



**AGREEMENT TO ESTABLISH AN UMBRELLA MITIGATION BANKING INSTRUMENT
IN THE CAPE FEAR RIVER BASIN FOR RIPARIAN BUFFER AND NUTRIENT OFFSET MITIGATION CREDITS
PURSUANT TO THE JORDAN LAKE NUTRIENT STRATEGY**

I. PREAMBLE

The Umbrella Mitigation Banking Instrument ("Instrument") regarding the establishment, use, operation, and maintenance of mitigation bank parcels ("Bank Parcels") under an Umbrella Bank ("Bank") to provide Jordan Lake Riparian Buffer mitigation credit ("Riparian Buffer Credits") and Jordan Lake Nutrient Strategy mitigation credit ("Nutrient Offset Credits") is made and entered into by and among Restoration Systems, LLC, acting as the Bank Sponsor ("Sponsor"), and the North Carolina Department of Environment and Natural Resources – Division of Water Quality ("DWQ"). This Instrument is in accordance with 15A NCAC 02B .0268 and 15A NCAC 02B .0240.

The purpose of the bank is:

- A. To improve water quality through the restoration of riparian buffer habitat, the installation of new stormwater best management practices ("BMP"), and the renovation of existing stormwater BMPs.
- B. To provide mitigation and sell any resulting Riparian Buffer Credits and Nutrient Offset Credits to third parties for development (both existing and proposed) requiring such mitigation.

II. GEOGRAPHIC SERVICE AREA

- A. The Geographic Service Area ("GSA") is the designated area wherein a Bank can reasonably be expected to sell Riparian Buffer Credits and Nutrient Offset Credits for impact due to development activities.
- B. The GSA for this instrument is limited to Bank Parcels located within the Cape Fear River Basin in the State of North Carolina, United States Geological Survey ("USGS") 8-digit Hydrologic Unit Codes ("HUC") 03030002.
- C. Sale or transfer of credit shall be limited to the sub-watershed of the Jordan Lake watershed, as defined in Rule 15A NCAC 02B .0262, in which the Bank parcel is located.

III. AUTHORITIES

- A. The Bank will be used to provide Riparian Buffer Credit and Nutrient Offset Credit in accordance with the requirements in the DWQ Authority document referenced herein as "Attachment A" and attached to this Instrument.
- B. Projects eligible for utilization of the credits are those requiring authorization under the requirements of Attachment A.
- C. All activities shall be consistent with approved North Carolina ("State") statutes and rules for the Jordan Lake Nutrient Sensitive Waters Management Strategy.

IV. ESTABLISHMENT OF BANK PARCEL(S)

- A. Each parcel proposed for inclusion within the Bank under this Instrument shall require a Bank Parcel Development Package (“BPDP”) be submitted to, and approved by, the DWQ prior to use of the parcel for mitigation purposes, sale, and transfer of any associated credits.
- B. Bank parcels(s) may be added to the Bank at any time upon Approval of a BPDP by the DWQ

V. BANK PARCEL DEVELOPMENT PACKAGE

- A. Each BPDP shall include detailed information consistent with the sections below concerning: 1) site location (8-digit HUC is required); 2) existing conditions; 3) proposed buffer restoration, nutrient offset and/or stormwater BMP activities; 4) monitoring and maintenance plans; 5) financial assurances; and 6) associated buffer mitigation/nutrient credit calculations, which shall include credit generation, service area, and accounting as appropriate for each regulatory authority; and 7) stream buffer determination letter from DWQ (where applicable)
- B. In addition to items 1-7 listed in “A” of this section, for each Bank Parcel, the Sponsor agrees to transfer or assign the conservation easement and its interest in perpetuity to a qualifies holder under N.C. General Statute (“G.S.”) 121-34 et seq. and 170(h) of the Internal Revenue Code. The holder shall be a land trust or stewardship program that will hold and enforce the conservation easement and the interests. The Sponsor shall choose a land trust or stewardship program that is accredited by the Land Trust Accreditation Commission and/or has been approved by the DWQ prior to the end of the fourth ear monitoring period. A land trust must be certified under 501(c) 3 of the Internal Revenue Code and must have the qualifications outline is G.S. 105-130.24 and G.S. 105-151.12.

PERMITTING

- C. The Sponsor will obtain all applicable federal, state, and local documentation, permits, or authorizations needed to construct and maintain the Bank Parcel. This Instrument does not qualify as, or substitute for, such documentation, permit or authorization.

CONSTRUCTION

- D. The placement of BMP’s constructed or renovated to produce Nutrient Offset Credit must be approved by DWQ prior to construction or renovation.
- E. The sponsor agrees to perform all necessary work, in accordance with the provisions of this Instrument, to establish, maintain, and monitor Jordan Lake Riparian Buffers or other riparian areas or to install and/or renovate stormwater BMPs until Item B (1) and (2) of Section IX have been satisfied.
- F. As-Built Report: The Sponsor will submit an as-built plan and report for each bank Parcel within 30 calendar days after completing the establishment of the buffer area, nutrient offset area, and/or construction or renovation of the stormwater BMP(s). The as-built report will describe any deviation from the approved BPDP and will document the following:
 - 1. Buffer Restoration: planting details, invasive species control, monitoring device locations, vegetation plot locations, photo point locations, surface and groundwater elevations, as appropriate.

2. Stormwater BMP's: outlet structure information, surface area/volume computations, hydrograph routing information, planting details, monitoring device locations, photo point locations as appropriate
3. Boundary Survey of the conservation easement area including an enumeration of the final mitigation area for buffer and/or nutrient offset mitigation credits in both square feet and acres.

OPERATIONS AND MAINTENANCE

- G. The Sponsor will provide the DWQ with the necessary operation and maintenance agreements for the newly constructed or renovated stormwater BMP's. These agreements shall be consistent with the standard adopted by the DWQ and must be approved by the DWQ prior to the release of any credits.
- H. The Sponsor agrees to perform all necessary work to operate and maintain the Bank Parcel(s) consistent with the operation and maintenance criteria established in each approved BPDP until Item B (1) and (2) of Section IX have been satisfied.
- I. Requests for deviation from the approved BPDP must be submitted to the DWQ in writing. Written approval from the DWQ must be received prior to implementing any deviation from the approved BPDP.

MONITORING

- J. The Sponsor shall monitor each bank Parcel as described in the BPDP until such time as DWQ determines that the success criteria described below have been met. The monitoring period shall be a minimum of five years.
- K. Trees should be planted at a density sufficient to provide 320 trees per acre at maturity. To achieve this density, approximately 436 (10x10ft. spacing) to 681 (8x8 ft. spacing) trees per acre should be planted.
- L. Vegetative Success Criteria: Reporting criteria of the riparian buffer restoration shall be based on the Carolina Vegetation Survey ("CVS") – *ECP protocol for Recording Vegetation level 1-2 Plot Sampling Only Version 4.0* or any updated versions of this protocol in place at the date of acceptance of the BPDP. "Character Trees" are defined as planted or volunteer species identified from a survey of local vegetation on less degraded sections of the specified stream and from reference literature that details native species. A list of Character Tree species for each Bank Parcel will be detailed in the BPDP. Vegetative Success Criteria will be based upon guidelines set forth in the *Guidelines for Riparian Buffer Restoration* prepared by the North Carolina Ecosystem Enhancement Program (or subsequent updated versions of this Guidance in place at the date of acceptance of a BPDP.) Success will be defined as the survival of an average density of 320 planted trees per acre after five years. If vegetative success criteria are not met, supplemental planting may be required. Supplemental planting will be utilized until required densities have been achieved and maintained for five years.

M. Monitoring Reports for Riparian Buffer Credit or Nutrient Offset Credit (excluding Stormwater BMPs): The Sponsor shall submit to the DWQ an annual monitoring report no later than December 31 of each year for a minimum of five years after the first full growing season. This report will describe the conditions of each Bank Parcel, including an evaluation of the success criteria contained within the approved BPDP. Reports shall contain the following.

1. A U.S. Geological Survey map showing location of the Bank Parcel(s); and
2. A detailed narrative summarizing the condition of the Bank parcel(s) and all regular maintenance activities; and
3. Appropriate topographical survey showing location of sampling plots, permanent photo points, location of transects, etc.; and
4. Monitoring data, including specific vegetative county and photographs; and
5. A copy of the most recent Bank credit/debit ledgers; and
6. Corresponding verification letters from designated local governments; and
7. Corresponding Mitigation Transfer Certificates.

N. Operation and Maintenance Reports for Nutrient Offset Credit – Stormwater BMPs: The Sponsor shall submit to the DWQ an annual Operation and Maintenance (“O&M”) no later than December 31 of each year for a minimum of five years after the initial installation/renovation of the stormwater BMP. This annual monitoring report shall describe the conditions of each Bank parcel, including an evaluation of the success criteria contained within the approved BPDP. Reports shall contain the following:

1. A U.S. Geological Survey map showing location of the Bank Parcel(s); and
2. A detailed narrative summarizing the condition of the Bank Parcel(s) and all regular maintenance actives; and
3. A copy of the most recent Bank credit/debit ledgers; and
4. Corresponding verification letters from designated local governments; and
5. Corresponding Mitigation Transfer Certificates; and
6. Photographs of current conditions of the BMPs as well as photos showing any maintenance that has been performed on the BMPs including the corresponding dates.

O. Stormwater BMP success Criteria: The success of a stormwater BMP will be based upon the type of BMP and its associated design criteria contained within the approved BPDP. For purposes of this agreement, the design criteria shown in the *North Carolina Division of Water Quality Stormwater Best Management Practices Manual* dated October 2007, or any updated versions of this manual, and compliance with the approved operation and maintenance agreements contained within the approved BPDP shall be the basis for judging the success of a specific device.

CONTINGENCY PLAN/REMEDIAL ACTIONS

- P. In the event the Bank Parcel fails to achieve the success criteria described in this Instrument and the approved BPDP, the Bank Sponsor shall develop necessary contingency plans in coordination with the DWQ and implement appropriate remedial actions for the Bank Parcel and the Bank. Depending on the degree of remedial actions required, the DWQ may modify the monitoring period.

FINANCIAL ASSURANCES

- Q. Following approval of the BPDP, the Sponsor shall provide a Performance Bond from a surety company that is rated no less than an "A-" as rated by A.M. Best. The Performance Bond amount shall be 100% of the estimated cost for implementation of the buffer restoration and/or stormwater BMP project as described in the approved BPDP, but not less than \$150,000.00.
- R. Alternatively, in lieu of posting the Performance Bond, the Sponsor may elect to construct the project prior to the first credit release.
- S. After completion of the restoration/construction, a separate Performance/Maintenance Bond will be secured for 100% of the estimated cost to implement the monitoring and maintenance plan but not less than \$100,000.00. The Performance/Maintenance Bond shall be in effect for a minimum of five years, and until DWQ has released all mitigation credits to the Bank Sponsor. Upon DWQ approval, this may be lowered each year based on the adjusted cost to complete the monitoring.

VI. CALCULATION OF MITIGATION CREDITS AND CREDIT RELEASE SCHEDULE

- A. Riparian Buffer Credit may be achieved through restoration, enhancement of the DWQ riparian buffer, as defined in 15A NCAC 02B .0267 and 15A NCAC 02B .0268.
- B. Nutrient Offset Credit may be achieved through restoration or enhancement of the riparian area adjacent to surface water features. Surface water features do not have to be intermittent or perennial, nor do they have to be depicted on a USGS, NRCS, or EMC approved map. However, surface water features must be hydrologically connected and drain to jurisdictional waters that are either intermittent or perennial. The width of the restoration area begins at the most landward limit of the top of bank or the rooted herbaceous vegetation and extends landward a maximum distance of 200 feet on all sides of the surface water.
- C. The mitigation accomplished in the DWQ riparian buffer, as defined in 15A NCAC 02B .0267 and per 15A NCAC 02B .0268 may be used for *either* Riparian Buffer Credit or Nutrient Offset Credit, but not both and shall be subject to the same mitigation ratios.
- D. Riparian Buffer Credit is defined as one (1) buffer credit per one square foot or 43,560 buffer credits per one acre.
- E. Nutrient Abatement of Restored Riparian Area: The Sponsor and DWQ agree:
1. The pounds of nitrogen offset per acre of restored riparian areas shall be two thousand two hundred and seventy three and two hundredths pounds per acre (2,273.02 lbs/acre) or the amount of nitrogen offset per acre in effect at the time the BPDP is approved.

2. The pounds of phosphorus offset per acre of restored riparian areas shall be one hundred forty six and four-tenths pounds per acre (146.4 lbs/acre) or the amount of phosphorus offset per acre in effect at the time the BPDP is approved.
- F. Nutrient Offset Credits sold or transferred from approved Bank Parcels to prospective purchasers shall account for the DWQ-approved transport factors between the Bank Parcel site and the location of the site or development wishing to utilize credits.
- G. The following Jordan Water Supply Nutrient Strategy requirements apply:
1. Nutrient offsets can only be provided to offset impacts within the same Jordan subwatershed, as defined in 15A NCAC 02B .0262.
 2. Pursuant to the Jordan Trading Rule Item 15A NCAC 02B .0273(2)(a), load reductions eligible for credit are only those that exceed reduction needs calculated by applying the strategy subwatershed percentage reduction goals as provided in 15A NCAC 02B .0262 (5). For the Haw and Upper New Hope subwatersheds, this requirement results in a reduction of credits yielded per acre of restored riparian buffers when compared with the credits given in other river basins. Table 1.0 below lists the generated credits per acre of restored riparian buffer for each Jordan subwatershed.

Table 1.0. Generated credit yields for forest buffer restoration by Jordan Subwatershed.

Jordan Subwatershed	Credit Generated (lbs/30 yrs/ac)	
	Nitrogen	Phosphorus
Upper New Hope	2,169.26	143.81
Lower New Hope	2,273.02	146.40
Haw	2,249.36	143.81

3. As required under Jordan Trading Rule Item 15A NCAC 02B .0273 (2)(d)(i), the party seeking to sell credits must account for differences in instream nutrient losses between the location of the reduction need and excess loading reduction being delivered to the affected arm of Jordan lake. Attachment B provides the delivered Jordan Lake Total Nitrogen (TN) and Jordan Lake Total Phosphorous (TP) credit yields per acre of buffer restoration by each Jordan small watershed.

Delivered credits are calculated by applying the delivery factors to the generated credit yields from Table 1.0 above and are provided in Attachment B. A map and GIS data of the small watersheds are available online at: <http://portal.ncdenr.org/web/jordanlake>.

4. The Bank Sponsor shall report the pounds of nitrogen and phosphorus credit per acre of restored riparian buffer in their BPDP for both credits generated at the site of the nutrient reduction activity and the credits delivered to Jordan Lake. The Bank Sponsor shall refer to Attachment B for determining delivered credits in the Jordan watershed.
5. Credit yields for measures that differ from forest buffer restoration shall be determined based on the proposed load reduction practice, the watersheds delivery factors, and the land use present at the baseline period for the site where the proposed load reduction practice occurs.

- H. Nutrient Offset Credit of Installed/Renovated Stormwater Best Management Practices: The Sponsor and DWQ agree that the pounds of nitrogen and/or phosphorus available for credit release from newly renovated or constructed stormwater BMPs shall be based upon the design calculations/nutrient export calculations submitted to and approved by the DWQ as part of the BPDP.
- I. The Sponsor and DWQ agree that the methodology and calculations for determining nitrogen and total phosphorous reduction, including delivery factors, associated with restoration or enhancement of riparian areas, shall be fixed as part of the approval of each BPDP, with the fixed amount not changing during the development or credit release schedule for each Bank Parcel.

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- J. Credit Release: Upon submittal of all appropriate documentation by the Sponsor, and subsequent approval by DWQ, it is agreed that the mitigation credits associated with the Bank Parcel will become available for sale to a third party in accordance with the following schedules:

Table I - Credit Release Schedule for Riparian Buffer and Nutrient Offset Credits (excluding Stormwater BMPs)

Task	Project Milestone	% Credit Available for Sale
1	BPDP Approved by DWQ, Conservation Easement Recorded* and Financial Assurance Posted	20
2	Mitigation Site Earthwork, Planting and Installation of Monitoring Devices Completed	20
3	Monitoring Financial Assurance Posted and Approval of As-Built Report	10
4	Monitoring Report #1: Approved by the DWQ**	10
5	Monitoring Report #2: Approved by the DWQ**	10
6	Monitoring Report #3: Approved by the DWQ**	10
7	Item B (1) of Section IX in this Instrument has been completed and approved by DWQ.	5
<i>No remaining credits will be released until Task 7 has been satisfied</i>		
8	Monitoring Report #4: Approved by the DWQ**	5
9	Monitoring Report #5: Approved by the DWQ** and final site visit by DWQ has been conducted	10
Total		100%

* For specification, please see Section VIII in this Instrument

** DWQ Approval provided upon a determination that the site is meeting success criteria contained within the approved BPDP

Table 2 - Credit Release Schedule for Nutrient Offset Credits – Stormwater BMPs

Task	Project Milestone	% Credit Available for Sale
1	BPDP Approved by DWQ, Bank Closure Agreement, Drainage and Access Easements Recorded and Financial Assurance Posted, and Operation and Maintenance Agreement Approved by DWQ	20*
2	Installation / Renovation of Stormwater BMP in accordance with approved design plans completed	20
3	Approval of As-Built Package	10
4	O&M Report #1: Approved by the DWQ*	10
5	O&M Report #2: Approved by the DWQ*	10
6	O&M Report #3: Approved by the DWQ*	10
7	Item B (1) of Section IX in this Instrument has been completed and approved by DWQ.	5
<i>No remaining credits will be released until Task 7 has been satisfied</i>		
8	O&M Report #4: Approved by the DWQ*	5
9	O&M Report #5: Approved by the DWQ* and final site visit by DWQ has been conducted	10
Total		100%

Table 2 - Credit Release Schedule for Nutrient Offset Credits – Stormwater BMPs

* For specification, please see Section VIII in this Instrument

** DWQ Approval provided upon a determination that the site is meeting success criteria contained within the approved BPDP

- K. DWQ may modify the credit release schedule based on the information submitted or the order in which required information is received. DWQ will notify the Sponsor of any modification to the credit release schedule.

VII. PROCEDURE FOR DEBITING AND CREDITING

- A. Available mitigation credits (credits that have been released by DWQ but not sold by the Sponsor) that are generated within the DWQ riparian buffer, as defined by 15A NCAC 02B .0267 and per 15A NCAC 02B .0268 can be converted and transferred from Riparian Buffer Credits to Nutrient Offset Credits and from Nutrient Offset Credits to Riparian Buffer Credits. Available Nutrient Offset Credits that are generated outside of the DWQ riparian buffer cannot be converted or transferred to Riparian Buffer Credits.
- B. The Bank Sponsor shall obtain verification of nutrient offset need from a designated local government prior to debiting Nutrient Offset Credits from the Bank Parcel.
- C. The Bank Sponsor shall obtain verification of buffer mitigation required prior to debiting Riparian Buffer Credits from the Bank Parcel.
- D. The Bank Sponsor shall maintain three credit ledgers, if applicable, for each Bank Parcel under this Instrument: one accounting for buffer mitigation credits in square feet, one accounting for nitrogen offset credits in pounds, and one accounting for phosphorus offset credits in pounds.
- E. Each credit ledger shall be submitted on a separate 8½ in X 11in spreadsheet with legible font style and font size. At a minimum and unless otherwise requested by DWQ, credit ledgers shall contain the following information:
 - 1. Bank Details listed in a header: (1) name of the approved banking instrument as it appears on the instrument document, (2) sponsor name, (3) bank parcel name as it appears on the BPDP, (4) DWQ project number for the BPDP, (5) date the ledger was last updated, and (6) total credits released to date.
 - 2. Credit Details Table with the following for each credit sale: (1) date of credit sale, (2) purchaser name, (3) project name and corresponding HUC, (4) name of designated local government requiring Nutrient Offset Credits, and/or (5) DWQ authorization number or delegated local government requiring Riparian Buffer Credits for this project, (6) credits released by DWQ to the Bank listed in pounds for Nutrient Offset Credits and in square feet for Riparian Buffer Credits, (7) credits debited/sold from bank listed in pounds for Nutrient Offset Credits and in square feet for Riparian Buffer Credits, and (8) available credits listed in pounds and acres for Nutrient Offset Credits and in square feet and acres for Riparian Buffer Credits.
- F. All credit and debit transactions for each Bank Parcel under this Instrument shall be accurately depicted in the credit ledgers. DWQ shall be notified of each credit sale or credit transfer within thirty (30) calendar days by electronically submitting an updated credit ledger to DWQ. At a minimum, DWQ shall receive a hard copy of updated credit ledgers along with the corresponding Mitigation Credit Transfer Certificates (“Certificate”) and all corresponding letters from the designated local governments twice a year. Notification of all credit sales shall be provided to DWQ until all credits that have been released have been sold.

G. All credit sales will include a Certificate that will include, at a minimum, the following information:

1. Bank Details: (1) sponsor Name, (2) name of the approved banking instrument as it appears on the instrument document, (3) bank parcel name as it appears on the BPDP, and (4) DWQ project number for the BPDP.
2. Credit Details: (1) date of receipt, (2) identify if full or partial payment, (3 – when applicable) amount of nitrogen credits purchased in pounds and confirmation from the designated local government of the amount required, (4 – when applicable) amount of phosphorous credits purchased in pounds and confirmation from the designated local government of the amount required, and (5 – when applicable) amount of Riparian Buffer Credits purchased in square feet and the confirmation from DWQ or the local government of the amount required.
3. Project Details: (1) project name as it appears on DWQ or local government permits and/or certifications, (2) 8-digit HUC (or the sub-watershed if for the Jordan Lake Nutrient Strategy), (3) river basin, (4) nutrient strategy applicable to the project, (5 – when applicable) designated local government requiring Nutrient Offset Credits or Riparian Buffer Credits for this project, and/or (6) DWQ authorization number or delegated local government requiring Riparian Buffer Credits for this project.

H. If the DWQ determines that the Bank is operating at a deficit (e.g. the Sponsor is closing on sales and/or transferring credit that is not available), or the Bank is selling credits out of compliance with statutes, rules or this Agreement, the sale/transfer of credits will immediately cease, and the DWQ, in consultation with the Sponsor, will determine what remedial actions are necessary.

VIII. PROPERTY DISPOSITION AND LONG-TERM MANAGEMENT

- A. Prior to the release of any credits, the Sponsor shall acquire a permanent conservation easement(s) and/or drainage and access easements for the Bank Parcel(s) at the County Register of Deed's office that is sufficient to ensure protection, operation and maintenance of restored riparian buffers, other riparian areas, and/or stormwater BMPs for the duration specified in the approved BPDP.
- B. The form of the conservation easement shall be consistent with the standards employed by the State of North Carolina in the protection of restored riparian buffers and riparian areas as well as any stormwater BMPs and shall be approved by the DWQ prior to the release of any credits.
- C. The Sponsor shall not grant additional easements, right of ways, or any other property interest in or to the project areas without prior approval from the DWQ.
- D. The Sponsor shall transfer or assign the Bank Parcel's conservation easement and all of its interests to a land trust or stewardship fund as described in Item B of Section V in this Instrument. The land trust or stewardship will hold and enforce the conservation easement in perpetuity.
- E. In the event that the Sponsor is also the owner of the underlying fee interest in the property, the conveyance of the conservation easement to a land trust or stewardship fund must be arranged at the outset of the approved BPDP.

IX. BANK PARCEL CLOSURE

- A. Bank Parcel Closure shall be identified as the event when the Sponsor is relieved of all of its responsibilities to the Bank Parcel and there are no mitigation credits left to sell.
- B. Bank Parcel Closure shall commence only after all of the following events have occurred:
 - 1. Transfer or assign the conservation easement and all of its interests, in perpetuity, to a land trust or stewardship program as described in Item B of Section V of this instrument.
 - 2. All five years of monitoring completed and all monitoring reports submitted and approved by DWQ.
 - 3. All credits have been released and debited and updated ledgers showing a zero credit balance have been submitted and approved by DWQ.

X. GENERAL PROVISIONS

- A. Upon the presentation of proper credentials, and during normal business hours, the Sponsor and the landowner shall grant permission to the Director, an authorized representative of the Director, or DENR staff, to enter the property containing the Bank Parcel(s).
- B. Amendments: This Banking Instrument may be amended or modified only with written approval of all signatory parties.
- C. Any transfer of the Sponsor's rights or obligations outlined in this Instrument or any other agreement referenced in this Instrument to a third party must be approved by DWQ prior to the transfer.
- D. Force Majeure: After the sale of all available credits, the Sponsor will not be responsible for Bank failure that is attributed to natural catastrophes including but not limited to flood, drought, disease, regional pest infestation, etc. that are beyond the control of the Sponsor.
- E. However, if an event occurs before DWQ has released all of the credits, the Sponsor shall take remedial action to restore the property to its condition prior to the event, in a manner sufficient to provide adequate mitigation to cover credits that were sold prior to the occurrence of the event. Such remedial action shall be taken by the Sponsor only to the extent necessary and appropriate, as determined by DWQ and the Sponsor.

DWQ must concur in writing that a *force majeure* event has occurred for this provision to apply.

- F. Oversight: Actions taken by DWQ may include, but are not limited to, the following:
 - 1. Site visits.
 - 2. BPD review and approval of items listed in Items A and B of Section V of this instrument.
 - 3. Monitoring Report and/or O&M report review and approval of items listed in Items M and N of Section V of this instrument.

4. As-Built Report review and approval of items listed in Item F of Section V of this instrument.
5. Credit Ledger review and approval of items listed in Item E and F of Section VII of this instrument.
6. Certificate review of items listed in Item G of Section VII of this instrument and cross analysis to credit ledgers.
7. Information requests, file reviews and audits

Reports, ledgers, files and other information shall be made available to DWQ upon request, unless otherwise specified in this or any other document.

- G. Validity of the Banking Instrument: This Instrument will become valid on the date of the last party's signature.
- H. Specific Language of Banking Instrument Shall Be Controlling: To the extent that specific language in this document changes, modifies, or deletes terms and conditions contained in those documents that are incorporated into the Instrument by reference, and that are not legally binding, the specific language within the Instrument shall be controlling.
- I. Any disputes over decisions regarding this Instrument, shall be referred to the Director of DWQ for a decision. The Director's decision is subject to review as provided in Articles 3 and 4 of G.S. 150B.
- J. This Agreement shall be binding upon the parties and is entered into knowingly, intelligently, and voluntarily.
- K. Notices: All notices and other communications which may be or are required to be given or made by any party to the other shall be in writing and shall be deemed to have been properly given and received on the date delivered in person or deposited in the United States mail, registered or certified, return receipt requested, to the addresses set out below, or at such other addresses as specified by written notice delivered in accordance herewith.

If to Restoration Systems, LLC: 1101 Haynes Street
Suite 211
Raleigh, NC 27604

If to DWQ: NC Division of Water Quality– Wetlands & Stormwater Branch
Attn: Nutrient Offset Bank Coordinator
1650 Mail Service Center
Raleigh, NC 27699-1650

L. Applicable Law: This Agreement shall be construed under the laws of the State of North Carolina.

RESTORATION SYSTEMS, LLC

By: George A. Howard (Print)
George A. Howard (Signature)
Title: CEO
Date: March 18, 2013

NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WATER QUALITY

By: Charles W. Wall (Print)
Charles W. Wall (Signature)
Title: Director, DWQ
Date: 4/9/13

Attachment A

All Basins

General Statutes:

G.S. §143-214.1 Water; water quality standards and classifications; duties of Commission
G.S. §143-214.11 Ecosystem Enhancement Program
G.S. §143-214.26 Nutrient Offset Credits
G.S. §143-214.20-24 Riparian Buffer Protection Program
G.S. §143-214.7 Stormwater runoff rules and programs

G.S. §143-215.3(a)(1) General powers of Commission and Department; auxiliary powers
G.S. §143-215.6A Enforcement Procedures: Civil Penalties
G.S. §143-215.6B Enforcement Procedures: Criminal Penalties
G.S. §143-215.6C Enforcement Procedures: Injunctive Relief
G.S. §143-215.8B Basinwide Water Quality Management Plans
G.S. §143B-282 Environmental Management Commission – creation; powers and duties

Session Laws

S.L. 2012-200 (Amendment to G.S. §143-214.23 and G.S. §143-215.1)
S.L. 2011-343 (Amendment to G.S. §143-214.11)
S.L. 2009- 337 (Amendment to G.S. §143-214.11)

Administrative Rules:

15A NCAC 02B .0202 Definitions
15A NCAC 02B .0223 Nutrient Sensitive Waters
15A NCAC 02B .0237 Best Management Practice Cost-Effectiveness Rate
15A NCAC 02B .0240 Nutrient Offset Payments
15A NCAC 02B .0269 Riparian Buffer Mitigation Fees to the NC Ecosystem Enhancement Program
15A NCAC 02B .0274 Nutrient Offset Payment Rates for the NC Ecosystem Enhancement Program
15A NCAC 02B .0301 Stream Classifications

Jordan Buffer and Jordan Water Supply Nutrient Strategy

General Statutes and Session Laws:

G.S. §143-214.5 Water Supply Watershed Protection)
S.L. 2012-201
S.L. 2012-187
S.L. 2009-216
S.L. 2009-484
S.L. 2006-259 (Section 31(a))
S.L. 2005-190
S.L. 1999-329 (part of G.S. 143B-282)

Administrative Rules:

15A NCAC 2B .0262 Purpose and Scope
15A NCAC 2B .0263 Definitions
15A NCAC 2B .0264 Agriculture
15A NCAC 2B .0265 Stormwater Management for New Development
15A NCAC 2B .0267 Jordan Water Supply Nutrient Strategy
15A NCAC 2B .0268 Mitigation for Riparian Buffers
15A NCAC 2B .0270 Wastewater Discharge Requirements
15A NCAC 2B .0271 Stormwater Requirements for State and Federal Entities
15A NCAC 2B .0272 Fertilizer Management
15A NCAC 2B .0273 Options for Offsetting Nutrient Loads

Attachment B

Delivered credit yields for buffer acres in Jordan small watersheds.

Watershed ID	Jordan Subwatershed	Delivery Factors		TN Credit (lbs/30yrs)	TP Credit (lbs/30yrs)
		TN	TP		
03030002010010	Haw	25%	10%	562.34	14.38
03030002010020	Haw	37%	36%	832.26	51.77
03030002010030	Haw	44%	40%	989.72	57.52
03030002010040	Haw	49%	44%	1102.19	63.27
03030002010050	Haw	55%	48%	1237.15	69.03
03030002020010	Haw	15%	4%	337.40	5.75
03030002020020	Haw	22%	12%	494.86	17.26
03030002020030	Haw	48%	43%	1079.69	61.84
03030002020040	Haw	32%	33%	719.80	47.46
03030002020050	Haw	32%	32%	719.80	46.02
03030002020060	Haw	47%	42%	1057.20	60.40
03030002020070	Haw	54%	47%	1214.66	67.59
03030002030010	Haw	60%	56%	1349.62	80.53
03030002030020	Haw	44%	31%	989.72	44.58
03030002030030	Haw	25%	8%	562.34	11.50
03030002030040	Haw	42%	30%	944.73	43.14
03030002030050	Haw	64%	62%	1439.59	89.16
03030002030060	Haw	39%	19%	877.25	27.32
03030002030070	Haw	36%	18%	809.77	25.88
03030002030080	Haw	73%	64%	1642.04	92.04
03030002040010	Haw	30%	14%	674.81	20.13
03030002040020	Haw	28%	14%	629.82	20.13
03030002040030	Haw	71%	63%	1597.05	90.60
03030002040040	Haw	32%	15%	719.80	21.57
03030002040050	Haw	52%	50%	1169.67	71.90
03030002040060	Haw	54%	51%	1214.66	73.34
03030002040070	Haw	67%	60%	1507.07	86.28
03030002040080	Haw	53%	51%	1192.16	73.34
03030002040090	Haw	54%	51%	1214.66	73.34
03030002040100	Haw	75%	65%	1687.02	93.47
03030002040110	Haw	66%	60%	1484.58	86.28
03030002050010	Haw	74%	68%	1664.53	97.79
03030002050020	Haw	81%	74%	1821.98	106.42
03030002050030	Haw	42%	17%	944.73	24.45
03030002050040	Haw	80%	73%	1799.49	104.98

Jordan Water Supply Nutrient Strategy
Delivered Credit Yield Table for Jordan Sub Watersheds

Updated
 12/20/2012

Watershed ID	Jordan Subwatershed	Delivery Factors		TN Credit (lbs/30yrs)	TP Credit (lbs/30yrs)
		TN	TP		
03030002050050	Haw	71%	67%	1597.05	96.35
03030002050060	Haw	79%	73%	1777.00	104.98
03030002050070	Haw	78%	72%	1754.50	103.54
03030002050080	Haw	80%	73%	1799.49	104.98
03030002050090	Haw	79%	73%	1777.00	104.98
03030002050100	Haw	81%	75%	1821.98	107.85
03030002060010	Haw	81%	74%	1821.98	106.42
03030002060020	Haw	95%	97%	2136.90	139.49
03030002060030	Haw	88%	91%	1979.44	130.86
03030002060040	Haw	97%	98%	2181.88	140.93
03030002060050	Haw	92%	95%	2069.41	136.61
03030002060062	Haw	98%	99%	2204.38	142.37
03030002060070	UNH	40%	19%	867.70	27.32
03030002060080	UNH	59%	45%	1279.86	64.71
03030002060100	UNH	69%	63%	1496.79	90.60
03030002060110	UNH	61%	58%	1323.25	83.41
03030002060120	UNH	69%	63%	1496.79	90.60
03030002060140	UNH	85%	89%	1843.87	127.99
03030002060130	UNH	69%	63%	1496.79	90.60
03030002060160	LNH	85%	90%	1932.07	131.76
03030002060090*	UNH	92%	94%	1995.71	135.18
03030002060090*	LNH	92%	94%	2091.18	137.62
03030002060060*	UNH	94%	96%	2039.10	138.05
03030002060060*	LNH	94%	96%	2136.64	140.54
03030002060150*	UNH	88%	91%	1908.94	130.86
03030002060150*	LNH	88%	91%	2000.26	133.22

*Watershed is located in both the Upper New Hope (UNH) and Lower New Hope (LNH) Subwatersheds.