential Subdivisions that utilize the Town’s Conservation Option, said Project shall provide the “Minimum Open Space” pursuant to Method 2 in Table 4.2-A – for those Subdivisions, the standards for Method 1 do not apply.
- D. **Cumulative Calculations and Credits Towards Other Requirements.** The minimum required On-Site Private Open Space areas may be combined and are inclusive of other conservation/preservation areas pursuant to the allowances and limitations outlined in this Chapter. It is possible that certain Conservation Areas, because they are based on specific locational criteria (i.e., along creeks and Streams) and not a minimum area, may exceed the minimum On-Site Private Open Space requirements of Table 4.2-A. Conservation and Tree Preservation Areas may also be counted towards the requirements for Chapter 5, Landscaping (e.g., Parking Lot landscaping, Perimeter Buffers).
- E. **Waterways and Water Bodies.** Floodplains, floodways, wetlands, farm ponds, etc. may be credited towards the general Open Space requirements but may not be used to meet the minimum Active Recreational Area components.

4.3.2 CONSIDERATION OF UTILITY AREAS

Utility areas may be considered eligible for contribution to the required On-Site Private Open Space only after all other priority areas have been considered as outlined in subsection 4.2.2 except as noted below:

- A. Above-ground utility easements and Rights-of-Way are ineligible regardless of whether the above ground facilities are in place.
- B. Utility easements and rights-of way for below-ground utilities may be utilized only for those areas where the easement-holder or owner permits public access and/or usage (e.g., trail crossing, recreational field)
- C. Up to 50% of a Stormwater Control Measures (SCMs) may be eligible subject to the following conditions:

1. It is designed for dry weather usage (e.g., dry detention areas) as fields or other active recreation activities; or,
 2. The SCM includes 1 or more of the following recreation-related design elements.
 - a. A trail for walking or jogging along the SCM a minimum of 50% of the perimeter length of the SCM; or,
 - b. 1 bench for every 50 linear feet of perimeter length of the SCM; or,
 - c. A decorative water feature, such as aeration or fountain fixture; or,
 - d. A fishing dock/pier; or,
 - e. A minimum of 2 educational signs explaining the function and benefits of the SCM. The minimum Sign Surface Area shall be 6 square feet and the maximum height shall be 4 feet; and,
 3. The project is not located within the Conservation Neighborhood Future Land Use category from the Comprehensive Plan.
3. Existing trees and vegetation may be used to meet these landscaping requirements.
- C. Permitted Open Space Configurations.** The applicant shall provide and improve (as applicable) the land dedicated to meet the Project's minimum On-Site Private Open Space requirements, pursuant as 1 or more of the configurations listed in Table 4.3-A – Types of Permitted Open Space Configurations below.

4.3.3 GENERAL DESIGN STANDARDS

- A. Access.** Any required On-Site Private Open Space shall be designed and located to be accessible to all residents, owners and users within the Project, and their guests, by way of a Sidewalk, private greenway, and/or multiuse trail. As applicable, the maintenance entity (e.g., homeowners association or conservation entity) may install signage and physical barriers to restrict access in portions of the Open Space lands to protect trees and natural resources.
- B. Perimeter Landscaping Required.** All required On-Site Private Open Space areas shall include perimeter landscaping pursuant to the following:
1. **All Open Spaces except Tree Preservation Areas, Parkways and Greenbelts.** A Type A Perimeter Buffer is required. The associated landscaping plan shall incorporate existing mature trees.
 2. **Tree Preservation Area, Parkways and Greenbelts:** These areas shall be maintained in their natural, vegetative state or enhanced with landscape materials to comply with a Type B Buffer.

TABLE 4.3-A – TYPES OF PERMITTED OPEN SPACE CONFIGURATIONS TABLE

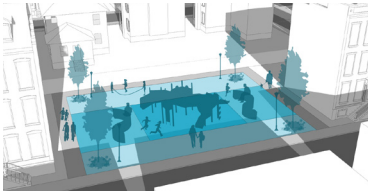
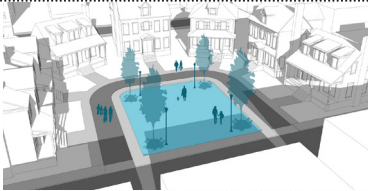
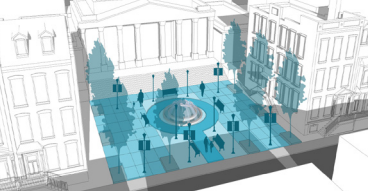
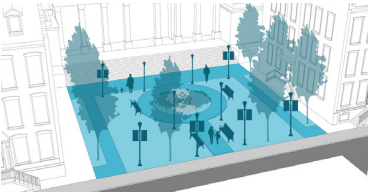
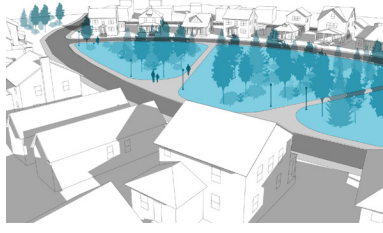
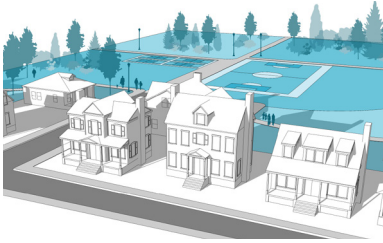
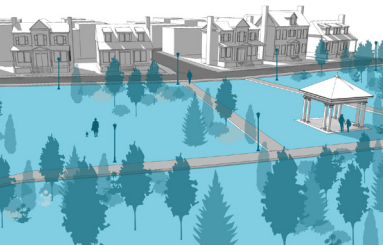
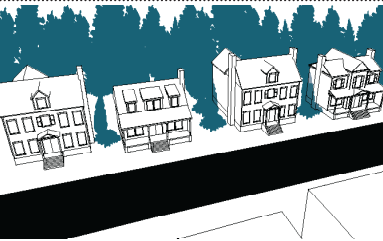
Open Space Type	Illustration	Recommended Size	Description & Key Features	Typical Facilities & Requirements
Mini-Park		Min: 2,000 sq. ft. Max: None	Mini-Parks are small spaces typically designed for small-scale passive recreation (e.g., courtyard seating) and active recreation (e.g., playgrounds).	Playgrounds may be fenced and shall be equipped with playground equipment and/or fountain/splash pad, seating, and an open shelter or other shading Structure. Courtyards are spaces with more than 50% of its perimeter defined by Building edges that is available for informal activities and seating. Courtyards are usually paved.
Close		Min: 2,500 sq. ft. Max: None	Closes are alternatives to a paved Cul-de-Sac that are available for informal activities near the fronting residences.	Passive recreation, formal landscaping, and seating.
Plaza		Min: 2,000 sq. ft. Max: 2 acres	A Plaza shall be located adjacent to or as a part of a civic Building or common area facility developed as a Project amenity and shall be spatially defined by Building frontages. A Plaza shall not exceed in horizontal length or width more than 3 times the height of adjacent Buildings.	It shall maintain all surface areas at a slope of less than 3% and may include passive recreation, Accessory Structure, drinking fountains, paths and trails, seating, primary surfaces with brick or other paver materials. Surface areas may be stepped, in a manner approved as being appropriate and necessary to accommodate natural topography.
Square		Min: 2,000 sq. ft. Max: 2 acres	A Square is a defined space available for civic purposes, unstructured, and limited amounts of Structured recreation. Squares are generally spatially defined by Building frontages and located at the intersection of important Streets.	Passive and active unstructured or Structured recreation, Accessory Structure, drinking fountains, community facility <5,000 gross square feet, paths and trails, seating. It may be surfaced in any combination of grass, crushed gravel, brick pavers, or other suitable ground cover.

TABLE 4.3-A – TYPES OF PERMITTED OPEN SPACE CONFIGURATIONS TABLE

Open Space Type	Illustration	Recommended Size	Description & Key Features	Typical Facilities & Requirements
Green		Min: 2,000 sq. ft. Max: 5 acres	Greens are informal spaces typically sited to preserve key natural features and may include passive and limited active recreational amenities.	Passive and active unstructured or Structured recreation, Accessory Structure, drinking fountains, community facility <5,000 gross square feet, paths and trails, seating. The surface is predominately grass or other natural ground cover and tree stand areas.
Park		Min: 1 Acre Max: None	Parks are available for unstructured recreation and a limited amount of Structured recreation including some athletic fields.	Facilities may include, but not be limited to, such passive recreational Use amenities as benches, picnic tables, paths and trails, drinking fountains, Gazebos, playground, stages or band stands as well as active recreational Uses such as athletic fields and their related facilities.
Parkway		Min: 1 acre Max: None	Parkways are areas that share more than 25% of their perimeter along a Street with a minimum depth of 50 feet from the back of curb / edge of pavement. Parkway shall retain, to the greatest extent possible, natural or pre-existing contours, topography, water courses and vegetation.	Parkways often contain trails. If the Parkway is sparsely vegetated, it shall be provided with supplemental interior landscaping of an informal design.
Greenbelt		Min: 20 feet in width	Greenbelts are generally conservation areas that shall retain, to the greatest extent possible, natural or pre-existing contours, topography, water courses and vegetation.	Passive and active recreation, greenways, trails, and seating.

4.4 TREE PRESERVATION AREAS

- A. **Applicability.** The provisions in this section apply to all Tree Preservation Areas that may be required for the subject development/Subdivision Project pursuant to Table 4.2-A.
- B. **Designation.** The applicant shall designate the minimum Tree Preservation Areas on the subject site as part of the associated Development Plan or Subdivision Plan process. Tree Preservation Areas shall be selected based on the priorities list in subsection 4.4.1. For previously cleared sites or properties that have tree canopy areas that are below the minimum required Tree Preservation Area requirements, the applicant may designate land that will be replanted/reforested to comply with the minimum site percentage.
- C. **Permitted Passive Recreational Elements.** Land tracts/parcels designated as Tree Preservation Areas may allow passive recreational elements such as trails, pathways, and gathering areas. Paved surfaces should be minimized and generally located outside the drip line of any specimen and/or protected tree; whereas, the Administrator may allow exceptions to meet Americans with Disabilities (ADA) accessibility standards.
- D. **Location Priority.** Where practicable, each Tree Preservation Area shall be located amongst existing tree canopies and along other natural corridors. Said areas shall be safely accessible to its intended population/users in terms of access points and pathways.
- E. **Tree Preservation Exemptions.** The following activities are exempt from the tree preservation standards of this Chapter:
 1. The removal of dead or naturally-fallen trees, as verified by a Certified Arborist, Registered Landscape Architect or Registered Forester; or
 2. The removal of trees that pose an imminent threat of falling onto an existing Structure, are so close to an existing Structure as to endanger the stability of the Structure, or otherwise create on-going safety problems for existing development, as verified by a Certified Arborist, Registered Landscape Architect or Registered Forester; or
 3. The removal of diseased trees posing a threat to adjacent trees, as verified by a Certified Arborist, Registered Landscape Architect or Registered Forester; or
 4. The removal of invasive species of trees, provided the removal results in the complete removal of the trees (including roots), as verified by a Certified Arborist, Registered Landscape Architect or Registered Forester; or
 5. The selective and limited removal of trees or vegetation necessary to obtain clear visibility within intersection sight distance regulations of this UDO; or
 6. The removal of trees that the Administrator or designee determines to be a hazard to traffic or to interfere with the provision of utility lines or public services; or
 7. The removal of trees as necessary for rescue in an emergency; or
 8. The removal or replacement of trees outside of an approved Tree Preservation Area or not required by an approved landscape plan; or
 9. Tree removal associated with normal forestry activity that is conducted on land taxed on the basis of its present-use value as forestland pursuant to NCGS Chapter 105, Article 12, in accordance with a forest management plan prepared or approved by a forester registered in accordance with NCGS Chapter 89B, or not required by an approved landscape plan.

4.4.1 TREE PRESERVATION PRIORITIES

In establishing Tree Preservation Areas, the applicant shall prioritize the site's tree-related features listed in this subsection in the order that follows:

- A. **Specimen Tree Preservation.** The applicant shall prioritize designated Tree Preservation Areas around existing Specimen Trees that may exist on the site. Trees that qualify as Specimen Trees are in good health and not showing signs of disease, insect infestation or decay and:
 1. Are over 30 inches DBH for Pine species; or

2. Are over 24 inches DBH for non-Pine species; or
3. For other unique or rare tree species: (1) Flowering Dogwood – over 3 inches DBH; (2) Eastern Redbud – over 3 inches DBH; (3) Longleaf Pine – over 12 inches DBH.
4. **Critical Root Zone.** An area equivalent to 2 times the area of the estimated critical root zone of the Specimen Tree may be credited towards the minimum Tree Preservation Area.

B. Significant Tree Stands. The applicant shall prioritize designated Tree Preservation Areas around existing significant tree standards that may exist on the site.

1. **Significant Tree Stand Qualification.** To qualify as a significant tree stand, the Tree Preservation Area must be an area within a contiguous wooded area of at least 10,000 square feet as measured by contiguous hardwood canopy coverage.
2. **Size and Variety.** Significant tree stands must contain mature hardwood forest consisting of greater than 25% hardwood trees native to the region over 20 years old or greater than 10 inches diameter to indicate mature trees.

C. Significant Natural Resource Areas. The applicant shall also prioritize designated Tree Preservation Areas around existing significant natural resource areas that may exist on the site. To qualify as a significant natural resource area, the Project Area must have an observed presence of species of special concern, threatened or endangered species as determined by the North Carolina Wildlife Resources Commission (NCWRC) and North Carolina Plant Conservation Program (NCPCP), or other important ecological or geologic features. Significant Natural Resource Areas may or may not include trees. The following qualifications apply to specific natural resource features:

1. **Riparian Corridors and Jurisdictional and Non-jurisdictional Wetlands.** Delineated wetland/Stream and/or Riparian Buffer Areas otherwise referenced in Section 4.4. may constitute “Natural Resources.”

Conservation Buffer Areas of this UDO may be counted toward the Tree Preservation Area requirement.

2. **Endangered Species Habitat.** Endangered species habitat, as delineated by state and federal agencies for environmental permitting, may constitute “Natural Resources” for the purposes of tree preservation.
3. **Sufficient/Critical Habitat.** Sufficient habitat of State listed wildlife species or federally listed plants may constitute “Natural Resources” for the purposes of tree preservation and includes species designed as Endangered, Threatened, or Special Concern. Said areas shall be as determined by the qualified biologist.

D. Supplemental Undisturbed Perimeter Buffers.

The applicant may designate Tree Preservation Areas around existing undisturbed Perimeter Buffers that may exist on the site – these areas shall be prioritized where no Specimen Trees, significant tree stands, and/or significant natural resources exist on the site OR when these other features have been designated for protection but the Project necessitates additional designated land areas to meet the minimum Tree Preservation Area of the zone.

1. **Qualifications.** Where Perimeter Buffers or other Buffer Areas are required, Tree Preservation Area credit may be granted for the full amount provided qualifying vegetation is present.
2. **Preservation Standards.** Preserved vegetation contains hardwood species, with a mixture of hardwood and evergreen species throughout the Perimeter Buffer.
3. **Utility Easements.** Utility easement areas that have been cleared of its original trees/vegetation may not be credited towards the minimum Tree Preservation Area.

4.4.2 TREE INVENTORY

- A. Preparation of the Tree Inventory.** To establish a Tree Preservation Area as required pursuant to Table 4.2-A, the applicant shall provide a tree inventory that is prepared by a Certified Arborist,

Registered Forester, Registered Landscape Architect, or other qualified professional approved by the Administrator and submitted as part of the applicable UDO Application/Permit.

- B. Contents of the Tree Inventory.** The tree inventory is used to clearly delineate areas of existing tree canopy coverage as well as the location and size of individual Specimen Trees on the site prior to permit approval and development activity. The tree inventory shall contain the following information:
1. **Aerial Photograph(s).** The applicant shall provide the latest available aerial photograph of the Project Area with the Project boundary and at an identifiable scale. All Specimen Trees and tree canopy types must be identified on the aerial photograph; and
 2. The applicant must also submit a Sample Area Survey which complies with the following:
 - a. A Sample Area Survey shall include a detailed survey of all trees and other vegetation existing in a twenty foot (20') radius sample area of each tree canopy type found on the site and the location of the sample area.
 - b. A Certified Arborist, Registered Landscape Architect or Registered Forester shall certify that sample areas are representative of the various canopy types found on the site.

4.4.3 TREE PRESERVATION AREA STANDARDS

- A. Species Variety and Health.** The required Tree Preservation Areas must contain, as determined by the tree inventory, a mixture of healthy and useful canopy and understory trees. Canopy tree species must be predominantly 2.5 inches DBH and a minimum of 12 feet in height.
1. **Replanting Requirements.** For designated Tree Preservation Areas on the site which are devoid of mature tree stands, the developer shall install trees/plantings in a manner that achieves (or exceeds) the ratios listed in subsection 4.4.3.A at maturity.

- B. Continuous Canopy.** Tree Preservation Areas shall, where possible, be designed as single, contiguous canopy units. Where practicable, Tree Preservation Areas shall also be connected within a Lot and/or between adjacent Lots to create habitat corridors.
- C. Critical Root Zone Protection.** Applicants (or responsible parties) shall protect the trees' critical root zones during site construction activities with protective fencing and pursuant to the following based on tree size:
1. Up to 8 inches DBH - 12 feet
 2. 8-12 inches DBH - 18 feet
 3. 12-16 inches DBH - 24 feet
 4. Greater than 16 inches DBH - 30 feet

4.4.4 FLEXIBILITY OPTIONS FOR TREE PRESERVATION

- A. Allowance.** Applicants may seek design flexibility to the required Tree Preservation Area requirements from the decision-making body (as part of the associated UDO Application/Permit and pursuant to Table 11.4-A of this UDO) to encourage innovative tree preservation solutions capable of enhancing the natural form of a Project. Design flexibility may be applied to the location, site elements, and land configuration standards herein where the applicant demonstrates that an alternative design achieves a greater public benefit that would not otherwise be possible through the strict application of said standards.
- B. Historical Forested Areas.** If priorities A-D of this section cannot achieve the minimum Tree Preservation Area, the applicant may only designate portions of the site that once supported native forests as a Tree Preservation Area to meet the minimum tree preservation requirements of Table 4.2-A under the following conditions.
1. **Limitation.** Historical forested areas should be prioritized over other cleared areas of the site where no Specimen Trees, significant tree stands, and/or significant natural resources exist OR where those features have been designated for protection, but the cumulative areas of those features do not otherwise meet the minimum protection requirements

of Table 4.2-A for said development/
Subdivision Project.

2. **Replanting Requirement.** Where these areas are designated as a Tree Preservation Area, the land shall be replanted/reforested to comply with the standards listed in subsection 4.4.3.A.1.

C. **Findings.** The decision-making body may grant design flexibility to the required tree preservation requirements herein upon making the following findings:

1. The proposed development represents an innovative solution for tree preservation, which will enhance the Use or value of area properties beyond the enhancement that would otherwise occur under the strict application of the required tree preservation requirements; and,
2. The strict application of the terms of the required tree preservation requirements represents an unusual or unnecessary hardship when applied to the proposed development; and,
3. The granting of design flexibility will not cause negative impacts on the environment; and,
4. The proposed development is consistent with the intent of the Comprehensive Plan; and,
5. The proposed development is consistent with the intent and purpose of this UDO.

4.4.5 REMOVAL OF PROTECTED TREES

A. **Removal Allowances.** Applicants (or applicable parties) may only remove a tree credited to a Tree Preservation Area pursuant to the provisions of this subsection.

B. **Tree Replacement Standards.** When a tree credited to a Tree Preservation Area is removed from the site, or dies before or within 1 year following construction or the issuance of the final Certificate of Occupancy for the Project, the owner (or applicable party) shall replace as follows:

1. The replacement tree shall be of a native species planted at least 30 feet from the trunk of any other tree;

2. The replacement tree(s) shall result in an equivalent or greater number of tree caliper inches of the tree removed; and
3. The minimum replacement tree size shall be a 3 inch caliper.

C. **Penalties for Unauthorized Tree Removal.** The Administrator may apply the following penalties where an applicant/owner removes trees that are otherwise protected pursuant to this section and/or has been protected through a Subdivision/land Use/development permit.

1. **Stop Work Order.** The Administrator may issue a stop work order which shall be served on the applicant/owner, or other responsible person.
2. **Withhold Certificate of Occupancy.** The Administrator may withhold a Certificate of Occupancy for the Building or other improvements constructed or being constructed on the site until the applicant/owner, or other responsible person has taken the remedial measures set forth in the notice.
3. **Fines.** For unauthorized removal of protected trees associated with any Project, the following fines shall apply to the property owner:
 - a. **Flat Fine.** The Administrator shall issue a flat civil penalty of \$2,000 for each innocent of unauthorized protected tree removal.
 - b. **Tree Fine.** In addition to the flat fine, the Administrator shall issue a fine of \$100 per caliper inch for removed vegetation if not replaced on site.
4. **Permit/Plan Denial.** The Administrator may deny Building permits and/or UDO Permits for the subject property until all fines are paid pursuant to 4.4.4.C.3.

D. **Removal of Penalties.** At its sole discretion, the Town Council may authorize the Administrator to remove/reduce any pending penalties where the subject property has been sold/transferred to a non-related individual or business entity, a government agency, or non-profit organization. Under those circumstances, the Town Council may impose certain conditions in exchange

for removing/reducing said penalties (e.g., tree replacement/replanting of the subject areas, reduced fines, completion dates and milestones, etc.)

- E. Code Circumvention.** Clear-cutting of a site to circumvent the requirements of this section is prohibited. Claiming/using the forestry exemption in subsection 4.4.E, to remove all or substantially all of the trees that would have been protected by this Section is a prohibited activity.

4.5 ACTIVE RECREATIONAL AREAS

- A. Applicability.** The provisions in this section apply to all Active Recreational Areas that may be required for the subject development/Subdivision Project pursuant to Table 4.2-A.
- B. Designation.** The applicant shall designate the minimum Active Recreation Area on the subject site as part of the Development Plan or Subdivision Plan.
- C. Final Plat/Certificate of Occupancy.** The Town shall withhold any approval including but not limited to Final Plat approval or Certificate of Occupancy until such time as all active Recreation Areas required by this ordinance or otherwise approved and shown on a Development Plan or Subdivision Plan have been constructed or the applicant has posted Construction Guarantees for the required improvements of such active Recreation Areas in accordance with Chapter 11.14.
- D. Minimum Recreational Elements.** Required Active Recreation Areas shall include the following elements:
- 1. Tot Lots.** In Residential Use Districts, at least 15% of the required Active Recreational Areas shall include tot lot elements (i.e., areas equipped with imaginative play apparatus oriented to children as well as seating accommodations for adults). Tot lots are not required for age-restricted residential Projects that are deed restricted to only allow residents 55-years of age or older.
 - 2. Other Elements.** All required Active Recreational Areas shall include 1 or more of the following recreational elements:

athletic fields; outdoor courts; indoor courts; Swimming Pools; greenway trails; exercise rooms; meeting or activity rooms within clubhouses; Community Gardens; tot lots; and/or a play apparatus.

- E. General Design Standards.** Required Active Recreational Areas shall be subject to the following general design standards.
- 1. Location Priority.** Each Active Recreational Area shall be centrally located and safely accessible to its intended population/users in terms of access points and orientation.
 - 2. Land Suitability.** Each Active Recreational Area shall be constructed on land that is relatively flat, free of routine flooding, and capable of serving the intended purposes of this section.
 - 3. Configurations.** Active Recreational Areas shall be designed and constructed to coincide with the applicable Open Space Configurations listed in Table 4.3-A in the previous subsection. Applicants may request minor design and size flexibility as an Administrative Adjustment pursuant to Chapter 11 of this UDO.
 - 4. Perimeter Landscaping Required.** All required On-Site Private Open Space areas shall include perimeter landscaping pursuant to the following:
 - a. All Open Spaces except Parkways and Greenbelts. A Type A Perimeter Buffer is required. The associated landscaping plan shall incorporate existing mature trees.
 - b. Parkways and Greenbelts. These areas shall be maintained in their natural, vegetative state or enhanced with landscape materials to comply with a Type B Buffer.
 - c. Existing trees and vegetation may be used to meet these landscaping requirements
- F. Swimming Pools.** Swimming Pools constructed in Active Recreation Areas shall be subject to the following additional standards:
1. A fence of at least 5 and no more than 6 feet in height above Grade shall enclose the

Swimming Pool, including but not limited to Decks, Patios and Walkway.

2. All pool facilities shall be Setback a minimum of 100 feet from all Thoroughfares.
3. The facility shall be placed in an area that is convenient to all homes in the neighborhood, preferably within walking distance or via a short bicycle ride.

- G. Community Garden.** Where established and operated on in an Active Recreation Area, a private Lot (with the owner's written permission), common area, or public parcel that is used primarily for growing and harvesting food and ornamental crops, for consumption, donation or for sale shall be subject to the following standards:
1. **Minimum Standards.** Community Gardens shall provide the following.
 - a. Wood or decorative fences not exceeding 4 feet in height around their perimeter.
 - b. An irrigation source.
 2. **Abandonment.** The Community Garden shall be deemed abandoned by the Administrator after 12 months of non-continuous Use if upon inspection of the Community Garden it is deemed overgrown with invasive plants or weeds. If such Community Garden is declared abandoned, the Community Garden shall be converted and maintained as grassed fields by the homeowner's association, property owner's association, or other entity that holds maintenance responsibility of the Community Garden.

4.6 URBAN CIVIC SPACE

- A. Applicability.** The provisions in this section apply to all Urban Civic Spaces that may be required for the subject development Project pursuant to Table 4.2-A.
- B. Designation.** The applicant shall designate the minimum Urban Civic Space on the subject site as part of the Development Plan or Subdivision Plan.
- C. Minimum Elements.** Required Urban Civic Spaces shall include at least two of the following elements: Patio/Plaza space, shelter Structures, benches, tables, landscaped planters, gardens, and/or a play apparatus.
- D. General Design Standards.** Required Urban Civic Spaces shall be subject to the following general design standards.
 1. **Location Priority.** Each Urban Civic Space shall be oriented along a Public Right-of-Way, a main entrance, and/or public Open Space area.
 2. **Lighting.** Each Urban Civic Space shall include lighting that illuminates at least half of the space but does not directly cast light onto adjacent properties.
 3. **Configurations.** Urban Civic Spaces shall be designed and constructed to coincide with the applicable Open Space Configurations listed in Table 4.3-A in the previous subsection. Applicants may request minor design and size flexibility as an Administrative Adjustment pursuant to Chapter 11 of this UDO.

4.7 PUBLIC PARK LAND

4.7.1 GENERAL STANDARDS & CRITERIA

- A. Requirement.** Development Projects and Subdivision activities that would result in additional residential Dwelling Units shall provide Public Park Land pursuant to Table 4.7-A and a fee-in-lieu of Improvement Cost pursuant to Table 4.7-C based on the resulting residential Dwelling Units. The applicant may provide its required Public Park Land pursuant to 1 or more of the following options.
 1. The applicant may dedicate a portion of the Project site for Public Park Land;
 2. The applicant may dedicate other lands (separate from the Project site) for Public Park Land; and/or,
 3. The applicant may provide a fee-in-lieu of dedicating physical land to the Town pursuant to Table 4.7-B.

B. Criteria for Land Dedication. All land dedicated to the Town for Public Park Land shall substantially meet the following criteria:

1. **Unit.** The dedicated land shall form a single parcel of land except where the decision-making body determines that multiple parcels would be in the public interest.
2. **Shape.** The shape of the dedicated land shall be sufficiently square or configured to be usable for recreational activities.
3. **Location.** Location should support the Uses specified in the Park Search Area recommendations of the Comprehensive Plan.
4. **Access.** Public Access to the dedicated land shall be provided either by direct Street Frontage or public easement at least 30 feet in width.
5. **Topography.** Generally, dedicated land reserved for Public Park Land shall not exceed a 5% slope for the majority of the land area. The decision-making body may allow for larger slopes where the decision-making body determines the land has recreational value and would meet existing deficiencies in the adopted level of service in the immediate vicinity.
6. **Usableness.** The dedicated land shall be usable for recreation. Lakes and wetlands should not be included in computed dedicated land area.
7. **Plans.** Town and County plans shall be taken into consideration when evaluating proposals for the dedication of land for Public Park Land purposes.

C. Criteria for Fee-in-Lieu. Applicants may provide a fee-in-lieu to the Town for all or portions of the required Public Park Land pursuant to Table 4.7-B. The fee-in-lieu option may be allowed in the following situations:

1. The site topography is not suitable for parkland Use which may include excessive slopes of 5% or greater, devoid of mature tree canopies, specimen trees, and/or solely contains riparian areas and wetlands.

2. The site has topographic features that make publicly accessible parkland impractical.
3. The fee-in-lieu option would provide a greater public benefit in the general site vicinity that could be achieved on the subject site.
4. The immediate vicinity is currently well-served by Public Park Lands and the area exceeds the Town's adopted level of service for Parks and recreation.
5. The proposed development/Subdivision involves fewer than 35 Lots or Dwelling Units.

D. Criteria for Choice Between Land Dedication and Fee-in-Lieu.

1. Whether the Town Council accepts the dedication of land or elects to require payment of a fee-in-lieu thereof, or a combination of both, shall be determined by but not limited to the following:
 - a. An adopted plan of the Town;
 - b. The recommendations of the Planning Board;
 - c. Topography, geology, access and location of land available for dedication; and,
 - d. Size and shape of the land available for dedication.
2. The determination of the Town Council as to whether land shall be dedicated or whether a fee-in-lieu should be charged, or a combination of both, shall be final and conclusive. In development/Subdivision Projects involving fewer than 35 Lots or Dwelling Units, only the payment of fees-in-lieu shall be required.

4.7.2 PUBLIC PARK LAND DEDICATION OR FEE-IN-LIEU CALCULATION.

A. Calculation Method.

1. **Public Park Land Dedication.** Where it is determined that Public Park Land dedication is appropriate to satisfy the requirements of this UDO, the amount of the Public Park Land to be dedicated shall be calculated as follows:

Table 4.7-A - Public Park Land Dedication Calculation

Number of Dwelling Units (by Residential Use)	X	Required Acres/Unit	=	Total Public Park Land
Residential Uses		Required Acres/Unit		
Detached Dwelling (except Detached Dwelling – Cottage)		0.0363		
Attached Dwelling - Townhome				
Detached Dwelling - Cottage		0.0163		
Attached Dwelling (except Attached Dwelling - Townhome)				
Apartment Dwelling				

2. **Fee-in-Lieu.** Where it is determined that a fee-in-lieu is appropriate to satisfy the requirements of this UDO, the amount of the Public Park fee-in-lieu shall be calculated as follows:

Table 4.7-B - Fee-in-Lieu of Public Park Land Dedication Calculation

Total Public Park Land Dedication Required (acres) (N1)	X	Land Value per acre (N2)	=	Total Fee-in-Lieu of Public Park Land Dedication
Notes: N1: Refer to Table 4.7-A N2: Applicant shall provide the pre-development appraised land value of the land prior to development Project/Subdivision activity or site construction pursuant to the most current property records from the Wake County Assessor.				

3. **Improvement Cost.** In addition to the Public Park Land dedication and/or fee-in-lieu requirement, a fee-in-lieu of improvement cost shall be required and shall be calculated as follows:

Table 4.7-C – Improvement Cost Calculation

Total Public Park Land Dedication Required (acres) (N1)	X	\$41,394	=	Total Improvement Cost
Notes: N1: Refer to Table 4.7-A				

B. Disagreements.

1. Public Park Land Dedication.

- In the event that the Town and the applicant or Subdivider of land cannot agree upon the location, terrain, size or shape of the land necessary to be dedicated for Public Park Land, or cannot agree upon the details of provisions for an equitable amount of land in another location or where there is disagreement between the Town and the applicant or Subdivider, such disagreement shall be determined by a special committee.
- Such special committee shall consist of 3 members appointed as follows: 1 member shall be a professional land appraiser appointed by the Town Council; 1 member shall be a professional land appraiser appointed by the Subdivider; and, 1 member shall be a professional land appraiser appointed by the 2 appointed members. The special committee shall view the land and hear the contentions of both the Town and the Subdivider. The findings of the special committee shall be by majority vote and shall be certified to the Town Council within 45 days of the time of appointment of the third member of the special committee. The costs of the professional land appraiser appointed by the Subdivider and 1/2 the cost of the professional land appraiser appointed by the appraisers shall be borne by the Subdivider. The costs of the professional land appraiser appointed by the Town Council and 1/2 the cost of the professional land appraiser appointed by the appraisers shall be borne by the Town Council.

2. Fee-in-Lieu.

- Any disagreement in the amount of required fee-in-lieu shall be resolved by conducting a professional appraisal of the fair market value of the property. The professional appraiser shall be mutually

agreed upon by the applicant and the Town. An appraiser shall be appointed by the Town, at the applicant's expense, should an agreement not be reached.

C. Timing. Land shall be dedicated or a fee-in-lieu shall be remitted to the Town pursuant to the following Project milestones:

1. For Detached and Attached Dwellings, land shall be dedicated or a fee-in-lieu shall be made on or before the submittal date for approval of the Final Plat mylar for signatures to be recorded with the Wake County Register of Deeds, in the amount per Dwelling Unit as required pursuant to Section 4.7.2.
2. For Apartment Dwellings, land shall be dedicated or a fee-in-lieu shall be made prior to the issuance of a Building permit, in the amount per Dwelling Unit as required pursuant to Section 4.7.2.

4.7.3 USE OF LAND BY TOWN; USE OF FEES RECEIVED IN-LIEU OF DEDICATION.

A. The land received by the Town under this Section shall be Used only for the purpose of providing Public Park Land and Park and recreational areas, but shall not be so restricted should the Town decide to sell such land as provided by the following:

1. The Town shall have the right to sell any land dedicated to the Town for Public Park Land or Parks and recreation purposes on finding by the Town Council and the Administrator that a particular piece of property is not feasible or compatible with adopted plans of the Town.
2. Fees collected in-lieu of dedications and any proceeds from such transactions or sales shall be held in a special fund by the Town, and the funds shall be Used by the Town for the purpose of acquiring and developing Public Park Land as shown on the Comprehensive Plan and for no other purpose. The depository for such funds may be the same as permitted for other funds of the Town and, pending their expenditure in accordance with the terms of this Section, such funds may

be invested as other funds of the Town. The Town may, at its discretion, add additional monies to the fund for the purpose of purchasing Public Park Land to be Used for public recreational purposes. On all matters not specifically provided for in this Section, the Local Government Budget and Fiscal Control Act shall be controlling.

B. Service Zones.

1. **West Zone.** When Public Park Land is dedicated and/or fees-in-lieu are collected for Development Projects and Subdivision activities west of NC 55, such land and or fees shall be used for the purpose of providing Public Park Land and Park and recreational areas west of NC 55.
2. **East Zone.** When Public Park Land is dedicated and/or fees-in-lieu are collected for Development Projects and Subdivision activities east of NC 55, such land and or fees shall be used for the purpose of providing Public Park Land and Park and recreational areas east of NC 55.
3. When Public Park Land is dedicated and/or fees-in-lieu are collected for Development Projects and Subdivision activities in close proximity to NC 55, the Town shall have the discretion to determine if acquiring land across the service areas would better align with the established park search areas, and other projects that the Town plans to construct in the future, as outlined in the Vision Holly Springs Comprehensive Plan.

4.8 CONSERVATION BUFFER AREAS

4.8.1 REQUIRED CONSERVATION BUFFER AREAS

A. Conservation Buffer Areas Required.

Applicants shall provide Conservation Buffer Areas where the following conditions/ natural features exist on or adjacent to the subject property. These may contribute to the landscaping requirements listed in Chapter 5 – Landscaping of this UDO.

1. **Thoroughfare Conservation Buffers.** Conservation Buffer Areas shall be

established and maintained in development/Subdivision Projects which abut the Right-of-Way of NC 540, US 1, or NC 55.

To recognize the intended future urban character of specific areas of the Town, Thoroughfare Conservation Buffers are not required for properties located within the Downtown Village District (from the Comprehensive Plan).

2. Riparian Conservation Buffers.

Conservation Buffers shall be established and maintained in development/Subdivision Projects that contain and/or abut any drainage way, water body and watercourse, or riparian corridors. Certain watersheds have unique buffer standards that coincide with the habitat function and state/federal conservation standards.

B. Identification of Buffer Areas. Applicants shall clearly identify, delineate, and label Conservation Buffer Areas on all Construction Drawings, Final Plats, Development Plans, or any relevant documentation submitted for a UDO Application/Permit.

C. Regulation. When Conservation Buffer Areas are required, said areas/buffers shall be subject to the following regulations:

1. Ownership and Management Entities. All required Conservation Buffer Areas shall be either:

- a. Deeded to the property owners' association (or equivalent thereof) for maintenance as provided for in the covenants and restrictions for the Project or Subdivision; or,
- b. Covered by appropriate documentary assurances acceptable to the Town Council to provide for continual maintenance and which includes a clear description of the ownership and maintenance responsibilities for such Buffer Areas.

2. Subdivision/Plat Notes. Whenever a Perimeter Buffer or greenbelt is required to be set aside as a Conservation Buffer Area, the Final Plat or other legally binding

instrument shall include a statement that plant materials within such Conservation Buffer Areas shall not be removed unless dead, diseased, threatens to become a danger to human life or property, or with the exceptions stated at the beginning of this chapter.

3. Locational Standards/Allowances.

Required Conservation Buffer Areas shall be subject to the following locational standards based on the Zoning District:

- a. For properties within the RR, SR, and/or NR Districts, the required Conservation Buffer Area shall be located in a separate tract (or equivalent thereof) and not established as part of an individual residential/development Lot.
- b. For properties within the NCR, MXR, any Commercial & Mixed-use District, or any Employment/Campus Use District may either:
 - i. Be part of a common area tract (or equivalent thereof) separate from a Lot; or,
 - ii. Be part of a Lot. In this situation, the associated construction plans shall specify the location and associated restriction for said areas.

4.8.2 MAINTENANCE OF CONSERVATION BUFFER AREAS

Notwithstanding anything in this UDO to the contrary, if any portion of a Lot is required by this chapter to be a Conservation Buffer Area, the following regulations shall apply:

A. Residential Use Districts.

1. Any Conservation Buffer Area or landscape easement located on a Lot adjacent to a perimeter Street or a boundary of a Subdivision as established by the Development Plan or Subdivision Plan pursuant to the requirements of this Chapter of the UDO, shall be maintained by the owner of the Lot at all times in compliance with the requirements established by the Development Plan or Subdivision Plan or this chapter, whichever requires the greater

amount of plant material. Dead or diseased trees or shrubs located in such Conservation Buffer Area or landscape easement shall be removed and replaced with appropriate replacement trees or shrubs, subject to the approval of the Administrator. Any removal, relocation, replacement or other alteration to the plant materials located in such Conservation Buffer Area or landscape easement shall be approved, in writing, by the applicable homeowners association, if any, and the Administrator prior to such removal, relocation, replacement or other alteration to the plant materials in the Conservation Buffer Area.

2. No fence, pool, hot tub, Patio, porch, Gazebo, Deck, shed, Garage or other accessory Building or Accessory Structure of any kind shall be permitted in any required Conservation Buffer Area.

B. Commercial & Mixed-Use Districts.

1. Any Conservation Buffer Area located on a Lot adjacent to a Front, Side or Rear Lot Line, shall be maintained by the owner of the Lot at all times. Dead or diseased trees or shrubs located in the Conservation Buffer Area shall be removed and replaced with appropriate replacement trees or shrubs, subject to the approval of the Administrator. Any removal, relocation, replacement or other alteration to the plant materials located in the Conservation Buffer Area shall be approved, in writing, by the applicable homeowners association, if any, and the Administrator prior to such removal, relocation, replacement or other alteration to the plant materials in the Conservation Buffer Area.
2. No accessory Building or Accessory Structure of any kind, other than a Freestanding Sign authorized by Chapter 9 of this UDO, shall be permitted in the required Conservation Buffer Area.

C. Employment / Campus Use Districts.

1. Any Conservation Buffer Area located on a Lot adjacent to a Front, Side or Rear Lot Line, shall be maintained by the owner of

the Lot at all times. Dead or diseased trees or shrubs located in the Conservation Buffer Area shall be removed and replaced with appropriate replacement trees or shrubs, subject to the approval of the Administrator. Any removal, relocation, replacement or other alteration to the plant materials located in the Conservation Buffer Area shall be approved, in writing, by the applicable property owners association, if any, and the Administrator prior to such removal, relocation, replacement or other alteration to the plant materials in the Conservation Buffer Area.

2. No accessory Building or Accessory Structure of any kind, other than a Freestanding Sign authorized by Chapter 9 of this UDO, shall be permitted in the required Conservation Buffer Area.

4.8.3 THOROUGHFARE CONSERVATION BUFFER AREAS

- A. **Thoroughfare Conservation Buffer Areas Required.** Conservation Buffer Areas shall be established and maintained for Subdivision and development Projects areas that abut NC 540, US 1, and NC 55.
- B. **Buffer Widths.** The minimum Thoroughfare Conservation Buffer width shall be measured from and parallel to such Right-of-Way as indicated below.

TABLE 4.8-A – MINIMUM THOROUGHFARE CONSERVATION BUFFER AREA WIDTH BY ZONING DISTRICT TABLE

N1 and N2	ZONING DISTRICTS				
THOROUGHFARE	RR, SR, NR	NCR, MXR	NMX	DMX	CB, SP, IVMX, BRT, HI
NC 540 and US1	100 feet	100 feet	100 feet	100 feet	100 feet
NC 55	100 feet	100 feet	50 feet	0 feet	50 feet

***NOTE:**

N1. When a Setback is reduced in accordance with the provisions set forth in the development standards for each District, the minimum Thoroughfare Conservation Buffer Area width shall be equal to the reduced Minimum Setback.

N2. Thoroughfare Conservation Buffers are not required for properties located in the Downtown Village District Future Land Use category from the Comprehensive Plan.

- C. **Vegetation Retention and Enhancement Standards.** Required Thoroughfare Conservation Buffers shall remain in their natural state to the

greatest extent practicable and/or enhanced with new native plantings to achieve a healthy tree canopy and vegetative environment.

Existing cleared areas within the designated Thoroughfare Conservation Buffer shall be landscaped in accordance with the requirements of Chapter 5 – Landscaping of this UDO.

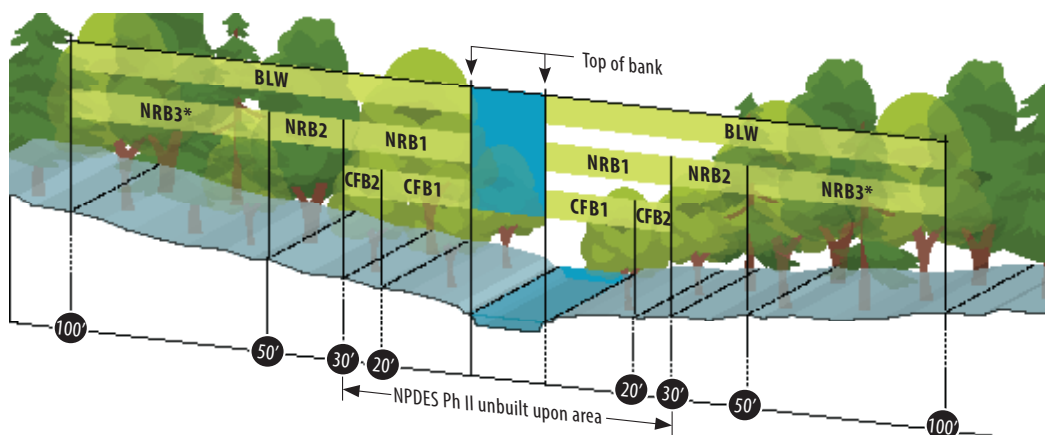
4.8.4 RIPARIAN CONSERVATION BUFFERS

- A. **Applicability.** Certain areas within the Town's jurisdiction may be subject to the Riparian Conservation Buffer regulations where riparian features are present on or adjacent to the subject property and/or where the property is within a protected watershed or basin.
- B. **Specific Watershed/Basin Standards.** Properties within or adjacent to the Bass Lake Watershed, Neuse River Basin, and Cape Fear River Basin are subject to specific Riparian Conservation Buffer standards.

TABLE 4.8-B – MINIMUM RIPARIAN CONSERVATION BUFFER BY WATERSHED TABLE

WATERSHED/AREA	RIPARIAN BUFFER FOR PERENNIAL STREAMS (EXCLUDING WETLANDS)	RIPARIAN BUFFER FOR ALL OTHER WATER FEATURES (EXCLUDING WETLANDS)	ZONE 1	ZONE 2	ZONE 3	SUBSECTION REFERENCE
Bass Lake Watershed (BLW)	100 feet	100 feet	100 feet	n/a	n/a	4.8.5
Neuse River Basin (NRB)	100 feet	50 feet (Zones 1 - 2 only)	30 feet	20 feet	50 feet	4.8.6
Cape Fear River Basin (CFB)	30 feet	30 feet	20 feet	10 feet	n/a	4.8.7

FIGURE 4.8-A RIPARIAN BUFFER ZONES



- C. Neuse River and Cape Fear River Basin Buffer Area Table of Approved Uses.** The following chart sets forth the allowable Uses in the Neuse River and Cape Fear Basins as Exempt, Allowable, Allowable with Mitigation, and Prohibited consistent with the requirements of 15A NCAC 02B .0233 and .0311. Conditions of Uses in the Town-mandated portion of the buffers (Zones NRB3 and CFB1 & CFB2) are

also described in the chart. All activities must have Construction Drawing approval prior to commencing work and must comply with all other Federal, State, and Town regulations. Applicants may notify the Administrator prior to commencing exempt Uses in any zone of the Riparian Buffer to obtain guidance and limitations on said activities.

TABLE 4.8-C – TABLE OF APPROVED USES

	NEUSE RIVER BASIN SUBJECT TO 15A NCAC 02B	CAPE FEAR RIVER BASIN		
	Zone NRB1 & NRB2*	Zone NRB3	Zone CFB1	Zone CFB2
Airport facilities:				
Airport facilities that impact equal or less than 150 linear feet or 1/3 of an acre of Riparian Buffer	Allowable	Allowable	Allowable	Allowable
Airport facilities that impact greater than 150 linear feet or 1/3 of Riparian Buffer	Allowable with Mitigation	Allowable	Allowable with Mitigation	Allowable
Archaeological activities	Exempt	Exempt	Exempt	Exempt
Bridges	Allowable	Allowable	Allowable	Allowable
Dam maintenance activities	Exempt	Exempt	Exempt	Exempt
Drainage ditches, roadside ditches and storm water outfalls through Riparian Buffers:				
<i>Existing drainage ditches, roadside ditches, and storm water outfalls provided that they are managed to minimize the sediment, nutrients and other pollution that convey to water bodies</i>	Exempt	Exempt	Exempt	Exempt
<i>New drainage ditches, roadside ditches, and storm water outfalls provided that a storm water management facility is installed to control nitrogen and attenuate flow before the conveyance discharges through the Riparian Buffer</i>	Allowable	Allowable	Allowable	Allowable
<i>New drainage ditches, roadside ditches, and storm water outfalls provided that do not provide control for nitrogen before discharging through the Riparian Buffer</i>	Prohibited	Allowable	Prohibited	Prohibited
<i>Excavation of the stream bed to bring it to the same elevation as the invert of a ditch</i>	Prohibited	Prohibited	Prohibited	Prohibited
<i>Drainage of a pond in a natural drainage way provided that a new Riparian Buffer that meets the requirements of Items (4) and (5) of the Neuse Buffer Rules are established adjacent to the new channel</i>	Exempt	Exempt	Exempt	Exempt
Driveway crossings of Streams and other surface waters subject to this Rule:				
<i>Driveway crossing on single family residential Lots that disturb equal or less than 25 linear feet or 2,500 square feet of Riparian Buffer</i>	Exempt	Exempt	Allowable	Allowable
<i>Driveway crossing on single family residential Lots that disturb greater than 25 linear feet or 2,500 square feet of Riparian Buffer</i>	Allowable	Allowable	Allowable	Allowable

TABLE 4.8-C – TABLE OF APPROVED USES

	NEUSE RIVER BASIN SUBJECT TO 15A NCAC 02B	CAPE FEAR RIVER BASIN		
	Zone NRB1 & NRB2*	Zone NRB3	Zone CFB1	Zone CFB2
<i>In a Subdivision that cumulatively disturb equal or less than 150 linear feet or 1/3 of an acre of Riparian Buffer</i>	Allowable	Allowable	Allowable	Allowable
<i>In a Subdivision that cumulatively disturb greater than 150 linear feet or 1/3 of an acre of Riparian Buffer</i>	Allowable with Mitigation	Allowable	Allowable	Allowable
<i>Fences provided that disturbance is minimized and installation does not result in removal of the forest vegetation</i>	Exempt	Exempt	Exempt	Exempt
<i>Forest Harvesting</i>	See Item (11) of the Neuse Buffer Rules and Timbering Chapter 8, Article IV of the Town of Holly Springs' Code of Ordinances	Allowable	Prohibited	Allowable
Fertilizer Application:				
<i>1-time fertilizer application to establish replanted vegetation</i>	Exempt	Exempt	Exempt	Exempt
<i>Ongoing fertilizer application</i>	Prohibited	Prohibited	Prohibited	Prohibited
Grading and re-vegetation in Zone 2 & 3 only provided that diffuse flow and the health of existing vegetation in Zone 1 is not compromised and disturbed areas are stabilized	Exempt	Exempt	Exempt	Exempt
Greenway/hiking trails	Allowable	Allowable	Exempt	Exempt
Historic Preservation	Exempt	Exempt	Exempt	Exempt
Landfills as defined by G.S. 130A-290	Prohibited	Prohibited	Prohibited	Prohibited
Mining Activities:				
<i>Mining activities that are covered by the Mining Act provided that new Riparian Buffers that meeting the requirements of Items (4) and (5) of the Neuse Buffer Rule are established adjacent to the relocated channels</i>	Allowable	Allowable	Allowable	Allowable
<i>Mining activities that are not covered by the Mining Act OR were new Riparian Buffers that meet the requirements of Items (4) and (5) of the Neuse Buffer Rules are not established to the relocated channels</i>	Allowable with Mitigation	Allowable	Allowable	Allowable
<i>Wastewater or mining dewatering wells approved NPDES permit</i>	Exempt	Exempt	Exempt	Exempt
Non-Electric Utility Lines:				
<i>Impacts other than perpendicular crossing in Zone 2 only</i>	Allowable	Allowable	Exempt	Exempt
<i>Impacts other than perpendicular crossings in Zone 1</i>	Allowable with Mitigation	Allowable	Exempt	Exempt
<i>Impacts other than perpendicular crossings in Zone 3</i>		Allowable	Exempt	Exempt

TABLE 4.8-C – TABLE OF APPROVED USES

	NEUSE RIVER BASIN SUBJECT TO 15A NCAC 02B	CAPE FEAR RIVER BASIN		
	Zone NRB1 & NRB2*	Zone NRB3	Zone CFB1	Zone CFB2
<i>Non-electric utility lines perpendicular crossing of Streams and other surface waters subject to the Neuse Buffer Rules:</i>				
<i>Perpendicular crossing that disturb equal or less than 40 linear feet of Riparian Buffer with a maintenance corridor equal to or less than 10 feet in width</i>	Exempt	Allowable	Allowable	Allowable
<i>Perpendicular crossing that disturb greater than 40 linear feet of Riparian Buffer with a maintenance corridor greater than 10 feet in width</i>	Allowable	Allowable	Allowable	Allowable
<i>Perpendicular crossing that disturb greater than 40 linear feet but equal or less than 150 feet of Riparian Buffer with a maintenance corridor equal to or less than 10 feet in width</i>	Allowable	Allowable	Allowable	Allowable
<i>Perpendicular crossing that disturb greater than 40 linear feet but equal or less than 150 feet of Riparian Buffer with a maintenance corridor greater than 10 feet in width</i>	Allowable with Mitigation	Allowable	Allowable	Allowable
<i>Perpendicular crossing that disturb greater than 150 linear feet of Riparian Buffer</i>	Allowable with Mitigation	Allowable	Allowable	Allowable
On-site sanitary sewer sewage systems - new ones that use ground absorption	Prohibited	Prohibited	Prohibited	Prohibited
Overhead electrical utility lines:				
<i>Impacts other than perpendicular crossing in Zone 2 only</i>	Exempt	Exempt	Exempt	Exempt
<i>Impacts other than perpendicular crossing in Zone 1</i>	Exempt	Exempt	Exempt	Exempt
<i>Impacts other than perpendicular crossing in Zone 3 only</i>		Exempt	Exempt	Exempt
Overhead electrical utility line perpendicular crossing of Streams and other surface waters subject to the Neuse Buffer Rules:				
<i>Perpendicular crossing that disturb equal to or less than 150 linear feet of Riparian Buffer</i>	Exempt	Exempt	Exempt	Exempt
<i>Perpendicular crossing that disturb greater than 150 linear feet of Riparian Buffer</i>	Allowable	Allowable	Allowable	Allowable
Periodic maintenance of modified natural Streams such as canals and grasses travel way on 1 side of the surface water when alternative forms of maintenance access are not practical	Allowable	Exempt	Allowable	Allowable
Playground Equipment:				
<i>Playground equipment on single family Lots provided that installation and Use does not result in removal of vegetation</i>	Exempt	Exempt	Exempt	Exempt
<i>Playground equipment installed on lands other than single family Lots or that requires removal of vegetation</i>	Allowable	Allowable	Allowable	Allowable
Ponds in natural drainage ways, excluding dry ponds:				
<i>New Ponds provided that a Riparian Buffer that meets requirements of Items (4) and (5) of the Neuse Buffer Rules</i>	Allowable	Allowable	Allowable	Allowable

TABLE 4.8-C – TABLE OF APPROVED USES

	NEUSE RIVER BASIN SUBJECT TO 15A NCAC 02B	CAPE FEAR RIVER BASIN		
	Zone NRB1 & NRB2*	Zone NRB3	Zone CFB1	Zone CFB2
<i>New Ponds where a Riparian Buffer that meets the requirements of Items (4) and (5) of the Neuse Buffer Rules</i>	Allowable with Mitigation	Allowable	Allowable	Allowable
Protection of existing Structures, facilities and Stream banks when this requires additional disturbance of the Riparian Buffer or the Stream channel	Allowable	Allowable	Allowable	Allowable
Railroad crossing of Streams and other surface waters subject to this Rule:	Allowable with Mitigation	Allowable		
<i>Railroad crossings of Streams and other surface waters subject to the Neuse Buffer Rules</i>	Exempt	Exempt	Allowable	Allowable
<i>Railroad crossings that impact equal to or less than 40 linear feet of Riparian Buffer</i>	Exempt	Exempt	Allowable	Allowable
<i>Railroad crossings that impact greater than 40 linear feet but equal to or less than 150 feet or 1/3 of an acre of Riparian Buffer</i>	Allowable	Allowable	Allowable	Allowable
<i>Railroad crossings that impact greater than 150 linear feet or 1/3 acre of Riparian Buffer</i>	Allowable with Mitigation	Allowable	Allowable	Allowable
Removal of previous fill or debris provided that diffuse flow is maintained and any vegetation removed is restored	Exempt	Exempt	Exempt	Exempt
Road impacts other than crossings of Streams and other surface waters subject to the Neuse Buffer Rules	Allowable with Mitigation	Allowable	Allowable with Mitigation	Allowable with Mitigation
Road crossings of Streams and other surface waters subject to the Neuse Buffer Rules:				
<i>Road Crossings that impact equal or less than 40 linear feet of Riparian Buffer</i>	Exempt	Exempt	Exempt	Allowable
<i>Road crossings that impact greater than 40 linear feet of Riparian Buffer but equal to or less than 150 feet or 1/3 acre of Riparian Buffer</i>	Allowable	Allowable	Allowable	Allowable
<i>Road crossings that impact greater than 150 linear feet of or 1/3 acre of Riparian Buffer</i>	Allowable with Mitigation	Allowable	Allowable	Allowable
Scientific Stream Studies and Stream Gauging	Exempt	Exempt	Exempt	Exempt
Storm water management ponds excluding dry ponds:				
<i>New storm water management ponds provided that a Riparian Buffer that meets the requirements of Items (4) and (5) of the Neuse Buffer Rules is established adjacent to the pond</i>	Allowable	Allowable	Allowable	Allowable
<i>New storm water management ponds where a Riparian Buffer that meets the requirements of Items (4) and (5) of the Neuse Buffer Rules is NOT established adjacent to the pond</i>	Allowable with Mitigation	Allowable	Allowable	Allowable
<i>Storm water management ponds located in Zone 3 only</i>		Allowable	Allowable	Allowable
Stream restoration	Exempt	Exempt	Allowable	Allowable
Stream bank stabilization	Allowable	Allowable	Allowable	Allowable

TABLE 4.8-C – TABLE OF APPROVED USES

	NEUSE RIVER BASIN SUBJECT TO 15A NCAC 02B	CAPE FEAR RIVER BASIN		
	Zone NRB1 & NRB2*	Zone NRB3	Zone CFB1	Zone CFB2
Temporary Roads:				
<i>Temporary roads that disturb less than or equal to 2,500 square feet provided that vegetation is restored within 6 months of initial disturbance</i>	Exempt	Exempt	Exempt	Exempt
<i>Temporary roads that disturb greater than 2,500 square feet provided that vegetation is restored within six months of initial disturbance</i>	Allowable	Allowable	Allowable	Allowable
<i>Temporary roads used for bridge construction or replacement provided that restoration activities, such as soil stabilization and re-vegetating, are conducted immediately after construction</i>	Allowable	Allowable	Allowable	Allowable
Temporary sediment and erosion control devices:				
<i>In Zone 2 only provided that the vegetation in Zone 1 is not compromised and that discharge is released as diffuse flow in accordance with Item (5) of the Neuse Buffer Rules</i>	Exempt	Exempt	Allowable	Allowable
<i>In Zones 1 and 2 to control impacts associated with Uses approved by NC DWR or that have receive a Variance provided that sediment and erosion control for upland areas is addressed to the maximum extent practical outside the buffer</i>	Allowable	Allowable	Allowable	Allowable
<i>In-Stream temporary erosion and sediment control measures for work within a Stream channel</i>	Exempt	Exempt	Allowable	Allowable
Underground electric utility lines:				
<i>Impacts other than perpendicular crossings in Zone 3 only</i>		Exempt	Prohibited	Allowable
<i>Impacts other than perpendicular crossings in Zone 2 only</i>	Exempt	Exempt	Prohibited	Allowable
<i>Impacts other than perpendicular crossings in Zone 1</i>	Exempt	Exempt	Prohibited	Allowable
Underground electric utility lines perpendicular crossing of Streams and other surface waters subject to the Neuse Buffer Rules:				
<i>Perpendicular crossings that disturb less than or equal to 40 linear feet of Riparian Buffer</i>	Exempt	Exempt	Prohibited	Allowable
<i>Perpendicular crossings that disturb greater than 40 linear feet of Riparian Buffer</i>	Allowable	Allowable	Allowable with Mitigation	Allowable with Mitigation
Vegetation Management:				
<i>Emergency fire control measures provided that topography is restored</i>	Exempt	Exempt	Exempt	Exempt
<i>Periodic mowing and harvesting of plant products in Zone 3 only</i>	Exempt	Exempt	Prohibited	Exempt
<i>Periodic mowing and harvesting of plant products in Zone 2 only</i>	Exempt	Exempt	Exempt	Exempt
<i>Planting vegetation to enhance the Riparian Buffer</i>	Exempt	Exempt	Exempt	Exempt
<i>Removal of individual trees which are in danger of causing damage to Dwellings, other Structures or human life</i>	Exempt	Exempt	Exempt	Exempt
<i>Removal of Poison Ivy</i>	Exempt	Exempt	Exempt	Exempt

TABLE 4.8-C – TABLE OF APPROVED USES

	NEUSE RIVER BASIN SUBJECT TO 15A NCAC 02B	CAPE FEAR RIVER BASIN		
	Zone NRB1 & NRB2*	Zone NRB3	Zone CFB1	Zone CFB2
<i>Removal of understory nuisance vegetation as defined in: Smith, Cherri L. 1998. Exotic Plant Guidelines. Department of Environment and Natural Resources. Division of Parks and Recreation. Raleigh, NC. Guideline #30</i>	Exempt	Exempt	Exempt	Exempt
Water dependent Structures as defined in 15A NCAC 2B .0202	Allowable	Allowable	Allowable	Allowable
Water supply reservoirs:				
<i>New reservoirs where a Riparian Buffer that meets the requirements of Items (4) and (5) of the Neuse Buffer Rules is established adjacent to the reservoir</i>	Allowable	Allowable	Allowable	Allowable
<i>New reservoirs where a Riparian Buffer that meets the requirements of Items (4) and (5) of the Neuse Buffer Rules is NOT established adjacent to the reservoir</i>	Allowable with Mitigation	Allowable	Allowable	Allowable
Water Wells	Exempt	Exempt	Prohibited	Prohibited
Wetland Restoration	Exempt	Exempt	Allowable	Allowable

D. Homeowners Education Packet Requirements.

The developer of any Subdivision and/or development Project shall provide a Homeowner Education Packet to all property owners of Lots with Riparian Conservation Buffers adjacent to any State or Town-mandated buffer. This shall occur at the time of the sale of the property. Copies of the Homeowners Education Packets shall be provided to the Administrator as part of the permitting process; The Administrator may require potential amendments thereto where the documents do not list the correct standards and limitations. The packet shall include the following information:

1. The location of the Riparian Conservation Buffer.
2. The restrictions/limitations on clearing, pruning, and planting within the Riparian Conservation Buffer. The allowances for addressing dead or dying plant material and responding to emergency events.
3. The restrictions/limitations on development and land Use activities within the Riparian Conservation Buffer.

4. The responsible party for maintaining the lands and vegetation within the Riparian Conservation Buffer.

E. Required Conservation Easement. Required Riparian Conservation Buffers shall be established with a conservation easement.

F. Vested Rights. The establishment of certain vested rights may be allowed to ensure reasonable certainty, stability and fairness to the reasonable expectations of landowners affected by this Ordinance in recognition that approval of land development Projects or Subdivisions typically follows significant landowner investment in site development. The following provisions apply to vested rights situations.

1. **Establishment of Vested Rights.** A vested right with respect to this section shall be established upon the approval of a site-specific Development Plan, or a PUD plan approval, that is currently valid or has been submitted for formal development review and continues on the current review schedule.

2. **Exceptions.** The vested rights provisions herein are excepted on property located partially or entirely within Zone 1 or Zone 2

of the Neuse River Basin, as defined by 15A NCAC 02B .022. Vested rights within these Zones shall be determined in accordance with 15A NCAC 02B .022, et seq.

3. **Vested rights shall run with the land.** The right to carry out development in accordance with the site-specific Development Plan or PUD approval shall attach and run with the land, and is not a personal right to the landowner. All successors and heirs to the original landowner shall be entitled to exercise such rights, as long as any development occurs in accordance within the approved plan as noted above.

4. **Subsequent Changes Prohibited.**

- a. A vested right, once established as provided for in this UDO, precludes any zoning action by the Town which would change, alter, impair, diminish, or otherwise delay the development or Use of the property as set forth in the site-specific Development Plan or approved PUD plan as submitted, except:
 - i. Upon written consent of the Landowner;
 - ii. Upon a finding by the Town Council after notice and public hearing that natural or man-made hazards on or in the immediate vicinity of the property, if uncorrected, would pose a serious threat to the public health, safety and welfare if the Project were to proceed as contemplated in the site-specific Development Plan;
 - iii. To the extent that the landowner receives compensation for all costs, expenses and other losses incurred by the landowner.
 - iv. Where the Town Council finds, after notice and public hearing, that the landowner or his representative supplied intentionally inaccurate information or made material misrepresentations which made a difference in the approval of the site-specific Development Plan or PUD plan;
 - v. Upon the enactment of a State or federal law or regulation which precludes development as contemplated in the site-specific Development Plan or PUD plan, in which case the Town Council may after notice and public hearing, allow for a modification of the plan so as to comply with the new State or federal law or regulation;
 - b. Vested rights under this Ordinance shall not preclude the application of overlay zoning which may impose additional requirements but does not affect the allowable type or Use density, or other ordinances or regulations which are general in nature and are applicable to all property subject to land Use regulation by the Town.

5. **Changes to Site-Specific Development Plan or Approved PUD Plan.** Changes made by the owner of the Project as listed in the development petition to a site-specific Development Plan or an approved PUD plan must be approved by the Administrator as not significantly deviating from the original site-specific Development Plan. Other changes to the plan will terminate the vested rights as they apply to this Section.

G. **Modifications and Waivers of Riparian Conservation Buffer Areas.**

1. **Riparian Conservation Buffer Areas for Map Inconsistency.** Where obvious conflicts between actual field conditions and USGS and Wake County Soil Survey maps exist, appeals may be made to the North Carolina Division of Water Resources in accordance with the relevant Buffer Rules, 15A NCAC 2B.0233. If an applicant obtains a map revision, permit, or Variance by NC Division of Water Resources or the NC Environmental Management Commission, the applicant shall submit all documentation, including corresponding maps, to the Administrator. The Administrator shall review the information provided by the applicant during the Construction Drawing

review process or earlier if the information required is available. After the review staff will ask for additional documentation or recommend approval of the Construction Drawings provided that the Construction Drawings correspond with all the NC Division of Water Resources requirements. The Administrator shall grant approval of the Construction Drawings consistent with NC Division of Water Resources ruling.

2. **Modifications.** In instances where an alternate Riparian Conservation Buffer Area is requested for the Town-mandated to be consistent with criteria allowable under 401 and 404 Permits of the Federal Clean Water Act, applicants may request an appeal to the Administrator. The applicant must provide documentation to the Administrator prior to the appeal, in the Construction Drawing review process, or as early as the Development Plan or Subdivision Plan review process, if sufficient information exists for review. The Administrator will review the documentation and ask for additional information as needed. Once the review is complete, the Administrator shall recommend approval or disapproval of the modification.
3. In all other instances where a waiver is requested for the Town-mandated Riparian Conservation Buffer applicants may appeal to the Environmental Appeal Committee. The applicant must provide documentation to the Administrator to support the appeal, in the Construction Drawing review process, or as early as the Development Plan or Subdivision Plan review process, if sufficient information exists for review as described in Chapter 11 of this UDO.

H. Mitigation. Required and voluntary mitigation activities to Riparian Conservation Buffers are subject to the following provisions.

1. Persons who wish to undertake or are required to provide mitigation shall be required to meet the requirements of acceptable mitigation practices as outlined in the Town Engineering Design and

Construction Standards to proceed with their proposed Use.

2. Stormwater Control Measures (SCMs) used for mitigation shall be included in a platted drainage easement.

4.8.5 BASS LAKE WATERSHED RIPARIAN BUFFER PROTECTION

A. Applicability. Any proposed Subdivision or development Project which is located within the Bass Lake Watershed and which includes lands lying within 100 feet of any Perennial Stream within the Bass Lake Watershed shall establish a restricted, undisturbed Riparian Buffer. The standards herein shall apply to said Riparian Buffers.

B. Riparian Buffer Width. The Riparian Buffers shall be provided at the following widths and the graphic below.

1. All perennial features indicated on the most recent version of the 1:24,000 scale (7.5 minutes) quadrangle topographic maps prepared by the United States Geological Survey (USGS) and/or on the most recent version of the Soil Survey of Wake County, North Carolina, prepared by the United States Department of Agriculture (USDA) shall provide the 100-foot-wide Riparian Buffers directly adjacent to such surface waters (or features), excluding wetlands. In the event of a discrepancy between these two maps that would affect a required buffer the most restrictive map shall apply.
2. Other perennial surface waters (or features) shall provide the 100-foot-wide undisturbed Riparian Buffers directly adjacent to such surface waters (or features).

C. Access Requirements. All access to the Riparian Buffer and conservation easement area, via abutting Right-of-Way or other form of access easement deemed acceptable by the Town Council, shall be provided on:

1. The Final Plat; or,
2. By separate grant of access easement subject to the approval, by resolution, of the Town Council.

D. Activity within the Riparian Buffer. The Town regulates all activity in the entire Riparian Buffer which shall be maintained as an undisturbed buffer, dedicated as a conservation easement, except for the approved uses described below.

1. All activity in the Riparian Buffer shall comply with the following approved and prohibited Uses listed below and comply with all Town, State and Federal Regulations. All approved Uses must demonstrate that impacts to the undisturbed buffer are designed in a manner to minimize impacts to the maximum extent practicable.
 - a. Sanitary Sewer Main Outfalls contained in a Utility Easement with access to upland areas outside of the Conservation Easement. Residential Sewer Services must be located outside of the Riparian Buffer.
 - b. Greenway trails contained in a Greenway Easement. Asphalt and other trail materials shall be designed in accordance with the Engineering Design and Construction Standards.
 - c. Perpendicular road crossings that have obtained all other Town, State and Federal approvals.
 - d. Post-Construction Storm water Best Management Practices as required by the Engineering Design and Construction Standards.
2. Timbering is prohibited in the Riparian Buffer.

E. Description of Buffer Areas on Development Petition. 100-foot undisturbed Riparian Buffers shall be graphically shown on all Preliminary Plans, Development Plans, Construction Drawings, erosion control plans and Final Plats or any site plan or plot plan submitted for a UDO Permit. The buffers shall be clearly labeled “Undisturbed Bass Lake Watershed Riparian Buffer” and the conservation easement shall be clearly shown and labeled with restrictions noted.

4.8.6 NEUSE RIVER BASIN RIPARIAN BUFFER PROTECTION

- A. Applicability.** Any proposed Subdivision or development Project which is located within the Town or its Extraterritorial Jurisdiction in the Neuse River Basin shall provide Riparian Buffer Areas on both sides of all Perennial and Intermittent Streams; including lakes, ponds, and other bodies of water (features).
- B. Required Riparian Buffer Width.** The Riparian Buffers shall be provided at the following widths and the graphic below.
 1. All perennial features indicated on the most recent version of the 1:24,000 scale (7.5 minutes) quadrangle topographic maps prepared by the United States Geological Survey (USGS) and/or on the most recent version of the Soil Survey of Wake County, North Carolina, prepared by the United States Department of Agriculture (USDA) shall provide the 100-foot-wide Riparian Buffers directly adjacent to such surface waters (or features), excluding wetlands. In the event of a discrepancy between these two maps that would affect a required buffer the most restrictive map shall apply.
 2. Other surface waters (or features) shall provide the 50-foot-wide Riparian Buffers directly adjacent to such surface waters (or features).
- C. Delineation of the Riparian Buffer Zones.** The Riparian Buffer shall be further delineated into the following Riparian Buffer Zones - the buffer zones shall be measured horizontally from the edge of the water body (i.e., from top of bank).
 1. Zone NRB1 (30 feet landward adjacent to Stream bank) on both sides of the Stream.
 2. Zone NRB2 (20 feet landward adjacent to Zone NRB1) on both sides of the Stream.
 3. Zone NRB3 (50 feet landward adjacent to Zone NRB2) on both sides of the Perennial Stream.
- D. Activity within the Riparian Buffer Zones.**
 1. The State of North Carolina, Division of Water Resources regulates activity within

Zones NRB1 & NRB2 of the Riparian Buffer in the Neuse River Basin. Activity may take place within any Riparian Buffer zone as defined by Neuse Riparian Buffer Rules, 15A NCAC 2B.0233 as amended. The following documentation will be required by the Town prior to permitting development activity to commence within Zones NRB1 & NRB2. The inner 30-foot zone shall also follow the NPDES Post-construction storm water regulations as described in 15A NCAC 02H .0154.

- a. An authorization certificate that documents that the NC Division of Water Resources has approved an allowable Use.
 - b. An opinion from the NC Division of Water Resources that vested rights have been established for that activity.
 - c. A letter from the NC Division of Water Resources documenting that a Variance has been granted for the proposed activity.
2. The Town regulates activity in Zone NRB3 of the Riparian Buffer which shall be as defined by Zone 2 requirements established by the Neuse Riparian Buffer Rules, 15A NCAC 2B.0233 as amended. All activity in Zone NRB3 must comply with all other Town, State and Federal regulations.
 3. All timbering activity in the buffer must also comply with the Town's Timbering standards pursuant to Section 4.9 of this UDO.

E. Description of Buffer Areas on Development Petition. Stream buffers (Zones NRB1, NRB2 and NRB3) shall be graphically shown on all Preliminary Plans, Development Plans, Construction Drawings, erosion control plans and Final Plats or any site plan or plot plan submitted for a UDO Permit. The buffers shall be clearly labeled "Riparian Buffer" and zones shall be clearly shown and labeled with zone restrictions noted.

F. Lots Containing Riparian Buffer Area. The following standards apply to construction activities on Lots containing a Riparian Buffer

Area and/or the establishment of new Lots in and around riparian corridors.

1. New construction of or substantial improvements to any residential Structure shall be located outside of the Riparian Buffer Area.
2. No proposed Building Lot that is wholly or partly in the Riparian Buffer Area shall be approved unless there is established on the Final Plat a line representing the limits of the Riparian Buffer Area and a minimum usable area as specified below.
 - a. The usable Lot Area is defined by the area of the Lot outside of the Riparian Buffer Area that will contain the Structure and related Setbacks. This area must be contiguous.
 - b. If the minimum Lot size has been reduced to an amount less than the typical Lot size of a Zoning District through a provision in this UDO, the total minimum square footage of any Lot located outside of the Riparian Buffer shall be the total revised minimum Lot size.

4.8.7 CAPE FEAR RIVER BASIN RIPARIAN BUFFER PROTECTION

A. Applicability. Any proposed Subdivision or development Project which is located within the Town or its Extraterritorial Jurisdiction in the Cape Fear River Basin shall provide Riparian Buffers on both sides of all Perennial and Intermittent Streams; including lakes, ponds, and other bodies of water (features).

B. Required Riparian Buffer Width. The Riparian Buffers shall be provided at the following widths and the graphic below.

1. All features indicated on the most recent version of the 1:24,000 scale (7.5 minutes) quadrangle topographic maps prepared by the United States Geological Survey (USGS) and/or the most recent version of the Soil Survey of Wake County, North Carolina prepared by the United States Department of Agriculture (USDA) shall provide the 30-foot-wide Riparian Buffers directly

adjacent to such surface waters (or features), excluding wetlands.

C. Delineation of the Riparian Buffer Zones. The Riparian Buffer shall be further delineated as the following Riparian Buffer Zones.

1. Zone CFB1 (20 feet landward adjacent to Stream bank) on both sides of the Stream.
2. Zone CFB2 (10 feet landward adjacent to Zone 1) on both sides of the Stream.

D. Activity within the Riparian Buffer Zone.

1. All built upon area shall be out of both of the buffer Zones CFB1 and CFB2 (30 feet landward of all perennial and intermittent features) The entire 30-foot Riparian Buffer shall also follow the NPDES Post-construction storm water regulations as described in 15A NCAC 02H .0154.
2. All activity taking place must comply with all other Town, State and Federal regulations.
3. All timbering activity in the buffer must also comply with the Town's Soil Erosion and Sediment Control, Stream and Wetland Protection, Land Disturbance Ordinance 02-06 Section 9-5023.
4. Zone CFB1 shall consist of a vegetated area that is undisturbed except for the Uses outlined in the Cape Fear River Basin Table of Approved Uses.
5. Zone CFB2 shall consist of a stable vegetated area that is undisturbed except for the activities outlined in the Cape Fear River Basin Table of Approved Uses. The Town of Holly Springs recommends keeping natural undisturbed vegetation in this area to the maximum extent practicable.

E. Description of Buffer Areas on Development Petition. Stream buffers (Zones CFB1 and CFB2) shall be graphically shown on all Development Plans, Preliminary Plans, Construction Drawings, erosion control plans and Final Plats or any site plan or plot plan submitted for a UDO Permit. The Buffer Areas shall be clearly labeled "Riparian Buffer" and zones shall be clearly shown and labeled with zone restrictions noted.

F. Lots Containing Riparian Buffer Area. The following standards apply construction activities on Lots containing a Riparian Buffer Area and/or the establishment of new Lots in and around riparian corridors.

1. New construction of or substantial improvements to any residential Structure shall be located outside of the Riparian Buffer Area.
2. No proposed Building Lot that is wholly or partly in the Riparian Buffer Area shall be approved unless there is established on the Final Plat a line representing the limits of the Riparian Buffer Area and a minimum usable area as specified below.
 - a. The usable Lot Area is defined by the area of the Lot outside of the Riparian Buffer Area that will contain the Structure and related Setbacks. This area must be contiguous.
 - b. If the minimum Lot size has been reduced to an amount less than the typical Lot size of a Zoning District through a provision in this UDO, the total minimum square footage of any Lot located outside of the Riparian Buffer shall be the total revised minimum Lot size.

G. Diffuse Flow Requirements. Diffuse flow of runoff shall be maintained in the Riparian Buffer by dispersing concentrated flow and reestablishing vegetation. Techniques for providing diffuse flow are specified in the ED&CS. The following provisions apply.

1. Concentrated runoff from ditches or man made conveyances shall be converted to diffuse flow before the runoff enters the buffer.
2. Periodic corrective action to restore diffuse flow shall be taken by the property owner as necessary to prevent the formation of erosion gullies.
3. Stormwater Control Measures (SCMs) for obtaining diffuse flow shall be included in a platted drainage easement.

4.9 FORESTRY ACTIVITY, TIMBERING OPERATIONS, AND SITE CLEARING

- A. Permit Required.** A UDO Permit shall be required for the Use of any Lot for a forestry activity, timbering operation or site clearing which is not being undertaken pursuant to a valid UDO Permit in connection with a proposed development in compliance with the terms of this UDO. The following activities shall be considered exempt from the requirement to obtain a UDO Permit:
1. Removal of trees found to be diseased or insect infested;
 2. Removal of trees which have become, or threaten to become, a danger to human life or property;
 3. Removal of trees in preparation for development pursuant to an approved and valid Development Plan or UDO Permit;
 4. Removal of trees from horticultural properties, such as farms, nurseries or orchards. This exemption shall not include forestry activities;
 5. Removal of trees for agricultural purposes authorized in the RR District; and,
 6. Removal of trees in connection with approved utility construction within a permanent utility easement.
- B. Exempted Forestry Activity.** Any site for which a valid permit for a forestry activity has been issued by the State of North Carolina under North Carolina General Statute, and undertaken pursuant to such State permit, shall be exempt from the standards of this UDO. Prior to commencing any forestry activity, the owner shall provide a copy of such State permit to the Administrator so that the Town may monitor State permitted forestry activity within its jurisdiction.
- C. Standards for Site Clearing.** Any forestry activity, timbering operation or site clearing which has not been issued a permit by the State of North Carolina for a valid forestry activity shall be accomplished in compliance with the terms and conditions of the UDO Permit for such activity. All timbering operations or site clearing activities that do not qualify as an exempted forestry activity shall comply with the following standards:
1. A 50 foot undisturbed buffer shall be provided and maintained at all times along the perimeter of the property, along public roadways and property boundaries adjacent to developed properties, and a 25 foot undisturbed buffer along property boundaries adjacent to undeveloped properties. No property owner shall be required to preserve an undisturbed buffer that covers more than 20% of the area of the tract, net of public road Right-of-Way and required conservation easements;
 2. The undisturbed Buffer Area shall be delineated by a 4 foot orange tree protection fencing. The tree protection fencing shall be maintained at all times until completion of timbering operations or site clearing or until the Certification of Completion is issued.
 3. Compliance with Chapter 8, Article IV Timbering of the Town Code of Ordinances.

HOLLY SPRINGS

North Carolina