Ut West Fork Deep River
ANNUAL MONITORING REPORT
YEAR 6 OF 7

EEP Project #442
SAW-2009-01111
Guilford County, North Carolina
Completed Construction: 2017
Submitted December 2024

NCDEQ – Division of Mitigation Services
1652 Mail Service Center
Raleigh, NC 27699-1652

APPENDICES

EXECUTIVE SUMMARY

The Ut to the West Fork of the Deep River project is located within Cape Fear River Basin in USGS hydrologic unit 03030003. The project lies within a rural setting that includes agricultural, forested, and low-density residential areas. The project is located on a small residential horse farm and includes several residential parcels. The project consists of an unnamed tributary to the west fork of the Deep River, hereafter referred to as main stem, and four smaller unnamed tributaries to the main stem, hereafter referred to as Ut-A, Ut-B, Ut-C, and UT-D. Project streams had been historically destabilized through land use change followed by ongoing watershed development, channelization, and hoof-shear exacerbated by an inadequate riparian buffer.

The project was acquired by NCDOT and later transferred to NC EEP. The initial feasibility study proposed priority level III and level II restoration on the main stem upper and lower reaches respectively. The design proposed in the Restoration Plan completed in 2009 proposed preservation and priority two restoration on the upper and lower reaches of the mainstem and Enhancement I on UT-A, UT-B, UT-C and restoration on UT-D. The project was delayed at the Restoration Plan phase due to access issues associated with the private access road serving the reaches proposed for restoration. DMS raised concerns regarding the long-term viability of the proposed restoration. The site was constrained by a limited easement belt width, multiple utility Right-of-Ways bisecting and running parallel to the main stem, and evidence of legacy sediment deposition along the mainstem in concert with a priority two restoration approach. In 2015, DMS proposed a modification to the Restoration Plan design comprised of scaling site work back to entail planting the previously proposed restoration and enhancement reaches. An on-site meeting was held to discuss the revised mitigation approach with the NC IRT and NC DEQ DWR. The revised approach was approved, and the project assets were amended to Stream Enhancement I and Stream Preservation. The project is located in the Randleman Watershed, is subject to the Randleman Buffer Rules (15A NCAC02B.0250 - 10/24/2014), project assets include riparian buffer mitigation credits.

Project Goals:

The goal of the project was revised, the newly defined project goal was to restore and improve riparian buffer function, preserve and protect existing buffer, and exclude livestock from project streams to promote enhanced water quality . These goals were to be achieved through:

- Establish native stream bank and floodplain vegetation in the permanent conservation easement.
- Improve the water quality in the Upper Cape Fear River watershed by fencing livestock out of the stream and reducing bank erosion.

Monitoring Requirements:

Monitoring Requirements for the Enhancement II reaches of the project included the following:

- Annual Visual Assessment
- Annual Vegetation Plot Survey: The required 2% survey of the 6.448 planted acres would yield 2.7 plots, 4 plots to be monitored annually.

The site was monitored in the fall of 2025 for this Year 7 Annual Monitoring Report.

VEGETATION ASSESSMENT

Vegetation monitoring in year six included visual assessment of the riparian zone and buffer mitigation areas to update the Current Conditions Plan View (CCPV). DMS observed one area of concern that based on visual assessment did not appear to be meeting riparian zone success criteria, this area exhibits low stem vigor and density. These observed conditions are reflected in the CCPV figures within this report and briefly discussed below.

- The conservation easement area adjacent to UT-C, stream left, continues to exhibit low stem density and low vigor. This area is approximately 0.12 acres in size and is noted on the CCPV.
- There are a few very small areas of sparse woody stems due to past wind throw.
- Multiflora Rose and Greenbrier have proliferated in small patches throughout the easement.

VISUAL ASSESSMENT

Year six stream channel monitoring included a visual assessment of the stream channel. Visual observations of the stream channel conditions were conducted to determine if the project is maintaining pre-project stability. There are no goals or performance standards associated with the stream visual monitoring; bank stability was addressed through riparian zone planting.

The visual assessment in year six continued to indicate that while the project streams continue to seek dynamic equilibrium, there is no systemic or significant destabilization of project channels.

Table 1. Ut West Fork Deep River Mitigation Site (ID-442) Project Mitigation Quantities and Credits

Project Segment	Mitigation Addendum Ft/Ac	Mitigation Category	Restoration Level	Ratio (X:1)	Credits	Comments
Stream						
Mainstem - Upstream	2,107	Warm	P	5	421.400	excludes easement breaks and ROWs
Mainstem - Downstream	1738	Warm	EII	5	347.600	excludes easement breaks and ROWs
UT A	131	Warm	P	5	26.200	excludes easement breaks and ROWs
UT B	235	Warm	P	5	47.000	excludes easement breaks and ROWs
UT C	72	Warm	EII	5	14.400	excludes easement breaks and ROWs
UT D	424	Warm	EII	5	84.800	excludes easement breaks and ROWs
Total:	**4707.000**			**Total:**	**941.400**	

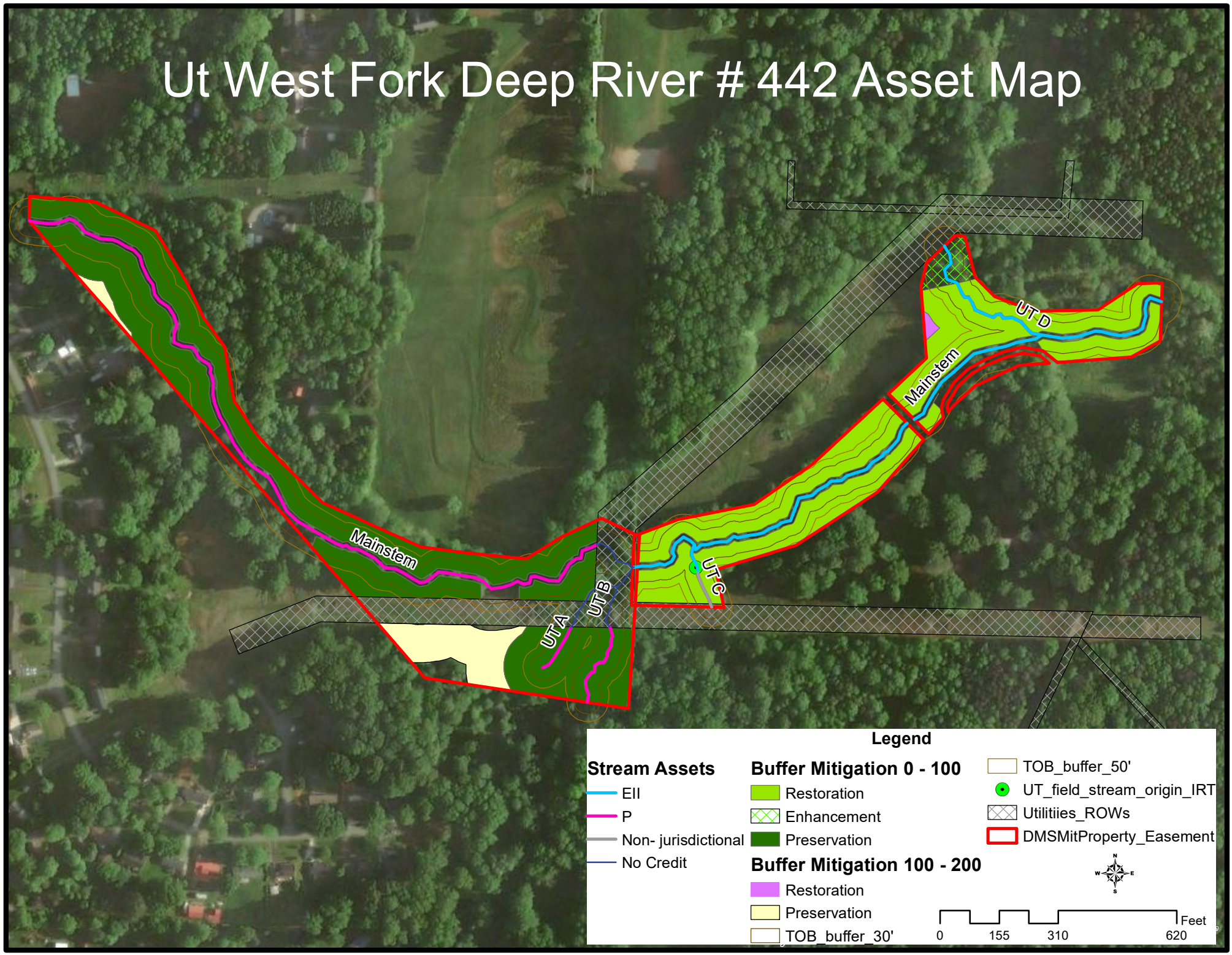
Project Credits

	Stream			
Restoration Level	Warm		Cool	Cold
Restoration				
Re-establishment				
Rehabilitation				
Enhancement				
Enhancement I				
Enhancement II	466.800			
Creation				
Preservation	494.600			
		Totals		**941.400**

Riparian Buffer Mitigation Quantities & Credits

Mitigation Activity	Buffer Width	Urban/Non - Urban	Subject/ Non-Subject	Buffer Quanties (sq. ft.)	Credit Ratio (X:1)	Credits	Comments
Buffer Restoration	30 - 100	Rural	Subject	211,938	1	211,938	
Buffer Enhancement	30 -100	Rural	Subject	11,897	2	5949	
Buffer Preseravation	30 -100	Rural	Subject	278,054	10	27,805	
			Total:	501889		**245,692**	
Buffer Restoration	100 -200	Rural	Subject	1712	2	856	
Buffer Enchancement	100 -200	Rural	Subject	0	4	0	
Buffer Preseravation	100 -200	Rural	Subject	41062	20	2,053	
			Total:	42,774		**2,909**	
		Total Mitigation Area		**544,663**		**Total Credits: 248,601**	
			10%	54,466		42,774<54,663; 10% eligibility met	

Ut West Fork Deep River # 442 Asset Map



METHODOLOGY

The following methods were utilized during the Year 7 monitoring for data collection and post-processing:

- The CVS Level 2 methodology was utilized for the vegetation plot data collection.

REFERENCES

SEPI Engineering Group. 2009. Unnamed Tributary to the West Fork of the Deep River Stream Restoration Plan.

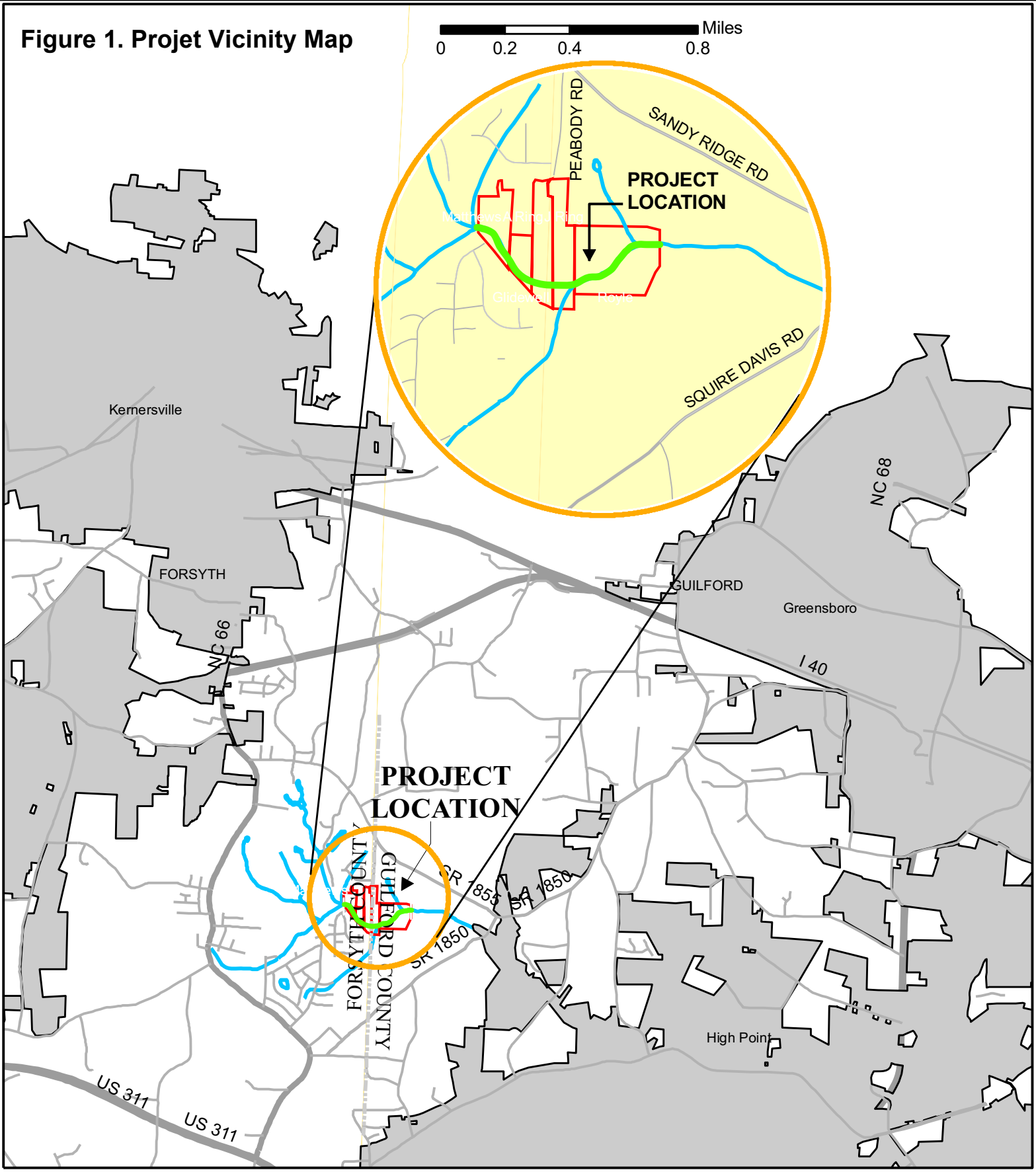
North Carolina DEQ Division of Mitigation Services. Monitoring Report Template June 2017.

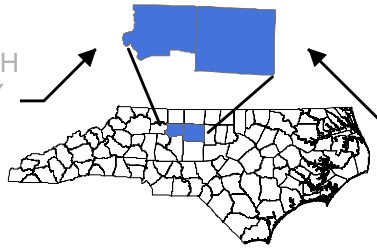
Content, Format and Data Requirements for DMA Monitoring Reports.

Appendix A

Project Vicinity Map and Background Files

Figure 1. Projet Vicinity Map





Miles
0 0.5 1 2

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W E
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NC ECOSYSTEM ENHANCEMENT PROGRAM

UT WEST FORK (DEEP RIVER) STREAM RESTORATION FORYSTH/GUILFORD COUNTY, NC

FIGURE 1 - PROJECT SITE VICINITY MAP KERNERSVILLE NC QUAD

Table 4. Project Activity & Reporting History		
Ut to West Fork of Deep River, DMS Project # 442		
Activity or Report	**Data Collection Complete**	**Actual Completion or Delivery**
Mitigation Plan		February 2009
BMP Installation - Fence, Well, Watering Stations		March 2011
Final Design - Planting Plan		April 2015
Invasive Species Treatment		October 2015
Planting		March 2016
Invasive Species Treatment (1)		March 2016
Baseline Monitoring/Report	June 2017	June 2017
Invasive Species Treatment (2)		June 2017
Year 1 Monitoring	May 2018	November 2018
Year 2 Monitoring	August/ November	November 2020
Year 3 Monitoring	October 2022	October 2021
Year 4 Monitoring	October 2022	December 2022
Year 5 Monitoring	October 2023	December 2023
Year 6 Monitoring	November 2024	December 2024
Year 7 Monitoring		

Table 3. Project Contacts Ut to West Fork Deep River # 442 Ut to West Fork Deep River #442	
Design Firm BMP Design Original Mitigation Plan	 Guilford County Soil & Water Conservation SEPI 1025 Wade Avenue Raleigh, NC 27605 Contact: Phillip Todd
BMP Construction Contractor Ford Crossing Well 2 solar watering stations	Guilford County Soil & Water Conservation Project # 10CF03-1
Invasive Treatment Contractor	Bruton Natural Systems, Inc. P.O. Box 1197 Fremont, NC 27830 Contact: Charlie Bruton Phone: (919) 242-6555
Planting Contractor	Bruton Natural Systems, Inc. P.O. Box 1197 Fremont, NC 27830 Contact: Charlie Bruton Phone: (919) 242-6555
Monitoring Performers	
MY0 - MY77	NC DEQ Division of Mitigation Services 217 West Jones St. Raleigh, NC 2603 Project Manager: Melonie Allen Phone: (910) 368-9352

Table 4. Restoration Component Attributes - UT West Fork (Deep River) EEP Project No. 442						
	UT-A	**UT-B**	**UT-C**	**UT-D**	**Reach 2a†**	**Reach 2b††**
Drainage area (Square miles)	(0.02 to 0.03)	0.60	0.07	0.15	2.6	3.04
Stream order	1st	1st / 2nd	1st	1st	3rd	3rd
Design length (ft.)	382	427	181	373	300	1528
Perennial or intermittent	Perennial	Perennial	Intermittent	Perennial	Perennial	Perennial
Watershed type	Rural	Rural	Rural	Rural	Rural	Rural
Watershed LULC	Ag-Livestock	Ag-Livestock	Ag-Livestock	Ag-Livestock	Ag-Livestock	Ag-Livestock
Watershed impervious cover %	4.5%*	4.5%*	1%	1%	5%	5%
NCDWQ AU/Index	03-06-08	03-06-08	03-06-08	03-06-08	03-06-08	03-06-08
NCDWQ Class	WS-IV	WS-IV	WS-IV	WS-IV	WS-IV	WS-IV
303d Listed	No	No	No	No	No	No
Upstream of 303d	No	No	No	No	No	No
Reasons for 303d	n/a	n/a	n/a	n/a	n/a	n/a
Total acreage of easement^	-	-	-	-	15.6^	-
Total vegetated easement acreage ^	-	-	-	-	15.6^	-
Total planted acreage as part of restoration^	-	-	- -	6.0^		-
Rosgen classification of pre-existing	E5	E5	E5	E5	E5/F5	E5/G5c
Rosgen classification of As-built	TBD	TBD	TBD	TBD	TBD	TBD
Valley type	8@	8@	8@	8@	8@	8@
Valley slope	0.0071	0.0072	0.0204	0.011	0.0047	0.0047
Valley side slope	n/a	n/a	n/a	n/a	n/a	n/a
Valley toes slope	n/a	n/a	n/a	n/a	n/a	n/a
Cowardin classification	n/a	n/a	n/a	n/a	n/a	n/a
Trout waters designation	No	No	No	No	No	No
T/E Species	None	None	None	None	None	None
Soils / characteristics						
Series	Wehadkee	Wehadkee	Wehadkee	Chewacla	Wehadkee	Series~
Max Depth	80	80	80	80	80	80
Clay %	21.3	21.3	21.3	25.2	21.3	21.3, 5.2
K	0.24	0.24	0.24	0.28	0.24	0.24, 0.28
T	5	5	5	5	5	5

† notes that the catchment upstream of and including UT-B.

†† notes that the catchment upstream of, but, excluding UT-D.

* notes that watershed for UT-A and UT-B were combined for impervious cover percentage.

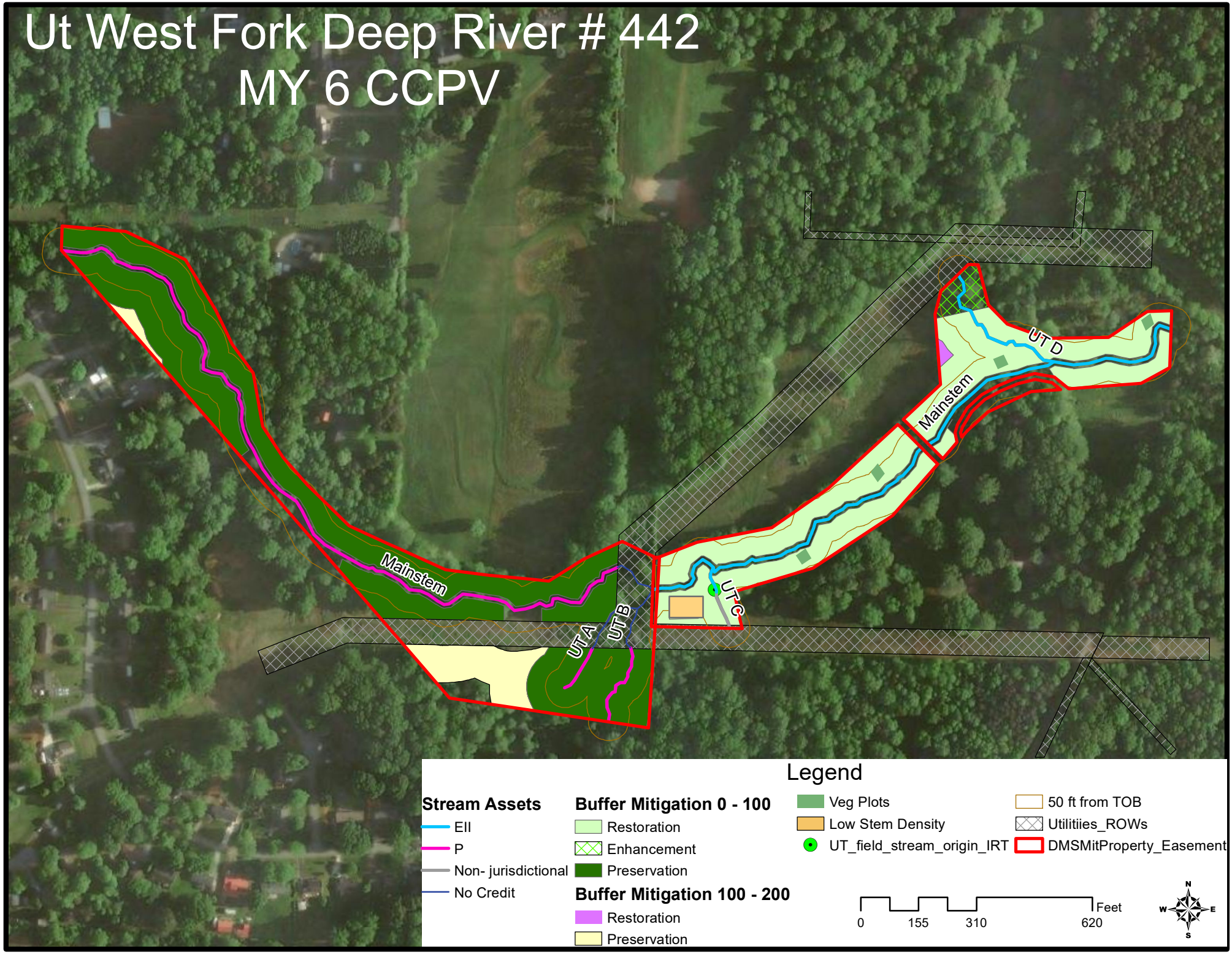
^ notes that the total project easement is 15.6 acres with 6 acres being replanted for the restoration project.

@ notes that the Valley Type is 8 (Broad Alluvial).

~ Reach contains both Chewacla and Wehadkee series.

Appendix B

Visual Assessment Data


Ut West Fork Deep River # 442
MY 6 CCPV
Mainstem
UT A
UT B
UT C
Mainstem
UT D
Legend
Stream Assets
EII
P
Non- jurisdictional
No Credit
Buffer Mitigation 0 - 100
Restoration
Enhancement
Preservation
Buffer Mitigation 100 - 200
Restoration
Preservation
Veg Plots
Low Stem Density
UT_field_stream_origin_IRT
50 ft from TOB
Utilitiies_ROWs
DMSMitProperty_Easement
0
155
310
620
Feet
N
W
E
S

Ut West Fork Deep River MY 6 Photo Log

Mainstem Upper Reach

Mainstem Mid Reach

Mainstem Lower Reach

Reach D

Ford Crossing

Appendix C
Vegetation Data

Table 6 **Ut West Fork Deep River Vegetation Condition Assessment MY 6**

Planted Acreage[1] **5.15**

Vegetation Category	Definitions	Mapping Threshold	CCPV Depiction	Number of Polygons	Combined Acreage	% of Planted Acreage
1. Bare Areas	Very limited cover of both woody and herbaceous material.	0.1 acres	Pattern and Color	0	0.00	0.0%
2. Low Stem Density Areas	Woody stem densities clearly below target levels based on MY3, 4, or 5 stem count criteria.	0.1 acres	Pattern and Color	1	0.12	2.3%
			Total	1	0.12	2.3%
3. Areas of Poor Growth Rates or Vigor	Areas with woody stems of a size class that are obviously small given the monitoring year.	0.25 acres	Pattern and Color	0	0.12	2.0%
			Cumulative Total	1	0.10	2.3%

Easement Acreage[2] **16.66**

Vegetation Category	Definitions	Mapping Threshold	CCPV Depiction	Number of Polygons	Combined Acreage	% of Easement Acreage
4. Invasive Areas of Concern[4]	Areas or points (if too small to render as polygons at map scale).	1000 SF	Pattern and Color	0	0.00	0.0%
5. Easement Encroachment Areas[3]	Areas or points (if too small to render as polygons at map scale).	none	Pattern and Color	0	0.00	0.0%

1 = Enter the planted acreage within the easement. This number is calculated as the easement acreage minus any existing mature tree stands that were not subject to supplemental planting of the understory, the channel acreage, crossings or any other elements not directly planted as part of the project effort.

2 = The acreage within the easement boundaries.

3 = Encroachment may occur within or outside of planted areas and will therefore be calculated against the overall easement acreage. In the event a polygon is cataloged into items 1, 2 or 3 in the table and is the result of encroachment, the associated acreage should be tallied in the relevant item (i.e., item 1,2 or 3) as well as a parallel tally in item 5.

4 = Invasives may occur in or out of planted areas, but still within the easement and will therefore be calculated against the overall easement acreage. Invasives of concern/interest are listed below. The list of high concern spcies are those with the potential to directly outcompete native, young, woody stems in the short-term (e.g. monitoring period or shortly thereafter) or affect the community structure for existing, more established tree/shrub stands over timeframes that are slightly longer (e.g. 1-2 decades). The low/moderate concern group are those species that generally do not have this capacity over the timeframes discussed and therefore are not expected to be mapped with regularity, but can be mapped, if in the judgement of the observer their coverage, density or distribution is suppressing the viability, density, or growth of planted woody stems. Decisions as to whether remediation will be needed are based on the integration of risk factors by EEP such as species present, their coverage, distribution relative to native biomass, and the practicality of treatment. For example, even modest amounts of Kudzu or Japanese Knotweed early in the projects history will warrant control, but potentially large coverages of Microstegium in the herb layer will not likley trigger control because of the limited capacities to impact tree/shrub layers within the timeframes discussed and the potential impacts of treating extensive amounts of ground cover. Those species with the "watch list" designator in gray shade are of interest as well, but have yet to be observed across the state with any frequency. Those in *red italics* are of particular interest given their extreme risk/threat level for mapping as points where isolated specimens are found, particularly ealry in a projects monitoring history. However, areas of discreet, dense patches will of course be mapped as polygons. The symbology scheme below was one that was found to be helpful for symbolzing invasives polygons, particulalry for situations where the conditon for an area is somewhere between isolated specimens and dense, discreet patches. In any case, the point or polygon/area feature can be symbolized to describe things like high or low concern and species can be listed as a map inset, in legend items if the number of species are limited or in the narrative

Appendix D

Project History Memo

Meeting Minutes: 10/13/15
IRT Site Visit Ut West Fork Deep River
CU 03030003
IMS # 442

Meeting Attendees:
Todd Tugwell-USACE, Andrea Hughes-USACE, John Thomas- USACE, Ginny Baker- NC DWR, Katie Merritt- NC DWR, Marissa Cox- NC DOT, Brad Chilton- NC DOT, Periann Russell- NC DMS, Melonie Allen- NC DMS

Meeting Location: 1609 Squire Davis Road, Kernersville NC (Forsythe & Guilford Co.)

A meeting request was submitted to the IRT (see request memo attached) by DMS for a site visit to the Ut West Fork Deep River. The intent of the request was to seek IRT input early in the re-design phase of the project, prior to the redrafting of the mitigation plan. DMS had re-evaluated the site and decided to scale back the originally submitted design to address concerns relating to existing constraints and site potential. The currently proposed plan for the Royle parcel, the furthest downstream reach of the project extent, is enhancement II. The remaining upstream project extent is proposed as preservation.

Enhancement II Reach(s):

DMS had previously contracted with Guilford Soil & Water to design agricultural BMPs, cattle exclusion fencing and two alternative watering stations, for this reach. The BMPs were installed by DMS through an informal contract in 2011. DMS has contracted to plant the entire easement area (5.14 ac) of the Royle parcel. The planting will consist of under and over story species. The planting specifications have been adapted for the site to require a minim of four sub-canopy species and two canopy species in areas where the canopy is approaching full coverage. Invasive species will also be treated in this area for a minimum of three years with a 95% eradication guarantee per the executed contract.

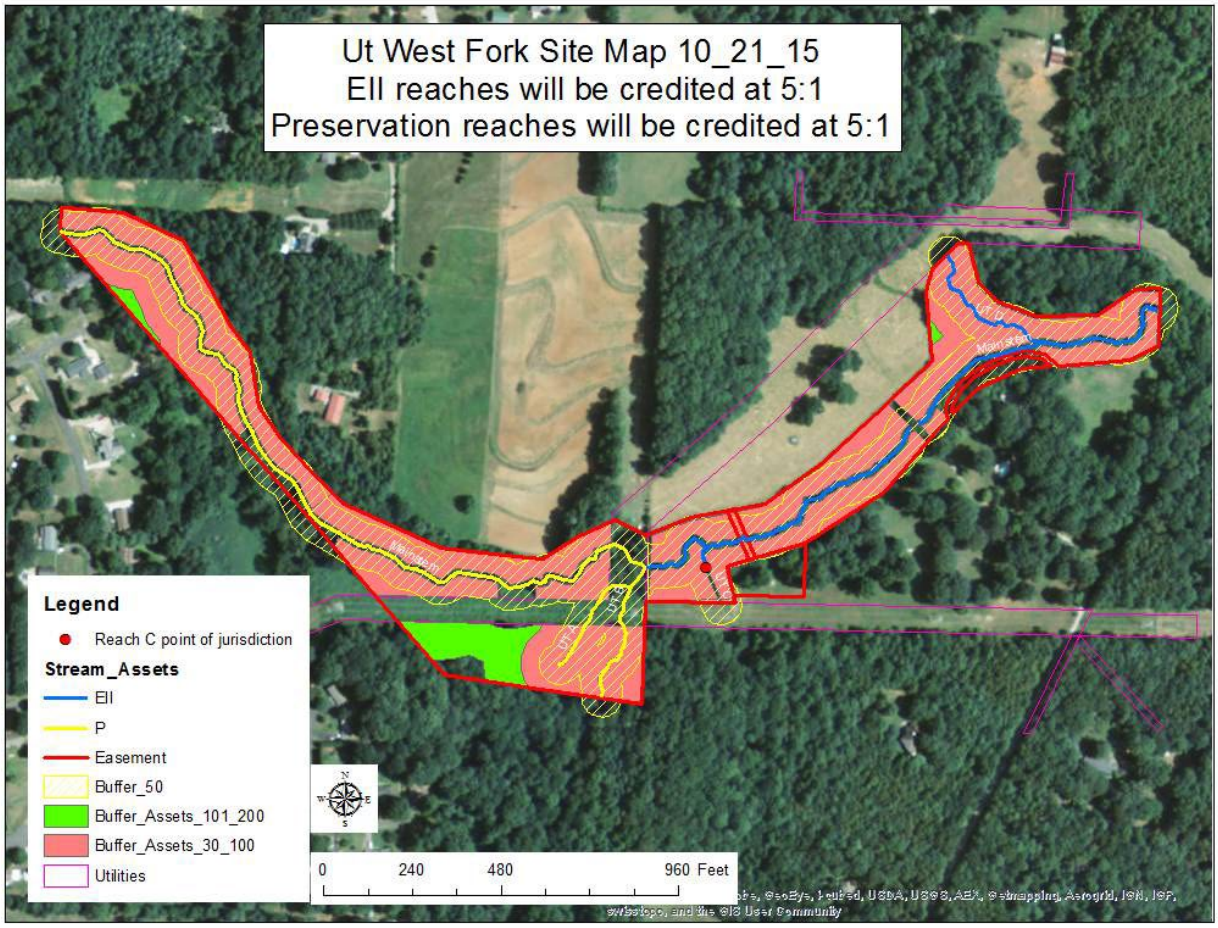
The project is located within and subject to the Randleman Watershed Buffer Rules and grandfathered to enable eligibility of buffer mitigation out to 200 feet from top of bank (TOB). Eligibility for buffer restoration and/or buffer enhancement adjacent to these reaches had been verified by NC DWQ (correspondence attached).Buffer restoration or enhancement will be assessed out to 200 feet at ratios of 1:1 and 2:1 respectively. Areas with buffer in excess of 200 ft. will be subject to the temporary consolidated buffer rule and credited at 2:1 under the alternative mitigation clause. Buffer credits will be refined and the credits associated with Ut C will be adjusted to reflect the jurisdictional call made on 10/13/15.

Preservation Reach(s):

This preservation reaches will not be planted or treated for invasives. Buffer preservation on these reaches will be sought pursuant to the temporary consolidated rule. The project is non-urban and all reaches are subject, credit will be sought on reaches with buffer widths of 30 feet or greater and associated credit ratios applied. Buffer credits will be refined and detailed in the mitigation plan.

The IRT was receptive to the scaled back approach for the EII reaches. However, given the current channel condition on the EII section, the common mitigation ratio of 1:2.5 was deemed inappropriate. A reduced ratio of 1:5 was agreed to for the EII reach. There was an adjustment of approximately 95 lf on Ut C based on stream origin call performed on site (located on attached map). The stream preservation reach will be credited at the common ratio of 1:5.
Visual monitoring (established photo points) will be required for a minimum of five years. Buffer mitigation will require the collection of vegetation plot data annually; this data will be included in the annual stream monitoring

reports as an auxiliary appendix but not tied to stream project success. Due to the lack of site disturbance no 404/401 permit will need to be issued for site work. It is anticipated that although monitoring reports will be submitted annually for post planting years 1 through 5, an IRT closeout site visit will likely not be necessary for this site.



Attachment 1. IRT Site Visit Request for 10/13/15 Meeting
Project Summary/Site Visit Request

TO: Interagency Review Team (IRT) members

FROM: Melonie Allen, DMS Project Manager

RE: Request for Establishment of Stream Enhancement and Preservation Mitigation Ratios
UT West Fork Deep River
CU 03030003; Forsythe & Guilford Counties
IMS # 442
Fund Code 2984

DATE: 10/01/2015

The Ut to West Fork Deep River is a DMS DBB stream mitigation project transferred to EEP in 2005 by NCDOT. There were a number of delays associated with the project including property acquisition (completion of original DOT acquisition held up by easement expansion), limited construction access and design concerns. The project was dropped by DMS in 2011 and resurrected in 2014 (see timeline below).

Brief Project History

Task	Date Completed
Project Transfer from NC DOT	? (2005)
EEP PRC Presentation	3/2007
EEP Project Designer Assigned	3/2007
Conceptual Plan	8/2008
Draft Mitigation Plan Submitted	9/2008
Final Mitigation Plan Approved	3/2009
404/401 submitted	4/15/2009
401/404 issued	11/24/2009 (expired 11/24/2011)
Draft Construction Plans Submitted	Project on hold/dropped 2010
Project resurrected	? 2014

Ut to the West Fork Site had a number of factors that resulted in a re-examination of the project's viability. The concerns associated with the site are:

1. Lateral constraint – the easement limits the belt width of the project
2. Vertical constraint – the existing conditions resulting from historical land use and ongoing stressors in the watershed have resulted in a channel that is both incised and entrenched through a combination of downcutting and aggradation of legacy sediment.
3. The project reach is located in a FEMA regulated zone.

These constraints have limited the design options for the site. Priority I restoration is not possible due to easement width as well as the length of the reach being insufficient to accommodate the profile adjustment that would be necessary to restore floodplain functionality. Priority II, the original design for the site, is also not a suitable solution for this reach in particular given that the site is currently functioning as a sand bed system. The long-term stability of the site would require that the sediment transport analysis be accurate not only for current conditions but also for future conditions in a developing watershed. A priority II restoration would entail the typical concerns associated with bank stabilization and vegetation establishment associated with working in subsoil as well as an added risk of potential for deposition on benches; which could ultimately re-create a stream system resembling the current condition. Stream enhancement I accomplished through dimension adjustment would have a similar risk. In lieu of the limited design options subject to uncertain success, planting the easement and treating the invasive species would benefit the site. DMS has funded the design and construction of agricultural BMPs on site. Fencing and alternative watering structures were designed by Guilford Soil & Water District and installed by DMS contractor in 2011. Given the work proposed; planting, invasive species treatment, cattle exclusion fencing and alternative watering, DMS is proposing a combination of stream

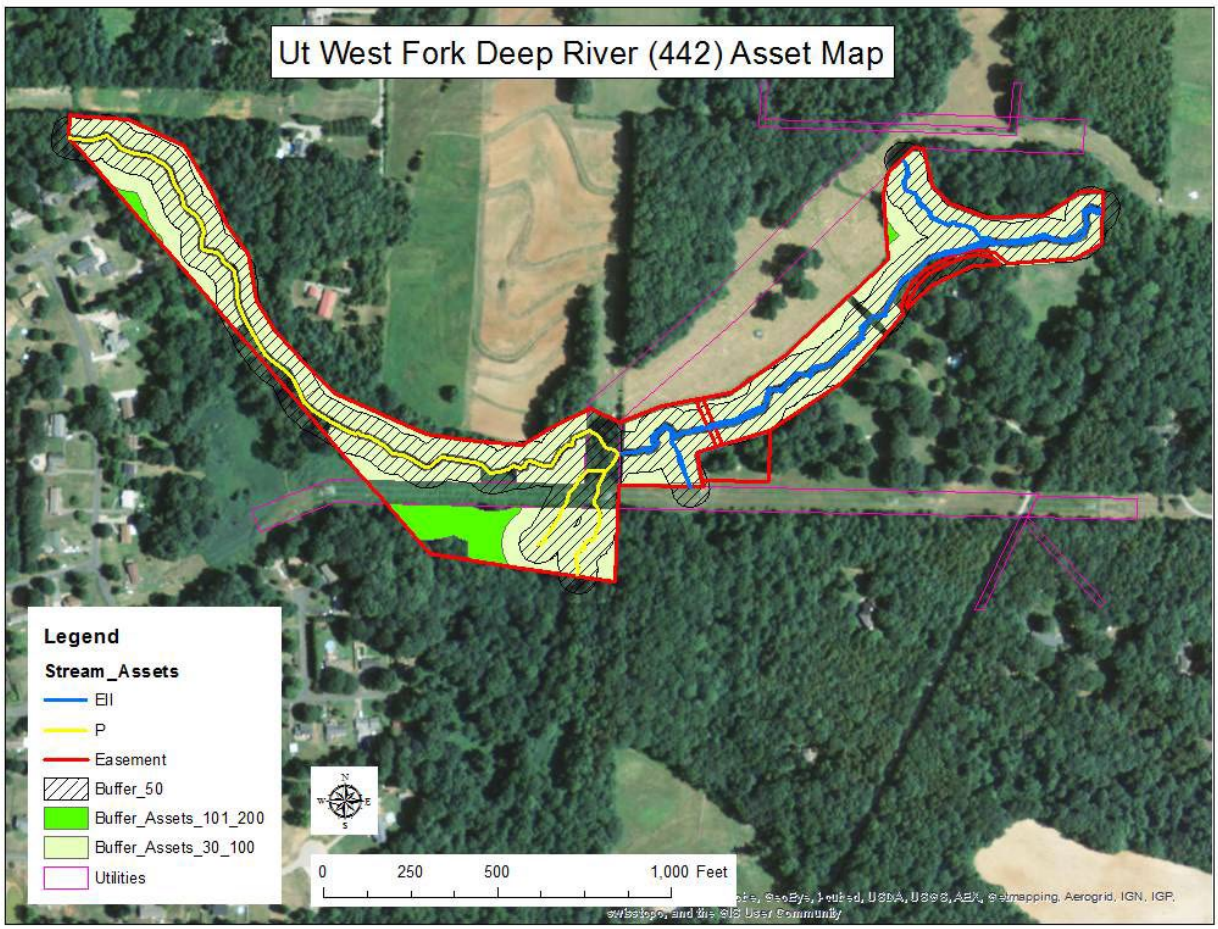
enhancement and preservation on Ut West Fork of Deep River. **Given the level of channel impairment, DMS is seeking IRT input on steam enhancement and preservation mitigation ratios.**

UT West Fork Deep River – Asset Summary

Type of Asset	Original Assets	Original Credits	Revised Assets*	Estimated Revised Credits
Stream Restoration (lf)	2201	2201	0	0
Stream Enhancement 1 (lf)	990	660	0	0
Stream Enhancement 2 (lf)	0	0	2456	?
Stream Preservation (lf)	2040	408	2775	?
Buffer Restoration & Enhancement (sq. ft.)	237837	237837	242,372	

*Buffer assets were revised to reflect the 2014 Consolidated Temporary Buffer Rules, will be re-evaluated and verified at mitigation plan stage; stream assets to be determined.

Project Location: 1609 Squire Davis Rd Kernersville, NC 27284



Attachment 2. DWQ Buffer Correspondence

From: Homewood, Sue
Sent: Monday, September 26, 2011 9:39 AM
To: Allen, Melonie
Subject: RE:

Perfect. I would leave it exactly as you have in this map. Since the enhancement area is both sides of that UT and 50 feet wide then I think it's worth calling them out as a separate area.

Sue Homewood
NC DENR Winston-Salem Regional Office
Division of Water Quality
585 Waughtown Street
Winston-Salem, NC 27107
Voice: (336) 771-4964
FAX: (336) 771-4630

From: Allen, Melonie
Sent: Monday, September 26, 2011 9:35 AM
To: Homewood, Sue
Subject: RE:

This may help clarify, the red cross hatched areas are the areas that qualified for buffer restoration (as measured on the Ut and the downstream reach of the main stem by the plot data from plots 3,4,5) the green simple hatch at the top of the Ut is the area that qualified for buffer enhancement (included plots 1&2)

Melonie Allen
NC EEP

From: Homewood, Sue
Sent: Monday, September 26, 2011 9:20 AM
To: Allen, Melonie
Subject: RE:

Can you draw that in on a map? That's not quite making sense to me, I'm sorry.

Sue Homewood
NC DENR Winston-Salem Regional Office
Division of Water Quality
585 Waughtown Street
Winston-Salem, NC 27107
Voice: (336) 771-4964
FAX: (336) 771-4630

From: Allen, Melonie
Sent: Monday, September 26, 2011 9:17 AM
To: Homewood, Sue
Subject: RE:

It does, we were trying to be conservative and measuring areas along the UT which had the max. number of trees and were surprised to find that the only area that qualified for enhancement was the area that the four of us were standing at

as we discussed the buffer. The upper section of the Ut (plots 1 &2 on stream left and right) were enhancement and all other plots downstream and along the main stem were restoration. I didn't think that it would be prudent to categorize the entire reach as restoration given the upper areas stem counts but it is a small area (about 50 lf along the channel) that qualified for enhancement. In this case, what would you recommend?
Thanks,
Melonie

Melonie Allen
NC EEP
E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties.
From: Homewood, Sue
Sent: Monday, September 26, 2011 9:08 AM
To: Allen, Melonie
Subject: RE:

Hi Melonie,

Amy's last name is Euliss.

With your stem count plots, it looks like you have a combination of restoration and enhancement. One thing I don't think DWQ would want to see is lots of individual plots that vary between restoration and enhancement. If that area can reasonably be broken up into two sections, then that would be fine, but if it goes back and forth between restoration and enhancement every 50 or so feet, that would probably be problematic. Does that make sense?

Sue Homewood
NC DENR Winston-Salem Regional Office
Division of Water Quality
585 Waughtown Street
Winston-Salem, NC 27107
Voice: (336) 771-4964
FAX: (336) 771-4630

E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties.

From: Allen, Melonie
Sent: Friday, September 23, 2011 3:59 PM
To: Homewood, Sue
Cc: Corson, Kristie
Subject:

Sue,
Thanks again for meeting Kristie and I on Monday at Ut West Fork of Deep River, your input was very helpful. I've attached my meeting notes which includes a summary of the plot data collected after you and Amy left and a map of the plot locations. I'm not sure yet when this site will be submitted for permit since we are still seeking construction access. Sorry about omitting Amy's last name.
Have a great weekend,
Melonie

PLEASE NOTE MY NEW E-MAIL ADDRESS: Melonie.Allen@ncdenr.gov

Melonie Allen
Central Project Manager
NCDENR- Ecosystem Enhancement Program
919-368-9352 (p)

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Ut West Fork Deep River Buffer Clarification Meeting
On site- Royle Parcel: 9/19/2011
Attendees: Sue Homewood, Amy ?: DWQ
Kristie Corson, Melonie Allen: EEP

This meeting resulted from a request by EEP to DWQ to meet on site to discuss three points:

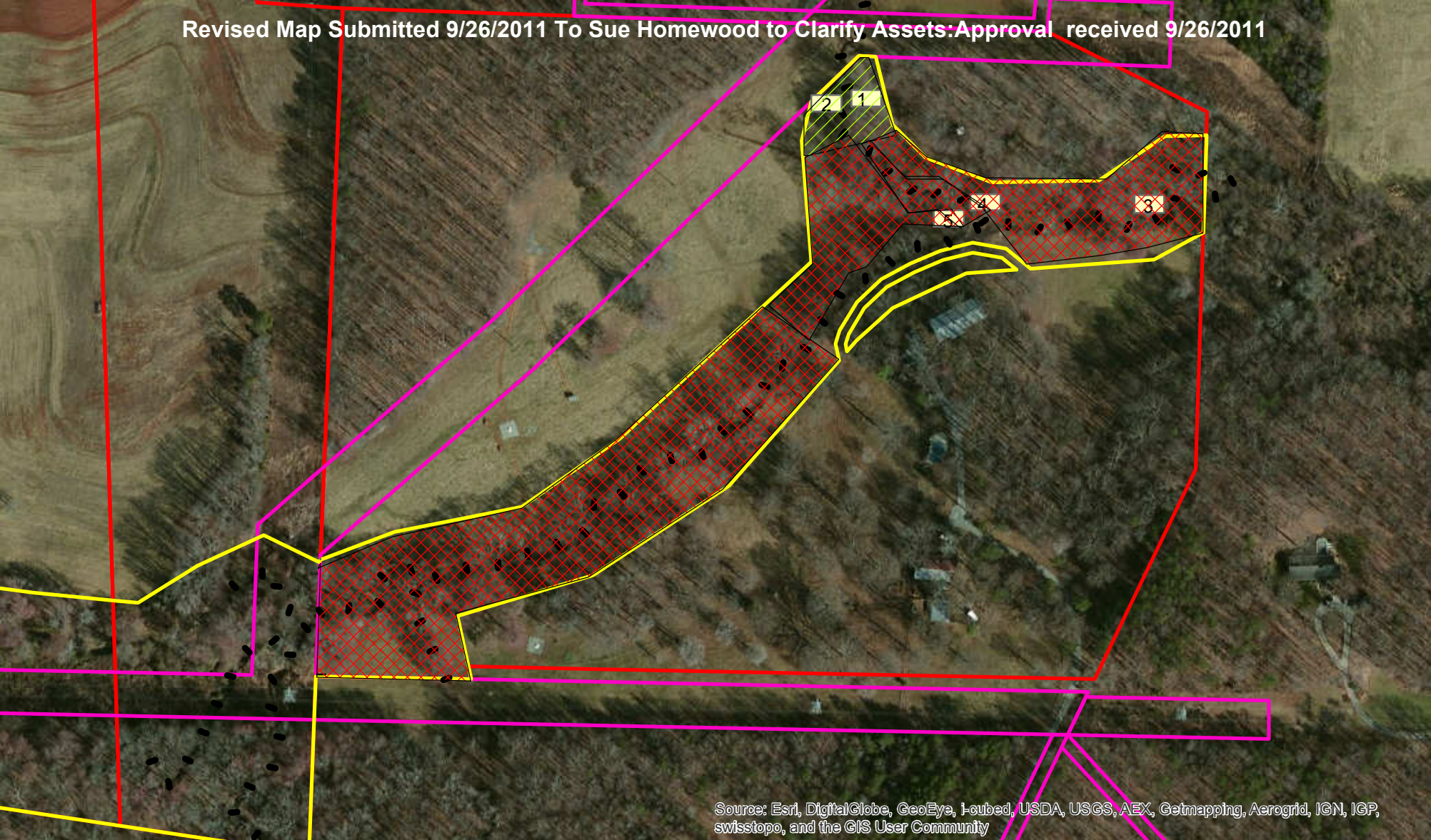
1. Clarification on best approach on method of measurement of potential buffer restoration/enhancement for the Ut West Fork Deep River EEP Stream restoration & enhancement project which lies within the Randleman Reservoir watershed and is subject to the Randleman Buffer Rules.
   - Site visit began by walking the upper reach (stream right, west of the existing ford crossing) of the main stem of the Ut W. Fork of Deep River on the Royle parcel to see a representative reach that was proposed for buffer restoration. This reach was deemed applicable for buffer restoration*.
   - The site visit continued by walking to 'UT D' which is the tributary north of the main stem downstream of the ford crossing. Discussion on this reach resulted in guidance to divide the buffer mitigation areas by number of existing trees and establish vegetation plots in areas where restoration/enhancement breaks may exist. These plots were established by the following method:
     - Plots representative of the existing vegetation in the vicinity were established.
     - Each plot measured 50 lf (length along existing thalweg as measured along Top of Bank) by 50 lf (measured from Top of Bank perpendicular to channel) for a total of 2,500 sq. ft = .05739 ac.
     - All trees with DBH (measured at 4.5 ft) equal to or greater than 5 inches were tallied within each plot.
     - The number of trees within each plot was then extrapolated to yield a stems/acre tally (break point for 50 ft x 50 ft plots for restoration (0-100 tpa/enhancement (100 – 200 tpa) is 5.7 for restoration and 11.5 for enhancement).
     - Plot data for attached map:
       - Plot 1 = 10 trees = 174 TPA; enhancement
       - Plot 2 = 9 trees = 156 TPA; enhancement
       - Plot 3 = 5 trees = 87 TPA; restoration
       - Plot 4 = 5 trees = 87 TPA; restoration
       - Plot 5 = 4 trees = 69 TPA; restoration
   - This concluded the buffer mitigation restoration vs. enhancement discussion as the two reaches visited represented the buffer mitigation reaches to be proposed.

2. Clarification on 'potentially allowable' temporary access road through existing mature buffer on upstream end of project site.
- Temporary access road may be allowable if is the only viable access route to complete the project. Documentation to support all other alternative routes sought must be submitted with application to allow construction of the road and the road must be designed to minimize impacts. All impacts associated with the road must be restored and the restoration efforts monitored to ensure success.

3. Verification that buffer mitigation would not be allowable on main stem of Ut W. Fork of Deep River absent stream work.
- Main stem of Ut West Fork is not eligible for buffer credits without stabilizing the stream; Ut D may be eligible for buffer without associated stream work.

* All proposed buffer restoration and enhancement will be re-evaluated to ensure buffer widths and other criteria are met post construction.

Revised Map Submitted 9/26/2011 To Sue Homewood to Clarify Assets:Approval received 9/26/2011



Original Map submitted with 9/19/211 email to schedule DWR Site Visit