

Public Notice

U.S. Army Corps of Engineers, Norfolk District

March 27, 2008

CENAO-REG
2008-01043

JOINT FEDERAL/STATE PUBLIC NOTICE

The District Engineer has received a prospectus to establish a compensatory wetland and stream mitigation bank for Federal and State permits as described below:

BANK SPONSOR

White Oak Landing Mitigation Bank
c/o Koontz-Bryant, P.C.
1703 North Parham Road, Suite 202
Richmond, VA 23229

WATERWAY AND LOCATION OF THE PROPOSED WORK: The project is located along the James River at Horseshoe Bend in Buckingham County, Virginia.

PROPOSED WORK AND PURPOSE: The proposal is for a 55 acre compensatory mitigation bank on a 193 acre site. The project includes restoration and conversion of approximately 17 acres of prior converted wetland and upland to a functional forested wetland system; preservation, enhancement, and/or restoration of approximately 9,581 linear feet of perennial stream and enhancement, and/or restoration of 2,522 linear feet of banks along the James River.

The current proposal is located within Hydrologic Unit Code (HUC) 02080203 and is proposed to serve areas within that code and HUCs 02080201, 02080202, 02080204, 02080205, and 02080207.

This mitigation bank may be one of a number of practicable options available to applicants to compensate for unavoidable wetland impacts associated with permits issued under the authority of Section 404 and 401 of the Clean Water Act (Public Law 95-217) in central Virginia.

The actual approval of the use of this mitigation bank for a specific project is the decision of the Corps pursuant to Section 404 of the Clean Water Act and by the Department of Environmental Quality pursuant to Section 401 of the Clean Water Act and Title 62.1 of the Code of Virginia. The Corps and the Department of Environmental Quality provide no guarantee that any particular individual or general permit will be granted authorization to use this mitigation bank to compensate for unavoidable stream impacts associated with a proposed permit, even though compensatory mitigation may be available.

AUTHORITY: A Public Notice is recommended pursuant to Federal Guidance for the Establishment, Use and Operation of Mitigation Banks (60 Federal Register Number 228).

FEDERAL EVALUATION OF PROPOSAL: The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other

interested parties in order to consider and evaluate this proposed mitigation bank. The Corps of Engineers in evaluating this proposal will consider any comments received. Comments are used to assess impacts on endangered species, historic properties, water quality, conservation, economics, aesthetics, general environmental concerns, wetlands, fish and wildlife values, flood hazards, flood plain values, land use classification, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, and consideration of property ownership.

Preliminary review indicates that: (1) no environmental impact statement will be required; (2) a survey will be conducted to determine if the proposed work will affect species listed as threatened or endangered under the Endangered Species Act of 1973 (PL 93-205); as well as any species listed as threatened or endangered in the Commonwealth of VA; (3) no cultural or historic resources considered eligible or potentially eligible for listing on the National Register of Historic Places are on the property or near vicinity of the proposed bank.

Additional information might change any of these preliminary findings.

STATE EVALUATION OF PROPOSAL: To comply with Section 401 of the Clean Water Act (the Act), any applicant for a Corps permit for a proposal which may result in a discharge to State waters must provide the Corps with a certification from the Virginia Department of Environmental Quality, Water Division. They must certify that water quality will be maintained in accordance with Virginia Department of Environmental Quality, Water Division Law (state law) and that the activity will comply with the applicable provisions of Sections 301, 302, 303, and 306 and 307 of the Act. A certification must set forth any effluent limitations and other limitations, conditions and/or requirements needed to assure compliance with the Act itself and with other appropriate requirements of state law. In Virginia, the 401 Water Quality Certification is issued as a Virginia Water Protection Permit.

COMMENT PERIOD: Comments or requests for copies of the bank prospectus should be made in writing, addressed to the Norfolk District, Corps of Engineers (ATTN: CENAO-REG), Central Virginia Regulatory Field Office, 444 Abby Lane, Howardsville, VA. 24562 and should be received by close of business 30 days from the date of this public notice.

If you have any questions about this project or the permit process, please contact:

Nora Iseli, (434) 263-8247
or by email at: nora.m.iseli@usace.army.mil

FOR THE DISTRICT ENGINEER:

Michael Schwinn
Chief, Western Virginia
Regulatory Section

Attachment: Prospectus, including location maps

**WHITE OAK LANDING MITIGATION BANK
BUCKINGHAM COUNTY**

**PROSPECTUS FOR A
COMPENSATORY WETLAND MITIGATION BANK**

MARCH 2008

Prepared For:

WHITE OAK LANDING, LLC

Prepared By:

KOONTZ-BRYANT, P.C.
1703 N. PARHAM ROAD, SUITE 202
RICHMOND, VIRGINIA 23229

**PROSPECTUS FOR A
COMPENSATORY WETLAND MITIGATION BANK**

**WHITE OAK LANDING MITIGATION BANK
BUCKINGHAM COUNTY**

I. INTRODUCTION

The purpose of this report is to provide a prospectus for the proposed development of a Compensatory Wetland Mitigation Bank located on the South side of the James River in Buckingham County. The property contains approximately 193 acres and is currently managed for agricultural and recreational purposes. The site proposed for the bank development contains approximately 55 acres of currently farmed pasture. Approximately 17.18 acres of prior converted wetlands and uplands can be manipulated to construct a functional, forested wetland system. In addition, approximately 9,581 linear feet of perennial stream and 2,522 linear feet of the James River will be preserved, with buffers, and restored, if necessary. The bank sponsor, White Oak Landing, LLC, has prepared this prospectus to initiate the planning and review process for developing a wetland and stream compensatory mitigation bank within a tract of their land known as the White Oak Landing Property. The "Property" is located within the James River drainage system. The Bank will be known and referenced in all future documents as the "White Oak Landing Mitigation Bank," (WOLMB). This prospectus and all future documents will be prepared in accordance with the "Federal Guidelines for the Establishment, Use and Operation of Mitigation Banks," published in Vol. 60, No. 228 of the Federal Register (28 November 1995) and pursuant to the "Virginia Standards for Use and Development of Wetlands" (Code of Virginia, Chapter 1, Title 33, Article 15 28.2-1308). We have complied with the Norfolk Districts' "Do's and Dont's List."

The bank sponsor is proposing to develop a single mitigation bank at the White Oak Landing Property to serve compensatory wetland mitigation needs throughout its primary and adjacent HUC areas within the James River Basin. The sponsor has made an evaluation of the need for compensatory wetlands

mitigation in the immediate and adjacent Hydrologic Unit Codes, and found sufficient need to justify the bank development. This report contains most of the data necessary for compiling a banking instrument. Both the wetlands and stream mitigation credits will be made available to any potential user with an approved permit on a first come, first served basis. The sponsor will actively market such credits.

A. Site Overview: The property, referred to as the White Oak Landing Mitigation Bank (WOLMB) consists of approximately 193 acres, which contains approximately 55 acres currently used as farmed pasture. The approximate 17.18 acres of wetland mitigation and 12,103 linear feet Waters of the U.S. mitigation being proposed for the bank are integral parts of the White Oak Landing Property, currently used for recreation, food, and fiber production (Appendix B, WS-2). The primary products of the farm by the current owners are row crops to other users, and a limited amount of silvicultural activities. An approximate 55 acre portion of the farm was previously ditched and drained for use as an agricultural field located in the James River floodplain and has some wetland characteristics, but has potential for restoration/enhancement for higher values and an extended life span.

The wetlands will be delineated and submitted to the Corps of Engineers for approval and surveyed prior to compiling the banking instrument.

The subject property is located in Buckingham County just south of the James River. The property is accessible from State Route 679. From the town of Scottsville, Virginia follow Route 20 south for approximately 3 miles, then take a left on Route 679, the driveway for the property is located approximately 200 yards on the left (Appendix A).

B. Archaeological Resources: There are no known archaeological resources documented by the Virginia Department of Natural Resources for this property (Appendix C).

C. Endangered Species: The U.S. Fish and Wildlife Services and the Virginia Department of Natural Heritage has the Small Whorled Pogonia (*Isotria medeoloides*) listed for Buckingham County. We believe there may be suitable habitat for the Small Whorled Pogonia within the proposed stream mitigation areas, which will be investigated as part of the Banking Instrument for this project. The proposed wetlands mitigation is open field and would therefore be unsuitable habitat for the Small Whorled Pogonia.

This property has a Bald Eagle (*Haliaeetus leucocephalus*) nest located within the proposed Conservation Easement. Several Bald Eagles have been seen using the nest and frequenting the property (See Appendix B – Photo 7). There is also the potential of habitat for host fish which are used by the Yellow Lance (*Elliptio lanceolata*). A study may be performed to determine if the Yellow Lance is still found in the James River adjoining the property.

II. PARTICIPANTS

Koontz-Bryant, P.C. acting as the agent for White Oak Landing, L.L.C., the Bank Sponsor, has prepared this mitigation banking prospectus for the White Oak Landing Mitigation Bank, Buckingham County, Virginia in cooperation and consultation with the Corps of Engineers (COE). The COE has made a field review of the proposed site. The participating agencies responsible for reviewing this document, the Mitigation Bank Review Team (MBRT), are the U.S. Army Corps of Engineers (chair), the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Services, the Virginia Department of Environmental Quality, the Virginia Department of Game and Inland Fisheries, Virginia Department of Conservation and Recreation, and other State, Federal or Local governing bodies deemed necessary or appropriate by the permanent members of the MBRT. We are requesting review of this prospectus by the MBRT in order to proceed with the Banking Instrument.

III. OWNERSHIP OF MITIGATION BANK LANDS

Ownership of the White Oak Landing Property, including all mitigation bank and other conservation lands will reside with the bank sponsor. The bank sponsor will continue to own the White Oak Landing Property beyond the time all of the credits have been sold and the mitigation monitoring period has expired. Also, both the COE and the DEQ must approve the bank's success prior to expiration of the monitoring period. Once the credits have been sold and the monitoring is complete, the property contained within the bank and the upland buffers will be protected by a conservation easement or deed restrictions within the chain of title. Its use as a private property will be limited to hunting, fishing and other appropriate passive recreation.

IV. BANK GOALS AND OBJECTIVES

The WOLMB's primary goals are:

a.) Restore/Enhance an approximately 17.18 acre wetlands mitigation site by restoring forested wetlands on farmed pasture within the floodplain of the James River through minimal manipulation and restoring hydrology to the site.

b.) Preserve, Enhance, and Restore approximately 9,581 linear feet of stream and 2,522 linear feet of the James River by planting the riparian areas, planting stream banks, installing stabilization structures, removing pipes, and protection of the streams, riparian areas and natural wetlands with a conservation easement or deed restrictions within the chain of title. Using the Unified Stream Methodology (Compensation Crediting Form 3) to calculate the compensation credits, the Total Compensation Credit is approximately 7,097 credits (Appendix D).

The mitigation bank will provide a wetland mitigation alternative for those impacts to jurisdictional wetlands within the approved bank service area (BSA). The WOLMB will restore and protect, by conservation easement, approximately 9,581 linear feet of viable, self-sustaining stream through the mitigation site and 2,522 linear feet of the James River by planting buffer areas or other means and re-connecting several streams to their historic floodplain. The bank sponsor's objective through the WOLMB is to construct, monitor and maintain the mitigation bank as a self-sustaining, functional wetland ecosystem until such time as the system is approved by the COE and DEQ.

It is our objective to restore this property to its former wetland condition, reconnect the streams to their floodplain and then place a conservation easement or deed restrictions on the property, thus removing the need for further channel maintenance, since these lands will no longer support farming and/or grazing, which was the original purpose for the channelization and drainage of the fields. The bank sponsor is expecting adequate return to guarantee the mitigation bank and provide a reasonable rate of return on investment. An escrow account will be established to maintain the wetlands and cure any associated problem through the monitoring phase. The maintenance of the property in its natural state, in perpetuity, will be insured by deed restrictions within the chain of title.

V. MITIGATION SERVICE AREA

The White Oak Landing Mitigation Bank is located within Hydrologic Unit Code (HUC) 02080203, a portion of the Middle James River – Buffalo Basin, which will become the banks' primary service area. Pursuant to the Virginia Standards for Use and Development of Wetlands (Code of Virginia, Chapter 1, Title 33, Article 15 28.2-1308), a mitigation bank can have a mitigation service area (MSA) of all Hydrologic Unit Codes within the same river basin. Under this ruling, the bank may also serve the adjacent HUC's 02080201, 02080202, 02080204, 02080205, and 02080207. These HUC's include all of Amelia, Alleghany, Amherst, Albemarle, Bath, Buckingham, Cumberland, Fluvanna,

Goochland, Nelson, Prince Edward, and Rockbridge; most of Appomattox, Botetourt, Craig, Chesterfield, Green, and Highland Counties; and part of Augusta, Bedford, Campbell, Dinwiddie, Henrico, Louisa, Nottaway, and Orange. These counties include the major cities of Richmond, Lynchburg, Petersburg, Charlottesville, Farmville, and Lexington. The Service Area is outlined in the map titled, "Bank Service Area" located in Appendix B. Service Credits will be offered on a first come, first service basis for any COE and DEQ approved impact requiring off-site mitigation within the WOLMB's service area.

VI. EXISTING CONDITIONS

A. Our preliminary evaluation found that the areas in the field proposed for wetland creation exhibit hydric soil conditions. There is a silty layer of soil that ranges 8-14 inches below the surface, below that layer most of the soils are hydric described as 10YR 5/2 with 7.5YR 3/4 mottles using the Munsell Soil Chart. This was typical within the area proposed for wetland creation. A complete soils database and mapping will be detailed in the Banking Instrument.

A database will be compiled in the Spring of 2008 showing that the hydrologic parameter for wetlands can be met throughout the field with minimal grading. Some lateral ditches across the fields will be necessary to distribute flow from the existing and historic drainage ditches. Also, removal of part of the side cast material will be necessary to reconnect several of the streams to the constructed floodplain wetlands. The excavated material will be placed within the riparian open field prior to planting with trees and shrubs.

B. **Baseline Data:** A hydrologic database and conceptual plan will be enhanced and detailed in the Banking Instrument.

VII. PROPOSED MITIGATION PLAN

A conceptual restoration/creation plan is presented here to restore and construct approximately 17.18 acres of farmed pasture to forested wetlands, and

to preserve, enhance, and restore 12,103 linear feet waters of the U.S. This plan is based on the preliminary database, existing soils, vegetation and restoration of the hydrologic parameter.

The streams (Reference Appendix B for Photographs 2, 3, and 4; Plan WS-1 and WS-2) will be protected by a conservation easement or deed restrictions with the following direct improvements:

- Priority 2 Restoration of approximately 2,134 linear feet of stream.
- Re-planting of the understory and establishing forest along the riparian buffer area.
- Re-connecting the streams to the floodplain wetlands.
- Remove existing pipes and install stream stabilization structures.
- Restore the adjacent forested wetlands by improving hydrologic conditions.

The wetlands restoration/creation will also be protected by a conservation easement or deed restrictions on approximately 109 acres including all natural wetlands, the restored and enhanced wetlands, the preserved and enhanced streams and additional upland buffers, as shown in the plan WS-1 (Appendix B).

Please refer to Appendix B, Photographs 5 and 6 for typical wetland creation areas. The conceptual plan for the wetlands mitigation is found in (Appendix B: Plans WS-1 and WS-2). The following direct improvements apply to the proposed wetlands mitigation:

- Construct lateral berms across the field to sever the drainage ditches.
- Grade the field to remove stream channel side castings and remove fill areas within the field.
- Excavate lateral ditches across the field and backfill with compacted clay to prevent drainage through old, abandoned agricultural drainage ditches.
- Re-connect the stream channel with the newly constructed wetland by making cuts through or removing the sidecast berm where necessary.
- Plant the field with typical wetlands vegetation including Willow and Pin Oaks on forty foot centers to produce mast for wildlife food.

- Make selective plantings in the understory to increase cover and food values for wildlife.
- Planting will be developed to accomodate the hydrologic conditions and enhance micro-habitats.

A detailed plan for all proposed mitigation will be presented in the Banking Instrument.

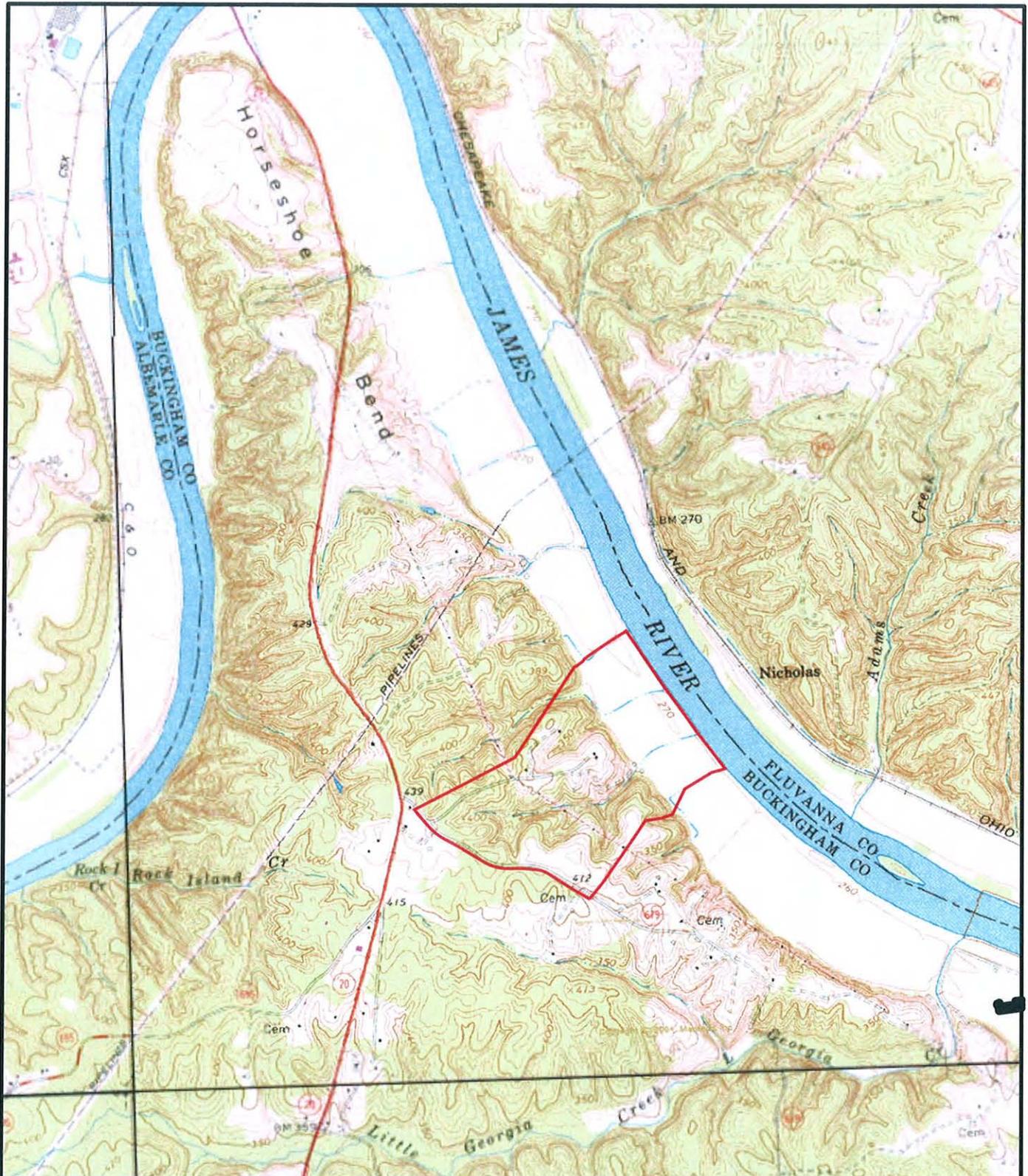
We expect to construct the wetlands and begin the stream work in the September-October, 2008 timeframe with planting late fall 2008 and early spring 2009. We expect to receive a portion of credits upon completion of the Banking Instrument and additional credits after the construction and initial plantings. Further credits will be based on approval of the site by the MBRT. This will be detailed in the Banking Instrument.

We appreciate the MBRT's review of the existing conditions and their detail comments on the proposed mitigation plan. Also, suggestions, recommendations and thoughts for improving the mitigation proposal, including the goals and objectives will be thoroughly investigated, incorporated if possible and justification will be given when they cannot be included.

In the interim, if you have questions, comments or need additional information for your review, please call Jamie Hudson at (804) 740-9200 or email jhudson@koontzbryant.com.

APPENDIX A

USGS Topographic Map and Location Map



WHITE OAK LANDING
TOPOGRAPHIC MAP

LATITUDE: 37°45'42"
 LONGITUDE: 78°28'38"



KOONTZ-BRYANT, P.C.
 Site Solutions from Concept to Construction

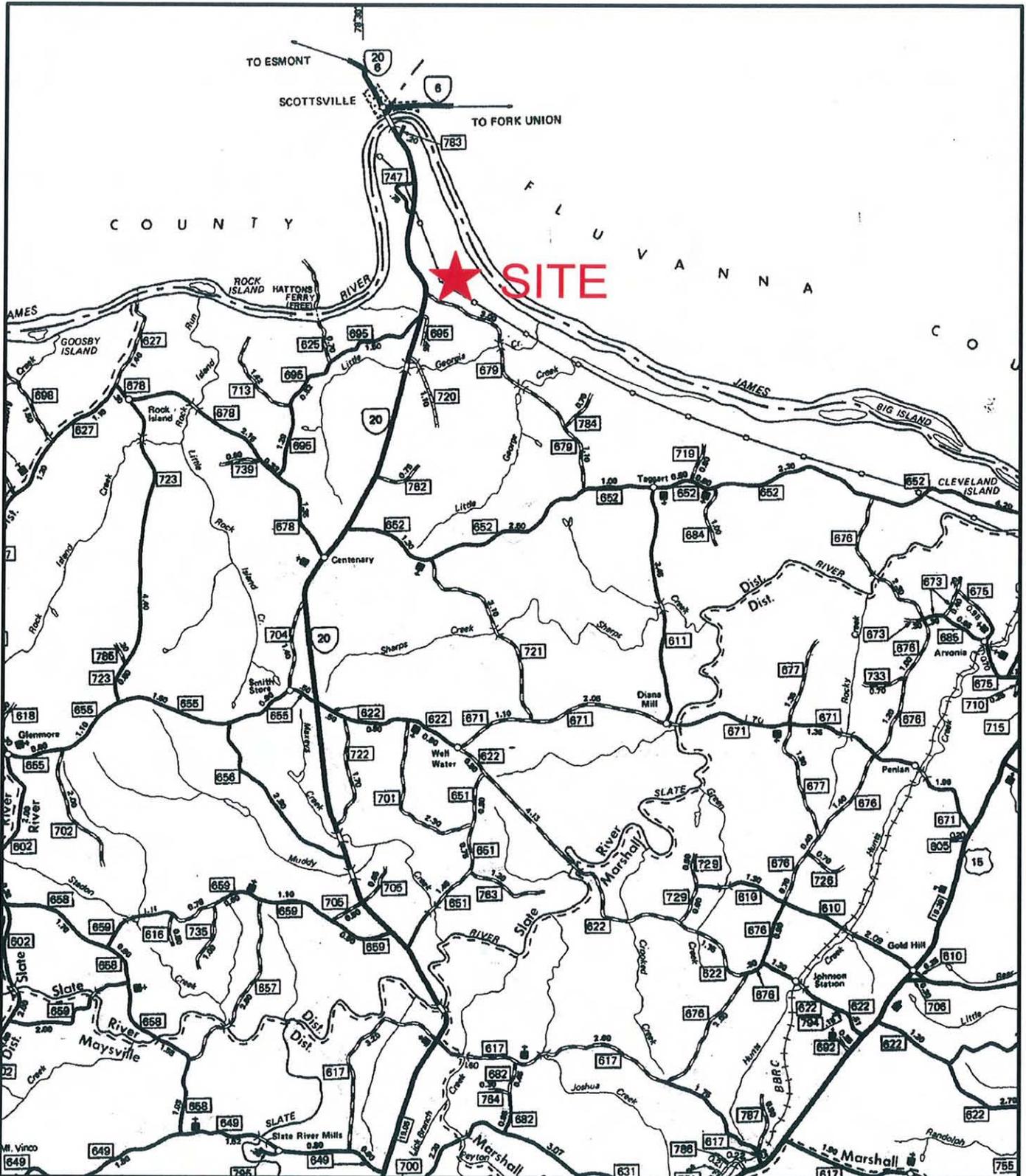
DATE: JULY 17, 2007

SCALE: 1"=2000'

BUCKINGHAM COUNTY, VIRGINIA

USGS QUAD: SCOTTSVILLE

AREA: ±193 ACRES



WHITE OAK LANDING
VICINITY MAP

LATITUDE: 37°45'42"
LONGITUDE: 76°28'38"



KOONTZ-BRYANT, P.C.
Site Solutions from Concept to Construction

DATE: JULY 17, 2007

SCALE: N/A

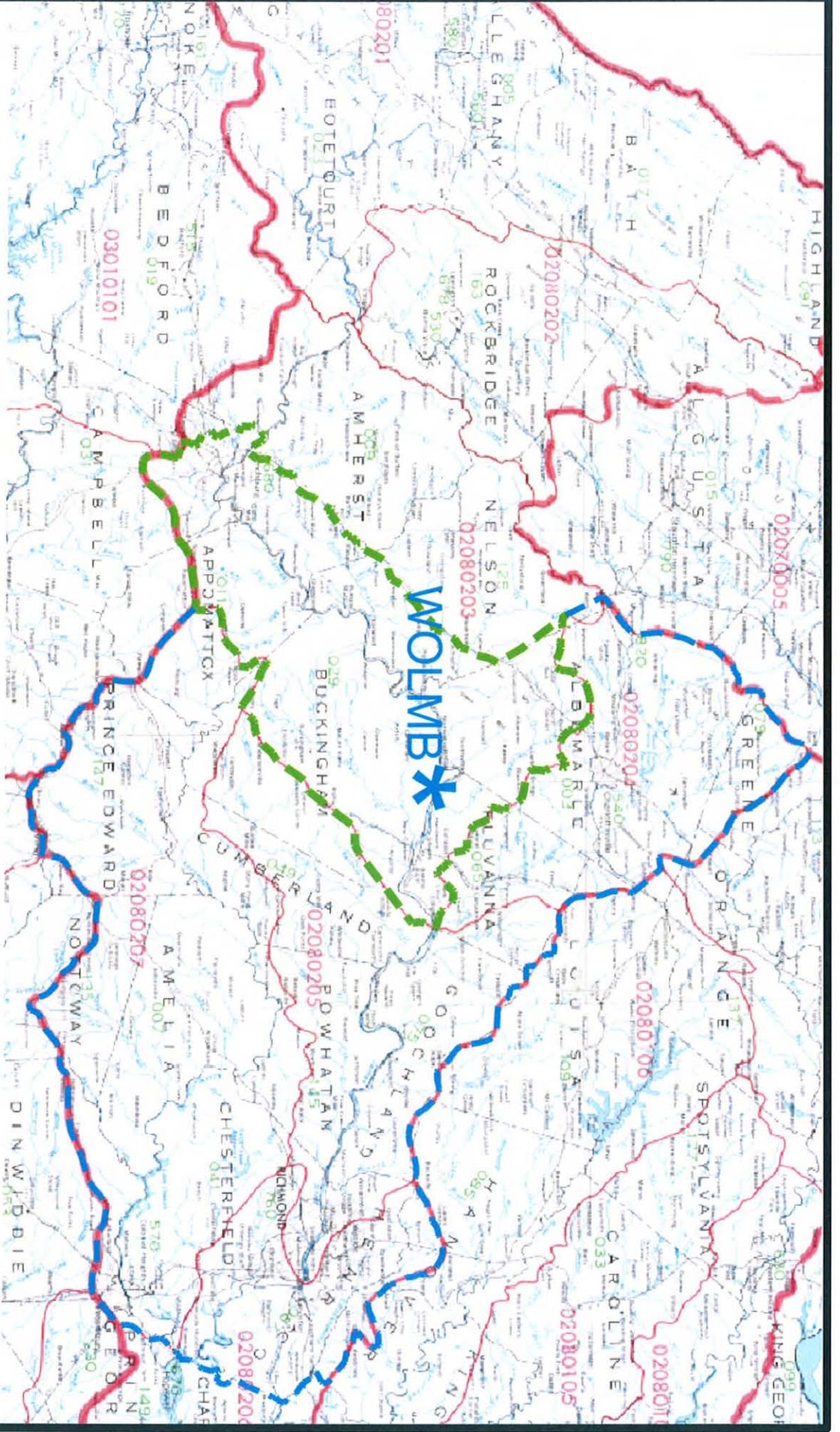
BUCKINGHAM COUNTY, VIRGINIA

JOB NO: 7053

SOURCE: VDOT COUNTY ROAD MAP

APPENDIX B

Maps and Picture Overview



BANK SERVICE AREA

WHITE OAK LANDING MITIGATION BANK
BUCKINGHAM COUNTY, VA

- - - PRIMARY SERVICE AREA
- OVERALL SERVICE AREA

PROJECT DATA :

PROPOSED AREA, BY USGS
HUC CODE, IN WHICH BANK
WOULD HAVE TRANSFERABLE
CREDITS AVAILABLE

- HUC #02080201, #02080202,
- #02080203, #02080204,
- #02080205, #02080207
- (REFER TO MAP FOR
BOUNDARY LINE DETAILS)



KOONITZ-BRYANT, P.C.

Site Solutions from Concept to Construction

1703 NORTH PARHAM ROAD, SUITE 202
RICHMOND, VA 23229
PHONE: (804)874-9312 FAX: (804)740-7338
E-MAIL: JHUDSON@KOONITZBRYANT.COM



Photo 1: Site overview of proposed White Oak Landing Mitigation Bank

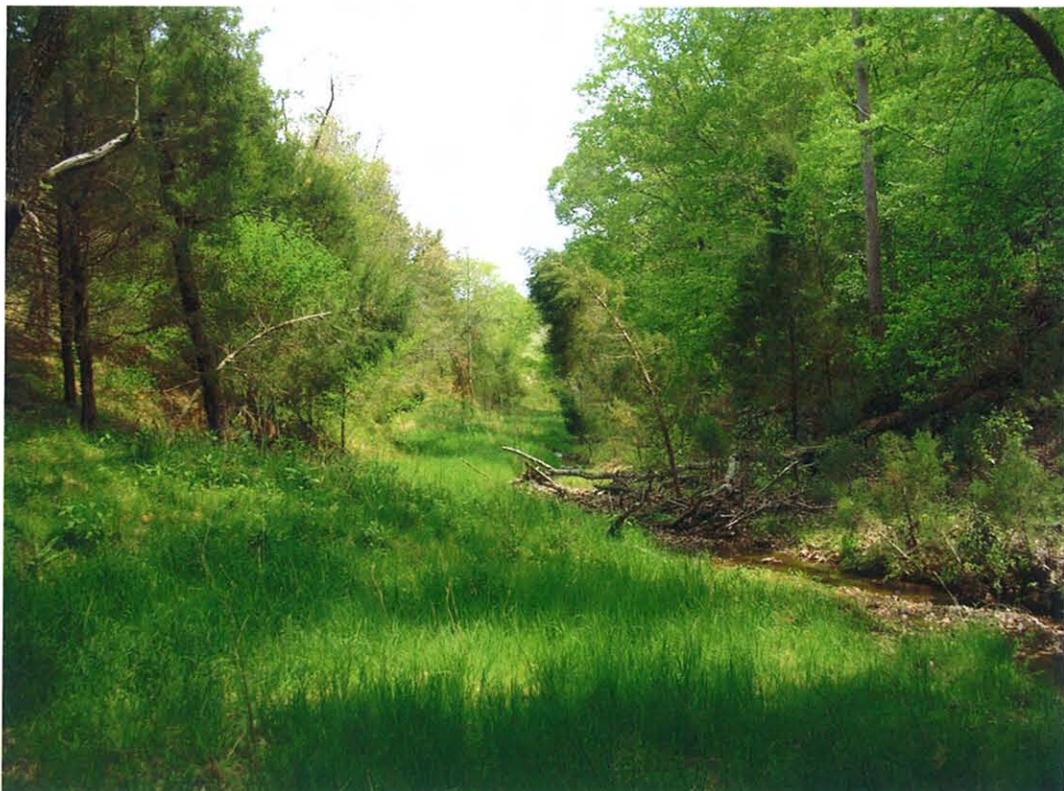


Photo 2: Stream Reach to including Wetland Bench and Buffer Planting



Photo 3: Stream Reach with a pool containing fish to be used for Preservation



Photo 4: Stream Reach to include Stream Bank and Buffer Planting



Photo 5: Agricultural field to be used for Wetland Creation and herbicides used for planting crops will be eliminated



Agricultural field to be used for Wetland Creation with minimal manipulation



Photo7: Looking closely at the Bald Eagle nest you can make out a white speck which is the head of a Bald Eagle sitting in the nest.

APPENDIX C

Threatened and Endangered Species Information and Department of Historic
Resources Information



Virginia Department of Game and Inland Fisheries

1/17/2008 1:28:41 PM

Fish and Wildlife Information Service

VaFWIS Search Report Compiled on 1/17/2008, 1:28:41 PM

[Help](#)

Known or likely to occur within a **3 mile radius of 37,45,16. - 78,27,51.**

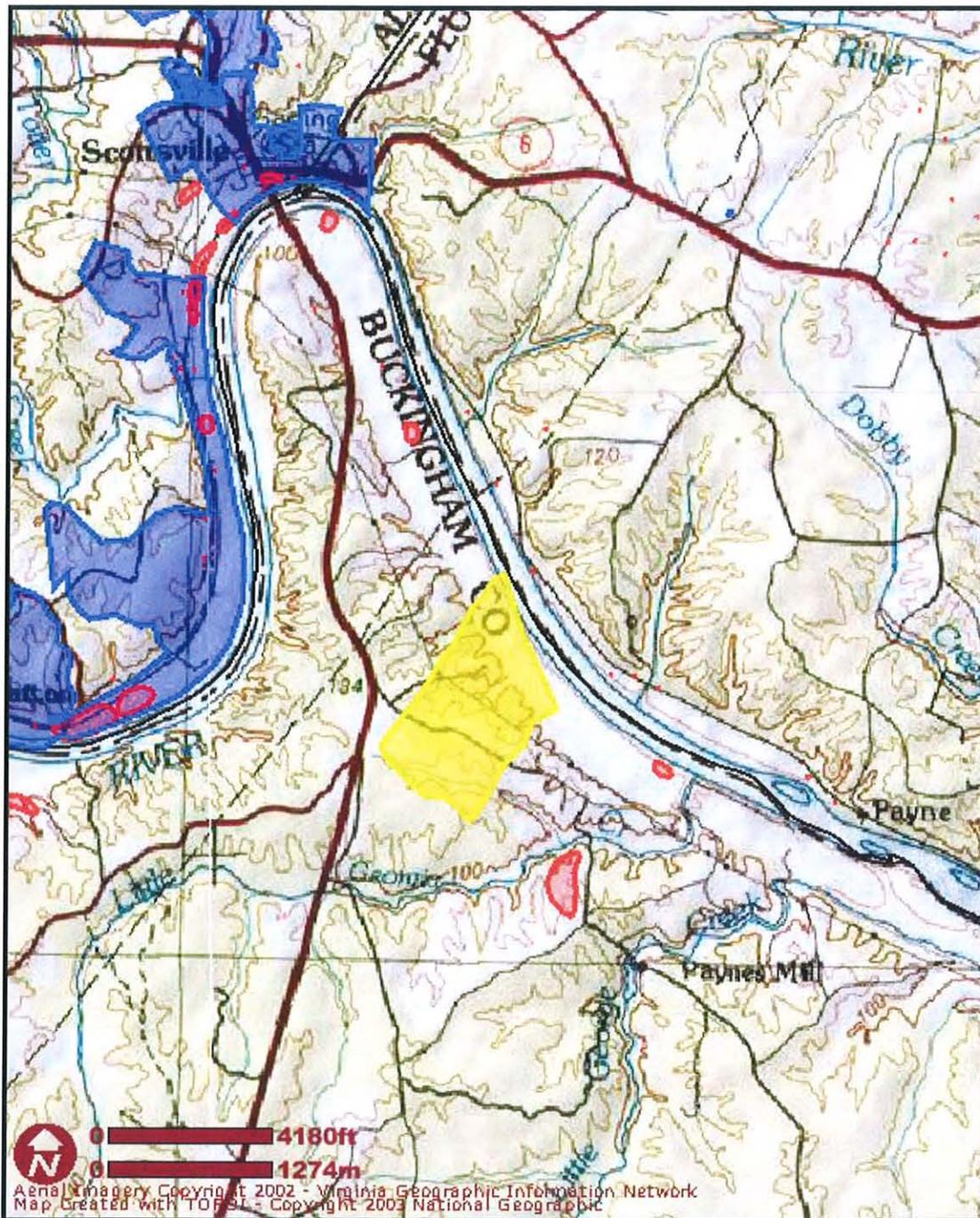
in **003 Albemarle County, 029 Buckingham County, 065 Fluvanna County, VA**

465 Known or Likely Species ordered by Status Concern for Conservation (displaying first 34) (34 species with Status* or Tier I**)

BOVA Code	Status*	Tier**	Common Name	Scientific Name
060017	FESE	I	<u>Spinymussel, James (= Virginia)</u>	Pleurobema collina
040096	ST	I	<u>Falcon, peregrine</u>	Falco peregrinus
040129	ST	I	<u>Sandpiper, upland</u>	Bartramia longicauda
040293	ST	I	<u>Shrike, loggerhead</u>	Lanius ludovicianus
040093	ST	II	<u>Eagle, bald</u>	Haliaeetus leucocephalus
060081	FSST	II	<u>Floater, green</u>	Lasmigona subviridis
060173	FSST	II	<u>Pigtoe, Atlantic</u>	Fusconaia masoni
040292	FSST		<u>Shrike, migrant loggerhead</u>	Lanius ludovicianus migrans
060084	FS	I	<u>Pigtoe, Virginia</u>	Lexingtonia subplana
100248	FS	I	<u>Fritillary, regal</u>	Speyeria idalia idalia
040320	FS	II	<u>Warbler, cerulean</u>	Dendroica cerulea
060029	FSSS	III	<u>Lance, yellow</u>	Elliptio lanceolata
010363	FS	IV	<u>Darter, Appalachia</u>	Percina gymnocephala
050081	FS	IV	<u>Woodrat, Allegheny</u>	Neotoma magister
040306	SS	I	<u>Warbler, golden-winged</u>	Vermivora chrysoptera
040304	SS	II	<u>Warbler, Swainson's</u>	Limnothlypis swainsonii
040266	SS	II	<u>Wren, winter</u>	Troglodytes troglodytes
030063	CC	III	<u>Turtle, spotted</u>	Clemmys guttata
040094	SS	III	<u>Harrier, northern</u>	Circus cyaneus
040204	SS	III	<u>Owl, barn</u>	Tyto alba pratincola
040270	SS	III	<u>Wren, sedge</u>	Cistothorus platensis
030012	CC	IV	<u>Rattlesnake, timber</u>	Crotalus horridus
040264	SS	IV	<u>Creeper, brown</u>	Certhia americana
040364	SS		<u>Dickcissel</u>	Spiza americana
040366	SS		<u>Finch, purple</u>	Carpodacus purpureus
040285	SS		<u>Kinglet, golden-crowned</u>	Regulus satrapa
040112	SS		<u>Moorhen, common</u>	Gallinula chloropus cachinnans

040262	SS		<u>Nuthatch, red-breasted</u>	<i>Sitta canadensis</i>
040189	SS		<u>Tern, Caspian</u>	<i>Sterna caspia</i>
040278	SS		<u>Thrush, hermit</u>	<i>Catharus guttatus</i>
040314	SS		<u>Warbler, magnolia</u>	<i>Dendroica magnolia</i>
050045	SS		<u>Otter, northern river</u>	<i>Lontra canadensis lataxina</i>

Virginia Department of Historic Resources Data Sharing System, 01/16/2008



Virginia Department of Historic Resources - November 27
2007

White Oak Landing Property

This property does not contain any know historic resources.

Appendix D

Unified Stream Methodology Forms

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length			
	White Oak Mitigation Bank					A	885			
Name(s) of Evaluator(s)		Stream Name and Information						Project Credits		
Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.								Credit per foot	25	
List Reaches that will receive full Restoration:						Total length of Full Restoration	25	1		
						<i>Credits = Stream Length X 1.0</i>				
Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vaness, Weirs, Step-Pools), Constructed Riffles								Credit per foot		
Discuss Length Affected by Instream Structures (justify length):						Length Affected by Instream Structures	0.3	0		
						<i>Credits = Stream Length X 0.3</i>				
Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain										
Mitigation Categories										
Mechanical Bank Work				Biological Bank Work						
Credit Per Structure		Pick One Per Length		May Be Cumulative Per Length						
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings ONLY					
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09					
Right Bank	Length	30				30				
	Credit >	0.1								
Left Bank	Length					0				
	Credit >									
						CREDITS				
						Rt Bank >	3.00	Credit		
						Lt Bank >	0.00	SUM of banks	3	
						<i>Σ (Length X Credit) for all areas (banks done separately)</i>				
Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)										
Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation ONLY. No work proposed High Quality	Preservation ONLY. No work proposed Low Quality	Buffer area not within preservation width but within the first 100'				
Credit for inner 100'	0.4	0.38	0.29	0.14	0.07	0				
Credit for outer 100'	0.2	0.19	0.15	0.07		0				
Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>>						88,500	square feet			
Insert area in square feet for a given activity: <input type="text" value=""/>						Percentage of "Goal" >>>> <input type="text" value="0.00%"/>				
WITHIN FIRST 100' - Mitigation Categories										
Missing one vegetative community				Subtract 0.03	Ensure the sums of % Riparian Blocks equal 100					
Missing two vegetative communities				Subtract 0.06						
Right Bank	% Area	68%	32%			100%				
	Credit >	0.14	0.38							
Left Bank	% Area	37%	63%			100%	Rt Bank >	0.22	Credit	
	Credit >	0.14	0.38				Lt Bank >	0.29	0.25	
						CREDITS				
								224.79		
						<i>Σ (% Area X Credit) for all areas (banks done separately)</i>				
						<i>AVE of credit for banks X length of project</i>				
WITHIN SECOND 100' - Mitigation Categories										
Missing one vegetative community				Subtract 0.03	Ensure the sums of % Riparian Blocks equal 100					
Missing two vegetative communities				Subtract 0.06						
Right Bank	% Area	82%	15%	3%		100%				
	Credit >	0.07	0.19	0.07						
Left Bank	% Area	40%	26%	23%	11%	100%	Rt Bank >	0.09	Credit	
	Credit >	0.19	0.07	0.19	0.07		Lt Bank >	0.15	0.12	
						CREDITS				
								106.2		
						<i>Σ (% Area X Credit) for all areas (banks done separately)</i>				
						<i>AVE of credit for banks X length of project</i>				
Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply										
Adjustment Factor Categories										
Activity	Rare, Threatened, or Endangered Species or Communities		Livestock Exclusion		Watershed Preservation					
Credit	0.1 - 0.3		0.1 - 0.3		0.1 - 0.3					
<i>Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors</i>										
Stream Length Affected	885									
Credit >	0.1									
						CREDITS >		89		
						<i>Σ Length X Credit for all areas</i>				
Total Compensation Credit Provided by Project								447		

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length		
	White Oak Mitigation Bank					B	1043		
Name(s) of Evaluator(s)		Stream Name and Information							Project Credits

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.								Credit per foot	1043
List Reaches that will receive full Restoration:						Total length of Full Restoration	1043	1	
<i>Credits = Stream Length X 1.0</i>									

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles								Credit per foot	
Discuss Length Affected by Instream Structures (justify length):						Length Affected by Instream Structures		0.3	0
<i>Credits = Stream Length X 0.3</i>									

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain									
Mitigation Categories									
Mechanical Bank Work				Biological Bank Work					
Credit Per Structure				Pick One Per Length				May Be Cumulative Per Length	
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings ONLY				
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09				
Right Bank	Length							0	
	Credit >								
CREDITS									
Left Bank	Length						0	Rt Bank > 0.00	Credit
	Credit >							Lt Bank > 0.00	SUM of banks
<i>Σ (Length X Credit) for all areas (banks done separately)</i>									0

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)										
Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation ONLY. No work proposed High Quality	Preservation ONLY. No work proposed Low Quality	Buffer area not within preservation width but within the first 100'				
Credit for inner 100'	0.4	0.38	0.29	0.14	0.07	0				
Credit for outer 100'	0.2	0.19	0.15	0.07		0				
Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>>				104,300 square feet						
Insert area in square feet for a given activity: <input style="width: 100px;" type="text"/>				Percentage of "Goal" >>>>		0.00%				
WITHIN FIRST 100' - Mitigation Categories										
Missing one vegetative community				Subtract 0.03	Ensure the sums of % Riparian Blocks equal 100					
Missing two vegetative communities				Subtract 0.06						
Right Bank	% Area	100%					100%			
	Credit >	0.38								
CREDITS										
Left Bank	% Area	100%					100%	Rt Bank > 0.38	Credit	
	Credit >	0.38						Lt Bank > 0.38	0.38	
<i>Σ (% Area X Credit) for all areas (banks done separately)</i>									396.34	
<i>AVE of credit for banks X length of project</i>										

WITHIN SECOND 100' - Mitigation Categories										
Missing one vegetative community				Subtract 0.03	Ensure the sums of % Riparian Blocks equal 100					
Missing two vegetative communities				Subtract 0.06						
Right Bank	% Area	64%	36%					100%		
	Credit >	0.19	0.07							
CREDITS										
Left Bank	% Area	75%	25%					100%	Rt Bank > 0.15	Credit
	Credit >	0.19	0.07					Lt Bank > 0.16	0.16	166.88
<i>Σ (% Area X Credit) for all areas (banks done separately)</i>									166.88	
<i>AVE of credit for banks X length of project</i>										

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply									
Adjustment Factor Categories									
Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion		Watershed Preservation					
Credit	0.1 - 0.3	0.1 - 0.3		0.1 - 0.3					
<i>Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors</i>									
Stream Length Affected	570								
Credit >	0.1								
<i>Σ Length X Credit) for all areas</i>								Credits >	57
Total Compensation Credit Provided by Project								1663	

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length		
	White Oak Mitigation Bank					C	1091		
Name(s) of Evaluator(s)		Stream Name and Information							Project Credits

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.	Credit per foot	1091
List Reaches that will receive full Restoration:	Total length of Full Restoration	1091
	Credits = Stream Length X 1.0	1

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vaness, Weirs, Step-Pools), Constructed Riffles	Credit per foot	
Discuss Length Affected by Instream Structures (justify length):	Length Affected by Instream Structures	0.3
	Credits = Stream Length X 0.3	0

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain					
Mitigation Categories					
	Mechanical Bank Work			Biological Bank Work	
	Pick One Per Length			May Be Cumulative Per Length	
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings ONLY
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09
Right Bank	Length				0
	Credit >				
Left Bank	Length				0
	Credit >				
CREDITS					
				Rt Bank >	0.00
				Lt Bank >	0.00
				SUM of banks	0
$\Sigma(\text{Length} \times \text{Credit})$ for all areas (banks done separately)					

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)						
Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation ONLY. No work proposed High Quality	Preservation ONLY. No work proposed Low Quality	Buffer area not within preservation width but within the first 100'
Credit for inner 100'	0.4	0.38	0.29	0.14	0.07	0
Credit for outer 100'	0.2	0.19	0.15	0.07		0
Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>>				109,100 square feet		
Insert area in square feet for a given activity: []				Percentage of "Goal" >>>> 0.00%		

WITHIN FIRST 100' - Mitigation Categories						
Missing one vegetative community			Subtract 0.03	Ensure the sums of % Riparian Blocks equal 100		
Missing two vegetative communities			Subtract 0.06			
Right Bank	% Area	100%				100%
	Credit >	0.38				
Left Bank	% Area	100%				100%
	Credit >	0.38				
CREDITS						
				Rt Bank >	0.38	Credit
				Lt Bank >	0.38	0.38
						414.58
$\Sigma(\% \text{ Area} \times \text{Credit})$ for all areas (banks done separately) AVE of credit for banks X length of project						

WITHIN SECOND 100' - Mitigation Categories						
Missing one vegetative community			Subtract 0.03	Ensure the sums of % Riparian Blocks equal 100		
Missing two vegetative communities			Subtract 0.06			
Right Bank	% Area	68%	32%			100%
	Credit >	0.19	0.07			
Left Bank	% Area	64%	36%			100%
	Credit >	0.19	0.07			
CREDITS						
				Rt Bank >	0.15	Credit
				Lt Bank >	0.15	0.15
						163.65
$\Sigma(\% \text{ Area} \times \text{Credit})$ for all areas (banks done separately) AVE of credit for banks X length of project						

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply						
Adjustment Factor Categories						
Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation			
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3			
<small>Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors</small>						
Stream Length Affected	1091					
Credit >	0.2					
Credits >						218
$\Sigma(\text{Length} \times \text{Credit})$ for all areas						
Total Compensation Credit Provided by Project						1887

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length			
	White Oak Mitigation Bank					D	2660			
Name(s) of Evaluator(s)		Stream Name and Information							Project Credits	
Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.								Credit per foot	0	
List Reaches that will receive full Restoration:						Total length of Full Restoration		1		
						Credits = Stream Length X 1.0				
Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vaness, Weirs, Step-Pools), Constructed Riffles								Credit per foot		
Discuss Length Affected by Instream Structures (justify length):						Length Affected by Instream Structures		0.3	0	
						Credits = Stream Length X 0.3				
Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain										
Mitigation Categories										
Mechanical Bank Work				Biological Bank Work						
Credit Per Structure		Pick One Per Length		May Be Cumulative Per Length						
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings ONLY					
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09					
Right Bank	Length 200	200			400					
	Credit >	0.1	0.1							
Left Bank	Length 200	200			400					
	Credit >	0.1	0.1							
CREDITS										
						Rt Bank >	40.00	Credit		
						Lt Bank >	40.00	SUM of banks	80	
Σ (Length X Credit) for all areas (banks done separately)										
Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)										
Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation ONLY. No work proposed High Quality	Preservation ONLY. No work proposed Low Quality	Buffer area not within preservation width but within the first 100'				
Credit for inner 100'	0.4	0.38	0.29	0.14	0.07	0				
Credit for outer 100'	0.2	0.19	0.15	0.07		0				
Calculation of "Goal" riparian buffer for each side (SAR length times 100) >>>>						266,000 square feet				
Insert area in square feet for a given activity: <input type="text" value=""/>						Percentage of "Goal" >>>> 0.00%				
WITHIN FIRST 100' - Mitigation Categories										
Missing one vegetative community				Subtract 0.03	Ensure the sums of % Riparian Blocks equal 100					
Missing two vegetative communities				Subtract 0.06						
Right Bank	% Area 95%	5%			100%					
	Credit >	0.14	0							
Left Bank	% Area 14%	5%	81%		100%					
	Credit >	0.26	0	0.14				Rt Bank > 0.13	Credit 376.12	
								Lt Bank > 0.15	0.14	
Σ (% Area X Credit) for all areas (banks done separately)										
AVE of credit for banks X length of project										
WITHIN SECOND 100' - Mitigation Categories										
Missing one vegetative community				Subtract 0.03	Ensure the sums of % Riparian Blocks equal 100					
Missing two vegetative communities				Subtract 0.06						
Right Bank	% Area 95%	5%			100%					
	Credit >	0.07	0							
Left Bank	% Area 25%	5%	70%		100%					
	Credit >	0.12	0	0.07				Rt Bank > 0.07	Credit 212.8	
								Lt Bank > 0.08	0.08	
Σ (% Area X Credit) for all areas (banks done separately)										
AVE of credit for banks X length of project										
Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply										
Adjustment Factor Categories										
Activity	Rare, Threatened, or Endangered Species or Communities		Livestock Exclusion		Watershed Preservation					
Credit	0.1 - 0.3		0.1 - 0.3		0.1 - 0.3					
<small>Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors</small>										
Stream Length Affected	2660									
Credit >	0.2									
Σ Length X Credit) for all areas										
Credits >								532		
Total Compensation Credit Provided by Project								1201		

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length		
	White Oak Mitigation Bank					E	427		
Name(s) of Evaluator(s)		Stream Name and Information							Project Credits
Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.								Credit per foot	0
List Reaches that will receive full Restoration:						Total length of Full Restoration		1	
						Credits = Stream Length X 1.0			
Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles								Credit per foot	
Discuss Length Affected by Instream Structures (justify length):						Length Affected by Instream Structures		0.3	0
						Credits = Stream Length X 0.3			
Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain									
Mitigation Categories									
Mechanical Bank Work				Biological Bank Work					
Credit Per Structure				Pick One Per Length				May Be Cumulative Per Length	
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings ONLY				
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09				
Right Bank	Length						0		
	Credit >								
Left Bank	Length						0		
	Credit >								
CREDITS									
						Rt Bank >	0.00	Credit	
						Lt Bank >	0.00	SUM of banks	0
Σ (Length X Credit) for all areas (banks done separately)									
Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)									
Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation ONLY. No work proposed High Quality	Preservation ONLY. No work proposed Low Quality	Buffer area not within preservation width but within the first 100'			
Credit for inner 100'	0.4	0.38	0.29	0.14	0.07	0			
Credit for outer 100'	0.2	0.19	0.15	0.07		0			
Calculation of "Goal" riparian buffer for each side (SAR length times 100) >>>>						42,700 square feet			
Insert area in square feet for a given activity: <input type="text" value=""/>						Percentage of "Goal" >>>> <input type="text" value="0.00%"/>			
WITHIN FIRST 100' - Mitigation Categories									
Missing one vegetative community				Subtract 0.03	Ensure the sums of % Riparian Blocks equal 100				
Missing two vegetative communities				Subtract 0.06					
Right Bank	% Area	64%	36%				100%		
	Credit >	0.14	0.14						
Left Bank	% Area	63%	37%				100%		
	Credit >	0.14	0.14						
CREDITS									
						Rt Bank >	0.14	Credit	
						Lt Bank >	0.14		59.78
Σ (% Area X Credit) for all areas (banks done separately) AVE of credit for banks X length of project									
WITHIN SECOND 100' - Mitigation Categories									
Missing one vegetative community				Subtract 0.03	Ensure the sums of % Riparian Blocks equal 100				
Missing two vegetative communities				Subtract 0.06					
Right Bank	% Area	56%	44%				100%		
	Credit >	0.07	0.07						
Left Bank	% Area	50%	50%				100%		
	Credit >	0.07	0.07						
CREDITS									
						Rt Bank >	0.07	Credit	
						Lt Bank >	0.07		29.89
Σ (% Area X Credit) for all areas (banks done separately) AVE of credit for banks X length of project									
Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply									
Adjustment Factor Categories									
Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation						
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3						
<small>Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors</small>									
Stream Length Affected	427								
Credit >	0.2								
CREDITS >								85	
Σ (Length X Credit) for all areas									
Total Compensation Credit Provided by Project								175	

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	Project Credits	
	White Oak Mitigation Bank					F	359		
Name(s) of Evaluator(s)		Stream Name and Information							
Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.								Credit per foot	0
List Reaches that will receive full Restoration:						Total length of Full Restoration		1	
						<i>Credits = Stream Length X 1.0</i>			
Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vaness, Weirs, Step-Pools), Constructed Riffles								Credit per foot	
Discuss Length Affected by Instream Structures (justify length):						Length Affected by Instream Structures		0.3	0
						<i>Credits = Stream Length X 0.3</i>			
Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain									
Mitigation Categories									
Mechanical Bank Work				Biological Bank Work					
Credit Per Structure		Pick One Per Length		May Be Cumulative Per Length					
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings ONLY				
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09				
Right Bank	Length						0		
	Credit >								
Left Bank	Length						0		
	Credit >								
CREDITS									
						Rt Bank >	0.00	Credit	
						Lt Bank >	0.00	SUM of banks	0
<i>Σ (Length X Credit) for all areas (banks done separately)</i>									
Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)									
Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation ONLY. No work proposed High Quality	Preservation ONLY. No work proposed Low Quality	Buffer area not within preservation width but within the first 100'			
Credit for inner 100'	0.4	0.38	0.29	0.14	0.07	0			
Credit for outer 100'	0.2	0.19	0.15	0.07		0			
Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>>				35,900 square feet					
Insert area in square feet for a given activity: <input type="text" value=""/>				Percentage of "Goal" >>>>		0.00%			
WITHIN FIRST 100' - Mitigation Categories									
Missing one vegetative community				Subtract 0.03		Ensure the sums of % Riparian Blocks equal 100			
Missing two vegetative communities				Subtract 0.06					
Right Bank	% Area	27%	73%			100%			
	Credit >	0	0.14						
Left Bank	% Area	28%	72%			100%			
	Credit >	0	0.14			Rt Bank >	0.10	Credit	
						Lt Bank >	0.10		36.44
<i>Σ (% Area X Credit) for all areas (banks done separately)</i>									
<i>AVE of credit for banks X length of project</i>									
WITHIN SECOND 100' - Mitigation Categories									
Missing one vegetative community				Subtract 0.03		Ensure the sums of % Riparian Blocks equal 100			
Missing two vegetative communities				Subtract 0.06					
Right Bank	% Area	29%	71%			100%			
	Credit >	0	0.07						
Left Bank	% Area	28%	72%			100%			
	Credit >	0	0.07			Rt Bank >	0.05	Credit	
						Lt Bank >	0.05		17.95
<i>Σ (% Area X Credit) for all areas (banks done separately)</i>									
<i>AVE of credit for banks X length of project</i>									
Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply									
Adjustment Factor Categories									
Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation						
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3						
<i>Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors</i>									
Stream Length Affected	359								
Credit >	0.2								
<i>Σ (Length X Credit) for all areas</i>								Credits >	72
Total Compensation Credit Provided by Project								126	

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length			
	White Oak Mitigation Bank					G	778			
Name(s) of Evaluator(s)		Stream Name and Information							Project Credits	
Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.								Credit per foot	0	
List Reaches that will receive full Restoration:						Total length of Full Restoration		1		
						<i>Credits = Stream Length X 1.0</i>				
Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vaness, Weirs, Step-Pools), Constructed Riffles								Credit per foot		
Discuss Length Affected by Instream Structures (justify length):						Length Affected by Instream Structures		0.3	0	
						<i>Credits = Stream Length X 0.3</i>				
Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain										
Mitigation Categories										
Mechanical Bank Work				Biological Bank Work						
Credit Per Structure		Pick One Per Length		May Be Cumulative Per Length						
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings ONLY					
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09					
Right Bank	Length						0			
	Credit >									
Left Bank	Length						0	Rt Bank >	0.00	
	Credit >							Lt Bank >	0.00	
<i>Σ(Length X Credit) for all areas (banks done separately)</i>								CREDIT	0	
Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)										
Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation ONLY. No work proposed High Quality	Preservation ONLY. No work proposed Low Quality	Buffer area not within preservation width but within the first 100'				
Credit for inner 100'	0.4	0.38	0.29	0.14	0.07	0				
Credit for outer 100'	0.2	0.19	0.15	0.07		0				
Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>>				77,800 square feet						
Insert area in square feet for a given activity:				Percentage of "Goal" >>>>		0.00%				
WITHIN FIRST 100' - Mitigation Categories										
Missing one vegetative community				Subtract 0.03	Ensure the sums of % Riparian Blocks equal 100					
Missing two vegetative communities				Subtract 0.06						
Right Bank	% Area	13%	87%				100%			
	Credit >	0.26	0.14							
Left Bank	% Area	14%	86%				100%	Rt Bank >	0.16	
	Credit >	0.26	0.14					Lt Bank >	0.16	
<i>Σ(% Area X Credit) for all areas (banks done separately)</i>								CREDIT	121.52	
<i>AVE of credit for banks X length of project</i>										
WITHIN SECOND 100' - Mitigation Categories										
Missing one vegetative community				Subtract 0.03	Ensure the sums of % Riparian Blocks equal 100					
Missing two vegetative communities				Subtract 0.06						
Right Bank	% Area	13%	87%				100%			
	Credit >	0	0.07							
Left Bank	% Area	14%	86%				100%	Rt Bank >	0.06	
	Credit >	0	0.07					Lt Bank >	0.06	
<i>Σ(% Area X Credit) for all areas (banks done separately)</i>								CREDIT	46.68	
<i>AVE of credit for banks X length of project</i>										
Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply										
Adjustment Factor Categories										
Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation							
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3							
<i>Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors</i>										
Stream Length Affected	778									
Credit >	0.2							Credits >	156	
<i>Σ Length X Credit) for all areas</i>										
Total Compensation Credit Provided by Project								324		

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length		
	White Oak Mitigation Bank					H	642		
Name(s) of Evaluator(s)		Stream Name and Information							
								Project Credits	
Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.								Credit per foot	0
List Reaches that will receive full Restoration:						Total length of Full Restoration		1	
						<i>Credits = Stream Length X 1.0</i>			
Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles								Credit per foot	
Discuss Length Affected by Instream Structures (justify length):						Length Affected by Instream Structures		0.3	0
						<i>Credits = Stream Length X 0.3</i>			
Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain									
Mitigation Categories									
Mechanical Bank Work				Biological Bank Work					
Credit Per Structure		Pick One Per Length		May Be Cumulative Per Length					
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings ONLY				
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09				
Right Bank	Length						0		
	Credit >								
Left Bank	Length						0		
	Credit >								
CREDITS									
						Rt Bank >	0.00	Credit	
						Lt Bank >	0.00	SUM of banks	0
<i>Σ (Length X Credit) for all areas (banks done separately)</i>									
Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)									
Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation ONLY. No work proposed <i>High Quality</i>	Preservation ONLY. No work proposed <i>Low Quality</i>	Buffer area not within preservation width but within the first 100'			
Credit for inner 100'	0.4	0.38	0.29	0.14	0.07	0			
Credit for outer 100'	0.2	0.19	0.15	0.07		0			
Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>>				64,200 square feet					
Insert area in square feet for a given activity: <input type="text"/>				Percentage of "Goal" >>>>		0.00%			
WITHIN FIRST 100' - Mitigation Categories									
Missing one vegetative community				Subtract 0.03	Ensure the sums of % Riparian Blocks equal 100				
Missing two vegetative communities				Subtract 0.06					
Right Bank	% Area						0%		
	Credit >								
Left Bank	% Area	100%					100%		
	Credit >	0.38							
						Rt Bank >	0.00	Credit	
						Lt Bank >	0.38	0.19	121.98
<i>Σ (% Area X Credit) for all areas (banks done separately)</i>									
<i>AVE of credit for banks X length of project</i>									
WITHIN SECOND 100' - Mitigation Categories									
Missing one vegetative community				Subtract 0.03	Ensure the sums of % Riparian Blocks equal 100				
Missing two vegetative communities				Subtract 0.06					
Right Bank	% Area						0%		
	Credit >								
Left Bank	% Area	100%					100%		
	Credit >	0.19							
						Rt Bank >	0.00	Credit	
						Lt Bank >	0.19	0.10	64.2
<i>Σ (% Area X Credit) for all areas (banks done separately)</i>									
<i>AVE of credit for banks X length of project</i>									
Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply									
Adjustment Factor Categories									
Activity	Rare, Threatened, or Endangered Species or Communities		Livestock Exclusion		Watershed Preservation				
Credit	0.1 - 0.3		0.1 - 0.3		0.1 - 0.3				
<i>Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors</i>									
Stream Length Affected									
	Credit >							0	
<i>Σ (Length X Credit) for all areas</i>									
Total Compensation Credit Provided by Project								186	

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length		
	White Oak Mitigation Bank					I	806		
Name(s) of Evaluator(s)		Stream Name and Information							Project Credits

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.	Credit per foot	0
List Reaches that will receive full Restoration:	Total length of Full Restoration	1
	<i>Credits = Stream Length X 1.0</i>	

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vaness, Weirs, Step-Pools), Constructed Riffles	Credit per foot	
Discuss Length Affected by Instream Structures (justify length):	Length Affected by Instream Structures	0.3
	<i>Credits = Stream Length X 0.3</i>	0

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain					
Mitigation Categories					
	Mechanical Bank Work			Biological Bank Work	
	Credit Per Structure	Pick One Per Length		May Be Cumulative Per Length	
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings ONLY
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09
Right Bank	Length				0
	Credit >				
Left Bank	Length				0
	Credit >				
CREDITS					
				Rt Bank >	0.00
				Lt Bank >	0.00
				SUM of banks	0
<i>Σ (Length X Credit) for all areas (banks done separately)</i>					

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)						
Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation ONLY. No work proposed High Quality	Preservation ONLY. No work proposed Low Quality	Buffer area not within preservation width but within the first 100'
Credit for inner 100'	0.4	0.38	0.29	0.14	0.07	0
Credit for outer 100'	0.2	0.19	0.15	0.07		0
Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>>				80,600	square feet	
Insert area in square feet for a given activity: <input type="text" value=""/>				Percentage of "Goal" >>>>	0.00%	

WITHIN FIRST 100' - Mitigation Categories						
Missing one vegetative community			Subtract 0.03	Ensure the sums of % Riparian Blocks equal 100		
Missing two vegetative communities			Subtract 0.06			
Right Bank	% Area	72%	28%			100%
	Credit >	0.14	0.14			
Left Bank	% Area	72%	28%			100%
	Credit >	0.14	0.14			
CREDITS						
				Rt Bank >	0.14	
				Lt Bank >	0.14	
				Credit	112.84	
<i>Σ (% Area X Credit) for all areas (banks done separately)</i>						
<i>AVE of credit for banks X length of project</i>						

WITHIN SECOND 100' - Mitigation Categories						
Missing one vegetative community			Subtract 0.03	Ensure the sums of % Riparian Blocks equal 100		
Missing two vegetative communities			Subtract 0.06			
Right Bank	% Area	80%	20%			100%
	Credit >	0.07	0.07			
Left Bank	% Area	84%	16%			100%
	Credit >	0.07	0.07			
CREDITS						
				Rt Bank >	0.07	
				Lt Bank >	0.07	
				Credit	56.42	
<i>Σ (% Area X Credit) for all areas (banks done separately)</i>						
<i>AVE of credit for banks X length of project</i>						

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply						
Adjustment Factor Categories						
Activity	Rare, Threatened, or Endangered Species or Communities		Livestock Exclusion	Watershed Preservation		
Credit	0.1 - 0.3		0.1 - 0.3	0.1 - 0.3		
<i>Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors</i>						
Stream Length Affected	806	806				
Credit >	0.1	0.2				
CREDITS						
					242	
<i>Σ (Length X Credit) for all areas</i>						
Total Compensation Credit Provided by Project						411

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	Project Credits		
	White Oak Mitigation Bank					J	890			
Name(s) of Evaluator(s)		Stream Name and Information								
Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.								Credit per foot	0	
List Reaches that will receive full Restoration:						Total length of Full Restoration		1		
						Credits = Stream Length X 1.0				
Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles								Credit per foot		
Discuss Length Affected by Instream Structures (justify length):						Length Affected by Instream Structures		0.3	0	
						Credits = Stream Length X 0.3				
Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain										
Mitigation Categories										
Mechanical Bank Work				Biological Bank Work						
Credit Per Structure		Pick One Per Length			May Be Cumulative Per Length					
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings ONLY					
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09					
Right Bank	Length						0			
	Credit >									
Left Bank	Length						0	Rt Bank >	0.00	
	Credit >							Lt Bank >	0.00	
								SUM of banks		0
										Σ (Length X Credit) for all areas (banks done separately)
Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)										
Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation ONLY. No work proposed High Quality	Preservation ONLY. No work proposed Low Quality	Buffer area not within preservation width but within the first 100'				
Credit for inner 100'	0.4	0.38	0.29	0.14	0.07	0				
Credit for outer 100'	0.2	0.19	0.15	0.07		0				
Calculation of "Goal" riparian buffer for each side (SAR length times 100) >>>>				89,000 square feet						
Insert area in square feet for a given activity: <input type="text" value=""/>				Percentage of "Goal" >>>>		0.00%				
WITHIN FIRST 100' - Mitigation Categories										
Missing one vegetative community				Subtract 0.03		Ensure the sums of % Riparian Blocks equal 100				
Missing two vegetative communities				Subtract 0.06						
Right Bank	% Area	82%	18%			100%				
	Credit >	0.38	0.14							
Left Bank	% Area					0%				
	Credit >					Rt Bank >	0.34	Credit		
								Lt Bank >	0.00	
								0.17		149.88
										Σ (% Area X Credit) for all areas (banks done separately)
										AVE of credit for banks X length of project
WITHIN SECOND 100' - Mitigation Categories										
Missing one vegetative community				Subtract 0.03		Ensure the sums of % Riparian Blocks equal 100				
Missing two vegetative communities				Subtract 0.06						
Right Bank	% Area	82%	18%			100%				
	Credit >	0.19	0.14							
Left Bank	% Area					0%				
	Credit >					Rt Bank >	0.18	Credit		
								Lt Bank >	0.00	
								0.09		80.1
										Σ (% Area X Credit) for all areas (banks done separately)
										AVE of credit for banks X length of project
Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply										
Adjustment Factor Categories										
Activity	Rare, Threatened, or Endangered Species or Communities		Livestock Exclusion		Watershed Preservation					
Credit	0.1 - 0.3		0.1 - 0.3		0.1 - 0.3					
<small>Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors</small>										
Stream Length Affected	282									
Credit >	0.1									
								Credits >		28
										Σ Length X Credit) for all areas
Total Compensation Credit Provided by Project										258

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length		
	White Oak Mitigation Bank					JR	2522		
Name(s) of Evaluator(s)		Steam Name and Information							Project Credits
		James River							

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.	Credit per foot	0
List Reaches that will receive full Restoration:	Total length of Full Restoration	1
	<i>Credits = Stream Length X 1.0</i>	

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vaness, Weirs, Step-Pools), Constructed Riffles	Credit per foot	
Discuss Length Affected by Instream Structures (justify length):	Length Affected by Instream Structures	0.3
	<i>Credits = Stream Length X 0.3</i>	

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain					
Mitigation Categories					
	Mechanical Bank Work			Biological Bank Work	
	Credit Per Structure	Pick One Per Length		May Be Cumulative Per Length	
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings ONLY
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09
Right Bank	Length				0
	Credit >				
Left Bank	Length				0
	Credit >				
CREDITS					
				Rt Bank >	0.00
				Lt Bank >	0.00
				Credit	
				SUM of banks	0
<i>Σ (Length X Credit) for all areas (banks done separately)</i>					

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)						
Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation ONLY. No work proposed <i>High Quality</i>	Preservation ONLY. No work proposed <i>Low Quality</i>	Buffer area not within preservation width but within the first 100'
Credit for inner 100'	0.4	0.38	0.29	0.14	0.07	0
Credit for outer 100'	0.2	0.19	0.15	0.07		0
Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>>				252,200	square feet	
Insert area in square feet for a given activity:					Percentage of "Goal" >>>>	
					0.00%	

WITHIN FIRST 100' - Mitigation Categories						
Missing one vegetative community			Subtract 0.03	Ensure the sums of % Riparian Blocks equal 100		
Missing two vegetative communities			Subtract 0.06			
Right Bank	% Area	55%	15%	30%		100%
	Credit >	0.14	0.14	0.38		
Left Bank	% Area					0%
	Credit >					
CREDITS						
				Rt Bank >	0.21	Credit
				Lt Bank >	0.00	0.11
						267.33
<i>Σ (% Area X Credit) for all areas (banks done separately) AVE of credit for banks X length of project</i>						

WITHIN SECOND 100' - Mitigation Categories						
Missing one vegetative community			Subtract 0.03	Ensure the sums of % Riparian Blocks equal 100		
Missing two vegetative communities			Subtract 0.06			
Right Bank	% Area	45%	55%			100%
	Credit >	0.19	0.07			
Left Bank	% Area					0%
	Credit >					
CREDITS						
				Rt Bank >	0.12	Credit
				Lt Bank >	0.00	0.06
						151.32
<i>Σ (% Area X Credit) for all areas (banks done separately) AVE of credit for banks X length of project</i>						

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply					
Adjustment Factor Categories					
Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation		
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3		
<i>Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors</i>					
Stream Length Affected					
Credit >					0
<i>Σ (Length X Credit) for all areas</i>					
Total Compensation Credit Provided by Project					419

Compensation Summary Form (Form 4)

Unified Stream Methodology for use in Virginia

Project #	Applicant	Date
White Oak Landing Mitigation Bank		1/11/2008
Evaluators		Locality
B. Coward/J. Hudson		Buckingham
		HUC
		2080203

Stream Name	Reach ID	Comp. Length (L) (feet)	Total Compensation Credit (Total CC) (From Form 3)
	A	885	447
	B	1043	1663
	C	1091	1887
	D	2660	1201
	E	427	175
	F	359	126
	G	778	324
	H	642	186
	I	806	411
	J	890	258
	JR	2522	419
	Totals	12103	7097

Note: Round all feet & CC's to the nearest whole number.