

HALIFAX FARM ENVIRONMENTAL BANK PROSPECTUS

Sponsor:

Roslyn Farm Corporation

Prepared and Managed by:

EarthSource Solutions, Inc.
5735 South Laburnum Avenue
Richmond, Virginia 23231
804-222-5114

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I. INTRODUCTION

Roslyn Farm Corporation (RFC) will serve as bank sponsor for the Halifax Farm Environmental Bank (HFEB). HFEB will provide pre-approved Environmental Credits for use in the compensatory mitigation of unavoidable environmental impacts within an approved service area. The environmental credits proposed by the bank sponsor and managed by EarthSource Solutions, Inc. (ESS) will meet the guidelines, ratios and habitat success requirements of the U.S. Army Corp of Engineers, Virginia Department of Environmental Quality, US Fish and Wildlife Service and EPA Region III. The geographic limits of the bank's service area will be determined by the sponsor and the Mitigation Bank Review Team (MBRT) and will be authorized in the Mitigation Banking Instrument (MBI) approved by signatory agencies. The bank sponsor will request authorization for any activity requiring a Local, State or Federal permit prior to permitted activity commencing.

Upon completion, HFEB will be managed to provide replacement functions and values for wetland, stream, riparian and upland forested habitat ecosystems. The replacement systems will be managed for functional hydrologic and forest regimes representative of naturally occurring habitats found in the upper Chowan River watershed. HFEB may provide preserved, restored and newly created natural ecosystems. This diverse and dynamic upland/wetland complex will enhance supplemental water retention, promote infiltration, improve water quality and contribute to the headwater hydrology of the Chowan River basin – Blackwater River. HFEB will also create/improve indigenous upland forest and meadow/open space to be used by wildlife as part of the natural systems on a larger scale. The bank will accomplish these goals by preserving and creating contiguous wetland and deciduous upland forest corridors and buffers along adjacent Warwick Swamp.

The HFEB site of approximately 240± acres is currently owned by Roslyn Farm Corporation and available for initial environmental credit management. This site

drains to Warwick Swamp via watershed and stream hydrologic connections, then to the Blackwater River and on to the Chowan River in North Carolina. The site is composed of approximately 10± acres of existing wetlands, and 230± acres of upland. The sponsor will work adjacent to the existing wetlands to develop a diverse wetland and upland mosaic of functional habitat. The sponsor Roslyn Farm Corporation will implement a Bank Development Plan (BDP) that develops approximately 125 +/- wetland credits and 2,116 linear feet of US Waters credits at the HFEB for use by authorized permits. These credits will be derived from 85± acres of restoration in agricultural areas with hydric soils, 35± acres of creation in areas with low permeability soils, 10± acres of preservation of existing wetlands, and the restoration and preservation of 2,116± linear feet of stream and riparian buffers. The resulting wetland/upland matrix will include primarily palustrine forested wetland with minor components of scrub-shrub wetland, emergent wetland and upland buffers. These credits will target the associated long-term regulatory needs of the Chowan River basin in the next 10 years.

II. SITE CHARACTERISTICS

The proposed HFEB site consists of approximately 240± acres of agricultural land located on the east side of State Route 604 (Halifax Road) in Dinwiddie County, Virginia. (See Exhibits 1 & 2). The site includes a single-family residential property and outbuilding complex associated with farming. The site has been used for agriculture for approximately 60 years.

Site visits by ESS, previous geotechnical studies and published NRCS documents have identified that soils within the proposed banking area include 12 to 14 inches of topsoil. The subsoil consists of 4 to 9 feet of “sandy clay” and “clayey and silty sand”. NRCS documents and site visits have confirmed that the majority of the site is underlain with hydric soils. Site grades range from approximately EL±150 to EL±172 with the majority of the site sloping predominantly southward toward Warwick Swamp. Surface water observations included streams, ponds, and standing water in lowland depressions.

Site hydrology contributes to the Chowan River basin via Warwick Swamp and the Blackwater River. The adjacency of this project to Warwick Swamp will enhance the existing wildlife corridors and allow newly established wetland, deciduous upland forest and stream/riparian wildlife corridors to be developed within the environmental bank. The site will be established and managed for MBI success criteria and target functional habitats containing wetlands, intermittent streams, riparian buffers, uplands deciduous forest, meadow uplands openings and wildlife corridors.

Research into previous studies as well as geographical references do not indicate any legal encumbrances on the portions of the site proposed for HFEB other than a potential easement for underground electrical lines. Should further study indicate the presence of an encumbered easement, it will be managed in conjunction with the environmental bank to provide open meadow green space and wildlife habitat.

Review of historical land use shows the site has been used for agriculture since at least 1943, with land cover and topography remaining relatively unchanged since that time. This farm was expanded in the mid-1970's through the mid-1980's, and modifications include the construction of an irrigation pond and the installation of subsurface drainages, which can be identified on NAPP photos. This network of drainage tiles has been preliminarily verified through a review of drawings located at the Appomattox River NRCS office as well as through a series of field visits. On-site and adjacent ecosystems will be used as reference benchmarks to guide the management and creation of all aspects of the environmental bank.

III. THE ENVIRONMENTAL BANK PROPOSAL

PROJECT GOALS AND OBJECTIVES

Roslyn Farm Corporation proposes to:

- ◆ *Develop a comprehensive environmental bank composed of wetland restoration and creation, a forested upland/wetland matrix, stream restoration and buffer creation;*

Primary design and management goals for the Halifax Farm Environmental Bank:

- ◆ *Preserve, restore and manage the 10± acres of existing wetlands, and 2,116± LF of US waters; Additional non jurisdictions streams may be restored for inclusions as bank credits*
- ◆ *Restore 85± acres of wetland ecology altered through years of agricultural practices;*
- ◆ *Create 35± acres of new wetland ecology with low impact engineering methods;*
- ◆ *Create wetlands and uplands types found in the Chowan River basin;*
- ◆ *Provide multiple types of hydroperiods and encourage seasonal draw downs common in wetlands of Virginia;*
- ◆ *Created wetlands will be developed as Cowardin types appropriate for replacement of functions and values lost by wetland/upland impacts;*
- ◆ *Establish a naturally self maintaining functional wetland system requiring no long-term management;*
- ◆ *Provide pre-approved wetland, stream and environmental credit compensation through the preservation, restoration and creation of varied wetland and deciduous upland forest systems;*
- ◆ *Restore and enhance/create stream connections altered by past land use.*

Roslyn Farm Corporation will preserve, restore and create various wetland and deciduous upland forest habitats. Additionally, Roslyn Farm Corporation will incorporate into the bank design the restoration of stream and riparian habitat altered by long-term agricultural practices. These habitats will be used for resolution of environmental impacts in the banks approved service area. Management of the existing natural resources and development of created wetlands, deciduous upland forest and stream restoration will be guided by a Bank Development Plan (BDP) developed by the Sponsor and its managing entity ESS. This BDP may include recommendation and guidance developed by the MBRT. Final success criteria, design guidelines, construction methods and implementation plans will be provided in the

approved MBI and BDP. These project success and design criteria will be expressed in the signatory copy of the Mitigation Banking Instrument and final support document referred to as the Bank Development Plan.

The establishment of the bank will be performed in 3 development phases over a 5-year period of time responding to the market needs of the watersheds impact types. Detailed design plans in the form of a BDP will be utilized for ongoing development of each wetland\upland preservation or creation phase. The sponsor will develop these natural systems in advance as pre-approved regulatory solutions for unavoidable impacts to the environment. Existing on-site resources and adjacent indigenous habitats with similar landscape position will provide long-term reference systems of natural functions.

Credit ratios will be established by the sponsor and the MBRT for each established ecological system. These ratios will be specified in the signatory copy of the MBI and BDP. The regulatory authorization of the banks MBI and BDP plans will allow approved credits to be transferred as compensation for authorized impacts within the service area. The proposed service area will include VAHUC 03010201, 03010202 and 03010203, and will be consistent with other banks authorized in the Chowan River Watershed basin. This service area includes all or portions of Isle of Wight, Surry, Sussex, Southampton, Greensville, Brunswick, Dinwiddie, Nottoway and Lunenburg counties in Virginia. In addition, presale credits will be requested as a percentage of the overall proposed bank creation acreage.

Environmental presale credits resolved at the bank will be secured by adequate financial assurances for a reasonable period of time. At the request of the sponsor, use of the bank for impacts outside the service area by authorized permit entities will be considered on a case-by-case basis for unavoidable environmental impacts. This case-by-case review will be given consideration for the health, welfare and safety needs of the public.

TECHNICAL OVERVIEW

Environmentally sensitive construction, moist soil management, natural hydrologic engineering techniques, and specific low impact construction techniques will be used to guide the implementation of each bank phase. These techniques will be adjusted in response to adaptive management strategies utilized to accommodate specific on-site conditions that become apparent during implementation of the project. This approach to site development and management of existing and proposed systems will allow the sponsor to respond to evolving site conditions.

To establish baseline information for the project the site characteristics, land use history, landscape position and previous site studies were reviewed. The various published baseline data researched included the US Virginia Hydrologic Unit Code Map, Petersburg USGS 7.5-minute quadrangle map, USGS maps, USDA-NRCS County Soils, USDA-NRCS drain tile as built drawings and historical black and white, color, and color IR photography. Actual topographic conditions have been verified by additional aerial

photography with interpretation and mapping of one-foot topography to guide bank development and selection of areas requiring minimal construction for wetland creation. Site visits were conducted by ESS and relevant baseline data was gathered along with additional site-specific information.

A wetland delineation was performed by Townes Site Engineering in September 2003 and subsequently confirmed by the Corps in a letter dated September 30, 2003. The site exhibits many qualities documented in public record as preferred conditions for wetland creation and restoration. These include the presence of clayey soils and the probability that portions of the site were previously converted from wetlands to agricultural uses, as evidenced by the extensive subsurface drain tile network. This information will be presented to the MBRT as it is concurrently refined. The existing wetlands on the site will receive perpetual management preservation, enhancement and potentially restoration. The sponsor will preserve the natural wetland and restored intermittent stream systems in conjunction with creation of wetlands, riparian buffers and deciduous upland forest credits on the site.

Site development will follow strict programmatic design guidelines. These guidelines include: development of micro-topography to promote infiltration, establishment of site stabilization techniques that promote natural vegetation, implementation of strict moist soil management practices, preservation of natural soil densities by using low ground pressure construction equipment, preservation of organics by retaining and incorporating natural debris and organics in the topsoil, allowing adjacent upland areas to contribute to the watershed of both the existing and creation areas, promotion of a natural watershed flow to existing wetlands and practicing natural resource management promoting diversity and sound design concepts to create functional natural resources.

To establish a functional environmental bank the sponsor, ESS and the MBRT will develop and identify criteria to gauge the development and functional success of the natural systems proposed. These success criteria will guide the release of bank credits to be used for the liability resolution of unavoidable environmental impacts authorized by regulatory agencies. All success criteria will be established in the MBI and will be consistent with the guidelines used for other authorized environmental banks in the Chowan River basin.

Success criteria may include:

- ◆ Establishment of hydrology, plant communities, function and values in the existing and proposed wetland, stream and upland forest systems;*
- ◆ Successful preservation, enhancement, restoration or creation of hydrologic regimes found in existing wetlands, streams and upland forest as per MBI & BDP guidelines;*
- ◆ Establishment of hydrologic regimes targeting soil saturation or ponding during the growing season as per MBI & BDP guidelines for target communities;*
- ◆ Monitoring of system hydrology with groundwater wells as per MBI & BDP guidelines;*

- ◆ *Establishment and monitoring of selected wetland communities and forest plant material as per MBI & BDP guidelines;*
- ◆ *Establish direct accountability by the sponsor for all implementation and development practices assuring compliances and adherence to the authorized MBI and BDP designs;*
- ◆ *Restoration of documented US Waters / riparian systems modified by past farming practices.*

Use of these success criteria by the sponsor and MBRT during the construction, maintenance and monitoring period will allow the development of on-site reference data to be used in long-term project management. Specific project data will be compiled and compared with regional climate trends, on-site reference systems and site specific monitoring. Local climate trends and local reference systems will be used to gauge success in any typical year.

GENERAL APPROACH TO RELEVANT BANKING ISSUES

Environmental Bank Credits and Debits: The development of actual available credits at the bank will be determined by the MBI and active credit ledger. Credits will be available at the ratios specified in the MBI for each type of ecological system.

Credit Ledger System: A ledger system will be established and approved by the MBRT to document credit availability and credit/debit withdrawals from the bank. The sponsor will submit annual reports to the MBRT chair of the approved transactions that have occurred at the bank. Upon written request the bank credit ledger will be available for inspection and accounting review.

Credit Availability and Release: Release of credits from the bank will be determined by the MBRT and authorized by success criteria outlined in the MBI. The sponsor upon signature of the MBI will make advance presale credits available for use by signatory agencies.

Financial Assurances: The sponsor will offer adequate financial assurances for all transferred credits. No credits will be transferred until financial assurances are in place. Financial assurances in the form of letter of credit, or licensed corporate surety bond will be provided in favor of the Norfolk District of the USACOE.

Annual Reporting of site conditions, field adaptations and success monitoring: The sponsor will prepare annual reports detailing the activity on the site. These reports will document any substantial design changes, amount of construction completed, planting success, review of the proposed hydrologic character on the site.

Provisions for Long-term Management and Maintenance: The sponsor will provide long-term protection in the form of a perpetual legal instrument or conservation real estate easement that is agreeable to the MBRT. Perpetual easement will be transferred concurrently with approved credit transfers. A permanent management fund will be established to allow for perpetual stewardship of the bank site.

IV. Request for Authorization to Proceed

The Bank Sponsor requests authorization from the Chair of the MBRT to proceed with the development of the Halifax Farm Environmental Bank located in Dinwiddie County, Virginia. The sponsor also requests the U.S. Army Corps of Engineers assemble an MBRT to review, guide and develop a consensus MBI and BDP instrument that meets the needs of regulatory agencies governing environmental impacts in the State of Virginia.

V. EXHIBITS

1. *Vicinity Map*
2. *Site Location Map*
3. *Virginia Hydrologic Unit Code Map*
4. *USGS 7.5 minute Brandon quadrangle 1"=2000'*
5. *USGS 7.5 minute Brandon quadrangle 1"=1000'*
6. *USGS National Wetland Inventory Map*
7. *USDA Soil Survey*
8. *1989 Aerial photo*
9. *1994 Aerial photo*
10. *2000 Aerial photo*
11. *Site photos*