MEMORANDUM OF UNDERSTANDING

BETWEEN THE

NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

AND THE

UNITED STATES ARMY CORPS OF ENGINEERS, WILMINGTON DISTRICT

This is a Memorandum of Understanding (MOU) between the United States Army Corps of Engineers, Wilmington District (hereinafter "Corps") and the North Carolina Department of Environment and Natural Resources, Wetlands Restoration Program (hereinafter "NCWRP").

I. Purpose: The purpose of this MOU is to establish the procedures and guidelines for coordinating compensatory mitigation requirements for Corps permits under Section 404 of the Clean Water Act (33 USC 1344) and the NCWRP. This MOU is intended to provide more effective mitigation for authorized impacts to wetlands, streams and other aquatic resources by allowing permit applicants to choose to pay the NCWRP to provide required compensatory mitigation in circumstances considered appropriate by the Corps, in consultation with Federal and State review agencies.

II. Authority: The Clean Water Act (33 USC 1344) provides that Section 404 is administered by the Secretary of the Army. The Secretary has delegated the authority to administer this permitting program to the U.S. Army Corps of Engineers. As stated in the "Final Notice of Issuance, Reissuance and Modification of Nationwide Permits and Conditions", Federal Register, Volume 61, No. 241, December 13, 1996, "contributions to wetland trust funds," where such fees contribute to the restoration, creation, replacement, enhancement, or preservation of wetlands may be acceptable as compensatory mitigation for wetland impacts authorized by general permits. Similarly, the "Federal Guidance for the Establishment, Use and Operation of Mitigation Banks," Federal Register, Volume 60, No. 228, November 28, 1995, recognizes in-lieu fee arrangements and states that the Corps "may find there are circumstances where such arrangements are appropriate so long as they meet the requirements that would otherwise apply to an offsite, prospective mitigation effort and provide adequate assurances of

success and timely implementation." Contributions to such funds may also be used to provide compensatory mitigation for impacts authorized by individual Section 404 permits when the Corps considers it appropriate. The use of this fund for compensatory mitigation may occur only after the relevant permitted activity has complied with Corps regulations and policy regarding wetland avoidance and minimization.

III. North Carolina Wetlands Restoration Program: The NCWRP was established by an act of the North Carolina General Assembly in 1996. The NCWRP is a non-regulatory program with a statutory mandate to protect and improve water quality, flood prevention, fisheries, wildlife and plant habitats, and recreational opportunities through the restoration, enhancement and preservation of wetlands and riparian areas. The goal of the NCWRP is to restore wetland and riparian area functions and values throughout North Carolina, which will result in a net increase in wetland and riparian area acres, functions, and values in each of the seventeen river basins. It is the intent of the NCWRP to improve the ecological effectiveness of compensatory mitigation through the development of restoration plans to ensure that compensatory mitigation is conducted within an ecosystem context to address identified problems. This proactive approach can provide a consistent and simplified procedure to address compensatory mitigation requirements and foster a comprehensive approach to environmental protection.

The Wetlands Restoration Fund, established as a special trust fund pursuant to NCGS 143.12, will provide a repository for appropriations from the General Assembly, monetary contributions, donations of property, payments to satisfy compensatory mitigation requirements and grants. The enabling legislation for the NCWRP restricts the use of these funds to the restoration, enhancement, preservation and creation of wetlands and riparian areas in accordance with the Basinwide Wetland and Riparian Restoration Plans. In addition, this fund may be used for directly related costs of planning, monitoring and maintenance of wetlands and riparian areas.

IV. Program Operation

A. Basinwide Wetland and Riparian Restoration Plans: Beginning July 1, 1997, the NCWRP will develop comprehensive Basinwide Wetland and Riparian Restoration Plans for each river basin in conjunction with the NC Division of Water Quality's Basinwide Water Quality Management Plans. GIS-based mapping methodologies will be used to

assess the status of the existing wetlands and riparian area resources within the basin and to identify degraded wetlands and riparian areas. Water quality, habitat, fisheries and flood control data will be assessed to identify priority-subbasins within each river basin. In general, one or more priority subbasins will be identified for each Cataloging Unit as shown on the "Hydrologic Unit Map, 1974, State of North Carolina" prepared by the U.S. Geological Survey (Cataloging Unit). For impacts that occur within a Cataloging Unit, restoration sites within the priority subbasins will be identified and prioritized based on the ability of the restored sites to provide the functions and values needed within the Cataloging Unit.

All state and federal agencies involved in the review of Section 404 permits will be provided the opportunity to participate in the development of Basinwide Wetland and Riparian Restoration Plans to ensure the inclusion of restoration and preservation sites of importance to these agencies, and will be provided copies of the Basinwide Wetland and Riparian Restoration Plans as they become available. All compensatory mitigation projects implemented by the NCWRP will be consistent with the Basinwide Wetland and Riparian Restoration Plans. The Corps will consider the Basinwide Wetland and Riparian Restoration Plans when developing mitigation requirements for Section 404 permits.

B. Compensatory Mitigation Requirements: Upon determination by the Corps that impacts to waters of the United States have been avoided and minimized to the maximum extent practicable, and that on-site mitigation is not practicable or in the best interest of the environment, the Corps may allow off-site mitigation for the loss of functions and values resulting from the issuance of Section 404 permits. Where the Corps makes such a finding and otherwise deems the use of the NCWRP to be appropriate, the NCWRP, pursuant to the terms of this MOU, may act as a recipient of a specified fee which satisfies the compensatory mitigation requirements of the Section 404 permit, provided that the NCWRP determines that it can meet the mitigation requirements. The Corps will specify the amount (in acres for wetlands or linear feet of stream); type (riparian, non-riparian or stream) as well as classification of habitat type in accordance with Cowardin, et al. (1979) Classification of Wetlands and Deepwater Habitats of the United States),

and/or stream type (cold, cool, or warm water stream); location (river basin and Cataloging Unit); and category (restoration, creation, enhancement, or preservation) of the required compensatory mitigation in the conditions of the Section 404 permit. For stream impacts, mitigation will be performed in the same Cataloging Unit as the impacts authorized, if practicable. If no opportunities exist in the same or immediately adjacent units, then the NCWRP will notify the Corps, and the NCWRP and the Corps will consult on appropriate sites to mitigate for the stream impacts. The NCWRP will play no role in the Corps decision to approve or deny a permit or the Corps decision as to whether compensatory mitigation is a necessary condition of any such permit.

C. Project Eligibility: Payment of an in-lieu fee to satisfy compensatory mitigation requirements shall be considered by the Corps on a case-by-case basis.

D. Payment to NCWRP: When the Corps determines that compensatory mitigation is acceptable through payment to the NCWRP, and the NCWRP agrees to provide mitigation in exchange for such payment, the Corps will send the NCWRP a copy of the issued permit. The NCWRP will send the permittee an invoice for the appropriate amount of payment. The amount of payment shall be determined by the amount (acres of wetlands or feet of stream) and type of wetland (riparian or non-riparian) of mitigation specified by the Corps in the permit and the Schedule of Fees adopted by the Environmental Management Commission. The NCWRP will notify the Corps and the permittee upon receipt of payment of the specified fee. This letter of notification shall contain the following statement, "The NCWRP, by acceptance of this payment, acknowledges that the NCWRP is responsible for the compensatory mitigation requirements associated with permit or action number _____, and agrees to provide the compensatory mitigation as specified in this permit." Payments from several permittees may be aggregated by NCWRP to fund one or more restoration projects provided that the impacts from these permits and the restoration projects are within the same Cataloging Unit (or immediately adjacent units for stream impacts).

E. Responsibility – NCWRP: Upon receipt of the appropriate fee from the permittee for compensatory mitigation, the NCWRP will assume the responsibility of mitigation planning, implementation, monitoring, and long-term maintenance and management. Acceptance of this fee is an acknowledgement by NCWRP that the NCWRP, and not the applicant, is responsible for satisfying the compensatory mitigation requirements of the Section 404 permit. In satisfaction of the compensatory mitigation requirements, the NCWRP shall provide compensatory mitigation of the type and in the amount and Cataloging Unit (or immediately adjacent units for stream impacts) specified in the Section 404 permit.

F. Mitigation Plans: All restoration, creation, or enhancement performed by NCWRP to satisfy mitigation requirements of Section 404 permits shall be performed in accordance with a site specific mitigation plan. Each such site specific mitigation plan shall be prepared in general compliance with the guidelines contained in Appendix A of this document, and shall include, but not be limited to, a pre-work description and ecological assessment of the mitigation site, identification of the goals and objectives of the mitigation plan, including a description of the specific aquatic functions to be created, restored, or enhanced, the assessment methodology to be used, a description of the work to be performed on the site, performance criteria to determine the success of the mitigation work, and a monitoring plan to evaluate the site at least annually until performance criteria have been met.

For each mitigation site, the NCWRP shall provide to the Corps a copy of the site specific mitigation plan, and a copy of the final report showing a site has met the performance criteria specified in the mitigation plan, within 30 days of the completion of each such document. The NCWRP shall provide copies of annual monitoring reports for each site upon request.

G. Preservation Sites: For each preservation site acquired by NCWRP to satisfy mitigation requirements of Section 404 permits, the NCWRP shall prepare a report generally describing the site, including an assessment of the functions and values of such site, a description of the anticipated development pressures for such sites, a description of

the long-term management plans for the site, and a description of how the site will be preserved, including copies of executed and recorded real estate documents implementing preservation of the site. The NCWRP shall provide a copy of such report to the Corps prior to utilizing the site as mitigation to satisfy requirements of Section 404 permits.

H. Time Frame: To satisfy the compensatory mitigation requirements of Section 404 permits assumed by NCWRP, during the first year of this MOU, the NCWRP agrees to institute projects within 3 years of the date of receipt of payment. During the second year, projects will be instituted within 2 years of the date of receipt of payment. Beginning with the third year, and continuing as long as this MOU is in effect, projects will be instituted within 1 year of the date of receipt of payment. For the purposes of this MOU, the terms "institute" and "instituted" mean that a site has been identified and acquired, and a contract has been issued for the development and implementation of the mitigation project. A construction completion date, not to exceed two years from the date of contract issuance, shall be required for each project. The NCWRP is committed to providing compensatory mitigation for the majority of wetland impacts in advance of the loss of these wetlands.

I. Protection of Restoration Sites: The NCWRP will insure that all restoration sites that are used to satisfy compensatory mitigation requirements will remain within the public domain in perpetuity or that appropriate conservation easements in perpetuity, approved by the Corps, are placed on the sites. With approval by the Corps, the NCWRP may transfer ownership or management responsibilities of restoration site properties to appropriate non-profit conservation organizations, local governments, or land trusts for management and monitoring. In all cases, the NCWRP will procure appropriate agreements to insure that both public domain properties and other properties under conservation easements are maintained in perpetuity as viable wetlands sites serving the functions and values required by the permit.

J. Advisory Team: In consultation with the Corps, the NCWRP will convene a team that will meet at least annually to review the mitigation projects that have been

implemented or planned to satisfy the compensatory mitigation requirements of Section 404 permits. This team will consist of the NCWRP, the Corps and all other state and federal agencies involved in the review of Section 404 permits. The purpose of this team is to review implemented and planned mitigation projects and to provide recommendations and guidance to the NCWRP concerning potential mitigation sites. The NCWRP will maintain and distribute to each of the members minutes of each meeting of the Advisory Team.

V. Fiscal Accountability and Record Keeping: The NCWRP shall hold any funds collected pursuant to this MOU in a separate account within the Wetlands Restoration Fund which is a special trust fund established by NCGS 143-214.12. Interest on these funds shall be credited to this account by the State Treasurer pursuant to NCGS 147-69.2 and 147-69.3. The NCWRP shall account for the funds so held, in accordance with generally accepted accounting principles, and the account shall be subject to audit by the Corps at any time. The NCWRP will provide the Corps with an account statement on an annual basis which states the balance of the fund and the interest earned by the fund. The accounting shall include a summary of direct and administrative costs associated with the implementation, monitoring and long term management of each restoration project. The accounting shall be based on the State's fiscal year (July 1 - June 30) and provided to the Corps by November 1 of each year.

VI. Annual Review: The Corps shall be provided with an annual report by November 1 of each year that this MOU is in effect. This report shall include the following information: the administrative costs associated with this MOU; a summary of the monitoring results of projects that have been implemented; an accounting of the amount of restoration, creation, enhancement or preservation that has been conducted in each river basin by Cataloging Unit; an accounting of the acres of mitigation required by Section 404 permits in each river basin by Cataloging Unit; and documentation concerning the implementation of projects in accordance with the time frame specified in paragraph IV. H. The Corps shall review this report and make a determination concerning the continued use of this MOU and/or any adjustments necessary to the MOU by January 1 of each year. Unless the Corps requests a termination or modification of the MOU by

January 1 of each year, the MOU will remain in effect for the next calendar year except as provided in paragraph VIII.

VII. Open Communication and Cooperation: Both the Corps and the NCWRP acknowledge that it is their desire to facilitate the process set forth in this agreement by open communication and cooperation. Both parties agree to exercise their rights and obligations in good faith as contained in this agreement.

VIII. Amendment and Termination: This MOU may be amended or terminated by either party by giving ninety (90) days written notice to the other party. Amendments, but not terminations, require written approval by both the Corps and NCWRP. Prior to termination, the NCWRP shall provide an accounting of in-lieu fees received in satisfaction of compensatory mitigation requirements and in-lieu fee funds disbursed. The NCWRP shall complete all restoration, creation, enhancement or preservation activities necessary to satisfy the compensatory mitigation requirements of the Section 404 permits where payments have been made to the NCWRP to satisfy compensatory mitigation requirements. All compensatory mitigation for which in-lieu fees have been received prior to termination will be satisfied according to the project implementation schedule provided in paragraph IV. G. of this document.

IX. Signatures: This MOU shall become effective when signed by both the Corps and the NC Department of Environment and Natural Resources, Division of Water Quality.

For the U.S. Army Corps of Engineers, Wilmington District

Terry R. Youngbluth
Colonel, U.S. Army
District Engineer

4 NOVEMBER 1998
Date

For the North Carolina Department of Environment and Natural Resources
Division of Water Quality

A. Preston Howard, Jr., P.E.
Director

10-8-98
Date

APPENDIX A

NORTH CAROLINA WETLANDS RESTORATION PROGRAM MITIGATION PLANS AND SPECIFICATIONS CHECKLIST FOR SECTION 404 PERMIT MITIGATION SITES (April 2, 1998 version)

I. Location Information.

A. Watershed by USGS Hydrologic Map Cataloging Unit Number.

B. County.

C. Stream name and classification.

D. Site identified on USGS Quad sheet or NWI map (7.5 minute) (with quad sheet name) and UTM coordinates of site.

E. Site identified on NRCS Soil Survey with appropriate Sheet Numbers.

F. Narrative description of location, including roads, nearest municipality, and general description of how to get to the site.

G. Location map with roads and nearest municipality (not larger than 1"=400').

II. Project Description (should be stated in terms of goals and objectives).

A. Type of mitigation (restoration, creation, enhancement, preservation).

1. Cowardin classification and/or stream type (cold water, cool water, or warm water).

2. Narrative description of vegetation types to be established or existing.

3. Use of a reference ecosystem in site planning and design and detailed description of that system.

B. Project Size.

1. Overall site size.

2. Acreage of each type of mitigation intended on the site.

3. Acreage of each vegetation type (by Cowardin classification) intended on the site.

4. Location map showing each mitigation type and vegetation type.

C. Wetland and/or stream functions goals and objectives for establishment (if restoration or enhancement) or existing (if preservation).

1. Description of how functions are determined or evaluated, methodologies used, etc. If modeling is used, assumptions, highs, lows, and averages should be included.

2. Endangered species present or likely in the future or being impacted either positively or negatively.

3. Description of existing (pre-mitigation project) functions and how the goals of the mitigation will contribute to desired functions and/or values.

D. Vegetation.

1. Pre-mitigation project description of vegetation of site with appropriate maps.

2. Mitigation site vegetation goals and objectives.

E. Wetland Hydrology.

1. Pre-mitigation project description of hydrology of site with appropriate maps.

2. Mitigation site hydrology goals and objectives with appropriate maps.

F. Soils.

1. Pre-mitigation project description of soils of site with appropriate maps.

2. Mitigation site soils goals and objectives with appropriate maps (if changes in the soils are being made).

III. Site Preparation Plan.

A. Orientation and scale maps (1"-50').

B. Schematic drawing of proposed changes in topography (3" contours for finished grades). Grading plan.

C. Location and elevation of all structures, especially those controlling hydrology.

D. Construction details for all structures.

E. Spot elevations for low points, high points, and structures. All target elevations and grades mapped.

F. Construction timetable.

G. Benchmark locations.

H. Limits of disturbance.

I. Areas to be graded and backfilled (or filled). Description of earthwork moving required including amounts, type of soils moved and locations for borrow or relocation, sources of topsoils and the nature of these, grading, etc.

J. Property boundaries.

K. Specifications for deconsolidation of substrates.

L. Stream/channel dimensions and configurations.

M. Locations, sizes, nature, of existing or proposed buffers and map.

N. On-site wetland boundaries, existing and after mitigation (proposed).

O. Areas for stockpiling soils.

P. Slope stabilization techniques.

Q. Maintenance procedures for maintaining slopes, grades, etc.

R. Other important site features and/or considerations.

T. Habitat structures and locations.

IV. Vegetation Plans.

A. Existing vegetation (description, species composition, relative abundance of dominants and subdominants, forest age, vegetation structure of uplands and wetlands.

B. Vegetation structure to be restored, enhanced, and/or created (description, species composition, relative abundance of dominants and subdominants, and vegetation structure of uplands and wetlands)(including buffers).

C. Plantings/seedings should be listed to species. Propagules should be listed as to whether "local" (within 200 miles north and south), and should be verified by a nursery certificate. Acceptable substitute species. Field collection instructions and techniques, if field collection is being used for sources. Plant material guarantees.

D. If a Reference Ecosystem (RE) is used, the diversity and densities of species within the RE relative to the target for the mitigation site should be discussed.

E. Transitions zones between wetland and upland should be discussed with regards to suitable transition zone species and planting densities, and composition.

F. Sources of all plant materials, soils, fertilizers, habitat structures, etc.

G. Landscaping contractor's responsibilities (fertilization, irrigation or watering requirements, replacing plant mortalities, replanting seeded areas with transplants, temporarily protecting vegetation from wildlife, number of site inspections and frequencies).

H. Plant handling instructions, seeding instructions, and planting techniques.

I. Planting timetable.

J. Schematic drawing of proposed vegetation distribution, spacing, and structure.

K. Areas to be vegetated identified on topo plans by species and planting methods.

L. Criteria for acceptable plant material.

M. Special plant conditioning requirements (brackish/salt marsh species).

N. Details of proposals for slope stabilization by vegetation.

O. Exotic and/or nuisance plant control methods.

P. Vegetative buffer descriptions.

V. Soils Plans.

A. Soils description and mapping (taxonomy, texture, color structure, permeability, organic content, sampling map, etc.).

B. Schematic drawing of soils profile and spatial distribution.

C. Soil amendment details.

D. Sedimentation and erosion control plan.

E. Fertility sampling (on mitigation site and on RE if applicable) and discussion of fertility results relative to the needs and requirements of the plantings proposed.

F. Discussion of appropriateness of soils for the target vegetation and wetland.

G. If PC farmland is used for a site, a discussion of presence, impacts, and remedies for plow pans, field crowns, herbicide residues and carryover, and the drainage system imposed on the farmland.

VI. Hydrology Plans.

A. A description (written and shown on plans) of the existing water regime on the site, including water budget, sources, volume, velocity, duration and frequency of inundation and/or saturation, drainage area, seasonal highs and lows for each source, rating of each source as primary, secondary, etc., and average depths of surface and/or subsurface water.

B. Stream gage/staff gage data and monitoring well data where flooding provides hydrologic input to the site.

C. Field verification of hydrologic regime.

D. Depth to water table and dates and methods of measurement with map showing locations of measurements.

E. Duration of water table within 12 inches of the surface of the ground in consecutive days and dates and methods of measurement (including map showing variations across site).

F. Map of stream channels, dimensions, and configuration.

G. Modeling and assumptions, including highs, lows, and averages.

H. Discussion of water budget regarding its appropriateness for the targeted wetland.

I. Description, location, and plans of any water control structures and devices.

VII. Stream Plans-All plans for stream restoration shall be developed in accordance with Rosgen methodologies and/or in consultation with the N.C. Wildlife Resources Commission.

VIII. Monitoring Plan.

A. Detailed description of success criteria for vegetation, soils, hydrology, and functions, including time-lines and targets to be met relative to the timeline. Include a discussion of why the success criteria are appropriate and will measure success.

B. Detailed description of methods of measuring success criteria, including contractors and individuals and their qualifications for collecting data and performing monitoring measures.

C. "As-built" report within 30 days of completion of the initial construction and planting.

D. Observations and measurements of natural regeneration on the site as opposed to the constructed and planted conditions.

E. Detailed description of monitoring schedule.

F. Fauna monitoring methods and periods.

G. Timetable for reporting monitoring results and to whom reports are made.

IX. Maintenance and Contingency Plans.