



FORESTRY Leaflets

November 2015

WQ-13

A Guide to Implementing the Goose Creek Watershed Riparian Buffer Rule for Forest Management Activities

Effective February 1, 2009, N.C. Administrative Code rule 15A NCAC 02B .0600-.0609 requires protecting and maintaining riparian areas along waterbodies located in the Goose Creek watershed of the Yadkin Pee-Dee River Basin. This watershed includes Goose Creek, Stevens Creek, Paddle Branch, Duck Creek, and all of their tributaries as located in Union or Mecklenburg counties (see map on Page 4). Contact the N.C. Division of Water Resources (DWR) Mooresville Regional Office at 704-663-1699 for more information or visit the Web: www.ncwater.org

Where To Apply This Rule

This rule applies to perennial and intermittent streams, lakes, ponds and estuaries located in the Goose Creek watershed if it is indicated by any of these methods:

- It appears on the most recently published version of a USGS 1:24000 ("7.5 Minute Quad") topographic map.
- It appears on the most recent published version of an USDA-NRCS Soil Survey map.

The following waterbodies do NOT require the Goose Creek Watershed riparian buffer rule:

- Any "surface waters" that do not appear on either of the above named soil or topographic maps;
- Any ephemeral streams (sometimes referred to as saddles, swales, gullies, or stormwater channels);
- Man-made ditches or canals that are not intended for water navigation or boat access;
- Man-made ponds and lakes that are located outside natural drainage ways;
- Areas mapped as intermittent streams, perennial streams, lakes, ponds, or estuaries on the most recent versions of either a USGS 1:24000 scale topographic map or published NRCS soil survey map where no perennial waterbody, intermittent waterbody, lake, pond or estuary actually exists on the ground. This type of determination must be made by DWQ or those to which they have delegated that authority.

Seek advice from a professional certified in DWR's "Surface Water Identification Training and Certification Program" when determining this rule's applicability. Modified streams may look like ditches, but still require implementing these watershed buffer rules. This leaflet is not intended to provide legal advice or final interpretation of the Goose Creek Watershed riparian buffer rules.

On waterbodies where the Goose Creek Watershed riparian buffer rules do not apply, a Streamside Management Zone (SMZ) of appropriate width is still required to comply with the Forest Practices Guidelines Related to Water Quality (FPGs). Information on FPGs can be found in the "Water Quality, Regulations" portion of the NCFS website at www.ncforestservice.gov.

There may be additional requirements of the Goose Creek Watershed Buffer Rule not covered in this Leaflet with which forestry activities must comply. Check the entire rule document for all necessary requirements related to road construction and other land disturbing activities.

How To Measure the Required Buffer Width

For streams:

Measurement will "begin at the most landward limit of the top of bank or the rooted herbaceous vegetation and extend landward on all sides of the surface water, measured horizontally on a line perpendicular to the surface water."

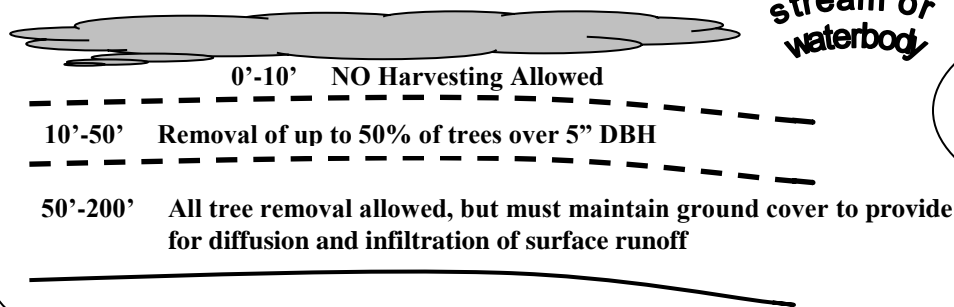
For any other waterbody:

Measurement will "begin at the most landward limit of the normal water level or the rooted herbaceous vegetation and extend landward, measured horizontally on a line perpendicular to the surface water."

Required Riparian Buffer Widths

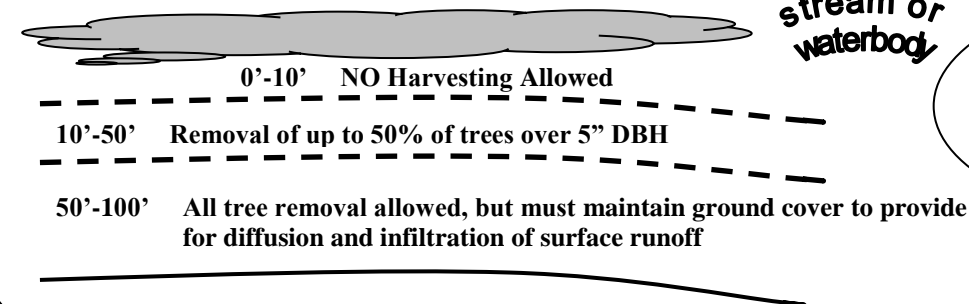
The buffer has 2 different requirements depending on where the stream or waterbody exists in relation to the 100-Year Floodplain. If it exists within the 100-Year Floodplain then a 200-foot buffer is required. If it exists beyond the 100-Year Floodplain then a 100-foot buffer is required. The 100-Year Floodplain is delineated by the North Carolina Floodplain Mapping Program of the N.C. Division of Emergency Management: www.ncfloodmaps.com

SCENARIO 1:



If stream or waterbody is located within the 100-Year Floodplain, a **200-foot** buffer is required on each side

SCENARIO 2:



If stream or waterbody is located beyond the 100-Year Floodplain, only a **100-foot** buffer is required on each side

Timber Harvesting In The Goose Creek Riparian Buffer

Timber harvesting is only allowed to occur within the 100-foot or the 200-foot buffer if:

- 1) A forest management plan for the property is prepared or approved by a Registered Forester, or
- 2) The property is enrolled in that county's Present-Use Tax Valuation Program for Forestry use.

Copies of either the approval of the deferment for use value under forestry or the forest management plan shall be produced upon request.

Area from 0 ft. to 10 ft. of either the 100-foot or the 200-foot buffer

Not Allowed No harvesting is allowed. The first 10 feet of the riparian buffer directly adjacent to the stream or waterbody shall be undisturbed.

Allowed with Restrictions **Tracked or wheeled vehicles are not allowed except at stream crossings designed, constructed, and maintained in accordance with FPG .0203**

Area from 10 ft. to 50 ft. of either the 100-foot or the 200-foot buffer

- Allowed
- Selective harvest is allowed. Trees shall be removed with the minimum disturbance to the soil and residual vegetation.
 - Remaining trees left standing should be as evenly spaced as possible.

Allowed with Restrictions **Tracked or wheeled vehicles are not allowed except at stream crossings designed, constructed, and maintained in accordance with FPG .0203**

Harvest of no more than 50% of the trees over 5" Diameter Breast Height (DBH).

- Re-entry for natural forests are allowed every 15 years.
- Re-entry for forest plantations are allowed every 5 years.

Not Allowed No removal of trees 5" DBH and smaller.

Area from 50 ft. thru the remainder of either the 100-foot or the 200-foot buffer

Allowed • Trees shall be removed with the minimum disturbance to the soil and residual vegetation.

Allowed with Restrictions • Harvesting and regeneration of the forest stand is allowed provided that sufficient ground cover is maintained to provide for diffusion and infiltration of surface runoff. Soil disturbing site preparation activities for regeneration are not allowed.

Forestry Activities in the Goose Creek Watershed Riparian Buffer

REQUIRED in the entire 100-foot or 200-foot buffer

- Diffuse flow of water shall be maintained in the riparian buffer by dispersing concentrated runoff flow and re-establishment of vegetation.
- Concentrated runoff from new ditches or man-made conveyances shall be converted to diffuse flow before the runoff enters the riparian buffer area.
- Periodic corrective action to restore diffuse flow shall be taken if necessary to impede the formation of erosion gullies.

ALLOWED in the entire 100-foot or 200-foot buffer

- ✓ Stream crossings associated with timber harvesting allowed only if performed in accordance with the FPGs.
- ✓ Natural regeneration of forest vegetation and planting of trees, shrubs, or ground cover plants to enhance the riparian buffer, provided that soil disturbance is minimized. Plantings shall consist primarily of locally native species. Soil disturbing site preparation activities are not allowed.
- ✓ Horticulture or silvicultural practices to maintain the health of individual trees.
- ✓ Removal of individual trees that are in danger of causing damage to structures or human life.
- ✓ Removal of dead or infected trees or application of pesticides necessary to prevent or control extensive tree pest and disease infestation when approved by the NC Forest Service for a specific site. A copy of the approval must be provided to the Division of Water Resources.
- ✓ Timber removal and skidding of trees shall be directed away from the stream or waterbody. Skidding shall be done in a manner that minimizes soil disturbance and prevents the creation of channels or ruts. Any tree removal must be performed in a manner that does not compromise the intended purpose of the riparian area and is in compliance with applicable FPGs.
- ✓ Existing drainage ditches, roadside ditches, and stormwater outfalls provided that they are managed to minimize the sediment, nutrients, etc. which they convey to waterbodies.
- ✓ Emergency fire control measures provided that topography is restored.

POTENTIALLY ALLOWED (with Division of Water Resources approval) in the entire 100-foot or 200-foot buffer

- ✓ Periodic maintenance of modified natural streams such as canals and a grassed travelway on one side of the surface water when alternative forms of maintenance access are not practical.

NOT ALLOWED in the entire 100-foot or 200-foot buffer

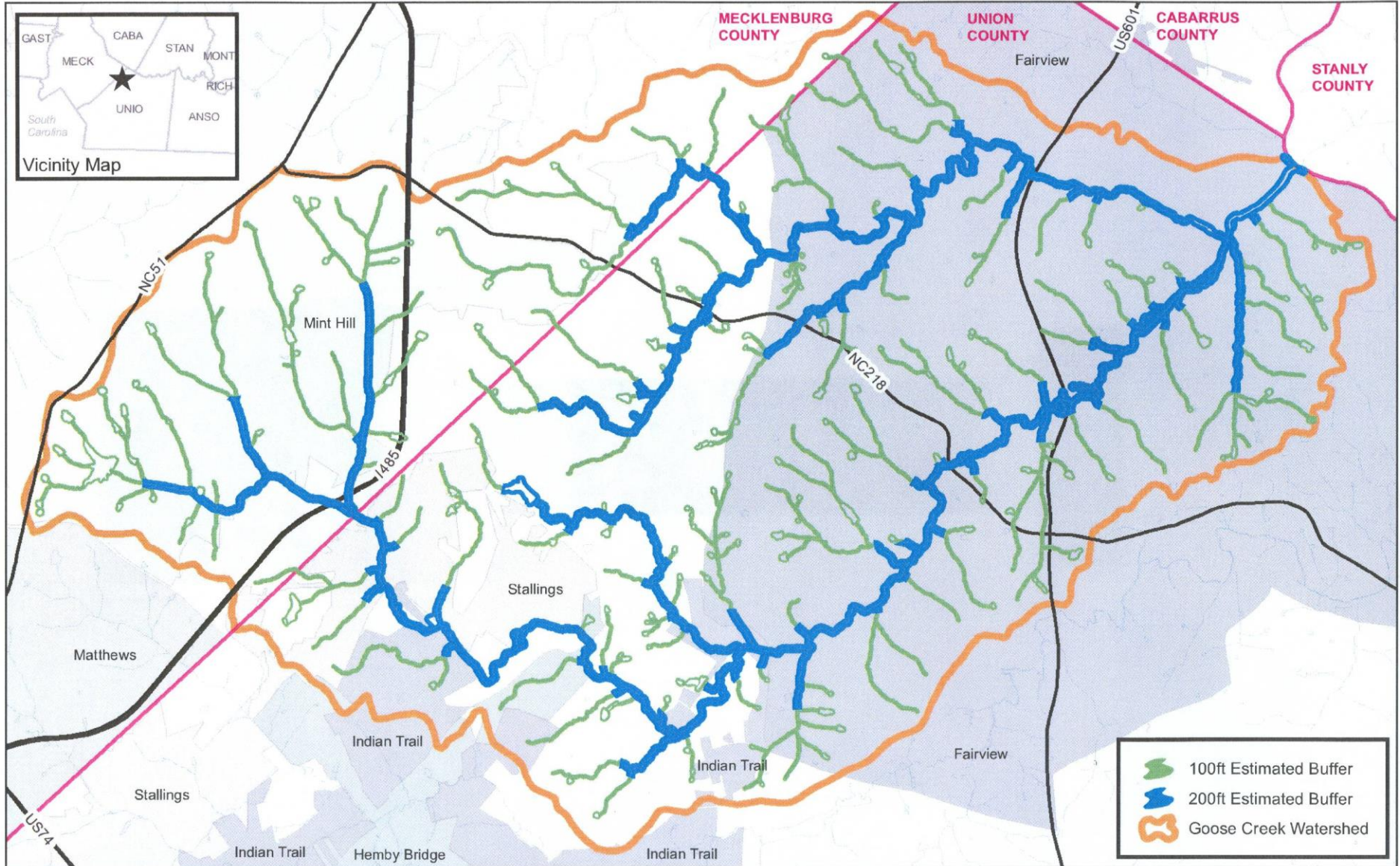
- ✗ Application of fertilizer is not allowed except as necessary for permanent stabilization. Broadcast application of fertilizer or herbicides to the adjacent forest stand shall be conducted so that the chemicals are not applied directly to or allowed to drift into the riparian buffer.
- ✗ Access roads and skid trails are prohibited except for temporary and permanent stream crossings established in accordance with the FPGs.
- ✗ High intensity prescribed burns shall not be allowed.
- ✗ Soil disturbing site preparation activities are not allowed.
- ✗ Logging decks and sawmill sites shall not be placed in the riparian buffer.

N.C. Department of Agriculture and Consumer Services, North Carolina Forest Service.

An equal opportunity employer. Programs, activities and employment practices are available to all people regardless of race, color, religion, sex, age, national origin, handicap or political affiliation. This is a 'print-as-needed' document available at N.C. Forest Service offices and at www.ncforestservice.gov.

Goose Creek Watershed Estimated Buffers*

Fairview, Hemby Bridge, Indian Trail, Matthews, Mint Hill, Stallings, Mecklenburg County, Union County - North Carolina



Map Source: NCDWQ, Published: 2Feb2009; Municipality Source: NCDOT, Published Jun2007; Hydrography Source: NCDWQ, Published: 29Nov2007
 *On-site determinations by DWQ or delegated local authorities are required for determining locations of streams and buffers. This map does not show all buffers.
 This map is only as good as the data available when it was printed and is not intended to replace any rule, regulation or classification schedule.

North Carolina Division of Water Quality - 512 N. Salisbury St. Raleigh, NC 27604 (919)807-6300

1:66,940

0 0.5 1 2 Miles