

## Use of Stream Preservation as Compensatory Mitigation in North Carolina

### North Carolina Interagency Review Team December 5, 2012

In general, mitigation proposals that include preservation will be evaluated on a case-by-case basis. Whenever stream preservation is proposed as compensatory mitigation for impacts to aquatic resources, documentation supporting the use of preservation must be included in the mitigation plan. This documentation should be based on the following guidance provided in Section 332.3(h) of the Mitigation Rule:

- 1) Preservation may be used to provide compensatory mitigation for activities authorized by DA permits when all the following criteria are met:
  - i) The resources to be preserved provide important physical, chemical, or biological functions for the watershed;
  - ii) The resources to be preserved contribute significantly to the ecological sustainability of the watershed. In determining the contribution to those resources to the ecological sustainability of the watershed, the district engineers must use appropriate quantitative assessment tools, where available;
  - iii) Preservation is determined by the district engineer to be appropriate and practicable;
  - iv) The resources are under threat of destruction or adverse modifications; and
  - v) The preserved site will be permanently protected through an appropriate real estate or other legal instrument (e.g., easement, title transfer to state resource agency or land trust).
- 2) Where preservation is used to provide compensatory mitigation, to the extent appropriate and practicable the preservation shall be done in conjunction with aquatic resources restoration, establishment, and/or enhancement activities. The requirement may be waived by the district engineer where preservation has been identified as a high priority using a watershed approach described in paragraph (c) of this section, but compensation ratios shall be higher.

The Mitigation Rule clearly states that all of the criteria listed in part 1 above should apply for a site to qualify for preservation. In order for a stream reach to be considered for preservation, the mitigation plan must document how these criteria apply to the site. The quality of the stream, type and uniqueness of functions provided, demonstrable threat, will all be considered in the final mitigation ratio approved for any preservation site. For mitigation banks and in-lieu fee mitigation projects, stream preservation should never generate more than 1 credit per 5 linear feet of stream preserved (5:1 ratio). For permittee-responsible projects where the mitigation plan is developed in response to specific impacts, a minimum of 10 linear feet should be preserved for every 1 linear foot impacted (10:1 ratio).

To qualify for preservation, stream channels must be ecologically important and in a relatively stable, undisturbed condition. Preservation should only be proposed along stream segments that have buffers consisting primarily of mature forest with an appropriately stratified vegetative structure comprised of canopy trees, a sub-canopy of smaller trees, and an understory, where appropriate. Wider buffers are preferred, and the inclusion of buffers beyond the minimum requirement (50 feet in the coastal plain and piedmont and 30 feet in the mountains) improve the overall quality of the preservation. The preservation mechanism must protect the buffer on both sides of the channel. If a project is located along a stream reach that is already subject to state buffer laws (e.g., Neuse or Tar-Pamlico Buffer

Rules), preservation may be considered at a less favorable ratio (e.g., 20:1) or additional buffer width may be required for the stream to be considered for preservation.

As stated by the Mitigation Rule, there is a preference for preservation to be used in conjunction with aquatic resources restoration, establishment, and/or enhancement activities. In these instances, the mitigation plan should demonstrate how the preservation contributes to the overall functional uplift of the proposed project or helps to maintain the aquatic functions associated with the overall project. For example, preservation may be appropriate for an intact headwater stream (zero or first order) where the preservation helps protect the headwaters of a mitigation site located downstream of the preservation area. Preservation may also be appropriate where small sections of intact stream connect larger sections of a restoration or enhancement project, resulting in a longer, more contiguous protected corridor. In these instances, the preservation can be demonstrated to provide benefits that extend beyond the preserved area, in which case the preservation may be acceptable even though the preservation area is not unique or of particularly high quality. Stand-alone preservation projects (i.e., bank or in-lieu fee sites where no work other than preservation will be conducted or permittee-responsible mitigation proposals that only include preservation) may be allowed in special circumstances and should only be proposed for sites that are of exceptional quality or have been identified as unique or high priority areas.

The following is a list of recommended priority areas for channel preservation (not listed in order of selection priority):

- Streams in a watershed that are adjacent to, or within a unique wetland as identified by NC Administrative Code 15A 2B .0100.
- Streams in a watershed that contains Critical Habitat Areas identified by the Coastal Habitat Protection Program of the Division of Marine Fisheries.
- Streams in a watershed that contains a significant Natural Heritage Area as identified by the Natural Heritage Program of the Division of Parks and Recreation, provided the Natural Heritage Area contributes to the overall quality of the stream.
- Streams in a watershed that is known to provide habitat for state or federally listed endangered or threatened species.
- Streams in a watershed that contains fishery nursery areas, High Quality Waters, Outstanding Resource Waters, Trout Waters, or Water Supply Watersheds.
- Streams in a watershed that meets the criteria for Exceptional Significance rating under the Division of Coastal Management's NC CREWS (NC Coastal Region Evaluation of Wetland Significance).
- Streams in a watershed that contains unique and/or high quality habitat (stream and/or wetland) that is adjacent or within an area experiencing a rapid increase in population or development trend.
- Streams in a watershed that contain stream reaches designated as critical habitat by the US F&WS.

In cases where a stream segment is stable, an intact forested buffer is present, and additional in-stream work will not result in substantial functional gains, functional uplift may still be achieved through activities in the buffer such as supplemental planting and fencing out livestock. In these cases, it is appropriate to treat these segments as stream enhancement, rather than preservation. Even though these stream reaches may be stable, they may not be high quality as a result of having a degraded buffer or livestock access, in which case a more favorable ratio (e.g., 2.5:1) may be appropriate depending on the level of degradation within the buffer and the amount of functional uplift provided by replanting and/or eliminating livestock access to the stream. In these situations, the mitigation plan must document the current conditions, level of degradation, and proposed functional uplift, and the streams must be monitored to demonstrate success.

