

# Riparian Buffers Fact Sheet

## For the Catawba River and Mainstem Lakes

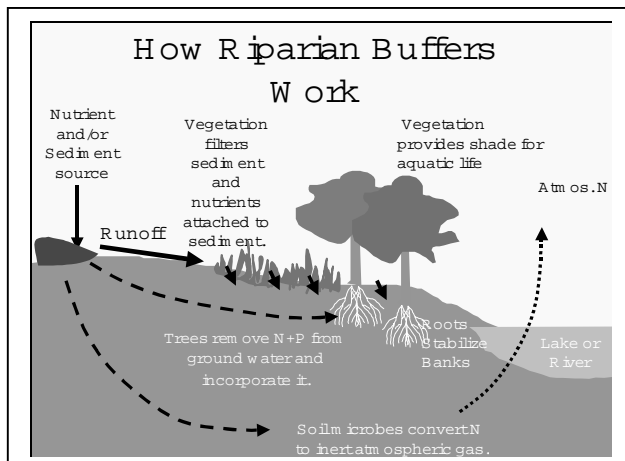
### What are Riparian Buffers?

*Riparian buffers* refer to forested or vegetated strips of land that border creeks, rivers and lakes for the purposes of water quality and ecological protection.

### Why Should We Protect Buffers?

Lakes along the mainstem of the Catawba River are in trouble. Three lakes (Rhodhiss, Hickory and Wylie) have documented water quality problems from excessive nutrients (nitrogen and phosphorus), and others may follow. Riparian buffers are one way to help protect the Catawba River and its lakes from runoff pollution, particularly from new development.

### Water Quality Benefits of Buffers



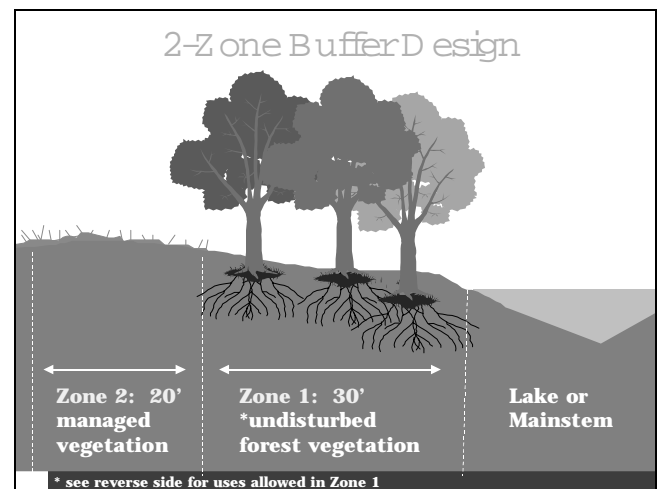
- **Filtering runoff**--Rain that runs off the land can be slowed and infiltrated in the buffer, which helps capture nutrients, sediment and other pollutants before they reach the lakes.
- **Protects banks from erosion**--If not undermined, tree roots help hold the bank soils together and stems protect banks by deflecting the cutting actions of currents, waves, boat wakes, and stormwater.
- **Nutrient Removal**--Phosphorus and nitrogen from fertilizers and animal waste are taken up by tree roots where they are then stored in leaves, limbs and roots instead of reaching the water. Some groundwater nitrogen is also converted to nitrogen gas by bacteria that live around the roots.

### Secondary Buffer Benefits

- **Provides Canopy and Shade**--Shading by lake vegetation can moderate water temperature along the shoreline providing some relief for aquatic life in the hot summer months.
- **Provides food and habitat for wildlife**--Leaves fall into a lake or river where they provide food to the aquatic food chain. The riparian buffer itself also offers habitat for many animals including songbirds, deer, foxes, turtles and amphibians.

### Buffer has two zones

The Catawba Riparian Buffer Protection Rules call for a two-zone buffer as shown below. Zone 1 (closest to the shoreline) is an undisturbed 30-foot forest buffer. Zone 1 is designed to protect water quality as well as the lake ecosystem. Since this area is forested with undisturbed soils, this zone removes, transforms and stores nutrients, sediments and other pollutants in runoff and groundwater. It also stabilizes the bank and provides habitat and food for aquatic organisms.



Zone 2, just upslope from Zone 1, consists of a 20 foot managed zone. This zone can be grass or other vegetation. The grass in Zone 2 compliments the forest by the roughness of the terrain and acting as a barrier to horizontal flow. This slowing of the water velocity allows for increased residence time in the buffer, increases sediment and adsorbed pollutant removal, and allows for infiltration of ground water.

# Frequently Asked Questions

Regarding Permanent Catawba Riparian Buffer Protection Rules for the Catawba River Mainstem and Mainstem Lakes from Lake James to Lake Wylie

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**Q. Who proposed these rules?**

A. These permanent rules were proposed by the NC Environmental Management Commission (EMC) to replace temporary rules that had been in effect since June 30, 2001 and authorized under House Bill 1160 in 1999. The permanent rules were adopted by the EMC in July 2003. They were approved by the Rules Review Commission (RRC) in December 2003.

**Q. What is the effective date of the permanent rules?**

A. August 1, 2004

**Q. Where do the rules apply?**

A. The Catawba buffer protection rules apply within 50 feet of all riparian shorelines along the Catawba River mainstem below Lake James and along the seven mainstem lakes from Lake James to the NC/SC border in the Catawba River Basin. This includes Lake James, Lake Rhodhiss, Lake Hickory, Lookout Shoals Lake, Lake Norman, Mountain Island Lake, and Lake Wylie (NC portion). **The rules do not include the Catawba River mainstem above Lake James nor any other streams in the Catawba Basin.**

**Q. How wide is the buffer?**

A. The buffer is 50 feet wide, measured horizontally from the water's edge (at full pond level in the lakes), and has two zones of 30 feet (Zone 1 nearest the water) and 20 feet (Zone 2 landward of Zone 1). The zones are shown and discussed on the reverse side.

**Q. What do the rules require?**

A. The Catawba buffer protection rules require maintaining and protecting existing 50-foot wide vegetated riparian (shoreline) areas along the Catawba River below Lake James and along the mainstem lake shorelines from Lake James to Lake Wylie. **The rule precludes new building and impervious surfaces within the 50-foot buffer unless the**

**activity is specifically allowed in the Table of Uses or is exempt as discussed below.** Grading and clearing of vegetation in the 30-foot zone nearest the water (Zone 1) is not allowed except for certain uses, some of which are discussed below. The outer 20-foot zone (Zone 2) can be cleared and graded but it must be revegetated and maintain diffuse flow to Zone 1.

**Q. Does the rule require planting new buffers?**

A. No, unless the existing use of the land changes after the effective date of the rule. An example of a use change would be if agricultural land that was cultivated up to the lake edge were developed for residential or commercial purposes. The new development would need to establish and maintain a 50-foot buffer.

**Q. Are there exemptions for Existing Uses?**

A. Yes. The footprints of all existing uses are exempt for continuance of that use. This includes, but is not limited to, cultivated cropland, pasture, buildings, industrial, commercial, and transportation facilities, lawns, gardens, utility lines, roads, driveways, walkways, decks, piers, seawalls and septic. Additional uses that may be exempt, allowable, or allowable with mitigation are included in a Table of Uses in the rules. A use shall also be considered as existing if A project that can be documented to the NC Division of Water Quality (DWQ) or the appropriate approved local government that has vested rights that were established or recognized for that project under the common law or by G.S. 153A-344(b), 153A-344.1, 160A-385(b), or 160A-385.1 prior to July 1, 2001. A use shall also be considered as existing if it can be documented to the DWQ or the appropriate approved local government that meets at least one of the following criteria:

- (A) Project requires a 401 Certification/404 Permit, these were issued prior to June 30, 2001 and are still valid;
- (B) Projects that require a state permit, such as landfills, NPDES wastewater discharges, land application of residuals and road construction activities, have begun construction or are under contract to begin construction and had received all required state permits prior to June 30, 2001 ;
- (C) Projects that are being reviewed through the Clean Water Act Section 404/National Environmental Policy Act Merger 01 Process (published by the US Army Corps of Engineers and Federal Highway Administration, 2003) or its immediate successor and that have reached agreement with DENR on avoidance and minimization by June 30, 2003; 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 DWQ prior to June 30, 2001.

**Q. What CAN you do in the buffer?**

- A. Certain activities are identified in the rule as “exempt”, “allowable”, or “allowable with mitigation”. Over 40 such uses are outlined in a Table of Uses in the rules. Examples of “exempt” activities include **view corridors** (allows thinning of underbrush, shrubs, trees less than 3” diameter, and low limbs to provide views to the lakes), **water dependent activities** that do not impact the buffer (such as boat ramps, docks, boat houses, bulkheads and access structures), **recreational and accessory structures** with a footprint of less than 150 square feet and **utility corridors**. “Allowable” and “allowable with mitigation” activities require review and written approval by the DWQ staff and include activities such as certain road crossings, airstrips, new drainage ditches, stormwater ponds, buildings, paved surfaces, etc.

**Q. Can you cut trees in the buffer?**

- A. Limited cutting is permissible. In Zone 2, all trees can be cut provided that the land is restabilized and revegetated (e.g. shrubs, lawn, etc). In Zone 1, individual trees can be cut that are dead, diseased or damaged, or if they pose a threat to human life, property or the shoreline. For continuing forestry operations, all trees more than 10 feet from the shoreline and over 12-inch diameter may be cut at 15-year intervals provided the work is done under a Forest Management Plan prepared or approved by a registered professional forester.

**Q. Are there any provisions for undeveloped lots or approved preliminary subdivision plans that existed as of June 30, 2001?**

- A. Yes. All properties in recorded subdivision plans whether undeveloped or previously built-upon and any approved preliminary subdivision plans are exempt from Zone 2 requirements. In addition, Zone 1 requirements are “allowable” (can be done with written permission by the state if no practical alternative exists).

**Q. Are variances allowed?**

- A. Yes, if it can be shown that there are “no practical alternatives” to the proposed activity. Mitigation may be required for a variance.

**Q. What is mitigation?**

- A. Mitigation is a way offsetting the environmental impacts from a project on a buffer. A separate buffer mitigation rule establishes requirements for activities that state staffs determine are “allowable with mitigation”. Mitigation, which is required at a 1.5 or 2 to 1 ratio, can take three forms: a) restoration or enhancement of a non-riparian buffer, b) payment of a compensatory mitigation fee to a wetlands and riparian restoration fund (ranges from \$1.44 to \$1.92 per sq ft for the footprint of the variance activity in the buffer), or c) donation of real property.

**Q. Approval of Local Ordinances**

- A. The Catawba buffer protection rules also give local governments the opportunity to enforce a

local ordinance in lieu of this rule if the DWQ determines that the local riparian buffer ordinance provides equal or greater water quality protection than the proposed temporary rules. McDowell and Burke Counties, for example, have existing buffer protection ordinances, which could be considered for approval under this provision.

**Q. How do the permanent rules compare with the temporary rules? Any major changes?**

**A.** No major changes have been made to the Catawba riparian buffer protection rules when they change from the temporary rules to the permanent rules. However, some minor changes were made in the rules to address concerns and issues raised during the rule-making process. The following are the changes made to the rules:

- Add definitions of access trails, archaeological activities, airport facilities, approved local government, DBH, forest plantation, Greenway/Hiking trails, riparian buffer enhancement and riparian buffer restoration.
- Add a paragraph to clarify what is to be considered converting existing use to another use.
- "Access trails or roads for accessing activities allowed in this Rule" under the Table of Use in the rules has been split into two categories – "Pedestrian access trails" and "Vehicular access roads and boat ramps". The maximum "except" width for pedestrian access trails has been reduced from 7 feet to 4 feet. The maximum "except" width for vehicular access roads and boat ramp has been reduced from 15 feet to 10 feet.
- "Dam maintenance activities" under the Table of Use in the rule has been modified.
- "Fence" under the Table of use in the rule has been modified. It is an allowable activity if fence installation results in removal of trees.
- "Recreational and accessory structures" under the Table of Use in the rule has been modified. It is an allowable activity if footprint of recreational and accessory

structures exceeds 150 square feet, or except if less than 150 square feet.

- Modification has been made to "View corridors" under the Table of Use in the rule.
- "Water dependent structures" under the Table of Use in the rule has been modified. It is an allowable activity if installation and use of water dependent structures results in disturbance to riparian buffers, or except if the buffer is undisturbed.

**QUESTIONS?**

If you have questions, want to request a site visit or report a violation, please contact:

NC Division of Water Quality, Mooresville  
Regional Office *for Alexander, Catawba, Gaston, Iredell, Lincoln, Mecklenburg, and Union counties.* or  
(704) 663-1699

NC Division of Water Quality, Asheville  
Regional Office *for Avery, Burke, Caldwell, and McDowell counties.*  
(828) 296-4500

If you have any question about the Catawba riparian buffer protection rules, please contact:

NC Division of Water Quality, Wetland and Stormwater Branch at Raleigh  
(919) 733-1786

For copies of rules, please contact:

NC Division of Water Quality – Planning Section  
(919) 733 5083 x 558

The rules can also be viewed or downloaded from the DWQ web site at  
<http://h2o.enr.state.nc.us/nps/catawba.htm>

