



WATERSHED PROTECTION

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CHAPTER 8 WATERSHED AND RIPARIAN BUFFER PROTECTION¹

8.1 PURPOSE²

8.1.1 GENERAL

This Chapter implements the following:

- A. The water supply watershed management and protection program required by [N.C.G.S. § 143-214.5](#) that is administered by the North Carolina Department of Environmental Quality (NCDEQ), including the water supply watershed program rules at [15A NCAC 02B .0620 et. seq.](#)
- B. The riparian buffer protection program for land located within the Jordan Lake Watershed required by N.C.G.S. § 143-214.20 *et. seq.* and NCDEQ's administrative rules at [15A NCAC 02B .0267](#).
- C. The County's watershed management and riparian buffer standards.

¹ See discussion of proposed revisions to the Watershed Protection Ordinance (WPO) in the [Audit Report](#) (pp. 32-35). This Chapter also includes additional direction from staff regarding integration of the watershed standards with the district and use standards, as well as integration of the County's standards regarding riparian buffers. It has been significantly simplified from the current WPO and includes the following key changes: 1) The low-density development option is maintained; 2) The high-density option is added for certain areas. The built-upon maximums in this Chapter are set at higher levels than what will be allowed in the base zoning districts. In addition, all single-family development is assumed to include 100% built-upon area, which will limit development intensity compared to the maximum that would be allowed under state law.

The following sections will be carried forward in other parts of the UDO: Section 308(C)-(E) address nonconforming uses and structures and will be relocated and consolidated with the standards in [Sections 14.4 and 14.5](#). The definitions in Section 109 will be consolidated with the general definitions in [Chapter 17](#). Article 200, Subdivision Regulations, requires that no plat be filed unless it is approved in accordance with the WPO. However, the WPO provides no affirmative review duties. We recommend, in accordance with the provisions in the [2023 Model Water Supply Watershed Protection Ordinance](#), that the subdivision procedures include provisions stating that compliance with the watershed regulations is required, providing for review by the Watershed Administrator, and incorporating any specific subdivision review requirements.

² The authority section in Section 101, Authority and Enactment, of the WPO is replaced by the general authority section in Chapter 1 of the UDO; this incorporates explicit reference to the state statute which establishes the watershed regulation requirements. The purpose statement is new.

8.1.2 PURPOSE

The purpose of this Chapter is to allow development while protecting the health of the waterways and the ecosystem by improving water quality, preserving natural features, and protecting aquatic habitats.

8.2 APPLICABILITY

8.2.1 GENERAL³

This Chapter applies to all lands in the unincorporated parts of the County that are not part of a municipality's extraterritorial jurisdiction. This Chapter only applies within any incorporated municipality within the County or to land subject to an incorporated municipality's extraterritorial jurisdiction pursuant to an interlocal agreement between the County and the municipality.

8.2.2 EXCEPTIONS⁴

- A. Existing development, as defined in this Ordinance, is not subject to the requirements of Section 8.3: Watershed Areas, Section 8.4: Watershed Intensity and Use Standards, and Section 9.5: Watershed Development Standards.
- B. Expansions to existing development shall comply with the requirements of Section 8.3: Watershed Areas, Section 8.4: Watershed Intensity and Use Standards, and Section 9.5: Watershed Development Standards, except for expansion of a single-family residential development that is not part of a common plan of development, subject to the following:
 1. In an expansion, the built-upon area of the existing development is not required to be included in the density calculations.

³ This generally carries forward and simplifies Section 102, Jurisdiction, of the Watershed Protection Ordinance (WPO) and clarifies its applicability to lands under which municipalities have extraterritorial jurisdiction. The County may wish to confirm that each local municipality's regulations enforce watershed and riparian buffer standards within their extraterritorial jurisdiction and, if not, may consider whether these powers should be so extended.

⁴ Carries forward and revises Section 103, Exceptions to Applicability, of the WPO, with minor revisions to conform to Sec. 203 of the [2023 Model Water Supply Watershed Protection Ordinance](#). Based on discussion with staff, Section 103D (regarding pre-existing lots established before the WPO was enacted) is not carried forward. Section 307 is duplicative and is not carried forward. The phrase that nothing in this Section shall repeal, modify, or amend "any ordinance or regulation pertaining thereto except any ordinance which these regulations specifically replace" is not carried forward.

2. Where there is a net increase of built-upon area, only the area of net increase is subject to the requirements of this Chapter.
 3. In redevelopment, when existing development is being replaced with new built-upon area and there is a net increase of built-upon area, only areas of net increase shall be subject to the requirements of this Chapter.⁵
- C. A lot or parcel created after [*insert the effective date of this Ordinance*] shall be exempt from the regulations in Section 8.3: Watershed Areas, Section 8.4: Watershed Intensity and Use Standards, and Section 9.5: Watershed Development Standards if it is developed for one single-family detached residence and was created as part of a family subdivision (see [Subsection 13.2.3: Exempt Subdivisions](#)).⁶
- D. A nonconforming lot of record that is not contiguous to any other lot owned by the same party may be developed for single-family residential purposes and shall comply with these regulations to the maximum extent practicable.
- E. The following types of activities within the Jordan Lake Watershed are not subject to the requirements of Section 8.6: *Riparian Buffer Standards*, but may be subject to state laws and regulations that establish rules for riparian buffers, including but not limited to regulations established by the North Carolina Department of Environmental Quality Division of Water Resource:⁷
1. Activities conducted under the authority of the State, the federal government, multiple jurisdictions, or local governments;
 2. Agricultural activities; and
 3. Forest harvesting activities that comply with [15 NCA 02B .0267\(14\)](#).
- F. Nothing contained in this Chapter shall repeal, modify, or amend any federal or state law or regulation.
- G. It is generally not intended that these regulations interfere with any easement, covenants, or other agreements between private parties. However,

⁵ Carries forward Section 104(c) of the WPO, with additional provisions regarding the applicability of the regulations to only the additional built-upon area on expansions of existing development taken from the [2023 Model Water Supply Watershed Protection Ordinance](#)

⁶ This clarifies that single-family lots are exempt from the watershed regulations, in accordance with state law, but not the riparian buffer regulations.

⁷ This incorporates the limitation on local government authority set out in 15A NCAC 02B .0267(3) and advises these exempt landowners that state law and regulations regarding riparian buffers may apply.

if the provisions of these regulations impose greater restrictions or higher standards for the use of a building or land, then the provisions of these regulations shall control.

8.3 WATERSHED AREAS⁸

8.3.1 WATERSHED AREAS CLASSIFICATION

- A. **Watershed Areas Established.** Table 8.3-1: *Watershed Areas* identifies the watershed areas that are subject to the requirements of this Chapter and includes general descriptions of each area. Figure 8.3: *Watershed Areas* illustrates the approximate boundaries of each watershed area. The official boundaries of the watershed areas are identified on the Watershed Map, which is incorporated herein by reference, and maintained in the Office of _____. The Watershed Map may be maintained either on paper or as an electronic map layer in the County’s Geographic Information System (GIS) database. All land in the watersheds are subject to the riparian buffer regulations in Section 8.6: *Riparian Buffer Standards*.

Table 8.3-1: Watershed Areas	
Name	Description
WS-II-BW (Balance of Watershed)	The portion of Chatham County draining to University Lake. Generally, it is bounded on the east by U.S. 15-501, on the south by S.R. 1532 (Manns Chapel Road), on the west by S.R. 1534, and on the north by the County’s border with Orange County.
WS-II-CA (Critical Area)	The land extending beyond the area designated as River Corridor, but within 2,640 feet from the normal pool elevation of approximately 540 feet of the Rocky River Lower Reservoir.
WS-III-BW (Balance of Watershed)	The land draining to the Siler City water system intake on the Rocky River.
WS-IV-CA (Critical Area)	The land within one mile and draining to the water intakes for Pittsboro (Haw River), Sanford (Cape Fear River), and Goldston-Gulf (Deep River), and one-half mile from the normal pool level and draining to Jordan Lake.

⁸ This section carries forward the existing set of watershed areas established in Section 301 of the WPO, except for the Jordan Lake Watershed. As drafted in the WPO, the WS-IV-PA area overlaps the WS-IV-CA area; the definitions have been updated to correct the overlap. Added option of maintaining the watershed map as a digital GIS layer.

Table 8.3-1: Watershed Areas	
Name	Description
WS-IV-PA (Protected Area)	The land between one and ten miles from and draining to the water intakes for Pittsboro (Haw River), Sanford (Cape Fear River), and Goldston-Gulf (Deep River), and the land between one-half mile and five miles from the normal pool level and draining to Jordan Lake.
RC: River Corridor	Land within a line drawn parallel to rivers 2,500 feet from the banks, except for specific excluded areas on the Watershed Map
RCSA: River Corridor Special Area	Land within the river corridor that, due to various existing infrastructure, is given a special designation on the Watershed Map, and in the text.
LW: Local Watershed	All the land area of Chatham County outside the WS-II, WS-III, WS-IV, RC, and RCSA areas, and outside the designated municipal watershed jurisdictions.

- A. **Jordan Lake Watershed.** The Jordan Lake Watershed consists of all lands and waters draining to the B. Everette Jordan Reservoir and is identified on the Watershed Map. It overlays portions of the WS IV-CA, WS IV- PA, WS II-BW, WS III-BW, RC, and LW watershed areas. Lands in the Jordan Lake Watershed are subject to additional riparian buffer regulations in Section 8.6: Riparian Buffer Standards.⁹

Figure 8.3-1: Watershed Area Map

[A map illustrating the different watersheds will be included in the Ordinance]

8.3.2 INTERPRETATION AND AMENDMENT OF WATERSHED AREA BOUNDARIES

- A. **Interpretation.** The following rules of interpretation govern the boundaries of the Watershed Areas:¹⁰
1. If a watershed area boundary is shown as approximately following a street, alley, railroad or highway, the boundary shall be deemed to be the center line of the feature.
 2. If a watershed area boundary is shown as approximately following lot lines, the boundary shall be construed as following such lot lines.

⁹ This carries forward and simplifies Sec. 301(l) of the WPO.

¹⁰ This updates and simplifies the rules governing interpretation of watershed district boundaries in Section 306 of the current WPO. This Section may be relocated to [Chapter 18: Rules of Interpretation & Measurement](#).

However, a surveyed plat prepared by a registered land surveyor may be submitted as evidence that one or more properties along these boundaries do not lie within the watershed area.

3. If a watershed area boundary is shown on the Watershed Map as being more than 25 feet from any parallel lot line, the boundary shall not be impacted. If a watershed area boundary is 25 feet or less from any parallel lot line, the boundary shall be construed to follow the lot line.

B. Amendment.¹¹

1. The Watershed Administrator may recommend amendments to the watershed area boundaries and shall transmit the recommendation to the Watershed Review Board. The Watershed Review Board shall review the application and may request additional information from the Watershed Administrator regarding the appropriate delineation of the watershed area boundaries.
2. A landowner may apply to the Watershed Administrator for a determination as to whether a property or portion of a property that is shown on the Watershed Map as lying within a particular watershed area actually lies within a different watershed area. The Watershed Administrator shall review and refer the application to the Watershed Review Board, which shall evaluate the request. The Watershed Review Board shall review the application and may require the landowner to produce relevant expert testimony and exhibits regarding the appropriate delineation of the watershed area boundaries.
3. Following its review of a request by the Watershed Administrator or a landowner, the Watershed Review Board shall transmit its determination to the Watershed Administrator. If the Watershed Review Board determines that all or a portion of a property lies outside the drainage area of the applicable watershed area, the Watershed Administrator shall initiate an amendment of the watershed area boundaries on the Watershed Map in accordance with the Watershed Review Board's determination. All proposed modifications to the WS-II-BW, WS-II-CA, WS-III-BW, WS-IV-CA, and WS-IV-PA boundaries shall be approved by the [North Carolina Environmental Management](#)

¹¹ This new provision allows landowners and the Watershed Administrator an opportunity to justify a change in the watershed boundaries. The application is referred to the Planning Board and could also be referred to the Watershed Review Board. It also includes the state requirement that the Environmental Management Commission sign off on any modification. A formal procedure may be added in a later draft.

Commission (EMC), or its designee, prior to approval of the amended boundary by the County Board of Commissioners.

8.4 WATERSHED INTENSITY AND USE STANDARDS

The standards of this Section apply to development in all watershed areas.

8.4.1 INTENSITY STANDARDS¹²

- A. **Intensity Standards.** Table 8.4.1-1: *Maximum Development Intensity in WS-II-BW, WS-III-CA, WS-III-BW, and WS-IV-CA*, establishes the maximum development intensity permitted within the WS-II-BW, WS-III-CA, WS-III-BW, and WS-IV-CA watershed areas, and Table 8.4.1-2: *Maximum Development Intensity in WS-IV-PA, RC, RCSA, and LW*, establishes the maximum development intensity permitted within the WS-IV-PA, RC, RCSA, and LW watershed areas, depending on the type of development permitted and the density option selected, in accordance with the following:
1. Where applicable, maximum built-upon area shall be calculated in accordance with 8.4.1A.3: *Built-Upon Area*, below. Zoning districts or land use areas on the County's Land Use and Conservation Plan (see Table 8.4.1-3: *Land Use Areas Eligible for High Density Development Option*) may include maximum built-upon area standards that are lower than the maximums included in Table 8.4.1-1 or Table 8.4.1-2. In the event of conflict between the maximum built-upon area allowed in this Section, the maximum built-upon area allowed in a land use area on the County's Land Use and Conservation Plan, or the maximum built-upon area allowed in a zoning district, the maximum built-upon area that is lowest shall control.
 2. In all watershed areas, the minimum lot size requirements do not apply for lots created specifically for minor utilities, provided that any noise-producing equipment (including generators) are stored within a structure or setback at least 50 feet from any public right-of-way or property line.

¹² Intensity standards are drafts established by staff and are subject to change. In this draft, low density development has been included as an option, and the standards in Tables 8.4.1-1 and 8.4.1-2 generally carry forward the density and built-upon limits in Section 302 of the WPO with changes as noted below. The maximum built-upon area for the high-density development option are based on the state requirements for the watershed areas at 15A NCAC 02B .0624 and are new for the local watershed areas.

Table 8.4.1-1: Maximum Development Intensity in WS-II-BW, WS-III-CA, WS-III-BW, and WS-IV-CA

	WS-II-BW	WS-III-CA	WS-III-BW	WS-IV-CA
Low Density Development Option—Single-Family Detached Residential				
Density, General, Max.	1 du/acre ¹³	1 du/acre	1 du/acre	1 du/acre
Density within Approved Conservation Subdivision, Max.	n/a	n/a	2 du/acre	2 du/acre
Lot Size, Min ¹	40,000 sf	40,000 sf	40,000 sf	40,000 sf
Low Density Development Option—Non-Residential and All Other Residential				
Built-Upon Area, Max.	12%	12%	24%	24%
Lot Size, Min. ²	40,000 sf	40,000 sf	40,000 sf	40,000 sf
High Density Development Option				
Built-Upon Area, Max.	30%	30%	50%	50%

Key: min = minimum required | max = maximum allowed | ft = feet | sf = square feet | du = dwelling unit | n/a = not applicable

¹ The minimum lot size for lots with individual wells and individual wastewater disposal systems shall be 63,5450 square feet. The required minimum lot size may be reduced for development in accordance with 5.3.5: Conservation Subdivision and 8.5.2: Conservation Subdivision.

² Minimum lot size may be reduced for development in accordance with 5.3.5: Conservation Subdivision and 8.5.2: Conservation Subdivision. Additionally, in WS-III-BW and WS-IV-CA, minimum lot size may be reduced for development in accordance with the regulations in 2.3.2: CD-CR, Compact Residential Conditional District; 2.3.3: CD-CMU, Compact Mixed Use Conditional District; and 2.3.4: CD-CN, Compact Non-Residential Conditional District.

Table 8.4.1-2: Maximum Development Intensity in WS-IV-PA, RC, RCSA, and LW

	WS-IV-PA	RC	RCSA	LW
Low Density Development Option—Single-Family Detached Residential				
Density, General, Max.	1 du/acre	1 du/5 acres	1 du/acre	1 du/acre

¹³ The standards in WS-II-BW and WS-III-CA have been simplified from the standards in the current WPO. In WS-II-BW, the maximum density is 1 du per 40,000 sf or 1 per 63,540 sf for lots with individual wells and individual wastewater disposal systems. The minimum lot size is 40,000 sf except within an approved cluster development. In WS-III-CA, the maximum density is 1 du per acre, and minimum lot size is 40,000 sf or 63,540 sf for lots with individual wells and individual wastewater disposal systems, except within an approved cluster development. In this draft, the density for both districts has been changed to be 1 du/acre, which is consistent with each other and consistent with the low-density regulations in the 2023 model ordinance and the regulations at 15A NCAC 02B .0264(3).

Table 8.4.1-1: Maximum Development Intensity in WS-II-BW, WS-III-CA, WS-III-BW, and WS-IV-CA

	WS-II-BW	WS-III-CA	WS-III-BW	WS-IV-CA
Density within Approved Conservation Subdivision, Max.	2 du/acre	1 du/acre	2 du/acre	2 du/acre
Lot Size, Min. ¹	40,000 sf	3 acres	40,000 sf	40,000 sf
Low Density Development Option—Non-Residential and All Other Residential				
Built-Upon Area, Max.	12%	2	2	2
Lot Size, Min. ³	40,000 sf	5 acres	40,000 sf	40,000 sf
High Density Development Option				
Built-Upon Area, Max.	70%	12%	12%	70%

Key: min = minimum required | max = maximum allowed | ft = feet | sf = square feet | du = dwelling unit | n/a = not applicable

¹ In WS-IV-PA and LW, minimum lot size for lots with individual wells and individual wastewater disposal systems shall be 63,5450 square feet. In RC, the minimum lot size in a family subdivision shall be two acres. In all areas, the required minimum lot size may be reduced for development in accordance with [5.3.5: Conservation Subdivision](#) and 8.5.2: Conservation Subdivision.

² Maximum built-upon area is 36% for projects without a curb and gutter street system, or 24% for all other non-residential projects.

³ Minimum lot size may be reduced for development in accordance with the regulations in [2.3.2: CD-CR, Compact Residential Conditional District](#); [2.3.3: CD-CMU, Compact Mixed Use Conditional District](#); and [CD-CN, Compact Non-Residential Conditional District](#).

3. All development in the County may use the low density development option.
4. The only development that may use the high density development option is the following:¹⁴
 - (a) Development on land within the WS-IV PA watershed area that is located in the Cape Fear drainage area may use the high density development option up to a maximum of 70 percent built-upon area.

¹⁴ This defines the areas in the County where development may use the high-density development option (development in all other land use areas or watersheds is limited to the use of the low-density development option). The intention is to allow high density development in the parts of the county that have been targeted for higher intensity development, including the area around the Moncure Megasite, and key nodes in the county such as the Town Center land use designations in the unincorporated county, and the Employment Center area.

- (b) Development on land within the land use areas on the County’s Land Use and Conservation Plan set forth in the first column of *Table 8.4.1-3: Land Use Areas Eligible for High Density Development Option*, may use the high density development option. The maximum amount of built-upon area shall be limited to (1) the maximum amount of built-upon area permitted in the land use area in accordance with the second column of *Table 8.4.1-3*, (2) the maximum amount of built-upon area permitted in the watershed area under the high density development option, in accordance with Tables 8.4.1-1 and 8.4.1-2, or (3) the maximum amount of built-upon area permitted in the zoning district, whichever is lowest.

Table 8.4.1-3: Land Use Areas Eligible for High Density Development Option¹⁵	
Area	Built-Upon Area, Max.
Town Center	70%
Employment Center	70%
Community Center	60%
Neighborhood Center	60%
Compact Residential	50%
Villages	50%
Crossroad Community	45%

B. Built-Upon Area.¹⁶

- 1. A project’s built-upon area shall be calculated as the total built-upon area divided by the total project area. If development is located on land included in two or more watershed areas, the maximum built-upon area shall be calculated separately for the portion of land within each watershed area. For purposes of this Subsection, the built-upon area of a lot containing a single-family (detached) dwelling that is part of a

¹⁵ These are new built-upon area maximums for discussion purposes; development using the high-density development option is not currently permitted in the County.

¹⁶ This is a new provision that integrates standards from the watershed protection program regulations at 15A NCAC 02B .0624(4). Rules for single-family development are not required by the state regulations. However, they are included to facilitate calculation of built-upon areas for staff, and to facilitate modifications of residential dwelling units without the requirement of tracking built-upon area.

common plan of development shall be calculated as 100% of the lot's area.¹⁷

2. Total project area shall exclude any areas below the Normal High Water Mark.
3. A project with existing development may calculate built-upon area by excluding the built-upon area of existing development from both the total built-upon area and the total project area.

C. **Density Averaging.** Two noncontiguous lots may be paired and their permitted development intensity averaged together for compliance with the maximum development intensity permitted by Table 8.4.1-1: *Maximum Development Intensity in WS-II-BW, WS-III-CA, WS-III-BW, and WS-IV-CA*, and Table 8.4.1-2: *Maximum Development Intensity in WS-IV-PA, RC, RCSA, and LW*, provided a Density Averaging Certificate (DAC) is issued in accordance with Section 8.7.2D: *Density Averaging Certificate*, and all of the following standards are met:¹⁸

1. The paired lots are within the same watershed area.
2. The maximum development intensity of the paired lots does not exceed the development intensity that would be permitted if the lots were developed separately. If only one of the paired lots is within the Critical Area of the watershed, the lot within the Critical Area shall not be developed beyond the intensities allowed for land in the watershed area in accordance with Table 8.4.1-1 or Table 8.4.1-2, as applicable.
3. The lots or portions of the lots that are not being developed remain in a vegetated or natural state. They may be managed by a homeowners' association as common area, conveyed to the County as a park or greenway with the County's approval, or placed under a permanent conservation or farmland preservation easement. Stormwater Control

¹⁷ This is a new provision that simplifies calculation of built-upon area by assuming that 100% of the land on a lot with a single-family (detached) dwelling consists of built-upon area. This reduces the workload of staff, who does need to track the built-upon area of every single single-family development; it also makes redevelopment easier for single-family homeowners, who do not need to track built-upon area as part of expansion or addition of accessory uses; and allows the County to implement accessory dwelling unit regulations without requiring conditions based on built-upon area. It also clarifies that this assumption of 100% coverage does not apply to a single lot that is used as a single-family dwelling which is not part of a larger development, such as a residential subdivision.

¹⁸ This is a new provision that implements the density averaging provisions in [N.C.G.S. § 143-214.5\(d2\)](#) and [15A NCAC 02B .0624\(9\)](#).

Measures are prohibited within the area being retained in a vegetated or natural state.

4. A metes and bounds description of the areas to remain vegetated and limits on use is recorded on the subdivision plat, in homeowners' covenants, and on individual deeds, and is irrevocable.
5. Vegetated buffers comply with the standards of this Chapter.
6. Built-upon areas are designed and located to minimize stormwater runoff impact to the receiving waters, minimize concentrated stormwater flow, maximize the use of sheet flow through vegetated areas, and maximize the flow length through vegetated areas. Areas of concentrated density development are located in upland areas and, to the maximum extent practicable, away from surface waters and drainageways.¹⁹
7. Development using density averaging that complies with the low density option development requirements transports stormwater runoff from the development by vegetated conveyances, to the maximum extent practicable.

8.4.2 USE STANDARDS

All uses and associated activities listed as allowed in Section 4.2: *Principal Use Tables* for the zoning district in which the development is located are allowed on land within the watershed areas, except as provided in Table 8.4.2-2: *Uses Prohibited in Watershed Areas*.²⁰

¹⁹ These standards, including the requirement that the design “minimize” and “maximize” certain flows, are taken directly from state law, [N.C.G.S. § 143-214.5\(d2\)\(4\)](#). The terms are not defined in either the regulations or the [2023 Model Water Supply Watershed Protection Ordinance](#).

²⁰ This generally carries forward the list of prohibited uses from the current WPO, and adds new prohibited uses identified in the [2023 Model Water Supply Watershed Protection Ordinance](#). The WPO includes two lists of permitted uses in the watershed areas—Attachment A and Attachment B. These lists of uses are not carried forward; instead, use permissions will be established for zoning districts in the permitted use table in [Chapter 3: Use Regulations](#). If the County wishes to further restrict allowable uses, it is recommended that a table be included here or in [Chapter 3: Use Regulations](#) that identifies additional uses defined in Chapter 3 that are permitted in some districts but prohibited in particular watershed areas.

Table 8.4.2-2 Uses Prohibited in Watershed Areas

Uses	WS-II-BW	WS-III-CA	WS-III-BW	WS-IV-CA	WS-IV-PA	RC	RCSA	LW
Key: No = Use prohibited blank cell = Use allowed if allowed in underlying base zoning district								
Sewage ²¹	No ¹	No ¹	No ¹	No ¹	No ¹			
Industrial waste	No ¹	No ¹	No ¹	No ¹	No ¹			
Other wastes ²²	No ¹	No ¹	No ¹	No ¹	No ¹			
New NPDES Individual Permit domestic treated wastewater discharge	No	No						
New NPDES Individual Permit industrial treated wastewater discharge	No	No ²	No ²					
Non-process industrial waste	No							
New industrial connections and expansions to existing municipal discharge with pretreatment program pursuant to 15A NCAC 02H .0904 ²³	No	No						
New sludge application site	No	No	No	No		No	No	
New landfill	No	No	No	No		No	No	
New permitted residual land application ²³		No		No				
New permitted petroleum contaminated soil sites ²³		No		No				
Petroleum contaminated soil remediation ²⁴								
Toxic or hazardous materials, unless specifically in relation to a permitted use with an approved and implemented spill containment plan	No	No	No	No		No		

²¹ This term is included in the table taken from the [2023 Model Water Supply Watershed Protection Ordinance](#) but is not defined. The consultant team is working on a definition.

²² This term is included in the table taken from the [2023 Model Water Supply Watershed Protection Ordinance](#) but is not defined. The consultant team is working on a definition.

²³ This is a new prohibited use that is integrated from the [2023 Model Water Supply Watershed Protection Ordinance](#).

²⁴ Allowed in all watershed areas, per best practice (Tetra Tech).

Table 8.4.2-2 Uses Prohibited in Watershed Areas

Uses	WS-II-BW	WS-III-CA	WS-III-BW	WS-IV-CA	WS-IV-PA	RC	RCSA	LW
Storage of toxic or hazardous materials unless a spill containment plan is approved and implemented					No			
Toxic or hazardous materials unless specifically in relation to a permitted use, and unless a spill containment plan is approved and implemented						No		
Toxic or hazardous materials unless a spill containment plan is approved by the County Fire Inspector and implemented.							No	

Key: No = Use prohibited | blank cell = Use allowed if allowed in underlying base zoning district

¹ Only allowed if specified in 15A NCAC 02B .0104.

² Non-process industrial discharges are allowed.

8.4.3 USE REGULATIONS

The following standards apply to specific uses:

- A. **Agriculture.** In all watershed areas, Agricultural uses conducted after January 1, 1993, shall comply with the riparian buffer standards in 8.6: Riparian Buffer Standards, or if the riparian buffer standards do not apply, shall maintain a minimum 20-foot vegetated setback or equivalent control as determined by SWCC along all perennial waters indicated on the most recent version of USGS 1:24000 scale (7.5 minute) topographic maps, or as determined by local government studies.²⁵
- B. **Silviculture.** In all watershed areas, silviculture activities shall comply with the provisions of the Forest Practices Guidelines Related to Water Quality, 02

²⁵ This carries forward the standards that apply everywhere in the WPO and includes a reference to the riparian buffer standards. This sentence is not included in the [2023 Model Water Supply Watershed Protection Ordinance](#) and is outdated and has not been carried forward – “Animal operations greater than 100 animal units shall employ Best Management Practices as recommended by the Soil and Water Conservation Commission.” This provision may be deleted depending on the revisions to the riparian buffer standards.

NCAC 60C, and other applicable forestry water quality standards, as determined by the North Carolina Forest Service.²⁶

- C. In the RC and RCSA watershed areas, buildings, equipment, or material storage shall not be located within the 100-year flood hazard area as designated on the most recent FEMA Regulatory Flood Maps, available at <https://www.fema.gov/flood-maps>.²⁷

8.5 WATERSHED DEVELOPMENT STANDARDS

Development in the watershed areas is subject to the following standards, in addition to any other applicable standards in this Ordinance.

8.5.1 STORMWATER MANAGEMENT²⁸

All development shall comply with the stormwater management standards of [Chapter 10: Stormwater Management](#). At a minimum, all development in the watershed areas that includes stormwater control measures (SCMs) shall comply with the standards in [15A NCAC 02B .0624\(6\)](#) and include SCM operation and maintenance agreements and plans in accordance with [15A NCAC 02B .0624\(10\)](#). Development that uses the low development density option and that does not include SCMs shall comply with the standards that apply to low density projects in [15A NCAC 02B .0624\(5\)](#).

8.5.2 CONSERVATION SUBDIVISION²⁹

Land in the watershed areas may be developed as a conservation subdivision in accordance with [Subsection 13.3.5: Conservation Subdivision](#), provided that all the standards of this Chapter are met, as well as the following:

²⁶ This updates the current standards in the WPO to reflect the location of the current regulations. It also includes a reference to the North Carolina Forest Service as noted in [15A NCAC 02B .0622](#).

²⁷ This carries forward existing standards in the WPO and modernizes the reference to the relevant flood hazard maps.

²⁸ For purposes of brevity and to refrain from including standards that are duplicative of or less stringent than the standards in Chapter 10, the specific stormwater management standards from the state regulations (which are also included in the [2023 Model Water Supply Watershed Protection Ordinance](#)) are not copied in the Ordinance but only referenced. Revised in this draft to reflect that not all development may have SCMs (e.g., a single-family detached dwelling built on an existing large lot) and to reference the allowance of vegetated conveyances or curb outlet systems for low-density development if permitted elsewhere by this Ordinance.

²⁹ This incorporates the cluster development standards in [15A NCAC 02B .0264\(8\)](#), excluding certain standards that are incorporated in the conservation subdivision standards.

- A. Built-upon areas shall be designed and located to minimize stormwater runoff impact to receiving waters, minimize concentrated stormwater flow, maximize the use of sheet flow through vegetated areas, and maximize the flow length through vegetated areas.
- B. Areas of concentrated development shall be located in upland areas and away, to the maximum extent practicable, from surface waters and drainageways, considering site-specific factors such as topography and site layout as well as protection of water quality.

8.5.3 VEGETATED SETBACKS³⁰

Vegetated buffers are required along surface waterbodies in accordance with 8.6: *Riparian Buffer Standards*.

8.5.4 PUBLIC HEALTH REGULATIONS³¹

- A. No activity, situation, structure, or land use is allowed within the watershed area that poses a threat to water quality and the public health, safety, and welfare.
- B. The Watershed Administrator shall monitor land use activities within the watershed areas to identify situations that may pose a threat to water quality and report all findings to the Watershed Review Board. The Watershed Administrator may consult with any public agency or official and request recommendations and may also coordinate with the local inspections department.
- C. Where the Watershed Review Board finds a threat to water quality and the public health, safety, and welfare, the Watershed Review Board may institute any appropriate action or proceeding to restrain, correct, or abate the condition or violation.

³⁰ This is a significant simplification from the WPO and the waterbody regulations, replacing basic requirements from the WPO and requirements from the regulations (15 NCAC 02B .0624(11)) with a reference to the riparian buffers that apply to areas both within and outside the Jordan Lake watershed.

³¹ This carries forward Article 400 of the WPO, with minor revisions to conform with the updated model ordinance.

8.6 RIPARIAN BUFFER STANDARDS³²

8.6.1 APPLICABILITY³³

A permanently protected riparian buffer is required to be provided for development adjacent to perennial, intermittent and ephemeral streams, as well as perennial water bodies and wetlands (both jurisdictional and non-jurisdictional), in accordance with the standards of this Chapter.

8.6.2 BUFFERS ESTABLISHED

The streams, water bodies, and wetlands subject to the regulations of this Section, the extent of the required riparian buffers along each feature, and the activities allowed within the riparian buffers vary based on the location of the stream, water body, and wetland, and whether the land are on lots that have been subdivided and when they were subdivided, in accordance with the following:

- A. Riparian Buffers Outside the Jordan Lake Watershed.** Riparian buffers are established along surface water bodies on land outside the Jordan Lake Watershed in accordance with the following:
1. On lots that were subdivided on or after December 2, 2008, or that are proposed to be subdivided in connection with a development proposal under this Ordinance, riparian buffers shall be established in accordance with Table 8.6.2-1: *Riparian Buffers on Lots Created On or After December 2, 2008*.³⁴

³² This section reorganizes and updates the riparian buffer standards in Section 304 of the WPO, both as applied to lands within and outside the Jordan Lake Watershed, and the mitigation provisions included in Section 305 of the WPO.

³³ This applicability statement is new.

³⁴ This carries forward Section 304(D) of the WPO, which establishes the buffers by surface waters classification outside the Jordan Lake Watershed and reorganizes the requirements into tabular format to improve legibility.

Table 8.6.2-1 Riparian Buffers on Lots Created On or After December 2, 2008

Surface Water Classification	Buffer Length (feet landward)	How Measured
Perennial Stream	100	Horizontally on a line perpendicular from top of bank; this distance is measured on all sides of perennial streams or is the full horizontal extent of the Area of Special Flood Hazard as most recently mapped by the North Carolina Floodplain Mapping Program, NC Division of Emergency Management, whichever is the greater horizontal distance.
Intermittent Stream	50	Horizontally on a line perpendicular from top of bank; this distance is measured on all sides of intermittent streams
Ephemeral Stream	30	Horizontally on a line perpendicular from top of bank; this distance is measured on all sides along all ephemeral streams
Wetland	50	Horizontally on a line perpendicular from the delineated boundary, surrounding all features classified as wetlands and linear wetlands.
Perennial Water Body	50	Horizontally on a line perpendicular from the delineated boundary

- On lots that were created before December 2, 2008, and that are not currently proposed to be subdivided, riparian buffers shall be established in accordance with Table 8.6.2-1: *Riparian Buffers on Lots Created Before December 2, 2008 Outside the Jordan Lake Watershed*.³⁵

Table 8.6.2-2 Riparian Buffers on Lots Created Before December 2, 2008 Outside the Jordan Lake Watershed

Surface Water Classification	Buffer Length (feet landward)	How Measured
Perennial and Intermittent Waters not within 2,500 ft of the Haw, Deep, or Rocky Rivers	50	Horizontally on a line perpendicular from top of bank or the full horizontal extent of the Area of Special Flood Hazard as most recently mapped by the North Carolina Floodplain Mapping Program, NC Division of Emergency Management, whichever is the greater horizontal distance.

³⁵ This carries forward the standards from the 1999 ordinance, which are not included in the WPO.

Table 8.6.2-2 Riparian Buffers on Lots Created Before December 2, 2008 Outside the Jordan Lake Watershed

Surface Water Classification	Buffer Length (feet landward)	How Measured
Haw, Deep, and Rocky Rivers	100	
Perennial and Intermittent Waters within 2,500 ft of the Haw, Deep, or Rocky Rivers	100	

B. **Riparian Buffers Within the Jordan Lake Watershed.** Riparian buffers are established along surface water bodies on land inside the Jordan Lake Watershed in accordance with the following:

1. On lots that were created on or after December 2, 2008, or that are proposed to be subdivided in connection with a development proposal under this Ordinance, riparian buffers shall be established in accordance with Table 8.6.2-1: *Riparian Buffers on Lots Created On or After December 2, 2008*.³⁶
2. On lots that were created before December 2, 2008, riparian buffers shall be established in accordance with Table 8.6.2-3: *Riparian Buffers on Lots Created Before December 2, 2008 Within the Jordan Lake Watershed*.³⁷

Table 8.6.2-3 Riparian Buffers on Lots Within the Jordan Lake Watershed Created Before December 2, 2008

Surface Water Classification	Buffer Length (feet landward)	How Measured
Perennial Stream	50	Horizontally on a line perpendicular from top of bank; this distance is measured on all sides of perennial streams or is the full horizontal extent of the Area of Special Flood Hazard as most recently mapped by the North Carolina Floodplain Mapping Program, NC Division of Emergency Management, whichever is the greater horizontal distance.

³⁶ This carries forward existing standards in the WPO.

³⁷ This carries forward the regulations that apply in the WPO, as described on the County's [Riparian Buffer Requirements web page](#).

Table 8.6.2-3 Riparian Buffers on Lots Within the Jordan Lake Watershed Created Before December 2, 2008

Surface Water Classification	Buffer Length (feet landward)	How Measured
Intermittent Stream	50	Horizontally on a line perpendicular from top of bank; this distance is measured on all sides of intermittent streams
Perennial Water Body	50	Horizontally on a line perpendicular from the delineated boundary

3. Wetlands adjacent to surface waters or within 50 feet of surface waters are regulated in accordance with 15A NCAC 02H. 0506.
- C. The buffers established on land within the Jordan Lake Watershed in accordance with 8.6.2B: *Riparian Buffers Within the Jordan Lake Watershed*, are separated into two zones:
1. *Zone One.* Zone One consists of the first 30 feet landward of the water body. If the buffer is only 30 feet in width, the buffer shall consist solely of Zone One.
 2. *Zone Two.* Zone Two consists of the entire buffer landward of the water body that is beyond the outer edge of Zone One.
- D. **Identification of Waters with Riparian Buffers Subject to this Chapter.** Riparian buffers subject to this Chapter shall be identified in accordance with the following:³⁸
1. *Mapped Surface Waters.* Except for land on lots outside the Jordan Lake watershed that were created before December 2, 2008, and that is not currently proposed to be subdivided, for which riparian buffers shall be identified based on the most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the United States Geologic Survey (USGS), surface water may be subject to this Chapter if it is approximately shown on any of the following references, provided

³⁸ This reorganizes and clarifies the provisions in the WPO relating to the designation and identification of surface water bodies that are subject to the riparian buffer regulations. Subsection 1, Mapped Surface Waters, builds on Section 304(A) of the WPO and identifies the materials used for baseline identification of relevant waterbodies. Subsection 2, Field Delineation, and 3, Identification Procedures, carries forward the requirement of field delineation from Sections 304(B) and 304(E) of the WPO with significant restructuring to improve clarity.

that a field delineation in accordance with Paragraph 2, below, is required:

- (a) The most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture;
 - (b) The most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the USGS; or
 - (c) Maps approved by the Geographic Information Coordinating Council and the Environmental Management Commission.
2. *Field Delineation.* Except for land on lots outside the Jordan Lake watershed that were created before December 2, 2008, and that is not currently proposed to be subdivided, field determinations of all surface water bodies shall be performed in accordance with the following. All field determinations of perennial water bodies, wetlands, and streams are subject to review and approval by the County, which may include an on-site review.
- (a) Field delineations may be completed by the County or privately contracted environmental professionals for those reviews described below. Privately contracted environmental professionals are required to complete field delineations for Major Subdivisions. All field delineations of perennial water bodies, wetlands, and streams are subject to review and approval by the County, which may include an on-site review.
 - (b) The specific origination point of a perennial or intermittent stream shall be established using the latest version of the DWR publication *Methodology for Identification of Intermittent and Perennial Streams and Their Origins*, available at <https://www.deq.nc.gov/about/divisions/water-resources/water-quality-permitting/401-buffer-permitting/application-forms-help-documents>.
 - (c) All perennial water body and stream classifications shall be conducted by a qualified professional who has successfully completed DWR's *Surface Water Identification Training Certification* course, its successor, or other equivalent training curriculum approved by DWR.
 - (d) Field delineations of wetlands shall be conducted using the 1987 U.S. Army Corps of Engineers methodologies and supplements

for each development project. (The current applicable version is *Environmental Laboratory (1987) Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1*, and supplements, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.)³⁹ Wetlands considered to be non-jurisdictional by the US Army Corps of Engineers or DWR are subject to Chatham County riparian buffers. All wetland delineations shall be conducted by a qualified professional who has at least two years of demonstrated experience in conducting wetlands delineations in North Carolina under the Clean Water Act Sections 401 and 404 provisions.

- (e) Surface waters that appear on the maps used to determine surface water classifications shall not be subject to the requirements of this Section 8.6 if a site evaluation reveals any of the following:
 - (1) Human-made ponds and lakes that are not part of a natural drainage way that is classified in accordance with [15A NCAC 2B .0100](#), including ponds and lakes created for animal watering, irrigation, or other agricultural uses. For purposes of this Paragraph, a pond or lake is part of a natural drainage way when it is fed by an intermittent or perennial stream or when it has a direct discharge point to an intermittent or perennial stream.
 - (2) The absence on the ground of a corresponding intermittent or perennial stream, lake, reservoir, or pond.
 - (3) Ditches or other human-made water conveyances, other than modified natural streams.
- (f) Any disputes over on-site determinations made in accordance with this section with regard to perennial water bodies and perennial and intermittent streams located within the Jordan Lake Watershed should be referred to the Director of the NC Division of Water Resources c/o the 401 Oversight Express Permitting Unit, or its successor, in writing. The Director's determination is subject to review as provided in N.C.G.S. Ch. 150B, Arts. 3 and 4. All other disputes over on-site determinations made in accordance with this Section shall be referred to the

³⁹ This has been carried forward from footnote 1 in the WPO. Because of the organization of this Ordinance, substantive material must be included in the text of the Ordinance. We recommend that the specific reference be removed, and that the County maintain specific information about references in a separate manual or on its website.

Watershed Review Board in writing. Appeals from a decision of the Watershed Review Board shall be in accordance with 8.7.2H: *Appeals from Decision of Watershed Review Board*.

3. *Identification Procedures.*⁴⁰ Allowable methodologies for establishing the location and extent of streams and water bodies in the field are described in the guidance document *Field Procedures for the Classification of Streams and Waterbodies, Chatham County, NC*. All perennial water body and stream classifications shall be conducted by a qualified professional who has successfully completed NC Division of Water Resources' (DWR's) Surface Water Identification Training Certification course, its successor, or other equivalent training curriculum approved by DWR.

E. **Exemptions When Existing Uses are Present and Ongoing.** Within the Jordan Lake Watershed, this Section 8.6 does not apply to uses that are existing and ongoing within the buffer for an intermittent stream or perennial water body, or for the inner 50 feet of the buffer for a perennial stream; however, this Section 8.6 does apply at the time an existing and ongoing use is changed to another use. Change of use shall involve the initiation of any activity that does not meet either of the following criteria for existing and ongoing activity:⁴¹

1. It was present within the riparian buffer as of August 11, 2009, and has continued to exist since that time. Existing uses shall include agriculture, buildings, industrial facilities, commercial areas, transportation facilities, maintained lawns, utility lines and on-site sanitary sewage systems, any of which involve either specific, periodic management of vegetation or displacement of vegetation by structures or regular activity. Only the portion of the riparian buffer occupied by the footprint of the existing use is exempt from this Section. Change of ownership through purchase or inheritance is not a change of use. Activities necessary to maintain uses are allowed provided that the site remains similarly vegetated, no impervious surface is added within 50 feet of the surface water where it did not previously exist as of August 11, 2009, and existing diffuse flow is maintained. Grading and revegetating Zone Two is allowed provided that the health of the vegetation in Zone One is not compromised, the ground is stabilized, and existing diffuse flow is maintained; or

⁴⁰ Detailed procedures for identification in Section 304(A) of the WPO have been replaced with a reference to the Field Procedures

⁴¹ This carries forward the exemptions in Section 304(J)(6) of the WPO.

8.6.3 VEGETATION AND ACTIVITIES WITHIN THE RIPARIAN BUFFER ON LOTS OUTSIDE THE JORDAN LAKE WATERSHED CREATED AFTER DECEMBER 2, 2008, OR THAT ARE PROPOSED TO BE SUBDIVIDED IN CONNECTION WITH A DEVELOPMENT PROPOSAL UNDER THIS ORDINANCE

2. Projects or proposed development that the County determines to meet at least one of the following criteria:
 - (a) Project requires a 401 Certification/404 Permit and these were issued prior to August 11, 2009;
 - (b) Projects that require a state permit, such as landfills, NPDES wastewater discharges, land application of residuals and road construction activities, and that have begun construction or are under contract to begin construction and had received all required state permits and certifications prior to August 11, 2009;
 - (c) Projects that are being reviewed through the Clean Water Act Section 404/National Environmental Policy Act Merger 01 Process (published by the US Army Corps of Engineers and Federal Highway Administration, 2003) or its immediate successor and that have reached agreement with the Department of Environmental and Natural Resources⁴² on avoidance and minimization prior to August 11, 2009; or
 - (d) Projects that are not required to be reviewed by the Clean Water Act Section 404/National Environmental Policy Act Merger 01 Process (published by the US Army Corps of Engineers and Federal Highway Administration, 2003) or its immediate successor if a Finding of No Significant Impact has been issued for the project and the project has the written approval of the County prior August 11, 2009.

8.6.3 VEGETATION AND ACTIVITIES WITHIN THE RIPARIAN BUFFER ON LOTS OUTSIDE THE JORDAN LAKE WATERSHED CREATED AFTER DECEMBER 2, 2008, OR THAT ARE PROPOSED TO BE SUBDIVIDED IN CONNECTION WITH A DEVELOPMENT PROPOSAL UNDER THIS ORDINANCE⁴³

The following standards apply to riparian buffers on land on lots located outside the Jordan Lake Watershed that were created on or after December 2, 2008, or that are proposed to be subdivided in connection with a development proposal under this Ordinance:

⁴² The Department of Environmental and Natural Resources is the predecessor to the Department of Environmental Quality, which was formed in 2015.

⁴³ This updates and reorganizes the allowed and prohibited uses and structures in riparian buffers outside the Jordan Lake Watershed in Sections 304(F) and (G) of the WPO.

8.6.3 VEGETATION AND ACTIVITIES WITHIN THE RIPARIAN BUFFER ON LOTS OUTSIDE THE JORDAN LAKE WATERSHED CREATED AFTER DECEMBER 2, 2008, OR THAT ARE PROPOSED TO BE SUBDIVIDED IN CONNECTION WITH A DEVELOPMENT PROPOSAL UNDER THIS ORDINANCE

- A. **Vegetation Requirements.** Riparian buffers shall be left in an existing vegetated condition, except for the following:
1. Silvicultural or allowable forest management activities using Best Management Practices;
 2. Removal of invasive species by hand; or
 3. Activities permitted elsewhere in this Chapter.⁴⁴
- B. **Allowed Uses and Structures.** The following uses and structures are allowed, as are maintenance activities associated with the uses and structures, provided there are no practical alternatives to the requested use and an Authorization Certificate is issued in accordance with 8.7.2F: *Authorization Certificate*, below:⁴⁵
1. Water dependent structures;
 2. Signs and lighting as necessary for public health, safety, and welfare purposes;
 3. Drainage and forestry maintenance associated with agricultural and silvicultural activities, in accordance with applicable Best Management Practices, including the Food Security Act of 1985 (Pub L. 99–198), as amended; the Food, Agriculture, Conservation and Trade Act of 1990 (Pub. L. 101–624, as amended); and [02 NCAC 60C .0101 through .0209](#).⁴⁶
 4. Stream crossings (such as roads, driveways, and trails) that are perpendicular to the stream flow, following a consultation meeting with County staff for private roads and County staff and NCDOT representatives for public roads. Stream crossings shall be designed to minimize the amount of stream channel bed and bank disturbance and shall comply with all applicable Best Management Practices and permit requirements. Stream crossing design alternatives that are preferred include arches, span bridges, and submerged culverts (see CSI Mitigation Measure No. 7 contained in the [Guidance Memorandum To Address And Mitigate Secondary And Cumulative Impacts To](#)

⁴⁴ This is significantly simplified from the standards in Section 304(H) of the WPO; staff reports that the provisions have not been enforced and buffer vegetation requirements are managed through the subdivision regulations.

⁴⁵ The last phrase is added to clarify that a no practical alternatives determination is required before the use may take place.

⁴⁶ This carries forward footnote 4 of the WPO and adds references to the relevant Public Laws and the updated sections of the NCAC.

8.6.3 VEGETATION AND ACTIVITIES WITHIN THE RIPARIAN BUFFER ON LOTS OUTSIDE THE JORDAN LAKE WATERSHED CREATED AFTER DECEMBER 2, 2008, OR THAT ARE PROPOSED TO BE SUBDIVIDED IN CONNECTION WITH A DEVELOPMENT PROPOSAL UNDER THIS ORDINANCE

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Wildlife Resources Commission (August 2002). The following standards also apply:

- (a) Bents or other support structures for bridges are not allowed within the bankfull area of perennial streams, except where necessary by permit on the Haw, Cape Fear, and Deep Rivers.
 - (b) For public road crossings, the crossing shall be designed in accordance with the alternative that best meets the intent of this Chapter and as required by permit.⁴⁷
 - (c) Culverts or arches are allowed for crossing perennial, intermittent, and ephemeral streams. Culverts and arches shall be sized and designed in accordance with standard design practices, including allowing for safe passage for wildlife and floodplain flows.
 - (d) Fill required for crossings shall not restrict flows during a 25-year, 24-hour storm event, based on hydrologic and hydraulic models. Additional culverts within the floodplain and at bankfull elevation may be required to ensure these flows are not restricted.
 - (e) There shall be no concentrated discharge of road or driveway runoff into riparian buffers. Diffuse flow into riparian buffers is allowed using Best Management Practices.⁴⁸
5. Utility crossings (including water, sanitary sewer, electric, communication lines, easements, manholes, and appurtenances) are allowed in the riparian buffer only where no practical⁴⁹ alternative exists, in accordance with the following:
- (a) The preferred methodology for crossings is:
 - (1) Attaching to bridges as permitted by NCDOT or private bridge owners;

⁴⁷ In the WPO, this references *Subdivision Roads Minimum Construction Standards*, N.C. Division of Highways Board of Transportation (January 2010). This reference has not been carried forward.

⁴⁸ In the WPO, this statement referenced footnote 7 that cited the Stormwater Best Management Practices Manual, NC Division of Water Quality [now known as the Division of Water Resources] (July, 2007). This has not been carried forward, and we recommend a simple reference to Best Management Practices.

⁴⁹ Changed from “practicable” in the WPO to “practical” for consistency.

8.6.3 VEGETATION AND ACTIVITIES WITHIN THE RIPARIAN BUFFER ON LOTS OUTSIDE THE JORDAN LAKE WATERSHED CREATED AFTER DECEMBER 2, 2008, OR THAT ARE PROPOSED TO BE SUBDIVIDED IN CONNECTION WITH A DEVELOPMENT PROPOSAL UNDER THIS ORDINANCE

- (2) Directional boring under the riparian buffer and associated stream, water body, or wetland; or
 - (3) In combination with road crossings, culvert-type design within the road right- of-way.
 - (b) Culvert-type crossings shall not cause any restriction of stream channel flows up to the 25-year, 24-hour design storm.
 - (c) Sewage treatment crossings of ephemeral streams may be trenched in accordance with the applicable laws and rules for sewage treatment disposal systems only for on-site (on-parcel) sewage treatment systems;
 6. Electric, petroleum, and gas pipeline construction and maintenance activities within the prescribed easement area;
 7. Stream and riparian buffer restoration and associated maintenance activities;
 8. All trails, provided that Best Management Practices and an approved Trail Management Plan are employed for trails that are used for recreational purposes, such as walking, mountain biking, and horseback riding. Land disturbance associated with these activities is limited to the outer or landward portions, measured from top of the bank, of perennial streams (beginning 50 feet), intermittent streams (30 feet), and ephemeral streams (20 feet); and
 9. Where permitted by state or federal law for public health and safety purposes, wastewater treatment and disposal components, including surface and subsurface wastewater disposal areas. However, any buffer areas disturbed or impacted by these components shall comply with the erosion and sedimentation control design practices described in the *North Carolina Erosion and Sedimentation Control Planning and Design Manual*, June 1, 2006 edition or current version.
- C. **Prohibited Uses and Structures.** The following uses and structures are prohibited within riparian buffers on land that is located outside the Jordan Lake Watershed, even if allowed within the zoning district that applies to the land:
1. Utilities (i.e., gas, electric, communications, water lines, wells, sanitary sewer, lift stations, etc.) except where stream and buffer crossings are required;

8.6.4 VEGETATION AND ACTIVITIES WITHIN THE RIPARIAN BUFFER ON LOTS OUTSIDE THE JORDAN LAKE WATERSHED THAT WERE CREATED BEFORE DECEMBER 2, 2008, AND THAT ARE NOT CURRENTLY PROPOSED TO BE SUBDIVIDED

2. Receiving, collection, storage or distribution areas for hazardous waste and hazardous materials;
3. Sanitary landfills and landfills as defined in this Ordinance. Mulching or chipping of inert, organic plant materials is allowed for forestry or maintenance activities;
4. Constructed stormwater features;
5. Discharge of concentrated storm water runoff or drainage from culverts, ditches, and other conveyances;
6. Entry by motor powered vehicles, except for the purpose of maintaining existing utility corridors (or new power line or gas corridors) and providing emergency services;
7. Excavation, land clearing, grading or fill material that is not allowed by permit; and
8. Stream or buffer maintenance activities unless otherwise allowed by permit.

8.6.4 VEGETATION AND ACTIVITIES WITHIN THE RIPARIAN BUFFER ON LOTS OUTSIDE THE JORDAN LAKE WATERSHED THAT WERE CREATED BEFORE DECEMBER 2, 2008, AND THAT ARE NOT CURRENTLY PROPOSED TO BE SUBDIVIDED⁵⁰

The following standards apply to riparian buffers on land on lots located outside the Jordan Lake Watershed that were created before December 2, 2008, and that are not currently proposed to be subdivided:

- A. No new development is allowed in the buffer, except for water-dependent structures and public projects such as road crossings and greenways where no practical alternative exists. These activities should minimize built-upon surface area, direct runoff away from the surface waters, and maximize the

⁵⁰ This incorporates, with no substantive changes, the regulations that apply under the County's 1994 Watershed Protection Ordinance to land that was subdivided prior to December 2, 2008, or never subdivided (former Section 304, available on the County's riparian buffer website). These standards were not included in the WPO but are proposed to be included in these regulations to provide clarity to landowners. No changes have been made to the existing regulations except for the addition of commas for consistency, and the update of a reference to "an approved use permit" to a Watershed Protection Permit.

utilization of stormwater BMPs. Desirable artificial streambank or shoreline stabilization is permitted.

- B. To avoid a loss of effectiveness in protecting streams, the stream buffer shall remain in natural undisturbed vegetation, except as follows:
1. Clearing, grading, or other land disturbing activities which would reduce the effectiveness of the buffer shall be revegetated.
 2. Buildings and other features that require grading and construction shall be set back at least 10 feet from the edge of the buffer. Crossings by streets, driveways, culverts, railroads, recreational features, intakes, docks, utilities, bridges, or other facilities shall be designed to minimize the amount of intrusion into the buffer. The buffer can serve to meet minimum lot size requirements if there is sufficient buildable area remaining on the lot.
 3. Stream buffers can be used for passive recreational activities such as walking and bicycling trails, provided that service facilities for such activities, including but not limited to parking, picnicking, and sanitary facilities, are located outside the buffer. Trails running parallel to the stream shall be located at least 10 feet from the edge of the stream. Water oriented recreational facilities, such as boat or fishing piers, shall require approval of a Watershed Protection Permit in accordance with 8.7.2A: *Watershed Protection Permit Procedure*.
 4. Clearing and re-vegetating the stream buffer for the purposes of improving its pollutant removal efficiency may be permitted.

8.6.5 VEGETATION AND ACTIVITIES WITHIN THE RIPARIAN BUFFER ON LANDS WITHIN THE JORDAN LAKE WATERSHED⁵¹

The following standards apply to riparian buffers on land located within the Jordan Lake Watershed:

- A. **Vegetation Requirements.** Zone One and Zone Two shall be vegetated areas that are undisturbed except for uses allowed in accordance with this Section. Within Zone Two, grading and revegetating is allowed provided that the health of the vegetation in Zone One is not compromised.

⁵¹ This updates and reorganizes the allowed and prohibited uses and structures in riparian buffers outside the Jordan Lake Watershed in Sections 304(F) and (G) of the WPO.

- B. **Diffuse Flow Requirements.** Diffuse flow of runoff shall be maintained in the riparian buffer by dispersing concentrated flow prior to its entry into the buffer and reestablishing vegetation, in accordance with the following:⁵²
1. Concentrated runoff from new ditches or artificial conveyances shall be converted to diffuse flow at non-erosive velocities before the runoff enters Zone Two of the riparian buffer.
 2. Periodic corrective action to restore diffuse flow shall be taken as necessary and shall be designed to impede the formation of erosion gullies.
 3. No new stormwater conveyances are allowed through the buffers except for those specified in Table 8.6.5-1: *Allowed Uses and Structures in Jordan Lake Watershed*.
 4. Activities conducted outside of riparian buffers that alter the hydrology in violation of the diffuse flow requirements of this subsection are prohibited.
- C. **Allowed Uses and Structures.** Table 8.6.5-1: *Allowed Uses and Structures in Jordan Lake Watershed* establishes the uses that are allowed in the buffer. All allowed uses shall comply with the standards that apply in this Section. Certain uses are subject to additional standards in Paragraph D below as listed in the right-most column of Table 8.6.5-1. All uses not identified in Table 8.6.5-1 are considered prohibited and may not proceed within the riparian buffer or outside the riparian buffer if the use could impact the buffer, unless a variance is granted in accordance with 8.7.2C: *Watershed and Riparian Buffer Variance Procedure*, below. Uses are classified as exempt, allowable, or allowable with mitigation, as follows:⁵³
1. *Exempt Uses.* Uses designated as exempt are permissible without authorization by the County provided that they adhere to the limitations of the activity as defined in this Section. In addition, exempt uses shall be designed, constructed, and maintained to minimize soil disturbance and to provide the maximum water quality protection

⁵² This carries forward Section 304(J)2 of the WPO, with the following changes: 1) Subsection (3) has been simplified by referencing the table and not certain types of stormwater conveyances; 2) Subsection (4) is new and provides additional protection to the hydrology within the riparian buffers; it is adopted from the regulations at 15A NCAC 02B .0267(8)(d).

⁵³ This carries forward the list of permitted uses and structures in Section 304(J) of the WPO, as well as whether the uses and structures are exempt, allowable, or allowable with mitigation.

practicable, including construction, monitoring, and maintenance activities.

2. *Allowable Uses.* Uses designated as allowable may proceed provided that there are no practical alternatives to the requested use and an Authorization Certificate is issued in accordance with 8.7.2F: *Authorization Certificate*, below. This includes construction, monitoring, and maintenance activities.
3. *Allowable with Mitigation.* Uses designated as allowable with mitigation may proceed provided that there are no practical alternatives to the requested use and an Authorization Certificate is issued in accordance with 8.7.2F: *Authorization Certificate*, below, and an appropriate mitigation strategy has been approved in accordance with 8.6.6: *Mitigation*, below. Mitigation will be required only for impacts to Zone One and to the first landward 20 feet of Zone Two, in accordance with 8.6.6: *Mitigation*.

Table 8.6.5-1 Allowed Uses and Structures in Jordan Lake Watershed

Use	Exempt	Allowable	Allowable with Mitigation	Additional Standards
<p>Access trails: Pedestrian access trails leading to the surface water, docks, fishing piers, boat ramps and other water dependent activities:</p> <ul style="list-style-type: none"> • Pedestrian access trails that are restricted to the minimum width practicable and do not exceed four feet in width of buffer disturbance, and provided that installation and use does not result in removal of trees⁵⁴ and no impervious surface is added to the riparian buffer • Pedestrian access trails that exceed four feet in width of buffer disturbance, the installation or use results in removal of trees, or impervious surface is added to the riparian buffer 	✓			
		✓		
<p>Airport facilities:</p>				

⁵⁴ Reference to “trees as defined in this Ordinance” in the WPO and “trees as defined in this Rule” in the Jordan riparian buffer regulations has been simplified to “trees.”

Table 8.6.5-1 Allowed Uses and Structures in Jordan Lake Watershed

Use	Exempt	Allowable	Allowable with Mitigation	Additional Standards
<ul style="list-style-type: none"> • Airport facilities that impact equal to or less than 150 linear feet or 1/3 (one-third) of an acre of riparian buffer • Airport facilities that impact greater than 150 linear feet or 1/3 (one-third) of an acre of riparian buffer • Activities necessary to comply with FAA requirements (e.g., radar uses or landing strips) 		✓	✓	
Archaeological Activities	✓			
Bridges		✓		
Canoe Access provided that installation and use does not result in removal of trees and no impervious surface is added to the buffer.	✓			
Dam maintenance activities:				
<ul style="list-style-type: none"> • Dam maintenance activities that do not cause additional buffer disturbance beyond the footprint of the existing dam or those covered under the U.S. Army Corps of Engineers Nationwide Permit No. 3. 	✓			
<ul style="list-style-type: none"> • Dam maintenance activities that do cause additional buffer disturbance beyond the footprint of the existing dam or those not covered under the U.S. Army Corps of Engineers Nationwide Permit No. 3. 		✓		
Drainage ditches, roadside ditches, and stormwater conveyances through riparian buffers:				
<ul style="list-style-type: none"> • New stormwater flows to existing drainage ditches, roadside ditches, and stormwater conveyances provided flows do not alter or result in the need to alter the conveyance and are managed to minimize the sediment, nutrients and other pollution that convey to waterbodies. 	✓			

Table 8.6.5-1 Allowed Uses and Structures in Jordan Lake Watershed

Use	Exempt	Allowable	Allowable with Mitigation	Additional Standards
<ul style="list-style-type: none"> • Realignment of existing roadside drainage ditches retaining the design dimensions, provided that no additional travel lanes are added, and the minimum required roadway typical section is used based on traffic and safety considerations. • New or altered drainage ditches, roadside ditches, and stormwater outfalls provided that a stormwater management facility is installed to control nutrients and attenuate flow before the conveyance discharges through the riparian buffer. • New drainage ditches, roadside ditches, and stormwater conveyances applicable to linear projects that do not provide a stormwater management facility due to topography constraints provided that other practicable BMPs are employed. 		<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>		
<p>Drainage of a pond in a natural drainage way provided that a new riparian buffer that meets the requirements of 8.6.28.6.2C and 8.6.5B, above, is established adjacent to the new channel.⁵⁵</p>	✓			
<p>Driveway crossings of streams and other surface waters subject to this Chapter:</p> <ul style="list-style-type: none"> • Driveway crossings on single family residential lots that disturb equal to or less than 25 linear feet or 2,500 square feet of riparian buffer 	✓			

⁵⁵ In the WPO, this is the fifth bulleted point under the “Drainage ditches, roadside ditches, and stormwater conveyances through riparian buffers” category. Under the Jordan Lake regulations’ Table of Uses (15A NCAC 02B .0267(9)), this is listed as a separate use/structure. We have carried this use forward as a separate use/structure.

Table 8.6.5-1 Allowed Uses and Structures in Jordan Lake Watershed

Use	Exempt	Allowable	Allowable with Mitigation	Additional Standards
<ul style="list-style-type: none"> • Driveway crossings on single family residential lots that disturb greater than 25 linear feet or 2,500 square feet of riparian buffer • In a subdivision that cumulatively disturb equal to or less than 150 linear feet or one-third of an acre of riparian buffer • In a subdivision that cumulatively disturb greater than 150 linear feet or one-third of an acre of riparian buffer 		<p style="text-align: center;">✓</p>		
<p>Driveway impacts other than crossing of a stream or other surface waters subject to this Ordinance</p>			<p style="text-align: center;">✓</p>	
<p>Fences:⁵⁶</p> <ul style="list-style-type: none"> • Fences in Zone Two provided that disturbance is minimized, and installation does not result in removal of trees as defined in this Ordinance • Fences in Zone Two provided that disturbance is minimized and installation results in removal of trees as defined in this Ordinance 	<p style="text-align: center;">✓</p>	<p style="text-align: center;">✓</p>		
<p>Forest harvesting – only in accordance with 15A NCAC 02B .0267(14)</p>				<p style="text-align: center;">C.6</p>
<p>Fertilizer application: one-time application to establish vegetation</p>	<p style="text-align: center;">✓</p>			
<p>Greenway / hiking trails designed, constructed, and maintained to maximize nutrient removal and erosion protection, minimize adverse effects on aquatic life and habitat, and protect water quality to the maximum extent practical.</p>		<p style="text-align: center;">✓</p>		
<p>Historic preservation</p>	<p style="text-align: center;">✓</p>			

⁵⁶ The Jordan buffer rules permit fences in both Zones One and Two. The WPO permits fences only in Zone Two. This draft follows the current WPO regulations.

Table 8.6.5-1 Allowed Uses and Structures in Jordan Lake Watershed

Use	Exempt	Allowable	Allowable with Mitigation	Additional Standards
<p>Maintenance access on modified natural streams: A grassed travel way on one side of the water body when less impacting alternatives are not practical. The width and specifications of the travel way shall be only that needed for equipment access and operation. The travel way shall be located to maximize stream shading.</p>		✓		
<p>Mining activities:</p> <ul style="list-style-type: none"> • Mining activities that are covered by the Mining Act provided that new riparian buffers that meet the requirements of this Chapter are established adjacent to the relocated channels • Mining activities that are not covered by the Mining Act (N.C.G.S Ch. 74 Art. 7), or where new riparian buffers that meet the requirements of this Chapter, are not established adjacent to the relocated channels • Wastewater or mining dewatering wells with approved NPDES permit 		✓	✓	
<p>Playground equipment:</p> <ul style="list-style-type: none"> • Playground equipment on single-family lots provided that installation and use does not result in removal of vegetation • Playground equipment installed on lands other than single-family lots or that requires removal of vegetation 	✓	✓		
<p>Protection of existing structures, facilities, and stream banks when this requires additional disturbance of the riparian buffer or the stream channel</p>		✓		
<p>Railroad impacts other than crossings of streams and other surface waters subject to this Rule</p>			✓	

Table 8.6.5-1 Allowed Uses and Structures in Jordan Lake Watershed

Use	Exempt	Allowable	Allowable with Mitigation	Additional Standards
<p>Railroad crossings of streams and other surface waters subject to this Rule:</p> <ul style="list-style-type: none"> Railroad crossings that impact equal to or less than 40 linear feet of riparian buffer Railroad crossings that impact greater than 40 linear feet but equal to or less than 150 linear feet or one-third of an acre of riparian buffer Railroad crossings that impact greater than 150 linear feet or one-third of an acre of riparian buffer 				
	✓			
		✓		
			✓	
<p>Removal of previous fill or debris provided that diffuse flow is maintained, and vegetation is restored</p>	✓			
<p>Road impacts other than crossings of streams and other surface waters subject to this Chapter</p>			✓	
<p>Road crossings of streams and other surface waters subject to this Chapter:</p> <ul style="list-style-type: none"> Road crossings that impact equal to or less than 40 linear feet of riparian buffer Road crossings that impact greater than 40 linear feet but equal to or less than 150 linear feet or one-third of an acre of riparian buffer Road crossings that impact greater than 150 linear feet or one-third of an acre of riparian buffer 	✓			
		✓		
			✓	
<p>Road relocation: Relocation of existing private access roads associated with public road projects where necessary for public safety:</p> <ul style="list-style-type: none"> Less than or equal to 2,500 square feet of buffer impact Greater than 2,500 square feet of buffer impact 		✓		
			✓	

Table 8.6.5-1 Allowed Uses and Structures in Jordan Lake Watershed

Use	Exempt	Allowable	Allowable with Mitigation	Additional Standards
Scientific studies and stream gauging	✓			
Streambank or shoreline stabilization		✓		
<p>Temporary roads, provided that the disturbed area is restored to pre-construction topographic and hydrologic conditions immediately after construction is complete and replanted immediately with comparable vegetation, except that tree planting may occur during the dormant season. A one-time application of fertilizer may be used to establish vegetation: At the end of five years the restored buffer shall comply with the restoration requirements of 15A NCAC 02B .0295(n)(1).⁵⁷</p> <ul style="list-style-type: none"> • Less than or equal to 2,500 square feet of buffer disturbance⁵⁸ • Greater than 2,500 square feet of buffer disturbance • Associated with culvert installation or bridge construction or replacement 		<p>✓</p> <p>✓</p> <p>✓</p>		
<p>In-stream temporary erosion and sediment control measures:</p> <ul style="list-style-type: none"> • In-stream temporary erosion and sediment control measures for work within a stream channel that is authorized under Section 401 and 404 of the Federal Water Pollution Control Act • In-stream temporary erosion and sediment control measures for work within a stream channel. 	<p>✓</p>	<p>✓</p>		
<p>Utility, electric, aerial, perpendicular crossings of streams and other surface waters subject to this Chapter</p>				C.2, 3, 5

⁵⁷ This has been updated to reference current state riparian buffer mitigation regulations.

⁵⁸ In the Jordan Lake regulations, this is listed as an exempt activity. In the WPO, this is listed as an allowable activity.

Table 8.6.5-1 Allowed Uses and Structures in Jordan Lake Watershed

Use	Exempt	Allowable	Allowable with Mitigation	Additional Standards
<ul style="list-style-type: none"> Disturb equal to or less than 150 linear feet of riparian buffer 	✓			
<ul style="list-style-type: none"> Disturb greater than 150 linear feet of riparian buffer 		✓		
Utility, electric, aerial, other than perpendicular crossings:				
<ul style="list-style-type: none"> Impacts in Zone Two 		✓		C.5
<ul style="list-style-type: none"> Impacts in Zone One 			✓	C.2, 3, 5
Utility, electric, underground, perpendicular crossings:				
<ul style="list-style-type: none"> Disturb less than or equal to 40- linear feet of riparian buffer⁵⁹ 		✓		C.3, 4, 5
<ul style="list-style-type: none"> Disturb greater than 40 linear feet of riparian buffer 		✓		C.3, 4, 5
Utility, electric, underground, other than perpendicular crossings:⁶⁰				
<ul style="list-style-type: none"> Impacts in Zone Two 		✓		C.4
<ul style="list-style-type: none"> Impacts in Zone One 		✓		C.1, 4
Utility, non-electric, perpendicular crossings of streams and other surface waters subject to this Ordinance:				
<ul style="list-style-type: none"> Disturb equal to or less than 40 linear feet of riparian buffer with a maintenance corridor equal to or less than 10 feet in width⁶¹ 		✓		C.3, 5
<ul style="list-style-type: none"> Disturb equal to or less than 40 linear feet of riparian buffer with a maintenance corridor greater than 10 feet in width 		✓		C.3, 5

⁵⁹ Listed as exempt in the Jordan Lake regulations, allowable in the WPO.

⁶⁰ Both are listed as exempt in the Jordan Lake regulations, allowable in the WPO.

⁶¹ Listed as exempt in the Jordan Lake regulations, allowable in the WPO.

Table 8.6.5-1 Allowed Uses and Structures in Jordan Lake Watershed

Use	Exempt	Allowable	Allowable with Mitigation	Additional Standards
<ul style="list-style-type: none"> Disturb greater than 40 linear feet but equal to or less than 150 linear feet of riparian buffer with a maintenance corridor equal to or less than 10 feet in width 		✓		C.3, 5
<ul style="list-style-type: none"> Disturb greater than 40 linear feet but equal to or less than 150 linear feet of riparian buffer with a maintenance corridor greater than 10 feet in width 			✓	C.3, 5
<ul style="list-style-type: none"> Disturb greater than 150 linear feet of riparian buffer 			✓	C.3, 5
<p>Utility, non-electric, other than perpendicular crossings:</p>				
<ul style="list-style-type: none"> Impacts in Zone Two 		✓		C.4, 5
<ul style="list-style-type: none"> Impacts in Zone One 			✓	C.1, 4, 5
<p>Vegetation management:</p>				
<ul style="list-style-type: none"> Emergency fire control measures provided that topography is restored 	✓			
<ul style="list-style-type: none"> Planting vegetation species native to Chatham County⁶² to enhance the riparian buffer 	✓			
<ul style="list-style-type: none"> Pruning forest vegetation provided that the health and function of the forest vegetation is not compromised 	✓			
<ul style="list-style-type: none"> Removal of individual trees that are in danger of causing damage to dwellings, other structures, or human life, or are imminently endangering stability of the streambank 	✓			
<ul style="list-style-type: none"> Removal of individual trees which are dead, diseased, or damaged 	✓			
<ul style="list-style-type: none"> Removal of poison ivy 	✓			

⁶² Text “native to Chatham County” is included in the WPO but not included in Jordan Lake regulations (and there is no similar text included in the regulations either, such as “native to the local jurisdiction”).

Table 8.6.5-1 Allowed Uses and Structures in Jordan Lake Watershed

Use	Exempt	Allowable	Allowable with Mitigation	Additional Standards
<ul style="list-style-type: none"> • Removal of invasive exotic vegetation as defined: (i) in Smith, Cheri L. 1998, <i>Exotic Plant Guidelines</i>, Dept. of Environment and Natural Resources, Division of Parks and Recreation, Raleigh, NC, Guideline #30; (ii) in <i>Plants to Avoid in the Southeastern United States</i> compiled by Allison Schwarz and Johnny Randall, Spring 1999; or (iii) by the NC Native Plant Society website: http://www.ncwildflower.org/invasives/invasives.htm • Revegetation in Zone Two⁶³ 	<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>			
<p>Vehicular access roads leading to water-dependent structures (as defined in 15A NCAC 02B .0202) provided they do not cross the surface water and have minimum practicable width not exceeding 10 feet.</p>		<p style="text-align: center;">✓</p>		
<p>Water dependent structures (as defined in 15A NCAC 02B .0202) where installation and use result in disturbance to riparian buffers.</p>		<p style="text-align: center;">✓</p>		
<p>Wetland, stream, and buffer restoration that results in impacts to the riparian buffers</p> <ul style="list-style-type: none"> • Wetland, stream, and buffer restoration that requires Division of Water Resources approval for the use of a 401 Water Quality Certification • Wetland, stream, and buffer restoration that does not require Division of Water Resources approval for the use of a 401 Water Quality Certification 	<p style="text-align: center;">✓</p>	<p style="text-align: center;">✓</p>		
<p>Wildlife passage structures</p>		<p style="text-align: center;">✓</p>		

⁶³ Included in the WPO, not included in the Jordan Lake regulations.

- D. **Applicable Standards.** The following standards apply to uses when referenced in the right-most column of Table 8.6.5-1: *Allowed Uses and Structures in Jordan Lake Watershed*, labeled “Additional Standards,” for a particular use.
1. The following standards apply:
 - (a) No heavy equipment shall be used in Zone One;
 - (b) Vegetation in undisturbed portions of the buffer shall not be compromised;
 - (c) Felled trees shall be removed by chain;
 - (d) No permanent felling of trees shall occur in protected buffers or streams;
 - (e) Stumps shall be removed only by grinding; and
 - (f) At the completion of the project, the disturbed area shall be stabilized with native vegetation.
 2. Allowed provided that, in Zone 1, all of the following BMPs for overhead utility lines are used. If all of these BMPs are not used, then the overhead utility lines shall require an Authorization Certificate in accordance with 8.7.2F: *Authorization Certificate*:
 - (a) A minimum zone of 10 feet wide immediately adjacent to the water body shall be managed such that only vegetation that poses a hazard or has the potential to grow tall enough to interfere with the line is removed.
 - (b) Woody vegetation shall be cleared by hand. No land grubbing or grading is allowed.
 - (c) Vegetative root systems shall be left intact to maintain the integrity of the soil. Stumps shall remain where trees are cut.
 - (d) Rip rap shall not be used unless it is necessary to stabilize a tower.
 - (e) No fertilizer shall be used other than a one-time application to re-establish vegetation.
 - (f) Construction activities shall minimize the removal of woody vegetation, the extent of the disturbed area, and the time in which areas remain in a disturbed state.

- (g) Active measures shall be taken after construction and during routine maintenance to ensure diffuse flow of stormwater through the buffer.
 - (h) In wetlands, mats shall be utilized to minimize soil disturbance.
3. Allowed provided that poles or towers shall not be installed within 10 feet of a water body unless the County issues an Authorization Certificate in accordance with 8.7.2F: *Authorization Certificate*:
4. Allowed provided that, in Zone 1, all of the following BMPs for underground utility lines are used. If all of these BMPs are not used, then the underground utility line shall require an Authorization Certificate in accordance with 8.7.2F: *Authorization Certificate*:
- (a) Woody vegetation shall be cleared by hand. No land grubbing or grading is allowed.
 - (b) Vegetative root systems shall be left intact to maintain the integrity of the soil. Stumps shall remain, except in the trench, where trees are cut.
 - (c) Underground cables shall be installed by vibratory plow or trenching.
 - (d) The trench shall be backfilled with the excavated soil material immediately following cable installation.
 - (e) No fertilizer shall be used other than a one-time application to re-establish vegetation.
 - (f) Construction activities shall minimize the removal of woody vegetation, the extent of the disturbed area, and the time in which areas remain in a disturbed state.
 - (g) Active measures shall be taken after construction and during routine maintenance to ensure diffuse flow of stormwater through the buffer.
 - (h) In wetlands, mats shall be utilized to minimize soil disturbance.
5. Perpendicular crossings are those that intersect the surface water at an angle between 75 degrees and 105 degrees.

6. Requirements are administered by the Division of Water Resources, but the Watershed Administrator shall be notified in advance of forest harvesting activity in buffer areas.

8.6.6 MITIGATION⁶⁴

- A. **Applicability.** The mitigation standards of this section apply to persons whose actions will impact a riparian buffer in the Jordan Lake watershed when one of the following applies:
 1. The person has received an Authorization Certification in accordance with 8.7.2F: *Authorization Certificate*, that permits a proposed use identified as “allowable with mitigation” in Table 8.6.5-1: *Allowed Uses and Structures in Jordan Lake Watershed*; or
 2. The person has received a variance in accordance with 8.7.2D: *Riparian Buffer Variance Procedure*, and is required to perform mitigation as a condition of the approval of the variance.
- B. **Mitigation Approval.** The Watershed Review Board shall issue a mitigation approval upon making a determination that the proposed mitigation complies with the requirements of [15A NCAC 02B .0295](#). The approval shall specify, at minimum, the option chosen for meeting the mitigation requirement, the required area of mitigation, and either the mitigation location or amount of offset payment, as applicable.

8.7 ADMINISTRATION⁶⁵

8.7.1 REVIEW AND DECISION-MAKING BODIES

- A. **Watershed Administrator.** The Watershed Administrator is hereby established and has the following powers and duties, which may be

⁶⁴ This carries forward Section 305 of the WPO with updates for legibility and to reference the state mitigation requirements, which have changed since the WPO was adopted, instead of duplicating those requirements here.

⁶⁵ The administration section may be relocated to [Chapter 13: Review and Decision Making Bodies](#), and [Chapter 14: Procedures](#). The section builds on the provisions in the WPO with revisions based on state regulations and the [2023 Model Water Supply Watershed Protection Ordinance](#).

delegated to other professional level staff in accordance with [13.2.9: Watershed Protection Director](#).⁶⁶

1. To review applications for and make decisions on applications for Watershed Protection Permits in accordance with 8.7.2A: *Watershed Protection Permit Procedure*, and Watershed Protection Occupancy Permits in accordance with 8.7.2B: *Watershed Protection Occupancy Permit Procedure*, below.
2. To maintain a record of all Watershed Protection Permits and Watershed Protection Occupancy Permits that are issued and make them available for public inspection;
3. To serve as a clerk for the Watershed Review Board;
4. To maintain a record of all development projects that receive Special Non-Residential Intensity Allocations or that are developed under the 10/70 development option and make them available for public inspection, and for each watershed area maintain the following information:⁶⁷
 - (a) Total acres of non-critical watershed area;
 - (b) Total acres eligible to be developed under this option;
 - (c) Total acres approved for this development option; and
 - (d) Individual records for each project with the following information: location, acres, site plan, use, stormwater management plan as applicable and inventory of hazardous materials, as applicable;
5. To maintain a record of all requests for variances from the watershed protection standards including any findings of facts, and on an annual basis submit a report to the state Division of Water Resources which identifies each project that received a variance and the reasons for granting the variance; and
6. To maintain a record of all amendments to the watershed protection standards and to provide copies of all amendments to the Stormwater Branch of the Division of Energy, Mineral, and Land Resources.

⁶⁶ This builds on Section 501 of the WPO. Statement that the “County” shall appoint the Watershed Administrator has been removed—County manager will appoint in accordance with their general authority.

⁶⁷ If there has not been development using the 10/70 option, this section can be removed.

7. To administer and enforce the provisions of this Chapter, exercising in the fulfillment of these responsibilities the full police power of the County. The Watershed Administrator, or the Watershed Administrator's duly authorized representative, may enter any building, structure, or premises, as provided by law, to perform any duty imposed upon the Watershed Administrator by this Ordinance.

B. Watershed Review Board.⁶⁸

1. *Membership.* The Watershed Review Board is hereby established. Members of the Watershed Review Board are subject to the following requirements:
 - (a) Each member shall faithfully attend meetings and conscientiously perform their duties.
 - (b) No member shall participate in or vote on any quasi-judicial matter, such as an administrative appeal or a request for a variance, in a manner that would violate affected persons' constitutional rights to an impartial decision maker. Impermissible violations of due process include but are not limited to a member having a fixed opinion prior to hearing the matter that is not susceptible to change; undisclosed *ex parte* communications; a close familial, business, or other associational relationship with an affected person; or a financial interest in the outcome of the matter.⁶⁹ Members shall notify the Board chair of a conflict of interest at least 48 hours prior to the hearing on a case.

⁶⁸ This carries forward the portions of Sections 505 through 507 of the WPO that establish the Watershed Review Board. Section 505 states that the Watershed Review Board has five members appointed by the County Commission, and that the Chatham County Environmental Review Board serves as the Watershed Review Board. These provisions are contradictory. Therefore, this has been simplified to establish the Watershed Review Board and to provide the flexibility for the County to maintain the current practice or establish a separate board. Section 506(F) states: "No Board member shall vote on any matter that decides an application or appeal unless he had attended the public hearing on that application or appeal." That standard is unusual and has not been carried forward. References to the Watershed Review Board's "delegated authority" have been removed.

⁶⁹ This incorporates the new conflict of interest provisions in N.C.G.S. § 160D-109(d) and replaces the existing conflict-of-interest standards in Section 506(B) of the WPO, the *ex parte* communication restrictions in Section 506(C), and the expression of opinion restrictions in Section 506(D). It is included to provide clarity to board members and the public about board members' need to avoid conflicts of interest.

2. *Powers and Duties.* The Watershed Review Board shall have the following powers and duties:⁷⁰
- (a) To make recommendations regarding amendments to the Watershed Map, in accordance with 8.3.2: Interpretation and Amendment of Watershed Area Boundaries, above;
 - (b) To hear applications for variances from the requirements in Section 8.3: Watershed Areas, Section 8.4: Watershed Intensity and Use Standards, and Section 9.5: Watershed Development Standards, and to decide applications for Minor Watershed Variances and to make recommendations on applications for Major Watershed Variances in accordance with 8.7.2C: *Watershed Variance Procedure*, below;
 - (c) To hear applications for variances from the requirements in Section 8.6: *Riparian Buffer Standards*, and to decide applications for Minor Riparian Buffer Variances and to make recommendations on applications for Major Riparian Buffer Variances in accordance with 8.7.2D: *Riparian Buffer Variance Procedure*, below;
 - (d) To hear and decide applications for a Density Average Certificate in accordance with 8.7.2E: *Density Average Certificate*, below;
 - (e) To hear and decide applications for an Authorization Certificate in accordance with 8.7.2F: *Authorization Certificate*, below;
 - (f) To hear and decide appeals from any decision or determination made by the Watershed Administrator, in accordance with [Section 14.11: Appeals of Administrative Decisions](#) and 8.7.2G: *Appeal from Decision of the Watershed Administrator*, below; and
 - (g) To receive reports from the Watershed Administrator and institute actions or proceedings to address threats to water

⁷⁰ Section 507(C) states that the Board has powers and duties with respect to subdivision approval and references Article 200. Article 200 states only that “No subdivision plat of land within the jurisdiction of this Ordinance shall be filed or recorded by the Register of Deeds until it has been approved in accordance with the provisions of this Ordinance. Likewise, the Clerk of Superior Court shall not order or direct the recording of a plat if the recording of such plat would be in conflict with this Ordinance.” Because there are no affirmative duties assigned to the Board, this provision has not been carried forward.

quality and the public health, safety, and welfare, in accordance with 8.5.4: *Public Health Regulations*, above.

8.7.2 PROCEDURES

A. **Watershed Protection Permit Procedure.**⁷¹

1. *Purpose.* The purpose of this Paragraph 8.7.2A is to establish the procedures and standards for issuance of a Watershed Protection Permit.
2. *Applicability.* No building or built-upon area shall be erected, moved, enlarged, or structurally altered; no building permit shall be approved; and no change in the use of any building or land shall be made except in compliance with a Watershed Protection Permit approved in accordance with this Paragraph.⁷²
3. *Procedure.*
 - (a) Applications shall be submitted in accordance with the requirements in **Chapter 20: Submittal Requirements**.
 - (b) The Watershed Administrator shall review the application and may consult with other County staff.
 - (c) The Watershed Administrator shall approve the application if the proposal complies with all applicable standards of this Chapter. If the application fails to comply with the applicable standards of this Chapter, the application shall be denied. The applicant shall be notified of the decision, and if the application is denied, be provided the reasons for denial in writing.
 - (d) A Watershed Protection Permit shall expire if a Building Permit or Watershed Occupancy Permit for such use is not obtained by the applicant within 12 months from the date of issuance of the Watershed Protection Permit.

B. **Watershed Protection Occupancy Permit Procedure.**⁷³

⁷¹ This carries forward and reorganizes Section 309 of the WPO.

⁷² Section 310 of the WPO is duplicative of this provision, so it is not carried forward.

⁷³ This carries forward and reorganizes Section 311 of the WPO.

1. *Purpose.* The purpose of this Paragraph 8.7.2B is to establish the procedures and standards for issuance of a Watershed Protection Occupancy Permit.
2. *Applicability.* No building or structure that is erected, moved, or structurally altered may be occupied and no change in the use of any building or land shall be made until a Watershed Protection Occupancy Permit is approved in accordance with this Paragraph.
3. *Procedure.*
 - (a) Applications shall be submitted in accordance with the requirements in **Chapter 20: Submittal Requirements**. A Watershed Protection Occupancy Permit, either for the whole or part of a building, shall be applied for at the same time as an application for a Watershed Protection Permit and shall be approved or denied within 10 days after the erection or structural alteration of the building.
 - (b) The Watershed Administrator shall review the application and may consult with other County staff.
 - (c) The Watershed Administrator shall approve the application if the proposal complies with the standards of this Chapter and, if only a change in use of land or an existing building is proposed, the Watershed Protection Occupancy Permit shall be issued at the same time as the Watershed Protection Permit. Otherwise, the Watershed Administrator shall deny the application and notify the applicant stating the reasons for denial in writing.⁷⁴

C. **Watershed Variance Procedure.**⁷⁵

1. *Purpose.* The purpose of this Paragraph 8.7.2C is to establish the procedures and standards for variances from the requirements in Section 8.3: Watershed Areas, Section 8.4: Watershed Intensity and Use Standards, and Section 9.5: Watershed Development Standards, and to

⁷⁴ This has been reorganized to make clear that the fact that the application involves only a change in use of land or an existing building does not exempt the applicant from the requirement to comply with the provisions of this chapter.

⁷⁵ This carries forward the variance procedures at Section 507(B) of the WPO as they apply to variances from the watershed protection standards in Sections 9.3 through 9.5, with changes as noted below. Application requirements have been taken out of the regulations (Section 507(B)(1)) and will be maintained in accordance with **Chapter 20: Submittal Requirements**.

- provide other local governments having jurisdiction in the designated watershed an opportunity to comment on a variance application.
2. *Applicability.* This Paragraph may be used to vary the requirements in Section 8.3: Watershed Areas, Section 8.4: Watershed Intensity and Use Standards, and Section 9.5: Watershed Development Standards.
 3. *Types of Variances.* There are two types of Watershed Variances:⁷⁶
 - (a) *Minor Watershed Variance.* A request for a modification of up to 5% of any buffer, density, or built-upon area requirement under the high density option, or a modification of up to 10% of any management requirement in the form of a numerical standard for the low-density development option.
 - (b) *Major Watershed Variance.* A request for a modification that is not a Minor Watershed Variance. If approval of a Major Watershed Variance is recommended by the Watershed Review Board, the recommendation is required to be transmitted to the [North Carolina Environmental Management Commission](#) (EMC) for its review and decision-making.
 4. *Procedure.*⁷⁷
 - (a) Applications shall be submitted in accordance with the requirements in [Chapter 20: Submittal Requirements](#). The Watershed Review Board shall refuse to hear an application for a variance previously denied if it finds that there have been no substantial changes in conditions or circumstances bearing on the application.
 - (b) After receipt of an application, the Watershed Administrator shall provide public notice in accordance with [Section 14.1.7: Notice Provisions](#) and schedule an evidentiary hearing on the application. In addition, notice by first class mail shall be provided to each local government having jurisdiction in the watershed area where the variance is requested. The notice to local governments shall include a description of the variance being

⁷⁶ This updates the current definitions of major watershed variance and minor watershed variance in Section 109 of the WPO with changes for consistency with the definition at 15 NCAC 02B .0621 and the new allowance of high density development in this Ordinance.

⁷⁷ This generally carries forward the procedure in Section 507(B)(3)-(6) of the current WPO, with the changes noted below. In addition, the sections of the WPO that establish criteria for the EMC in making its decision are removed, as local ordinances do not regulate the EMC's actions.

requested and indicate the date by which the local government may submit comments regarding the variance request to be included in the materials reviewed by the Watershed Review Board.⁷⁸

- (c) The Watershed Review Board shall hold a quasi-judicial evidentiary hearing on the application and, after its review, make a decision on the application.
- (d) If the application is for a Minor Watershed Variance, the Watershed Review Board shall make a decision based on the standards in 8.7.2C.5: *Watershed Variance Review Standards*, below. The Watershed Review Board's decision shall be to approve the application as submitted; approve the application subject to conditions of approval; or deny the application.
- (e) If the application is for a Major Watershed Variance, the Watershed Review Board shall make a recommended decision based on the standards in 8.7.2C.5: *Watershed Variance Review Standards*, below. If the Watershed Review Board's recommendation is to deny the application, the application shall be deemed denied. If the Watershed Review Board's recommendation is to approve the application as submitted or approve the application subject to conditions of approval, then the application and a preliminary record of the hearing shall be transmitted to the EMC. The preliminary record of the hearing shall include:
 - (i) The variance application;
 - (ii) The hearing notices;
 - (iii) The evidence presented;
 - (iv) Motions, offers of proof, objections to evidence, and rulings on them;
 - (v) Proposed findings and exceptions; and

⁷⁸ The provision providing other local governments notice of and an opportunity to comment on requests for a watershed buffer variance reflects the interconnected nature of watersheds, and that the award of a variance on one part of a watershed may impact other parts of the watershed, including land in another jurisdiction.

- (vi) The proposed decision, including all proposed conditions of approval.
- (2) If the EMC approves the Major Watershed Variance, or approves the Major Watershed Variance with conditions or stipulations added, the EMC will prepare a decision to be sent to the Watershed Review Board that authorizes the Watershed Review Board to issue a final decision that includes any conditions or stipulations added by the EMC. Following receipt of the EMC's decision, the Watershed Review Board shall issue a decision including any such conditions or stipulations. If the EMC denies the Major Watershed Variance, the EMC will prepare a decision to be sent to the Watershed Review Board denying the application. Following receipt of the EMC's decision denying the application, the Watershed Review Board shall issue a decision denying the application.
- (f) A Watershed Variance shall be considered a Watershed Protection Permit and shall expire if a Building Permit or Watershed Occupancy Permit for such use is not obtained by the applicant within six months from the date of the decision.
5. *Watershed Variance Review Standards.* The Watershed Review Board shall approve a Minor Watershed Variance, or decide in favor of granting a Major Watershed Variance, on finding that the applicant demonstrates all of the following:⁷⁹
- (a) <The standards that apply to a standard request for a variance.>
 - (b) The variance is in accordance with the general purpose and intent of this Chapter; and
 - (c) The project will ensure equal or better protection of waters of the state than state and local regulations; and
 - (d) If applicable, the stormwater controls will function in perpetuity.

⁷⁹ This revises the current decision standards at Section 507(B)(2) of the WPO for consistency with state regulations. Instead of duplicating the hardship findings that are used in the standard variance procedure, this section incorporates those decision standards by reference.

D. Riparian Buffer Variance Procedure.⁸⁰

1. *Purpose.* The purpose of this Paragraph 8.7.2D is to establish the procedures and standards for variances from the requirements in Section 8.6: Riparian Buffer Standards.
2. *Applicability.* This Paragraph may be used to vary the requirements in Section 8.6: Riparian Buffer Standards.
3. *Types of Variances.* There are two types of Riparian Buffer Variances:⁸¹
 - (a) *Minor Riparian Buffer Variance.* A request pertaining to activities that will impact only Zone Two of a riparian buffer on land inside the Jordan Lake Watershed, or that will impact a riparian buffer on land outside the Jordan Lake Watershed.
 - (b) *Major Riparian Buffer Variance.* A request pertaining to activities that will impact any portion of Zone One or any portion of both Zone One and Zone Two of a riparian buffer on land inside the Jordan Lake Watershed.
4. *Procedure.⁸²*
 - (a) Applications shall be submitted in accordance with the requirements in **Chapter 20: Submittal Requirements**. The Watershed Review Board shall refuse to hear an application for a variance previously denied if it finds that there have been no substantial changes in conditions or circumstances bearing on the application.
 - (b) After receipt of an application, the Watershed Administrator shall provide public notice in accordance with **Section 14.1.7: Notice**

⁸⁰ This carries forward the variance procedures at Section 507(B) of the WPO as they apply to variances from the riparian buffer standards, with changes as noted below. Application requirements have been taken out of the regulations (Section 507(B)(1)) and will be maintained in accordance with **Chapter 20: Submittal Requirements**.

⁸¹ This incorporates the distinction between minor variances and major variances from 15 NCAC 02B .0267((12), updating the definition of riparian buffer variances to distinguish between variances within the Jordan Lake Watershed subject to state regulatory oversight, for which “major” variances must be reviewed and decided upon by the EMC, and “minor” variances which may be decided by local governments. Since the EMC does not oversee the County’s buffer, all requests for variances regarding land outside the Jordan Lake watershed are deemed to be “minor” variances.

⁸² This generally carries forward the procedure in Section 507(B)(3)-(6) of the current WPO, with the changes noted below. In addition, the sections of the WPO that establish criteria for the EMC in making its decision are removed, as local ordinances do not regulate the EMC’s actions.

Provisions and schedule an evidentiary hearing on the application.⁸³

- (c) The Watershed Review Board shall hold a quasi-judicial evidentiary hearing on the application and, after its review, make a decision on the application.
 - (d) If the application is for a Minor Riparian Buffer Variance, the Watershed Review Board shall make a decision based on the standards in 8.7.2D.5: *Riparian Buffer Variance Review Standards*, below. The Watershed Review Board's decision shall be to approve the application as submitted; approve the application subject to conditions of approval; or deny the application.
 - (e) If the application is for a Major Riparian Buffer Variance, the Watershed Review Board shall prepare preliminary findings based on the standards in 8.7.2D.5: *Riparian Buffer Variance Review Standards*, below. The preliminary finding shall be transmitted to the EMC for its review and decision.
5. *Riparian Buffer Variance Review Standards*. The Watershed Review Board shall approve a Minor Riparian Buffer Variance, or prepare preliminary findings in favor of granting a Major Riparian Buffer Variance, on finding that the applicant demonstrates all of the following:⁸⁴
- (a) That there are practical difficulties or unnecessary hardships that prevent compliance with the riparian buffer protection requirements. A finding of practical difficulties or unnecessary hardships shall require that the following conditions are met:
 - (1) If the applicant complies with the provisions of this Rule, the applicant can secure no reasonable return from, nor make reasonable use of, the property. Merely proving that the variance would permit a greater profit from the property shall not be considered adequate justification for a variance. Moreover, the Watershed Review Board shall

⁸³ The provision providing other local governments notice of and an opportunity to comment on requests for a variance is only included in the model watershed ordinance and not in the state regulations regarding riparian buffers. Therefore, it has not been included in the riparian buffer variance procedure.

⁸⁴ These review standards are new and incorporate the standards that apply to the Jordan Lake watershed buffers in 15 NCAC 02B .0267(12)(a), with revisions to accommodate differences between the state Jordan Lake buffer standards and the County's local buffers.

consider whether the variance is the minimum possible deviation from the terms of this Chapter that shall make reasonable use of the property possible;

- (2) The hardship results from application of this Chapter to the property rather than from other factors such as deed restrictions or other hardship;
 - (3) The hardship is due to the physical nature of the applicant's property, such as its size, shape, or topography, such that compliance with provisions of this rule would not allow reasonable use of the property;
 - (4) The applicant did not cause the hardship by knowingly or unknowingly violating this Chapter;
 - (5) For land within the Jordan Lake Watershed, the applicant did not purchase the property after August 11, 2009, and then request a variance from the state regulations that apply to riparian buffers within the Jordan Lake Watershed; or, for land anywhere in the County, the applicant did not purchase the property after January 1, 1994, and then request a variance from the County regulations that apply to riparian buffers within the County, and
 - (6) The hardship is rare or unique to the applicant's property.
- (b) The variance is in harmony with the general purpose and intent of the State's riparian buffer protection requirements and this Ordinance and preserves their spirit; and
 - (c) In granting the variance, the public safety and welfare have been assured, water quality has been protected, and substantial justice has been done.

E. Density Averaging Certificate.

1. *Purpose.* The purpose of this Paragraph 8.7.2D is to establish the procedures and standards for issuance of a Density Averaging Certificate (DAC).
2. *Applicability.* This Paragraph may be used to implement the density averaging option in 8.4.1B.3: *Density Averaging*.
3. *Procedure.*

- (a) An application for density averaging shall be submitted by the owner(s) of the paired lots in accordance with the requirements in [Chapter 20: Submittal Requirements](#). The application shall include a site plan that includes the information required by the Watershed Administrator to demonstrate that the paired lots will comply with the density averaging provisions of 9.4.1.C: *Density Averaging*, and shall clearly identify the built-upon area and the protected area.
- (b) After receipt of an application for a Density Averaging Certificate, the Watershed Administrator shall provide public notice in accordance with [Section 14.1.7: Notice Provisions](#) and schedule an evidentiary hearing on the application.
- (c) The Watershed Review Board shall review the application for a DAC and hold a quasi-judicial evidentiary hearing on the application and, after its review, shall approve, approve with conditions, or deny the application based on the standards in 9.4.1.C: *Density Averaging*. The Watershed Review Board shall issue written findings regarding the application's compliance with the standards of this Subsection.
- (d) If the application is approved, the development shall be consistent with the site plan. No change in the approved plan shall be made unless the Watershed Review Board approves an amendment to the DAC.

4. *Post-Decision Provisions.*

- (a) The Watershed Administrator shall maintain an index of lots for which DACs are awarded and shall track density averaging among parcels in the County.
- (b) Violation of the conditions of a DAC shall be a violation of this Ordinance and may be enforced in accordance with [Chapter 17: Enforcement](#).

F. **Authorization Certificate.**⁸⁵

⁸⁵ This carries forward the procedure for a “determination of no practical alternatives” in Section 304(l) of the WPO. It is renamed as an “Authorization Certificate” to clarify its purpose, but it maintains the requirement that the applicant demonstrate the existence of no practical alternatives. It has been reorganized for clarity and consistency with the other procedures in this Section.

1. *Purpose.* The purpose of this Paragraph 8.7.2F is to establish the procedures and standards for issuance of an Authorization Certificate to authorize certain uses within the riparian buffers established in this Chapter.
2. *Applicability.* This Paragraph authorizes applicants who wish to undertake uses designated as “allowed” in 8.6.3B: *Allowed Uses and Structures*, above, or as “allowed” or “allowable with mitigation” in Table 8.6.5-1: *Allowed Uses and Structures in Jordan Lake Watershed*, to submit a request for a “no practical alternatives” determination by the Watershed Review Board that authorizes issuance of an Authorization Certificate.
3. *Procedure.*
 - (a) The applicant shall submit an application in accordance with the requirements in [Chapter 20: Submittal Requirements](#). The application shall include sufficient information to demonstrate that the criteria in Paragraph 4, below, are met, as well as the following information in support of the claim of “no practical alternative”:
 - (1) The name, address, and phone number of the applicant;
 - (2) The nature of the activity to be conducted by the applicant;
 - (3) The location of the activity, including all applicable jurisdictions;
 - (4) A map of sufficient detail to accurately delineate the boundaries of the land to be utilized in carrying out the activity, the location and dimensions of any disturbance in riparian buffers associated with the activity, and the extent of riparian buffers on the land;
 - (5) An explanation of why this plan for the activity cannot be practically accomplished, reduced, or reconfigured to better minimize disturbance to the riparian buffer, preserve aquatic life and habitat, and protect water quality; and
 - (6) Plans for any Best Management Practices proposed to be used to control the impacts associated with the activity.
 - (c) After receipt of an application for an Authorization Certificate, the Watershed Administrator shall provide public notice in

accordance with **Section 14.1.7: Notice Provisions** and schedule an evidentiary hearing on the application.

- (b) Within 90 days of a request for a use designated as “allowed” in accordance with 8.6.3B: *Allowed Uses and Structures*, above, or within 60 days of a request for a use designated as “allowed” or “allowable with mitigation” in accordance with Table 8.6.5-1: *Allowed Uses and Structures in Jordan Lake Watershed*, the Watershed Review Board shall review the application and hold a quasi-judicial evidentiary hearing on the application and, after its review, shall approve, approve with conditions, or deny the application based on the standards in Paragraph 4, below. The failure of the Watershed Review Board to act within the applicable timeframe shall be construed as a finding that there is “no practical alternative” which authorizes the issuance of an Authorization Certificate, unless one of the following occurs:
 - (1) The applicant agrees, in writing, to a longer period;
 - (2) The Watershed Review Board determines that the applicant has failed to furnish requested information necessary to its decision;
 - (3) The final decision is to be made pursuant to a public hearing; or
 - (4) The applicant refuses access to its records or premises for the purpose of gathering information necessary to the Watershed Review Board’s decision.
- (c) The Watershed Review Board may attach conditions to the Authorization Certificate that support the purpose, spirit, and intent of this Ordinance.

4. *Authorization Certificate Review Standards.* The Watershed Review Board shall issue an Authorization Certificate on finding that the applicant demonstrates all of the following:

- (a) The basic project purpose cannot be practically accomplished in a manner that would better minimize disturbance, preserve aquatic life and habitat, and protect water quality;
- (b) The use cannot practically be reduced in size or density, reconfigured or redesigned to better minimize disturbance, preserve aquatic life and habitat, and protect water quality; and

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

G. Appeals from Decision of the Watershed Administrator.⁸⁶

1. *Applicability.* Any order, decision, or determination made by the Watershed Administrator may be appealed to and decided by the Watershed Review Board.
2. *Procedure.*
 - (a) An appeal from a decision of the Watershed Administrator shall be submitted to the Watershed Review Board within 30 calendar days from the date the order, interpretation, decision, or determination is issued. All appeals must be made in writing stating the reasons for appeal. Following submission of an appeal, the Watershed Administrator shall transmit to the Watershed Review Board all papers constituting the record upon which the action appealed from was taken.
 - (b) A notice of violation or other enforcement order appealed in accordance with this Section shall be stayed in accordance with the procedures in [N.C.G.S. § 160D-405\(f\)](#).
 - (c) All appeals shall follow the procedures for appeals of administrative decisions in [N.C.G.S. § 160D-405](#).

H. Appeals from Decision of Watershed Review Board.⁸⁷

1. Appeals from decisions regarding Minor Riparian Buffer Variances in accordance with 8.7.2D: *Riparian Buffer Variance Procedure*, or decisions regarding Authorization Certificates in accordance with 8.7.2F: *Authorization Certificate*, shall be made in writing to the Director of the Division of Water Resources c/o the 401 Oversight Express Permitting Unit, or its successor. The Director's decision is subject to review as provided in N.C.G.S. Ch. 150B, Arts. 3 and 4.

⁸⁶ This carries forward Section 502 of the WPO. However, provisions regarding stays on appeal have been updated. These standards are similar to similar regulations that are applied generally to all appeals of administrative decisions in N.C.G.S. § 160D-1402, which is specifically referenced in the [2023 Model Water Supply Watershed Protection Ordinance](#).

⁸⁷ Updates the existing appeal regulations in Section 508 of the WPO with reference to state law and consolidates appeal procedure for riparian buffer variance and authorization certificates, which involve administrative review.

2. All other decisions by the Watershed Review Board may be appealed in accordance with N.C.G.S. § 160D-1402.

8.8 ENFORCEMENT⁸⁸

8.8.1 GENERAL

This Chapter may be enforced in accordance with this Section and [Chapter 15: Enforcement](#).

8.8.2 CIVIL PENALTIES

A. Generally.

1. Civil penalties may be imposed as provided in this Section.
2. Any person who violates any of the provisions of this Chapter is subject to a civil penalty.
3. The EMC may assess civil penalties for violations of this Chapter, in addition to any penalties assessed by the County, in accordance with N.C.G.S. § 143-215.6A.⁸⁹

B. **Each Day is a Separate Offense.** Each day of a continuing violation constitutes a separate violation. Additional fees may be charged for remedies and enforcement of this Chapter.

C. **Notice of Violation Required.**⁹⁰

1. No person shall be assessed a penalty until that person has been notified in writing of the violation by:
 - (a) Registered or certified mail, return receipt requested;
 - (b) Personal delivery by the Watershed Administrator; or

⁸⁸ This carries forward the substance of Sections 105 and 106 of the WPO with updates for clarity and to match the format of the enforcement provisions in Chapter 9: *Stormwater Management*.

⁸⁹ This updates the existing reference in the WPO to N.C.G.S. § 143-215.6(a), which was recodified to § 143-215.6A.

⁹⁰ This provides additional clarity about the notice required before penalties can be incurred, to ensure persons receive appropriate due process.

- (c) Any means authorized for the service of documents by Rule 4 of the North Carolina Rules of Civil Procedure
 2. The notice shall:
 - (a) Describe the violation with reasonable particularity;
 - (b) Specify a reasonable time period within which the violation can be corrected; and
 - (c) Warn that failure to correct the violation within the time period will result in the assessment of a civil penalty or other enforcement action.
 3. **Correction of Violation.** If the violation has not been corrected within the designated time period, a civil penalty may be assessed from the date the violation is detected or, if deemed by the County to be an emergency or an on-going threat to the environment or public health, safety or general welfare, the County may perform the corrective measures at the owner's expense.
- D. **Enforcement Actions.** The Watershed Administrator may implement the following enforcement actions until the applicant has taken the remedial measures set forth in the notice of violation and cured the violations described therein:
 1. Institute a civil penalty, in accordance with the following:
 - (a) For a first violation, a civil penalty in the amount of \$50 per day;
 - (b) For the same violation on the same property within six years after the initial violation is remedied, a civil penalty in the amount of \$100 per day;
 - (c) For the same violation on the same property within six years after the second occurrence of the violation is remedied, a civil penalty in the amount of \$200 per day;
 - (d) For the same violation on the same property within six years after the third or any subsequent occurrence of the violation is remedied, a civil penalty in the amount of \$500 per day;
 2. Issue a stop work order to the person(s) violating the requirements of this Chapter.

- (a) The stop work order shall remain in effect until the person has taken the remedial measures set forth in the notice of violation or has otherwise cured the violation or violations described therein;
 - (b) The stop work order may be withdrawn or modified to enable the person to take the necessary remedial measures to cure such violation or violations;
 3. Refuse to issue a certificate of occupancy or revoke a certificate of occupancy for any building or other improvements constructed or being constructed on the site;
 4. Institute an action in a court of competent jurisdiction for a mandatory or prohibitory injunction and order of abatement to correct a violation of the requirements of this Chapter. Any person violating this Chapter shall be subject to the full range of equitable remedies provided in the General Statutes or at common law; and
 5. Take any other action available in law or equity in accordance with [Chapter 15: Enforcement](#).
- E. **Appeal.** Any ruling of the Watershed Administrator relating to this Section may be appealed to the Watershed Review Board in accordance with 8.7.2G: *Appeals from Decision of the Watershed Administrator*.

8.8.3 CRIMINAL PENALTIES

- A. **Generally.** Any person violating any provision of this Chapter shall be guilty of a misdemeanor and, upon conviction, shall be punished in accordance with N.C.G.S. § 14-4. The maximum fine for each offense shall be \$500.
- B. **Each Day is a Separate Offense.** Each day of a continuing violation constitutes a separate offense.