



North Carolina Department of Environment and Natural Resources
Division of Water Resources
Water Quality Programs

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August 9, 2013

MEMORANDUM

To: N.C. Ecosystem Enhancement Program

From: Tom Reeder

Subject: DWR responses to the EEP document "*Reforms needed immediately in the regulation of riparian buffer mitigation*"

On August 2, 2013, the Division of Water Resources (DWR) received a document from the N.C. Ecosystem Enhancement Program (EEP) titled "*Reforms needed immediately in the regulation of riparian buffer mitigation*". Below is a short summary of each point raised in the document and DWR's response to those points.

I. Riparian Buffer Mitigation Widths – the Ironclad 50' Standard

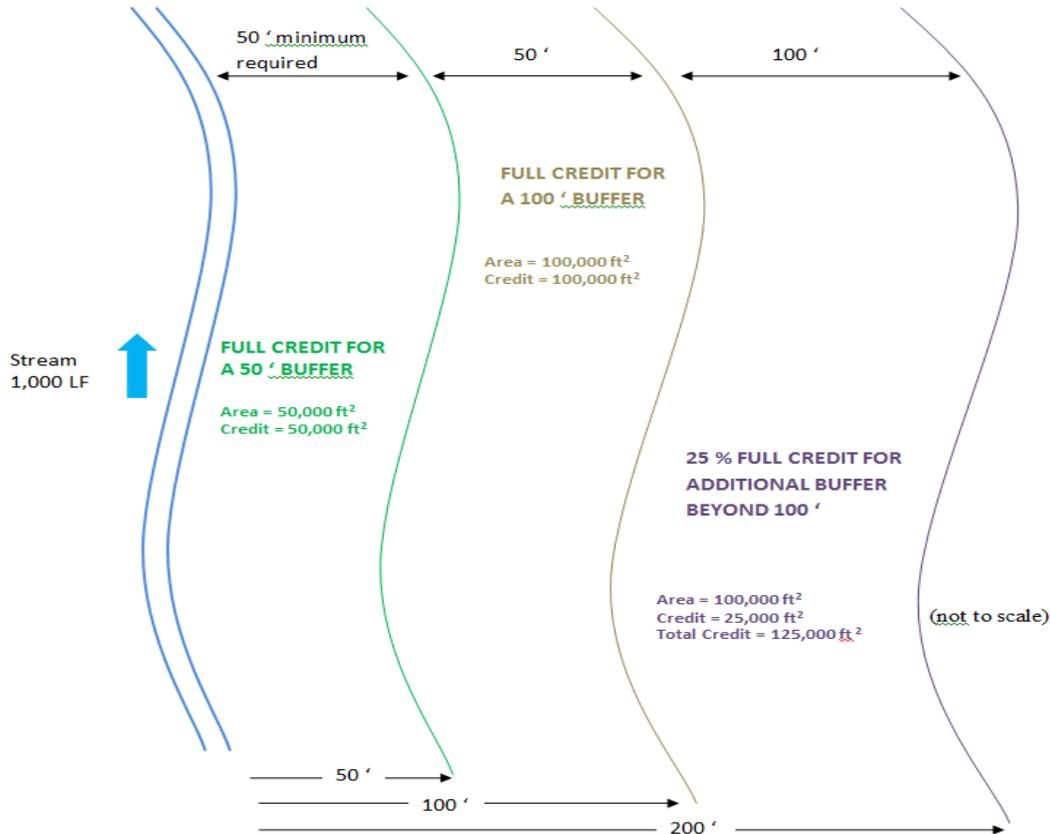
There are two issues raised under this section: (a) provide mitigation credit for buffers wider than 50 feet and (b) provide mitigation credit for buffers narrower than 50 feet.

Response:

- (a) DWR will approve mitigation credit for buffer widths in excess of 50 feet on a prorated basis, up to a maximum of 200 feet, including on pre-existing mitigation sites:

Buffer width (ft)	Percentage of Full Credit
50-100	100%
101-200	25% for area > 100 feet

Example for restoration of a 1,000 linear foot stream segment:



- (b) DWR agrees that mitigation credit should be granted for restored buffer widths less than 50 feet, however this would require a rule change. The draft consolidated buffer mitigation rule (15A NCAC 02B .0295) already has provisions for narrower buffers in urban areas and DWR supports expanding this to non-urban areas.

II. Riparian Buffer Jurisdiction – Map Jurisdiction.

There are two issues raised under this section: (a) the ability to conduct restoration or enhancement on unmapped streams and (b) the ability to conduct restoration or enhancement on all watercourses, including ditches.

Response for the Neuse, Tar-Pamlico, Catawba and Jordan:

Under the current buffer mitigation rules, applicants may “restore or enhance a non-forested riparian buffer...” A riparian buffer is defined within each of the buffer rules. Each rule has an applicability paragraph that defines where the rule shall apply (e.g. in the Neuse “*This Rule shall apply to 50-foot wide riparian buffers directly adjacent to surface waters in the Neuse River Basin (intermittent streams, perennial streams, lakes, ponds, and estuaries), excluding wetlands.*”) The rule goes on further to clarify that a subject feature must be depicted on either the USGS topo map or the NRCS soil survey and defines the Zones of the riparian buffer.

To allow buffer mitigation to occur on non-subject features requires a rule change. DWR does support buffer mitigation on unmapped streams, and the draft consolidated buffer mitigation rule (15A NCAC 02B .0295) already has language to allow for this.

Response for Randleman:

Under the current Randleman buffer mitigation rules, applicants may “restore or enhance a non-forested riparian buffer...” A riparian buffer is defined within the Randleman rules to include unmapped features, as well as ditches or manmade conveyances that “deliver untreated stormwater runoff from an adjacent source directly to an intermittent or perennial stream are subject to the Rule.”

DWR will continue to allow buffer mitigation to occur in the Randleman watershed on unmapped features as well as ditches or manmade conveyances that meet the rule.

Response for Goose Creek:

Under the current Goose Creek buffer mitigation rules, unmapped streams may be used to provide buffer mitigation, as well as first order ephemeral streams that discharge/outlet into intermittent or perennial streams.

III. Riparian Buffer Jurisdiction – Stream Calls on Mapped Streams

The issues raised under this section focus on the requirement to have a stream determination made by DWR staff. More specifically, there is a concern that the stream method is not appropriate for modified natural streams that may be severely degraded and that these streams are not eligible for mitigation.

Response:

- DWR will allow all subject streams to be eligible for riparian buffer mitigation.

IV. Restoration Success Criteria – Native Hardwood Trees

The issues raised under this section focus on the requirement to plant a minimum of at least two native hardwood tree species and the current DWR practice of not allowing Sweet Gum or Red Maple to be counted towards meeting this requirement.

Response:

- DWR agrees that as written, the use of Sweet Gum and Red Maple counts towards meeting the minimum requirement of the rule. Mitigation providers will be expected to meet planting criteria established by the IRT in buffer areas that are part of a stream mitigation site.

V. Restoration Success Criteria – Planted Stems

The issues raised under this section focus on the requirement to plant 320 trees per acre and the statement that DWR does not count trees derived from existing seed sources, planted seeds, stump sprouts or other volunteer species towards meeting that 320 requirement.

Response:

- DWR agrees that using 260 stems per acre at the end of the monitoring period would provide more consistency with the federal performance standards for stream and wetland projects; however this would require a rule change. The draft consolidated buffer mitigation rule (15A NCAC 02B .0295) has already incorporated this change.

DWR staff will continue to consider the presence of woody volunteers during closeout of buffer sites.

VI. Restoration and Enhancement Criteria – Measuring Density

The issues raised under this section focus on tree density for determining restoration or enhancement. More specifically, the issues include the inconsistency among rules, the lack of clarity on how to measure density which has resulted in inconsistent calls among DWR staff, and the use of a tree's dripline.

Response:

- DWR agrees that the inconsistency among rules has created confusion and inconsistency in implementation; however this would require a rule change to be consistent among all six rules. The draft consolidated buffer mitigation rule (15A NCAC 02B .0295) has definitions for restoration, enhancement and preservation, which were written to provide clarity and predictability while still allowing DWR staff to use best professional judgment in evaluating potential mitigation sites based on their many years of experience.

In the Jordan and Randleman watersheds, the rules allow for restoration on sites with fewer than 100 trees/acre and enhancement on sites with between 100 and 200 trees. In these two watersheds, DWR will accept established forestry protocols (e.g. fixed radius plot sampling) to be used to determine existing tree densities in any non-forested buffer area. Sufficient numbers of plots should be used to accurately assess stem densities and delineate areas of the site with varying densities. Plot data should not be averaged to determine an overall stem density unless the site is fairly homogeneous in terms of vegetative coverage. Existing forested areas should be delineated out and not included in stem density calculations. DWR has not considered the drip line to represent the outer edge of a wooded area for several years and will not consider it in the future. Existing wooded areas should be delineated at the trunks of the outer edge of the areas.