

Proposal to Request Funding from the Virginia Aquatic Resources Trust Fund (VARTF)

LJ-11 Chickahominy River (Wilson)

Date Submitted to the Corps: September 12, 2012

1. OBJECTIVES

The Nature Conservancy (TNC) has prepared this request from the VARTF to include a stream restoration component to the LJ-11 Chickahominy River (Wilson) project site.

Background. In 2010, the IRT approved funding for a preservation only project at this site. The objectives of the preservation included placing a conservation easement on the 263-acre tract, preserving 134 acres of wetlands and 4,861 lf of streams and tributaries, including 1,300 lf along the main stem of the Chickahominy River. Through this project, the Conservancy proposed generating 13.34 NTW credits. No stream credits were proposed or approved.

Current. The Conservancy is proposing to remove an earthen dam on the property and restore approximately 311 lf of stream and 0.5 acre of riparian buffer. The mitigation site will consist of a 287.5-acre tract (updated through boundary survey) on the Chickahominy River, containing several tributaries and 116-acres of wetlands in Henrico and New Kent Counties, Virginia (HUC 02080206). The initial wetland preservation proposal has not changed, except that the acres and crediting will be reduced with the confirmation of the wetland delineation. The removal of the dam structure and restoration of the stream reach will help repair and protect inputs into the Chickahominy River, and provide mitigation through stream and riparian restoration. This prospectus focuses solely on the stream restoration that is being proposed at this time.

Contact/Project Specifics:

TNC Contact:	Karen Johnson Mitigation Program Manager 804-644-5800x116 Karen_johnson@tnc.org
TNC Project Name:	Chickahominy River (Wilson)
VARTF Tracking Number:	LJ-11
Project Type:	Stream and Riparian Area Restoration
Locality/County:	Henrico County
Stream Name:	Chickahominy River and tributaries
HUC:	02080206
Basin:	Lower James River
Geographic coordinates:	-77.238; 37.533
Property Owner:	Martha Wilson Trust
Total project area protected:	287.5 acres
Wetland Mitigation Area:	162 acres (116-acres wetland, 46-acres buffer)
Stream Mitigation Area:	51 acres
Additional Protected Acreage:	75 acres
Stream Restoration Length:	311 linear feet
Proposed USM Credits:	340 (approx.)

2. SITE SELECTION

A. This property contains approximately 116 acres of wetlands and 3,500 lf of streams and tributaries, including 1,300 lf along the main stem of the Chickahominy River. The property is completely forested with hardwoods and pines and bottomland, forested wetlands. There is a recognized natural community (G2/S2) on the property known as the Chickahominy Flats, represented by non-riverine, saturated forests.

B. The Chickahominy River is a TNC aquatic portfolio, primarily downstream of the project location. The watershed is largely forested. The river itself is fringed with tidal freshwater wetlands. The dominant wetland communities include arrow arum and pickerelweed, yellow pond lily, and very diverse freshwater mixed plant communities. The Chickahominy system is important for migratory fish, such as striped bass, shad, herring, and yellow perch. Adjacent tidal wetlands attract and provide home for many species of waterfowl and migratory songbirds. Male blue crabs are found here during the warmer summer months. The proximity of Richmond, Virginia to this area has led to increasing development pressures on the system. Development within the watershed is one of the biggest stresses to the Lower Chickahominy portfolio site as it increases sediment and nutrient loadings to the river.

C. The property contains a natural community occurrence identified by VA Department of Natural Heritage known as Chickahominy Flats. This community includes an area of 15 acres with a ranking of B2/B3. This area is typified as a broad, saturated bottomland supporting a fair occurrence of a globally rare palustrine hardwood forest.

D. Like many rural properties, the Wilson site is under increasing threat of development, primarily for residential housing which would negatively impact the water quality of the Chickahominy River, the unnamed tributaries and the forested acres of wetlands on the property. This easement limits subdivision, development, impervious surface, timber harvesting and agricultural use.

E. The Chickahominy River, including the section thereof on which the Property fronts, has been classified as a state scenic river. The Chickahominy River is accessible to the public in this location and is frequently used by canoeists and other outdoor recreation enthusiasts. This Conservation Easement will protect the scenic values along a half mile of the Chickahominy River by restricting subdivision, construction and timber harvesting activities, thereby preserving the scenic character of the river.

F. The Chickahominy River is identified in the VARTF Compensation Planning Framework as a priority area for identifying and securing mitigation projects.

G. The south-western tributary is a small, spring-fed stream surrounded by forest that has been dammed to create a small pond. The dam and pond are over 30 years old with mature trees surrounding the pond and growing on the dam. There is an outlet scour and head cut near the embankment. Evidence can be seen of seepage into the outlet scour and recent sediment deposition from the scour. Removal of the dam and restoration of the stream are proposed.

H. Cultural Resources. Section 106 review has been initiated with the Corps.

3. GOAL

The goal of the proposed mitigation site is to establish a self-sustaining, functional stream and riparian system that will serve to replace the functional values of permitted stream impacts within the service area through restoration. In doing so, the mitigation site will satisfy a portion of the existing mitigation needs within the authorized service area. Restoration activities are being proposed on the small stream which is currently impacted by the existing dam. These restoration activities are proposed to generate approximately 340 stream credits which will be used to satisfy a portion of the existing liabilities. They are not anticipated to be “released credits”.

4. MITIGATION WORK PLAN

A. The Conservancy has an approved Mitigation Banking Instrument (MBI) developed in accordance with the “Compensatory Mitigation for Losses of Aquatic Resources: Final Rule, 33 CFR 332”. This project is submitted as an additional mitigation site under that existing MBI. Terms and specifics related to bank operation are outlined in the MBI. This proposal will only address site specific details.

Mitigation activities will entail removal of the dam, placement of instream structures and buffer planting. The 0.5-acre ponded area will be planted, with the full 200’ of riparian buffer protected through the easement document. The restoration of approximately 311 feet of stream is expected to include placement of a series of grade control structures, created riffles, and native planting. The pond bottom/buffer area will be planted with bare root seedlings planted on ten-foot centers for a density of 440 trees/acre, for a total of approximately 220 stems. Planting will occur in the dormant season. The plantings used will be native species common to the area, which are suitable for growth in local riparian conditions and from areas within the same or adjacent USDA Plant Hardiness Zone or NRCS Land Resource Region as the project site. Bare root seedlings will be at least 18 inches tall, and 4’ Tubex treeshelters and 3’ x 3’ VisPore mats may be installed with the seedlings. The site will be monitored for up to 10 years to ensure the stability of the stream and success of the plantings, with 2013 anticipated to be Year 1. TNC proposes the following schedule for project implementation:

Timing	Activity
December 2012	Complete design plans
Early 2013	Buffer Planting
October 2013	Year 1 Success Monitoring
Growing Season 2014	Year 2 Success Monitoring
Growing Season 2015	Year 3 Success Monitoring
Growing Season 2017	Year 5 Success Monitoring
Growing Season 2019	Year 7 Success Monitoring
Growing Season 2022	Year 10 Success Monitoring

5. DETERMINATION OF CREDITS.

A. The stream restoration will be conducted on 311 linear feet of an unnamed tributary and provide for restoration of approximately 0.5 acres of riparian buffer. The mitigation area is shown in Map 3.

B. The table below indicate the estimated compensation credit potential under USM for stream and buffer restoration activities associated with the project.

C. The estimated USM compensation credits for the project total 340 for stream and buffer restoration.

D. All acreages, linear footages, and buffer widths were estimated with Arcview GIS and with GPS in the field. Values will be finalized in the site development plan, which will be completed following authorization by the Corps and DEQ. USM forms are attached.

Estimated Compensation Credit Potential

Preservation and Planting

	Reach Length (lf)		Mitigation Activities			Compensation Credits
			L Bank (% Area)	R Bank (% Area)	Activity Type	
Unnamed Tributary	311	Within 100'	-	-	Stream Restoration	311
			25	25	Heavy Buffer Planting	31
					TOTAL CREDITS	342

6. GEOGRAPHIC SERVICE AREA

The proposed geographic service area for this mitigation site shall be consistent with Federal Banking Guidance and the Code of Virginia. For purposes of this site, the proposed service area includes the primary HUC 02080206 (portions of Hanover, Henrico, Chesterfield, Charles City, New Kent, James City, Prince George, and Isle of Wight counties) and the adjoining HUC: 02080208 (portions of Suffolk, Norfolk, Chesapeake and Hampton Roads). See attached Service Area map.

7. USE/TRACKING OF MITIGATION CREDITS

- A. Decisions related to applicability, in-kind vs. out-of-kind mitigation, and compensation requirements will be made as part of individual permit decisions.
- B. Decisions related to credit purchase from the mitigation site will be made in accordance with the Federal Banking Guidance and the existing Virginia Aquatic Resources Trust Fund Banking Instrument. Availability will be determined by achievement of goals and objectives of the mitigation site.
 - a. Stream credits will be determined using USM crediting methodology, and will be released upon meeting success criteria outlined in the Site Development Plan and approved by the IRT.
 - b.
 - c. Credits established through this project will be applied to existing VARTF liabilities within the defined Geographic Service Area for this project.
- C. Tracking of credits released, withdrawn and available will be provided on a Mitigation Site ledger, available for review on Ribits. Project specific summaries will be provided in the Trust Fund Annual Report.

8. SITE PROTECTION INSTRUMENT

TNC will acquire and hold a conservation easement on the approximately 287.5-acre tract. Buffer areas and preserved wetland areas will be protected in accordance with mitigation standards and approved by the Corps. The easement terms will specify no development, destruction of wetlands or buffer areas, and no impervious surfaces or new structures within the mitigation area. TNC will hold and monitor the easement terms to ensure compliance with the easement terms.

9. MAINTENANCE PLAN

TNC will inspect the stream restoration and plantings during each monitoring event to assess stability and whether corrective action is needed to ensure achievement of success criteria. TNC will describe any corrective actions implemented in each year's monitoring report.

10. PERFORMANCE STANDARDS

Performance standards will be detailed in the site development plan and will generally follow the standards outlined in the MBI template and subject to approval by the IRT.

11. MONITORING REQUIREMENTS

A. The project will be monitored once per year during the growing season for up to 10 years, in years 1, 2, 3, 5, 7, and 10. Year 1 monitoring will take place in October 2013 to allow sufficient time for the species planted in early 2013 to become established. In the event the site proves successful prior to Monitoring Year 10, the Conservancy may request an early termination of the monitoring, which is at the ultimate discretion of the IRT.

B. Monitoring requirements will be detailed in the site development plan and will generally follow the standards outlined in the MBI template and subject to approval by the IRT.

12. LONG-TERM MANAGEMENT PLAN

A detailed Long-Term Management Plan will be developed and approved by the IRT prior to closure of the site.

13. ADAPTIVE MANAGEMENT PLAN

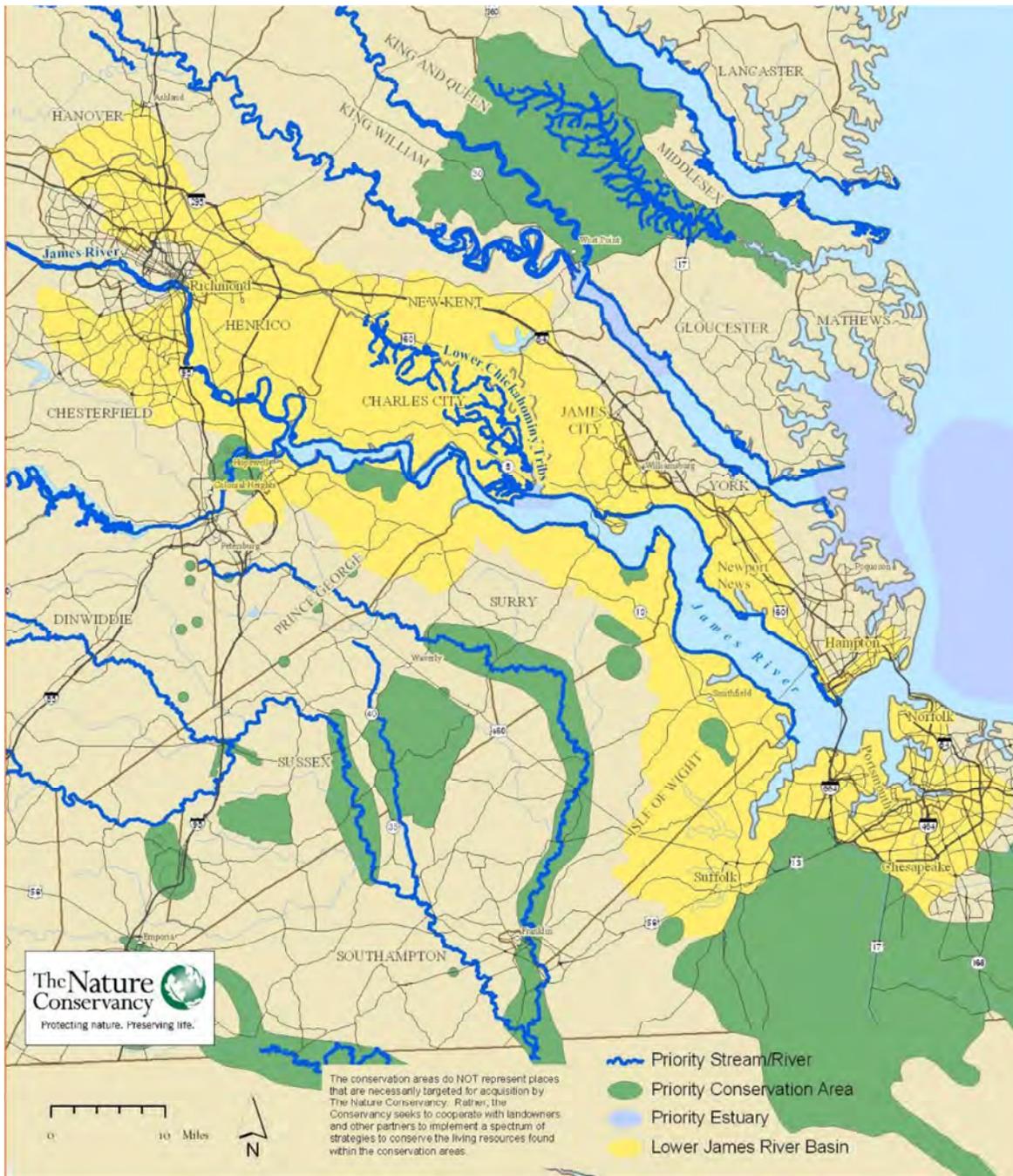
TNC will work with the Corps, DEQ, IRT and DCR to determine if modifications are necessary should unforeseen circumstances arise based on monitoring and performance standards for the site.

14. FINANCIAL ASSURANCES

TNC has established financial assurances for this site in accordance with the VARTF Program Instrument.

ATTACHMENTS:

- Map 1 – Service Area
- Map 2 – Property Vicinity Map of Protected Lands and Element Occurrences
- Map 3 – Mitigation Area
- Property Photographs
- USM Forms



Map 1. Service Area



Buffer preservation area located downstream of dam.

Seepage plane in outlet scour of embankment.





Seepage and recent sediment deposition from scour area (foreground).



Existing dam



Existing pond



OUTLET

① →



OUTLET SCOUR

② →



OUTLET



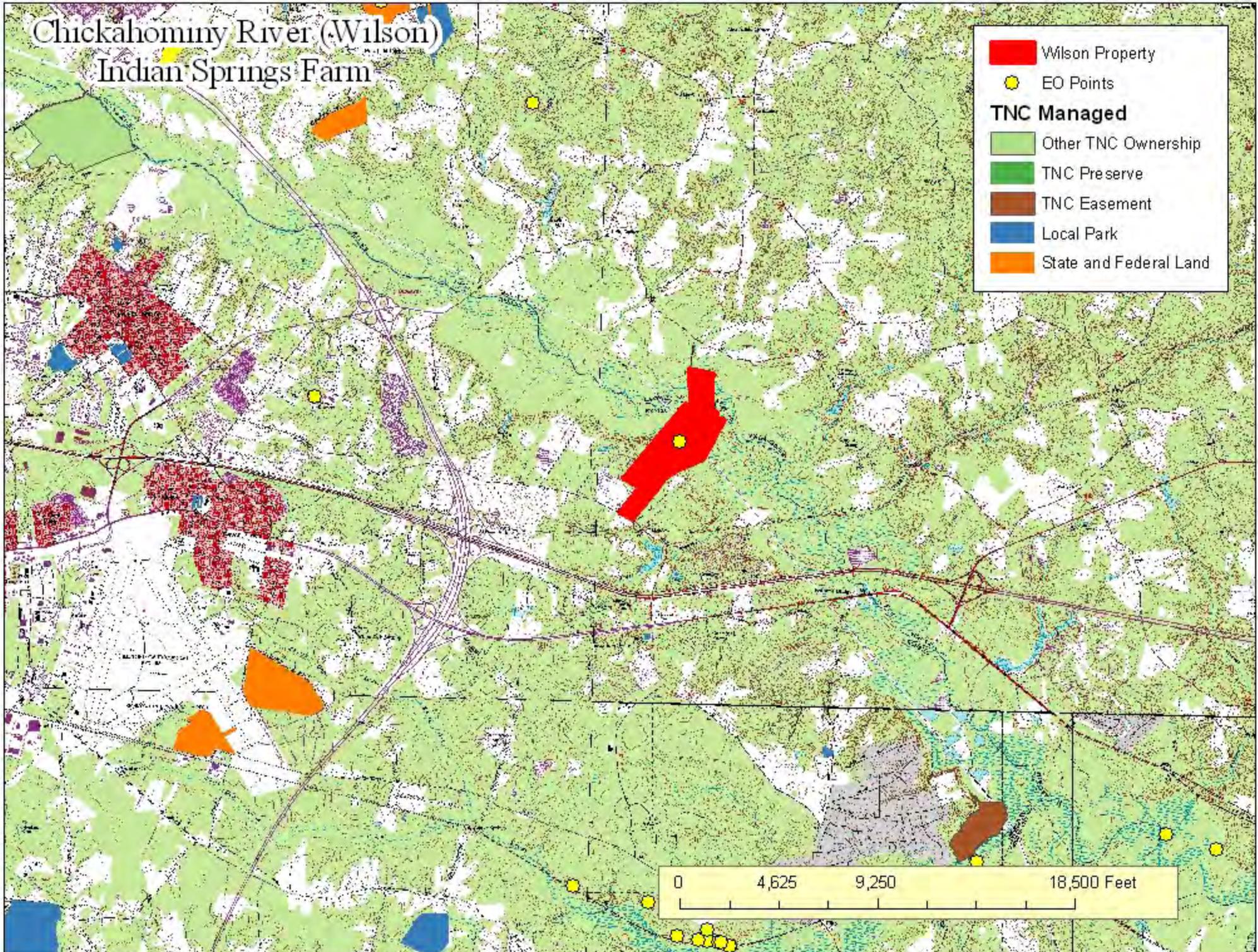
OUTLET SCOUR



Chickahominy River (Wilson)

Indian Springs Farm

- Wilson Property
- EO Points
- TNC Managed**
 - Other TNC Ownership
 - TNC Preserve
 - TNC Easement
 - Local Park
 - State and Federal Land



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LEGEND

-  APPROXIMATE WETLAND LIMITS
-  APPROXIMATE STREAM CHANNEL LIMITS
-  APPROXIMATE OPEN WATER LIMITS
-  STREAM STABILIZATION / RESTORATION (311 L.P. 4)

NOTE: THE LIMITS OF WETLANDS AND STREAM CHANNELS HAVE BEEN FIELD LOCATED BY MEANS OF SUBMETER GPR TECHNOLOGY AND ARE FOR PLANNING PURPOSES ONLY.



DUNNFIELD LANE

FULL REMOVAL RESTORATION OF STREAMS AND WETLANDS

LANDOWNER PREFERRED ACCESS

1
2

PROS

- NO DAM / LESS WORRIES
- WETLAND AND STREAM RESTORATION CREDIT

CONS

- LOW ECONOMY OF SCALE
- GREATEST AMOUNT OF DISTURBANCE
- UNCONSOLIDATED BOTTOM SEDIMENT
- NO OPEN WATER FEATURE
- MOST COSTLY



EXISTING DAM

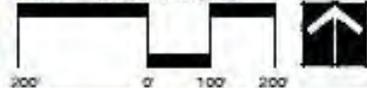
1 →



EXISTING POND

2 →

CONTOUR INTERVAL = 2 FEET




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 817.336.7222
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ALTERNATIVE 3
DAM REMOVAL
WILSON PROPERTY
 HENRICO AND NEW KENT COUNTY, VIRGINIA

DATE: MARCH 26, 2012
 JOB NUMBER: 493
 SCALE: 1"=100' - 200' FEET
 SOURCE: XXX