

**Deaton Farm Stream Restoration  
Randolph County, North Carolina  
Annual Monitoring Report**  
Monitoring Year: 2005



Monitoring Year: 2005  
Measurement Year 3  
Construction Date: 2003  
Project Design by HSMM, Raleigh, NC  
NCEEP Project Number: 110

February 2006

**DEATON FARM STREAM RESTORATION 2005 MONITORING REPORT**

CONDUCTED FOR THE NORTH CAROLINA DEPARTMENT  
OF  
ENVIRONMENT AND NATURAL RESOURCES

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## **I Executive Summary/Project Abstract**

The Deaton Farm Stream Restoration Site includes 5,050 linear feet along four unnamed tributaries to Fork Creek near Coleridge in Randolph County, North Carolina. The site was constructed in January 2003 by the North Carolina Department of Transportation (NCDOT). The following report is the 2005 Annual Monitoring Report: Year 3 for the two main tributaries: Northern and Southern Tributary. The two smaller tributaries were not surveyed.

New cross section and longitudinal benchmarks were established. Therefore it is difficult to compare cross section data to previous years. However, the project appears to be doing very well and no problem areas were observed. The vegetation has done well in the floodplain and along the banks. Many sections of the Southern Tributary were dry or contained only standing water in pools during the field survey in late fall.

The vegetation monitoring of the site revealed an average tree density of 357 trees per acre. This average is above the minimum criteria of at least 320 stems per acre after 3 years. Seedlings from natural recruitment are very low. No additional plantings are recommended at this time, but close monitoring of future survivorship may indicate additional plantings.

## **II Project Background**

### **A. Location and Setting**

The Deaton Farm Stream Restoration Site includes 5,050 linear feet and a conservation easement of 13.7 acres along four unnamed tributaries to Fork Creek, in Randolph County. The site is located between Asheboro and Coleridge on the west side of Erect Road (SR 1003) in the southeastern portion of Randolph County, North Carolina (**Figure 1**).

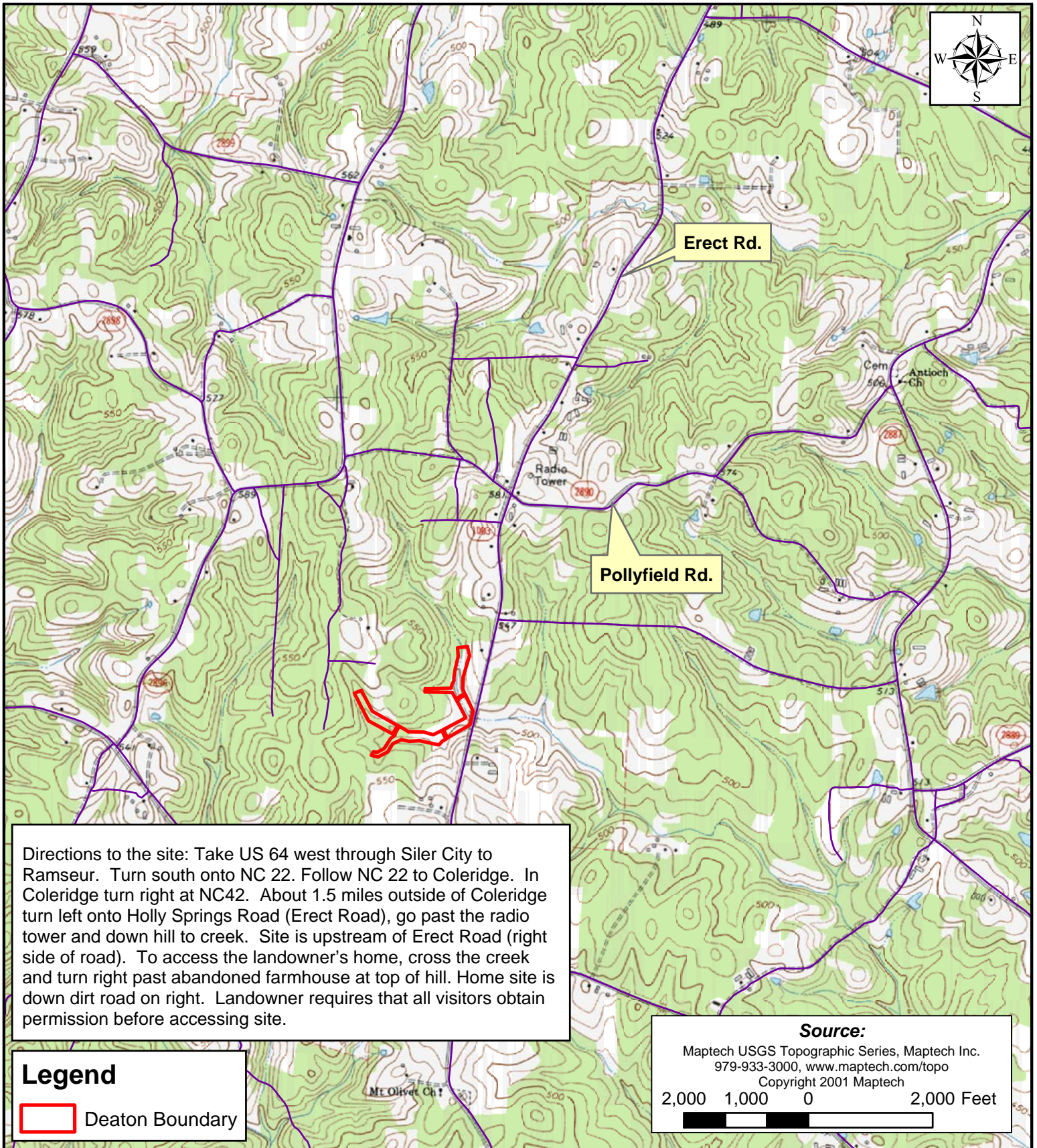
Directions to the site: Take US 64 west through Siler City to Ramseur. Turn south onto NC 22. Follow NC 22 to Coleridge. In Coleridge turn right at NC42. About 1.5 miles outside of Coleridge turn left onto Holly Springs Road (Erect Road), go past the radio tower and down hill to creek. Site is upstream of Erect Road (right side of road). To access the landowner's home, cross the creek and turn right past abandoned farmhouse at top of hill. Home site is down dirt road on right. Landowner requires that all visitors obtain permission before accessing site.

### **B. Mitigation Structure and Objectives**

Successful stream mitigation is demonstrated by a stable channel that neither aggrades nor degrades over time. It is also demonstrated by reduced erosion rates, the permanent establishment of native vegetation, and bed features consistent with the design stream type. Vegetation survival is based on federal guidelines denoting success criteria for wetland mitigation.


Approximately 4,100 linear feet were surveyed along the two main tributaries, identified as the northern unnamed tributary (UT) and the southern UT in this report (**Figure 2**). Several smaller






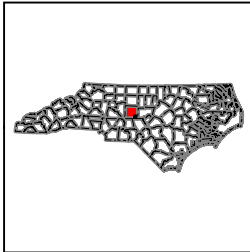
Directions to the site: Take US 64 west through Siler City to Ramseur. Turn south onto NC 22. Follow NC 22 to Coleridge. In Coleridge turn right at NC42. About 1.5 miles outside of Coleridge turn left onto Holly Springs Road (Erect Road), go past the radio tower and down hill to creek. Site is upstream of Erect Road (right side of road). To access the landowner's home, cross the creek and turn right past abandoned farmhouse at top of hill. Home site is down dirt road on right. Landowner requires that all visitors obtain permission before accessing site.

**Legend**

 Deaton Boundary

**Source:**  
 Maptech USGS Topographic Series, Maptech Inc.  
 979-933-3000, [www.maptech.com/topo](http://www.maptech.com/topo)  
 Copyright 2001 Maptech

2,000 1,000 0 2,000 Feet

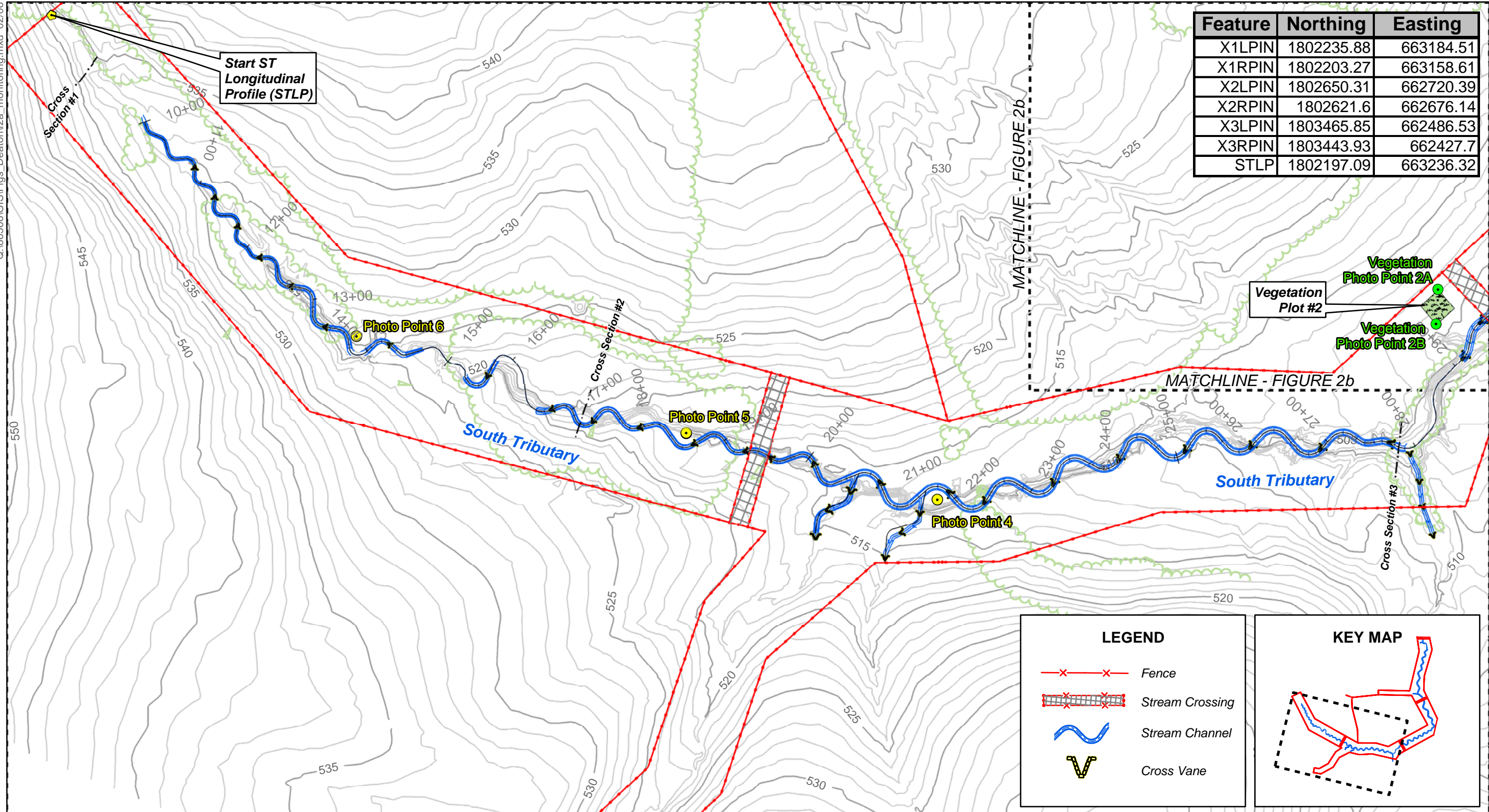
**FIGURE 01  
VICINITY MAP**

Deaton Stream Mitigation Site  
 Randolph County, North Carolina

Map Produced: February 2006



Feature	Northing	Easting
X1LPIN	1802235.88	663184.51
X1RPIN	1802203.27	663158.61
X2LPIN	1802650.31	662720.39
X2RPIN	1802621.6	662676.14
X3LPIN	1803465.85	662486.53
X3RPIN	1803443.93	662427.7
STLP	1802197.09	663236.32

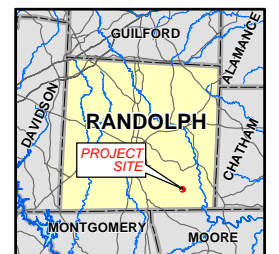
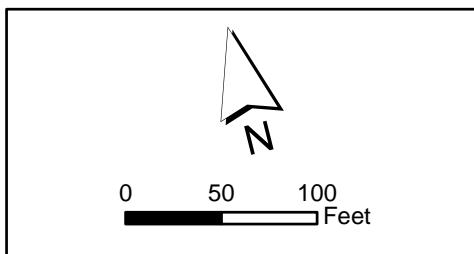


**LEGEND**

- Fence
- Stream Crossing
- Stream Channel
- Cross Vane

**KEY MAP**

Station	Restoration
10+00 to 14+00	Priority 1
14+00 to 17+00	Priority 2
17+00 to 27+00	Priority 1
27+00 to 30+00	Priority 2
30+00 to 35+00	Priority 1

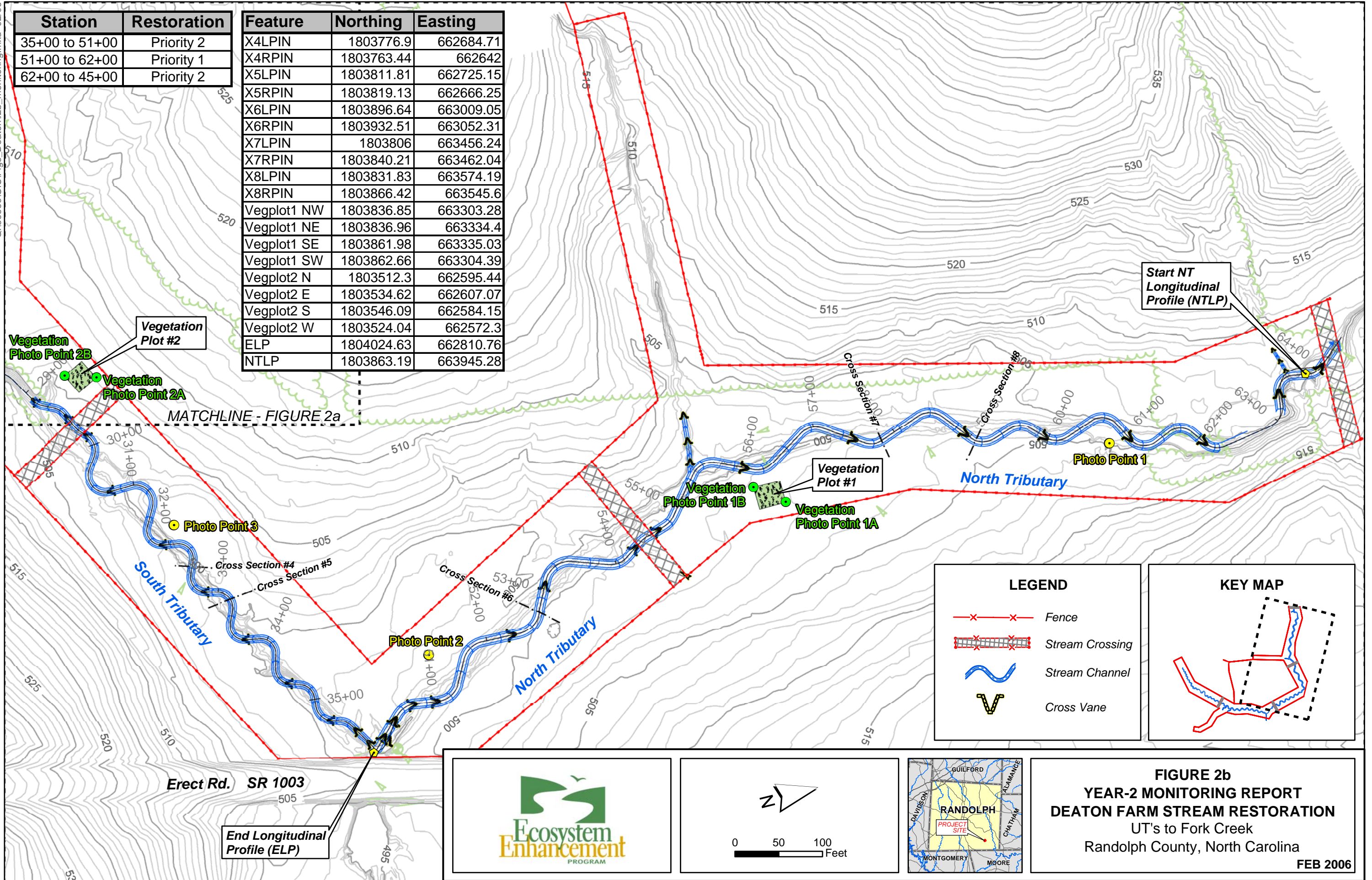


**FIGURE 2a**  
**YEAR-2 MONITORING REPORT**  
**DEATON FARM STREAM RESTORATION**  
 UT's to Fork Creek  
 Randolph County, North Carolina  
 FEB 2006

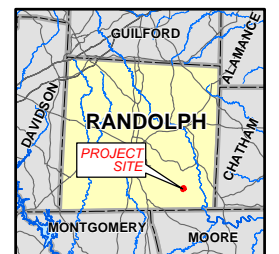
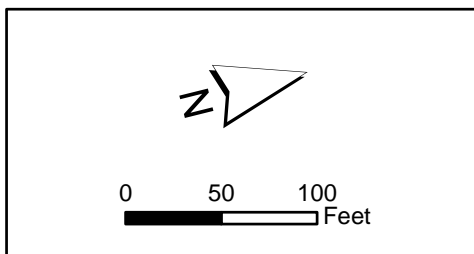


Station	Restoration
35+00 to 51+00	Priority 2
51+00 to 62+00	Priority 1
62+00 to 45+00	Priority 2

Feature	Northing	Easting
X4LPIN	1803776.9	662684.71
X4RPIN	1803763.44	662642
X5LPIN	1803811.81	662725.15
X5RPIN	1803819.13	662666.25
X6LPIN	1803896.64	663009.05
X6RPIN	1803932.51	663052.31
X7LPIN	1803806	663456.24
X7RPIN	1803840.21	663462.04
X8LPIN	1803831.83	663574.19
X8RPIN	1803866.42	663545.6
Vegplot1 NW	1803836.85	663303.28
Vegplot1 NE	1803836.96	663334.4
Vegplot1 SE	1803861.98	663335.03
Vegplot1 SW	1803862.66	663304.39
Vegplot2 N	1803512.3	662595.44
Vegplot2 E	1803534.62	662607.07
Vegplot2 S	1803546.09	662584.15
Vegplot2 W	1803524.04	662572.3
ELP	1804024.63	662810.76
NTLP	1803863.19	663945.28



**KEY MAP**



**FIGURE 2b**  
**YEAR-2 MONITORING REPORT**  
**DEATON FARM STREAM RESTORATION**  
 UT's to Fork Creek  
 Randolph County, North Carolina  
 FEB 2006

tributaries entering both the main tributaries were not surveyed as part of this assessment. The unnamed tributaries to Fork Creek are on an active cattle farm. Priority Level I and II restorations were completed along both tributaries at the site. Construction involved establishing a new channel along each reach. Cross vanes were installed for grade control and bank stability. The adjacent streambanks were re-sloped to reduce overall erosion. It also included the installation of native vegetation and livestock management practices, including a 50-foot riparian buffer and at-grade stream crossings in several locations.

Monitoring activities in 2005 reflect the third formal year of monitoring following the restoration efforts. Included in this report are analyses on stability (primarily the longitudinal profile and cross sections) and site photographs. Earth Tech conducted monitoring activities in 2005.

According to the stream mitigation plan, the following objectives were proposed:

- Protection of the streams, including the smaller tributaries, and riparian zones via 50-foot conservation easements;
- Protection of the riparian zones vegetation from grazing by fencing livestock out of the easement area and installing watering tanks, stream crossings, etc.;
- Enhancement of overall stability by establishing the correct width/depth ratio, reducing entrenchment, sloping banks, and planting woody vegetation along the northern UT and southern UT tributaries to Fork Creek;
- Installation of rock cross vanes along eroding sections of the creek to reduce erosion and provide habitat diversity;
- Enhancement of instream habitat by constructing a series of cross vanes;
- Establishment of the proper width/depth by narrowing the channel and establishing a floodplain; and
- Planting of native trees, shrubs, and ground cover that will help to stabilize the stream banks, establish shade, and provide wildlife cover and food.

<b>Project Segment</b>	<b>Mitigation Type</b>	<b>Approach</b>	<b>Linear Footage</b>	<b>Stationing</b>	<b>Comment</b>
Reach I (Southern Tributary)	R	PI/ PII	2687 ft	00+00 - 26+87	Level Priority I and Priority II restoration was performed on both streams
Reach II (Northern Tributary)	R	PI/ PII	1366 ft	00+00 - 13+66	Level Priority I and Priority II restoration was performed on both streams

R=Restoration  
PI=Priority I  
PII=Priority II



<b>Table II. Project Activity and Reporting History Deaton Farm Stream Restoration Site/Number 110</b>			
<b>Activity or Report</b>	<b>Scheduled Completion</b>	<b>Data Collection Complete</b>	<b>Actual Completion or Delivery</b>
Restoration Plan	N/A	N/A	N/A
Final Design	N/A	N/A	July 2002
Construction	N/A	N/A	January 2003
Temporary S&E mix applied	N/A	N/A	N/A
Containerized and B&B plantings for each reach/segment	N/A	N/A	February 2003
Mitigation Plan/As-built (Year 0 Monitoring – baseline)	N/A	N/A	N/A
Year 1 Monitoring (Vegetation)	N/A	N/A	June 2003
Year 1 Monitoring (Channel)	N/A	N/A	September 2003
Year 2 Monitoring(Vegetation)	N/A	N/A	July 2004
Year 2 Monitoring (Channel)	N/A	N/A	August 2004
Year 3 Monitoring(Vegetation)	N/A	Nov. 2, 2005	December 2005
Year 3 Monitoring (Channel)	N/A	Nov.15, 2005	December 2005
Year 4 Monitoring	Fall 2006	Fall 2006	
Year 5 Monitoring	Fall 2007	Fall 2007	

N/A – Historical project documents necessary to provide this data were unavailable at the time of this report submission.

### C. Project History and Background

The project background information was extracted from Annual Monitoring Reports dated December 2003 and October 2004, prepared by the NCDOT, Office of Natural Environment and Roadside Environmental Unit. The Deaton Mitigation Site consists of priority I and II stream restoration of approximately 5,050 linear feet along the unnamed tributaries to Fork Creek. Approximately 4,100 linear feet of channel were surveyed along the two main tributaries. The site is an active cattle farm and formerly cattle had access to the stream channels causing damage to the riparian zone, soil erosion and channel degradation.

<b>Table III. Project Contact Table Deaton Farm Stream Restoration Site/Number 110</b>	
Designer	HSMM 1305 Navaho Drive, Suite 303 Raleigh, NC 27609
Primary project design POC	H. R. Currin
Construction Contractor Construction Contractor POC	NCDOT
Planting Contractor Planting Contractor POC	N/A
Seeding Contractor Planting Contractor POC	N/A
Seed Mix Sources	N/A
Nursery Stock Suppliers	N/A

<b>Table III. Project Contact Table Deaton Farm Stream Restoration Site/Number 110</b>	
Monitoring Performers (2003 and 2004)	Mulkey Engineers & Consultants 6750 Tryon Road Cary, North Carolina 27511
Monitoring Performers (2005)	Earth Tech 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607
Stream Monitoring POC	Ron Johnson (919) 854-6210
Vegetation Monitoring POC	Ron Johnson (919) 854-6210
Wetland Monitoring POC	No Wetlands at site

N/A – Historical project documents necessary to provide this data were unavailable at the time of this report submission.

<b>Table IV. Project Background Table Deaton Farm Stream Restoration Site/Number 110</b>	
Project County	Randolph
Drainage Area	
Southern Tributary	0.15 square miles
Northern Tributary	0.35 square miles
Drainage impervious cover estimate (%)	
Northern unnamed tributary	< 1%
Southern unnamed tributary	< 1%
Stream order	
Northern unnamed tributary	1 <sup>st</sup> Order
Southern unnamed tributary	1 <sup>st</sup> Order
Physiographic region	Piedmont
Ecoregion	Carolina Slate Belt (45c)
Rosgen classification of As-built	C4
Dominant soil types	Callison and Lignum
Reference site ID	N/A
USGS HUC for Project	USGS Unit: 03030003 (Deep River)
NCDWQ sub-basin for project	03-06-09
NCDWQ classification for project and reference	C (Fork Creek and unnamed tributaries)
Any portion of project segment upstream of a 303d listed segment	No
Reasons for 303d listing or stressor	N/A
Percent of project easement fenced	100



### III Project Condition and Monitoring Results

#### A. Vegetation Assessment

##### 1. Soil Data

Series	Max Depth (in.)	% Clay on Surface	K	T	OM %
Callison	40	4 – 20	.43	3	0.5 - 2
Lignum	60	10 - 25	.3	4	0.5 - 2

##### 2. Vegetation Problem Areas

No vegetation problem areas were identified at this site during this monitoring period. Therefore, Table VI is not applicable for this monitoring period.

##### 3. Stem Counts

Using the established plots previously monitored, two plots were surveyed November 2, 2005 for the 2005-monitoring season. No reference area was studied; therefore no comparisons could be made to reference conditions.

Tree species planted include green ash (*Fraxinus pennsylvanica*), willow oak (*Quercus phellos*), water oak (*Quercus nigra*), laurel oak (*Quercus laurifolia*), and southern red oak (*Quercus falcata*) (Table VII). No shrubs were planted at this site.

Species		Plots (50 FT X 50 FT)			*Initial Planting	Year 1 Totals	Year 2 Totals	Year 3 Totals	Survival %
Scientific Name	Common Name	Plot 1	Plot 2	Total Stems					
<i>Fraxinus pennsylvanica</i>	Green ash	5	8	13		11	15	13	
<i>Quercus phellos</i>	Willow oak	13	1	14		22	16	14	
<i>Quercus nigra</i>	Water oak	0	1	1		6	2	1	
<i>Quercus laurifolia</i>	Laurel oak	4	0	4		8	3	4	
<i>Quercus falcata</i>	Southern red oak	0	9	9		1	1	9	
<b>Total Trees</b>		<b>22</b>	<b>19</b>	<b>41</b>	<b>94</b>	<b>48</b>	<b>37</b>	<b>41</b>	<b>44%</b>

**Notes:** Percent survival calculated for current year based on initial count at planting.

The average plot density is 357 stems per acre and the most dominant species are green ash and willow oak. Survival has stabilized after the Year 1 monitoring. It is noted that the estimated stems per acre have increased from previously reported due to the way Earth Tech has calculated density. Previous density calculations were based on the assumption that 680 stems per acre were planted changes were reported as a percent reduction. The current estimated is based on the plot size (2,500 square feet) and shows that an estimated 819 stems per acre were initially planted (based on reported stems counted per plot). Photographs were taken at all permanent photo points (Appendix A). The photographs show that vegetation is generally growing well and is a good combination of woody and herbaceous growth.

Success criteria for vegetation state that there must be a minimum of 320 stems per acre living after three years and 260 stems per acre living after five years. This site appears to meet the established success criteria after three years.

The herbaceous vegetation is moderately dense in both plots with approximately 90 percent coverage in plot 1 and 85 percent coverage in plot 2. Species include: beaked panicgrass (*Panicum anceps*), common rush (*Juncus effusus*), dog fennel (*Eupatorium capillifolium*), pasture thistle (*Cirsium pumilum*), Pennsylvania smartweed (*Polygonum pennsylvanicum*), sedge (*Carex* sp.), sharpwing monkeyflower (*Mimulus alatus*), and tall pasture fescue (*Lolium arundinaceum*).

## **B Stream Assessment**

Earth Tech personnel performed a site visit at Deaton Farm mitigation site on November 7 through 15, 2005. During the field visit notes were made regarding the condition of the stream restoration project. Overall, the project is doing well having only a few areas with minor erosion or minimal vegetation.

Photographs were taken at all permanent photo points. Banks are stable with no unusual bank erosion.

### **1. Morphometric Criteria**

The assessment included the survey of eight total cross sections associated with both tributaries, as well as the longitudinal profiles. Cross section locations established for Monitoring Year 1 and 2 were not properly benchmarked and flagged. Many were not located due to the dense vegetation. While at least one wooden stake was found for each cross section location, no permanent metal pins identifying the end of each cross section were located. During this survey each end of the longitudinal profile and both the left and right stream banks of each cross section were set with a rebar benchmark. The location of the rebar benchmark is also marked with wooden survey stakes. Cross sections are located at the following locations.

- Cross Section #1. Southern UT, Station 0+69, midpoint of pool
- Cross Section #2. Southern UT, Station 8+63, midpoint of riffle
- Cross Section #3. Southern UT, Station 19+00, midpoint of riffle
- Cross Section #4. Southern UT, Station 23+36, midpoint of riffle
- Cross Section #5. Southern UT, Station 24+17, midpoint of pool
- Cross Section #6. Northern UT, Station 4+51, midpoint of pool
- Cross Section #7. Northern UT, Station 5+76, midpoint of riffle
- Cross Section #8. Northern UT, Station 10+91, midpoint of riffle

All of the cross section locations appeared stable with little or no active bank erosion. Survey data collected during future monitoring periods may vary depending on actual location of rod placement and alignment; however, from this point forward this information should remain similar in overall appearance.

When comparing morphological parameters with previous year's data many of the cross sections exhibit significant differences. These differences appear to be due to the relocation of the cross sections as well as determination of a bankfull elevation higher than what may have been previously identified.



## **2. Hydrologic Criteria**

Monitoring requirements state that at least two bankfull events must be documented through the five-year monitoring period. No surface water gauges exist on Fork Creek or its tributaries. A review of known U.S. Geological Survey (USGS) surface water gauges identified three gauges within 21 miles (32 kilometers) of the mitigation site: one on the Rocky River near Crutchfield Crossroads, one on the Deep River near Ramseur, and one on Tick Creek approximately 5 miles southeast of Siler City. The gauge station on the Deep River near Ramseur is located closest to the project site; however, its large 349 square mile drainage area likely does not accurately reflect the hydrology and precipitation of the Deaton Site.

The Rocky River gauge was utilized for this report because it is the smaller of the remaining two gages. The Rocky River gauge has a 7.42 square-miles drainage area as compared to the 15.5 square-miles drainage area associated with Tick Creek. The restoration site has a drainage area of 0.6 square-miles. The Rocky River gauge is situated in USGS Hydrologic Unit 03030003 and has a datum of 620 feet above sea level NGVD29. Based on the drainage area associated with the gauge, the correlated bankfull discharge according to the NC Rural Piedmont Regional Curves is between 342 and 413 cubic feet per second (cfs). Based on the USGS data, two bankfull events may have occurred during 2005, one in January and one in March. The March 2005 event approached 400 cfs, while the January 2005 event is almost 500 cfs. The event discharge amount was not available. The USGS graph depicting these peak flows is presented in **Appendix C**. Also, according to the 2004 monitoring report, two bankfull events may have also occurred during 2003.

## **3. Bank Stability Assessments**

Bank stability and sediment transport are not required to be monitored for this former NCDOT restoration site. Therefore Table IX BEHI and Sediment Export Estimates are not applicable.

## **4. Problem Areas**

During the 2005 monitoring, two small problem areas were noted, both involving headcuts in the Southern Tributary. One of these was noted during the 2004 monitoring and the other was a new observation. Because of the small drainage area there was very little water in the Southern Tributary during this monitoring period. This is probably helping to limit further headcutting. Vegetation is filling in bare areas along the banks, stabilizing these areas and preventing erosion of the channel. Because of the small contributing drainage area and the absence of water or active erosion in this section of channel, these headcuts are not considered a significant problem at this time and no remedial action is needed. It is recommended that they continue being watched to ensure they do not progress. Should this area progress in the future remedial action may be required.

The cross vane structures reported as having rocks fallen into the middle of the channel were not observed. The areas of active erosions and scour noted in 2004 appear to have stabilized and were not observed in 2005. No other problems were observed. No significant deposition was noted beyond normal sediment transport. The areas described and evaluated in the 2004 Monitoring Report for active erosion, scour, and sediment deposition appeared to have stabilized during the current monitoring period.

<b>Table X. Stream Problem Areas Deaton Farm Stream Restoration Site/Number 110</b>			
<b>Feature/Issue</b>	<b>Station # /Range</b>	<b>Probable Cause</b>	<b>Photo #</b>
Headcut-minor	Southern Trib 5+34	Soils	N/A
	Southern Trib 19+12	Cross vane/ soils	

<b>Table XI. Categorical Stream Feature Visual Stability Assessment Deaton Farm Stream Restoration Site/Number 110</b>					
<b>Segment/Reach: Southern Tributary (2,697 feet)</b>					
<b>Feature</b>	<b>MY-01</b>	<b>MY-02</b>	<b>MY-03</b>	<b>MY-04</b>	<b>MY-05</b>
A. Riffles	100%	100%	100%		
B. Pools	100%	97%	100%		
C. Thalweg	100%	100%	100%		
D. Meanders	100%	97%	100%		
E. Bed General	99%	99.8%	99.8%		
F. Vanes/J Hooks etc.	89%	89%	100%		
G. Rootwads and Boulders	N/A	N/A	N/A		
<b>Segment/Reach: Northern Tributary (1,364 feet)</b>					
<b>Feature</b>	<b>MY-01</b>	<b>MY-02</b>	<b>MY-03</b>	<b>MY-04</b>	<b>MY-05</b>
A. Riffles	95%	95%	100%		
B. Pools	100%	96%	100%		
C. Thalweg	100%	100%	100%		
D. Meanders	100%	100%	100%		
E. Bed General	100%	100%	100%		
F. Vanes/J Hooks etc.	83%	100%	100%		
G. Rootwads and Boulders	N/A	N/A	N/A		

**Note:** The Year 1 and 2 estimates are Earth Tech's estimate based upon review of previous monitoring reports. No rootwads or boulders were used in this restoration.

### **C. Wetland Assessment**

No wetland restoration is associated with this site. Tables XIV is not applicable to this project.



**Table XII. Baseline Morphology and Hydraulic Summary  
Deaton Farm Stream Restoration Site/Number 110  
Segment/Reach: Southern Tributary (2,697 feet)**

Parameter	USGS Data			Regional Curve Interval*			Pre-Existing condition			Project Reference Stream			Design			As-built		
	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med
BF Width (ft)				6.1	7.1	6.6	3	20										
BF Cross Sectional Area (ft <sup>2</sup> )				5	7	6	2	18										
BF Mean Depth (ft)				0.8	1.0	0.9	0.4	1.3										
BF Max Depth (ft)							0.8	2.7										
Width/Depth Ratio									6.5									
Entrenchment Ratio									2.6									
Wetted Perimeter (ft)																		
Hydraulic radius (ft)																		
<b>Pattern</b>																		
Channel Beltwidth (ft)													7.0	48.0	23.5			
Radius of Curvature (ft)													8.8	29.7	16.8			
Meander Wavelength													26	90	56			
Meander Width ratio													0.8	4.6	3.1			
<b>Profile</b>																		
Riffle length (ft)																		
Riffle slope (ft/ft)																		
Pool length (ft)																		
Pool spacing (ft)																		
<b>Substrate</b>																		
d50 (mm)									9									
d84 (mm)									29									
<b>Additional Reach Parameters</b>																		
Valley Length (ft)									N/A									
Channel Length (ft)									N/A									
Sinuosity									N/A									
Water Surface Slope (ft/ft)									N/A									
BF slope (ft/ft)							0.008	0.02										
Rosgen Classification									N/A						E4			
Habitat Index																		
Macrobenthos									N/A									

N/A – Historical project documents necessary to provide this data were unavailable at the time of this report submission

\*Regional curve data based on 0.15 square mile watershed.

**Table XII. Baseline Morphology and Hydraulic Summary  
Deaton Farm Stream Restoration Site/Number 110  
Segment/Reach: Northern Tributary (1,374 feet)**

Parameter	USGS Data			Regional Curve Interval*			Pre-Existing condition			Project Reference Stream			Design			As-built		
	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med
BF Width (ft)				8.0	10	9.0	3	20										
BF Cross Sectional Area (ft <sup>2</sup> )				10	11	10.5	2	18										
BF Mean Depth (ft)				1.0	1.2	1.1	0.4	1.3										
BF Max Depth (ft)							0.8	2.7										
Width/Depth Ratio									10.2									
Entrenchment Ratio									4.9				4	6				
Wetted Perimeter (ft)									N/A									
Hydraulic radius (ft)									N/A									
<b>Pattern</b>																		
Channel Beltwidth (ft)									N/A				15.0	51.0	34.5			
Radius of Curvature (ft)									N/A				17.0	28.0	23.9			
Meander Wavelength									N/A				69.0	139.0	100			
Meander Width ratio									N/A				1.1	3.7	2.7			
<b>Profile</b>																		
Riffle length (ft)									N/A									
Riffle slope (ft/ft)									N/A									
Pool length (ft)									N/A									
Pool spacing (ft)									N/A									
<b>Substrate</b>																		
d50 (mm)									9						15			
d84 (mm)									29						50			
<b>Additional Reach Parameters</b>																		
Valley Length (ft)									N/A									
Channel Length (ft)									N/A									
Sinuosity									N/A						1:3			
Water Surface Slope (ft/ft)									N/A									
BF slope (ft/ft)							0.008	0.02										
Rosgen Classification									N/A						E4			
Habitat Index																		
Macrobenthos									N/A									

N/A – Historical project documents necessary to provide this data were unavailable at the time of this report submission

\*Regional curve data based on 0.15 square mile watershed.

**Table XIII. Morphology and Hydraulic Monitoring Summary  
Deaton Farm Stream Restoration Site/Number 110  
Segment/Reach: Southern Tributary (2,697 feet)**

Parameter	Cross Section 1 ~0+69 Pool			Cross Section 2 ~8+63 Riffle			Cross Section 3 ~19+00 Riffle			Cross Section 4 ~23+36 Riffle			Cross Section 5 ~24+17 Pool		
	MY1	MY2	MY3	MY1	MY2	MY3	MY1	MY2	MY3	MY1	MY2	MY3	MY1	MY2	MY3
<b>Dimension</b>															
BF Width (ft)	10.3	10.6	20.4	18.3	18.9	4.9	11.1	6.3	9.6	7.9	7.6	10.4	22.1	8.5	14.6
Floodprone Width (ft) (approx)				32	32	>24	40		>30	60	60	>45			
BF Cross Sectional Area (ft <sup>2</sup> )	7.8	8.0	18.4	6.6	8.2	2.2	4.6	4.0	7.7	4.6	4.6	6.0	16.3	7.9	14.9
BF Mean Depth (ft)	0.8	0.8	0.9	0.4	0.4	0.5	0.4	0.6	0.8	0.6	0.6	0.6	0.7	0.9	1.0
BF Max Depth (ft)	1.6	1.5	2.3	0.9	1.1	0.9	0.9	1.3	1.7	1.0	1.1	1.1	2.5	1.7	2.1
Width/Depth Ratio	12.9	13.2	22.7	50.8	43.4	10.7	26.8	10.5	12.0	13.4	12.6	18.1	31.6	9.4	14.6
Entrenchment Ratio				1.8	1.7	>4.9	3.6		>3.1	7.6	7.9	>4.3			
Wetted Perimeter (ft)	10.9	11.1	22.2	18.5	19.1	5.8	11.5	7.0	11.2	8.2	8.1	11.5	23.3	9.5	16.6
Hydraulic radius (ft)	0.7	0.7	0.8	0.4	0.4	0.38	0.4	0.6	0.69	0.6	0.6	0.52	0.7	0.8	0.89
<b>Substrate</b>															
d50 (mm)	< 0.062	< 0.062	< 0.062	11.3	8.0	0.125	< 0.062	0.25	0.25	5.7	0.25	2	< 0.062	1.0	0.25
d84 (mm)	0.125	< 0.062	< 0.062	22.6	16.0	22	45.0	22.6	22	22.6	22.6	32	16.0	16.0	16
<b>Parameter</b>	<b>MY-01 (2003)</b>			<b>MY-02 (2004)</b>			<b>MY-03 (2005)</b>			<b>MY-04 (2006)</b>			<b>MY-05 (2007)</b>		
<b>Pattern</b>	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med	Min	Max	Med
Channel Beltwidth (ft)							7.0	48.0	23.5						
Radius of Curvature (ft)							8.8	29.7	16.8						
Meander Wavelength (ft)							26	90	56						
Meander Width Ratio							0.8	4.6	3.1						
<b>Profile</b>															
Riffle Length (ft)							1.4	74.70	16.64						
Riffle Slope (ft/ft)							0.004	0.14	0.03						
Pool length (ft)							2.04	34.48	11.58						
Pool spacing (ft)							6.86	133.78	39.25						
<b>Additional Reach Parameters</b>															
Valley Length (ft)								2,080							
Channel Length (ft)								2,679							
Sinuosity								1.3							
Water Surface Slope (ft/ft)								0.0145							
BF Slope (ft/ft)								0.0142							
Rosgen Classification					E			E/C							
Number of Bankfull Events					2			1 to 2							
Extent of BF floodplain (area)															
BEHI*															
Habitat Index*															
Macrobenthos*															

**Table XIII. Morphology and Hydraulic Monitoring Summary (cont.)  
Deaton Farm Stream Restoration Site/Number 110  
Segment/Reach: Northern Tributary (1,374 feet)**

Parameter	Cross Section 6 ~4+51 Pool			Cross Section 7 ~5+76 Riffle			Cross Section 8 ~10+91 Riffle		
	MY1	MY2	MY3	MY1	MY2	MY3	MY1	MY2	MY3
<b>Dimension</b>									
BF Width (ft)	11.0	13.9	15.4	12.6	15.5	14.5	11.8	14.5	10.9
Floodprone Width (ft) (approx)						>35			>36
BF Cross Sectional Area (ft <sup>2</sup> )	11.5	19.9	19.8	10.7	10.3	12.2	10.0	12.3	9.4
BF Mean Depth (ft)	1.0	1.4	1.3	0.9	0.8	0.8	0.9	0.8	0.9
BF Max Depth (ft)	2.2	2.9	2.6	1.5	1.6	1.5	1.3	1.5	1.4
Width/Depth Ratio	11	9.9	11.8	14.8	19.4	17.2	13.2	17.1	12.5
Entrenchment Ratio				8.0	6.5	2.4	3.4	2.8	>3.3
Wetted Perimeter (ft)	12.4	15.3	1.8	13.0	16.0	16.2	12.2	15.2	12.6
Hydraulic radius (ft)	0.9	1.3	1.11	0.8	0.8	0.76	0.9	0.8	0.75
<b>Substrate</b>									
d50 (mm)	5.7	0.125	0.5	8.0	< 0.062	0.5	16.0	2.0	0.125
d84 (mm)	16.0	11..3	11	32.0	22.6	16	32.0	32.0	22
<b>Parameter</b>	<b>MY-01 (2003)</b>			<b>MY-02 (2004)</b>			<b>MY-03 (2005)</b>		
<b>Pattern</b>	Min	Max	Med	Min	Max	Med	Min	Max	Med
Channel Beltwidth (ft)							15.0	51.0	34.5
Radius of Curvature (ft)							17.0	28.0	23.9
Meander Wavelength (ft)							69	139	100
Meander Width Ratio							1.1	3.7	2.7
<b>Profile</b>									
Riffle Length (ft)							1.29	79.18	12.55
Riffle Slope (ft/ft)							0.0009	0.10	0.02
Pool length (ft)							4.52	62.94	18.14
Pool spacing (ft)							24.3	142.12	45.94
<b>Additional Reach Parameters</b>									
Valley Length (ft)								1,195	
Channel Length (ft)								1,363	
Sinuosity								1.1	
Water Surface Slope (ft/ft)								0.0078	
BF Slope (ft/ft)								0.0076	
Rosgen Classification (2005)					E/C			C	
Number of Bankfull Events					2			1 to 2	
Extent of BF floodplain (area)									
BEHI*									
Habitat Index*									
Macrobenthos*									



# **Appendix A**

## **Vegetation Raw Data**

- A1 Vegetation Survey Data Tables
- A3 Vegetation Monitoring Plot Photos

# **Appendix A**

## **Vegetation Raw Data**

- A1 Vegetation Survey Data Tables
- A3 Vegetation Monitoring Plot Photos

**Appendix A.1**  
**Deaton Farm Stream Restoration**  
**Monitoring Year 2005**  
**EEP Site Number 110**

Exhibit Table VIII. Stem Counts for each species arranged by plot									
Scientific Name	Species Common Name	Plots (50 FT X 50 FT)			*Initial Planting	Year 1 Totals	Year 2 Totals	Year 3 Totals	Survival %
		Plot 1	Plot 2	Total Stems					
<b>Shrubs</b>									
No shrubs monitored at this site.									
<b>Total Shrubs</b>		0	0	0					
<b>Trees</b>									
<i>Fraxinus pennsylvanica</i>	Green ash	5	8	13		11	15	13	
<i>Quercus phellos</i>	Willow oak	13	1	14		22	16	14	
<i>Quercus nigra</i>	Water oak	0	1	1		6	2	1	
<i>Quercus laurifolia</i>	Laurel oak	4	0	4		8	3	4	
<i>Quercus falcata</i>	Southern red oak	0	9	9		1	1	9	
<b>Total Trees</b>		<b>22</b>	<b>19</b>	<b>41</b>	<b>94</b>	<b>48</b>	<b>37</b>	<b>41</b>	<b>44%</b>
<b>TABLE SUMMARY</b>									
Total Stems of planted Woody vegetation.		22	19	41	94	48	37	41	44%
<b>Current Density</b>				<b>**Average Stems per Acre</b>					
* Stems per acre		383	331	357	819	418	322	357	
Stems per hectare		947	818	883	2024	1033	797	883	

\* Stems per acre calculated on size of plot (0.05739 acre) and number of stems within plot.

\*\* Percent survival calculated for current year based on initial at planting.

Exotic Invasive Species	Plot 1	Plot 2
<i>Rosa multiflora</i> Multiflora rose		Y
<b>Additional Species Observed</b>		
<i>Carex</i> sp. Sedge	Y	Y
<i>Cirsium pumilum</i> Pasture thistle	Y	
<i>Eupatorium capillifolium</i> Dog fennel	Y*	Y
<i>Juncus effusus</i> Common rush	Y*	Y*
<i>Lolium arundinaceum</i> Tall pasture fescue	Y	
<i>Mimulus alatus</i> Sharpwing monkeyflower	Y	
<i>Panicum anceps</i> Beaked panicgrass	Y	
<i>Polygonum pensylvanicum</i> Pennsylvania smartweed	Y*	Y*

Stems per acre are more than indicated in the initial report due to difference in the way stems per acre are calculated. The initial report assumed only 680 stems per acre were planted. Subsequent year was calculated using percent loss of stems multiplied by the assumed 680 stems per acre.

\*= other dominate species

**Appendix A2**  
**Deaton Farm Stream Restoration Site**  
**Year 3 Monitoring**  
**Vegetation Monitoring Plot Photos**



Vegetation Plot Photo 1A



Vegetation Plot Photo 1B



Vegetation Plot Photo 2A



Vegetation Plot Photo 2B



# **DEATON FARM STREAM RESTORATION**

## **APPENDIX B Geomorphologic Raw Data**

- B3 Stream Photos-station Photos**
- B4 Table B.1 Qualitative Visual Stability Assessment**
- B5 Cross section Plots and Raw Data Tables**
- B6 Longitudinal Plots and Raw Data Table**
- B7 Pebble Count Plots and Raw Data Tables**
- B8 USGS Stream Gauge Plot/Extract**

# **DEATON FARM STREAM RESTORATION**

## **APPENDIX B Geomorphologic Raw Data**

- B3 Stream Photos-station Photos**
- B4 Table B.1 Qualitative Visual Stability Assessment**
- B5 Cross section Plots and Raw Data Tables**
- B6 Longitudinal Plots and Raw Data Table**
- B7 Pebble Count Plots and Raw Data Tables**
- B8 USGS Stream Gauge Plot/Extract**

**DEATON FARM STREAM RESTORATION**  
**APPENDIX B3**  
**Stream Photos-station Photos**



Photo Point 1 Upstream



Photo Point 1 Downstream



Photo Point 2 Upstream



Photo Point 2 Downstream



Photo Point 3 Upstream



Photo Point 3 Downstream



**DEATON FARM STREAM RESTORATION**  
**APPENDIX B3**  
**Stream Photos-station Photos**



Photo Point 4 Upstream



Photo Point 4 Downstream



Photo Point 5 Upstream



Photo Point 5 Downstream



Photo Point 6 Upstream



**Table B1. Visual Morphological Stability Assessment  
Deaton Farm Stream Restoration/(110)  
Southern Tributary (2,697 ft)**

Feature Category	Metric (per As-built and reference baselines)	(# Stable) Number performing as Intended	Total number per As-built	Total Number/ feet in unstable state	% Perform in Stable Condition	Feature Perform. Mean or Total
A. Riffles	1. Present?	52	NA	0	100%	
	2. Armor stable (e.g. no displacement)?		NA	0	100%	
	3. Facet grade appears stable?		NA	0	100%	
	4. Minimal evidence of embedding/fining?		NA	0	100%	
	5. Length appropriate?		NA	0	100%	100%
B. Pools*	1. Present? (e.g. not subject to severe aggrad. or migrat.?)	62	NA	0	100%	
	2. Sufficiently deep (Max Pol D: Mean Bkf>1.6?)		NA	0	100%	
	3. Length appropriate?		NA	0	100%	100%
C. Thalweg	1. Upstream of meander bend (run/inflection) centering?	NA	NA	0	100%	
	2. Downstream of meander (glide/inflection) centering?	NA	NA	0	100%	100%
D. Meanders**	1. Outer bend in state of limited/controlled erosion?	71	NA	0	100%	
	2. Of those eroding, # w/ concomitant point bar formation?		NA	0	100%	
	3. Apparent Rc within spec?		NA	0	100%	
	4. Sufficient floodplain access and relief?		NA	0	100%	100%
E. Bed General	1. General channel bed aggradation (bar formation)?	NA	NA	0		
	2. Channel bed degradation - areas of increasing downcutting or head cutting?	NA	NA	1/7	99.97%	99.97%
F. Vanes*	1. Free of back or arm scour?	18	NA	0	100%	
	2. Height appropriate?		NA	0	100%	
	3. Angle and geometry appear appropriate?		NA	0	100%	
	4. Free of piping or other structural failures?		NA	0	100%	100%
G. Wads/ Boulders	1. Free of scour?	NA	NA			
	2. Footing stable?	NA	NA			

\*\*Pools and vanes are from longitudinal profile survey.

\*\*\*Meander number is from design sheet.

N/A – Historical project documents necessary to provide this data were unavailable at the time of this report submission

**Table B1. Visual Morphological Stability Assessment  
Deaton Farm Stream Restoration/(110)  
Northern Tributary (1,364 ft)**

Feature Category	Metric (per As-built and reference baselines)	(# Stable) Number performing as Intended	Total number per As-built	Total Number/ feet in unstable state	% Perform in Stable Condition	Feature Perform. Mean or Total
A. Riffles	1. Present?	23	NA	0	100%	
	2. Armor stable (e.g. no displacement)?		NA	0	100%	
	3. Facet grade appears stable?		NA	0	100%	
	4. Minimal evidence of embedding/fining?		NA	0	100%	
	5. Length appropriate?		NA	0	100%	100%
B. Pools*	1. Present? (e.g. not subject to severe aggrad. or migrat.?)	25	NA	0	100%	
	2. Sufficiently deep (Max Pol D: Mean Bkf>1.6?)		NA	0	100%	
	3. Length appropriate?		NA	0	100%	100%
C. Thalweg	1. Upstream of meander bend (run/inflection) centering?	NA	NA	0	100%	
	2. Downstream of meander (glide/inflection) centering?	NA	NA	0	100%	100%
D. Meanders**	1. Outer bend in state of limited/controlled erosion?	23	NA	0	100%	
	2. Of those eroding, # w/ concomitant point bar formation?		NA	0	100%	
	3. Apparent Rc within spec?		NA	0	100%	
	4. Sufficient floodplain access and relief?		NA	0	100%	100%
E. Bed General	1. General channel bed aggradation (bar formation)?	NA	NA	0	100%	
	2. Channel bed degradation - areas of increasing downcutting or head cutting?	NA	NA	0	100%	100%
F. Vanes*	1. Free of back or arm scour?	7	NA	0	100%	
	2. Height appropriate?		NA	0	100%	
	3. Angle and geometry appear appropriate?		NA	0	100%	
	4. Free of piping or other structural failures?		NA	0	100%	100%
G. Wads/ Boulders	1. Free of scour?	NA	NA			
	2. Footing stable?	NA	NA			

\*Pools and vanes are from longitudinal profile survey.

\*\*Meander number is from design sheet.

N/A – Historical project documents necessary to provide this data were unavailable at the time of this report submission

**Deaton Farm Stream Restoration Site  
Monitoring Year 2005  
EEP Site Number 110**

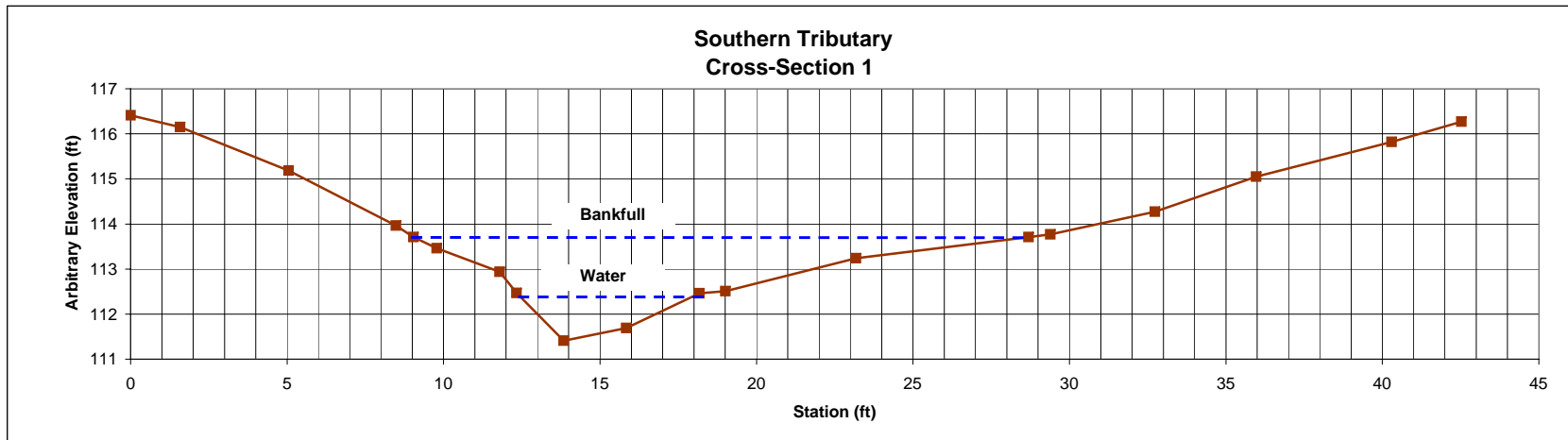
<b>Field Crew:</b>	Jan Patterson, Chad Holland, and Wade Patton
<b>Watershed:</b>	<b>Fork Creek</b>
<b>Stream Reach:</b>	Southern Tributary
<b>Date:</b>	11/7-15/2005
<b>Station:</b>	0+69
<b>Feature:</b>	Pool

STATION (FEET)	ELEVATION (FEET)	NOTES
0+00.0	116.41	LPIN
0+01.6	116.15	
0+05.1	115.18	
0+08.5	113.96	
0+09.0	113.71	LBKF
0+09.8	113.46	
0+11.8	112.94	
0+12.3	112.47	LEW/WS
0+13.8	111.41	TW
0+15.8	111.69	
0+18.2	112.46	REW/WS
0+19.0	112.51	
0+23.2	113.24	
0+28.7	113.71	RBKF
0+29.4	113.77	
0+32.7	114.27	
0+36.0	115.05	
0+40.3	115.82	
0+42.5	116.27	RPIN

BANKFULL/TOB Hydraulic Geometry		
Width (Feet)	Depth (Feet)	Area (Sq. Ft.)
0.0	0.0	0.0
0.7	0.3	0.1
2.0	0.8	1.0
0.5	1.2	0.5
1.5	2.3	2.7
2.0	2.0	4.3
2.3	1.3	3.8
0.8	1.2	1.0
4.2	0.5	3.5
6.2	0.0	1.5
<b>TOTALS</b>	<b>20.4</b>	<b>18.4</b>

SUMMARY DATA (TOB)			
A(BKF)	18.4	Wetted Perimeter*	22.2
W(BKF)	20.4	Hyd. Radius	0.83
Max d	2.3		
Mean d	0.9		

\*Approximated as  $Wp=(2*MeanD)+W$



**Deaton Farm Stream Restoration Site  
EEP Site Number 110  
Monitoring Year 2005**

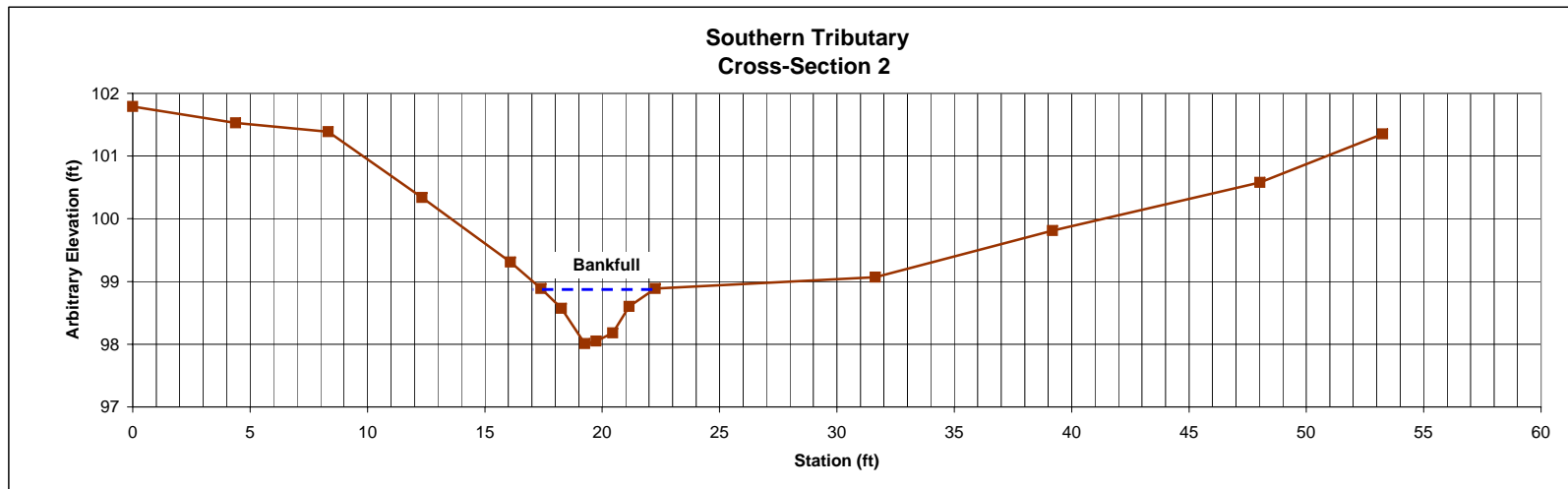
<b>Field Crew:</b>	Jan Patterson, Chad Holland, and Wade Patton
<b>Watershed:</b>	Fork Creek
<b>Stream Reach:</b>	Southern Tributary
<b>Date:</b>	11/7-15/2005
<b>Station:</b>	8+63
<b>Feature:</b>	Riffle/Run

STATION (FEET)	ELEVATION (FEET)	NOTES
0+00.0	101.79	LPIN
0+04.4	101.53	
0+08.3	101.39	
0+12.3	100.34	
0+16.1	99.31	
0+17.4	98.89	LBKF
0+18.3	98.57	
0+19.3	98.01	
0+19.7	98.05	TW
0+20.5	98.18	
0+21.2	98.60	
0+22.3	98.89	RBKF
0+31.6	99.07	
0+39.2	99.81	
0+48.0	100.58	
0+53.3	101.35	RPIN
	98.30	WS

BANKFULL Hydraulic Geometry		
Width (Feet)	Depth (Feet)	Area (Sq. Ft.)
0.0	0.0	0.0
0.9	0.3	0.1
1.0	0.9	0.6
0.5	0.8	0.4
0.7	0.7	0.6
0.7	0.3	0.4
1.1	0.0	0.2
<b>TOTALS</b>	<b>4.9</b>	<b>2.2</b>

SUMMARY DATA (BANKFULL)			
A(BKF)	2.2	W(FPA) >24	
W(BKF)	4.9	Wetted Perimeter*	5.8
Max d	0.9	Hyd. Radius	0.38
Mean d	0.5	Area= A	
W/D	10.7	Width= W	
Entrenchment	>4.9	Depth= D	
Stream Type	E	Bankfull= BKF	

\*Approximated as  $Wp=(2*MeanD)+W$



**Deaton Farm Stream Restoration Site  
EEP Site Number 110  
Monitoring Year 2005**

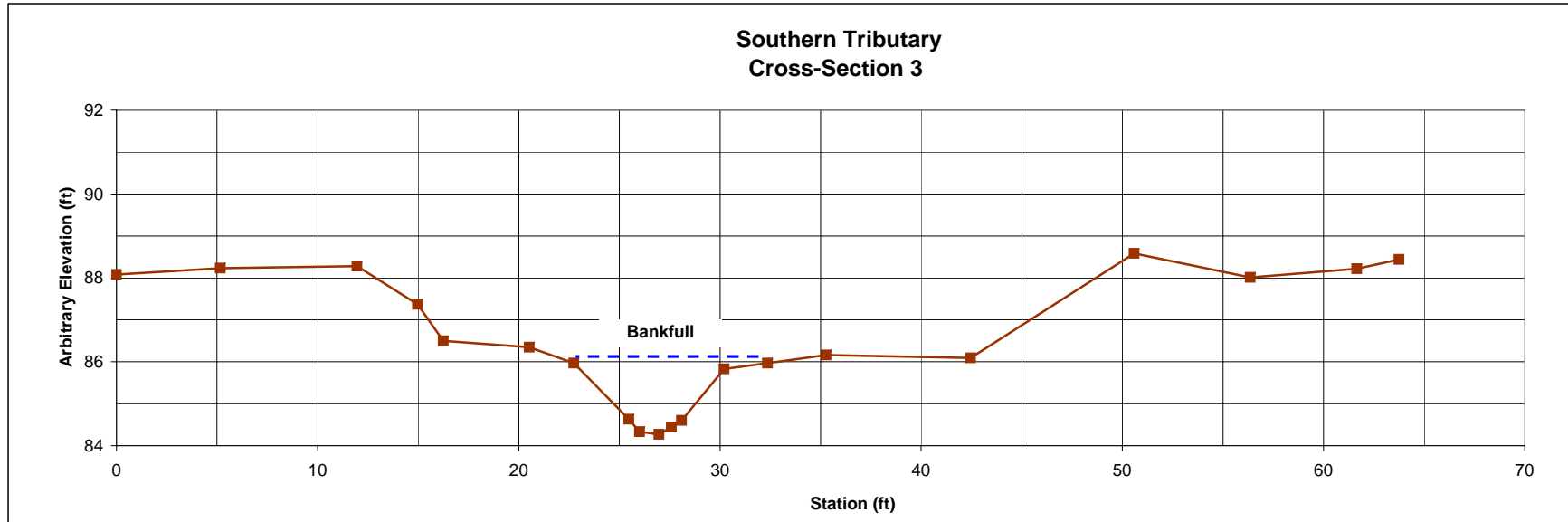
<b>Field Crew:</b>	Jan Patterson, Chad Holland, and Wade Patton
<b>Watershed:</b>	Fork Creek
<b>Stream Reach:</b>	Southern Tributary
<b>Date:</b>	11/7-15/2005
<b>Station:</b>	19+00
<b>Feature:</b>	Riffle

STATION (FEET)	ELEVATION (FEET)	NOTES
0+00.0	88.08	LPIN
0+05.2	88.23	
0+12.0	88.28	
0+15.0	87.37	
0+16.3	86.50	
0+20.5	86.35	
0+22.7	85.97	LBKF
0+25.5	84.63	
0+26.0	84.33	
0+27.0	84.27	TW
0+27.6	84.44	
0+28.1	84.60	
0+30.2	85.83	
0+32.4	85.97	RBKF
0+35.3	86.16	
0+42.5	86.09	
0+50.6	88.58	
0+56.4	88.01	
0+61.7	88.22	
0+63.8	88.44	RPIN

BANKFULL Hydraulic Geometry		
Width (Feet)	Depth (Feet)	Area (Sq. Ft.)
0.0	0.0	0.0
2.7	1.3	1.8
0.5	1.6	0.8
1.0	1.7	1.6
0.6	1.5	1.0
0.5	1.4	0.7
2.1	0.1	1.6
2.2	0.0	0.2
<b>TOTALS</b>	<b>9.6</b>	<b>7.7</b>

SUMMARY DATA (BANKFULL)			
A(BKF)	7.7	W(FPA)	>30
W(BKF)	9.6	Wetted Perimeter*	11.2
Max d	1.7	Hyd. Radius	0.69
Mean d	0.8	Area= A	
W/D	12.0	Width= W	
Entrenchment	>3.1	Depth= D	
Stream Type	E/C	Bankfull= BKF	

\*Approximated as  $Wp=(2*MeanD)+W$





**Deaton Farm Stream Restoration Site  
EEP Site Number 110  
Monitoring Year 2005**

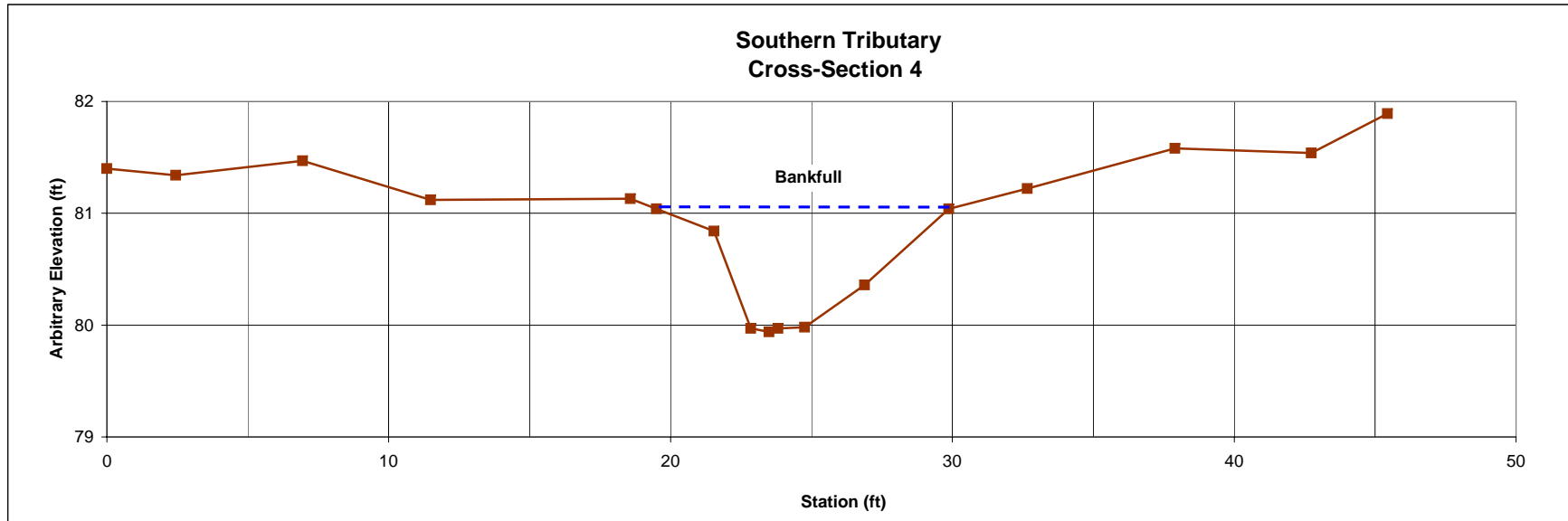
<b>Field Crew:</b>	Jan Patterson, Chad Holland, and Wade Patton
<b>Watershed:</b>	Fork Creek
<b>Stream Reach:</b>	Southern Tributary
<b>Date:</b>	11/7-15/2005
<b>Station:</b>	23+36
<b>Feature:</b>	Riffle

STATION (FEET)	ELEVATION (FEET)	NOTES
0+00.0	81.40	LPIN
0+02.4	81.34	
0+06.9	81.47	
0+11.5	81.12	
0+18.6	81.13	
0+19.5	81.04	LBKF
0+21.5	80.84	
0+22.9	79.97	LEW/WS
0+23.5	79.94	TW
0+23.8	79.97	
0+24.8	79.98	
0+26.9	80.36	
0+29.9	81.04	RBKF
0+32.7	81.22	
0+37.9	81.58	
0+42.7	81.54	
0+45.4	81.89	RPIN

BANKFULL Hydraulic Geometry		
Width (Feet)	Depth (Feet)	Area (Sq. Ft.)
0.0	0.0	0.0
2.0	0.2	0.2
1.3	1.1	0.8
0.6	1.1	0.7
0.3	1.1	0.3
1.0	1.1	1.0
2.1	0.7	1.9
3.0	0.0	1.0
<b>TOTALS</b>	<b>10.4</b>	<b>6.0</b>

SUMMARY DATA (BANKFULL)		
A(BKF)	6.0	W(FPA) >45
W(BKF)	10.4	Wetted Perimeter* 11.5
Max d	1.1	Hyd. Radius 0.52
Mean d	0.6	Area= A
W/D	18.1	Width= W
Entrenchment	>4.3	Depth= D
Stream Type	C	Bankfull= BKF

\*Approximated as  $Wp=(2*MeanD)+W$



**Deaton Farm Stream Restoration Site  
EEP Site Number 110  
Monitoring Year 2005**

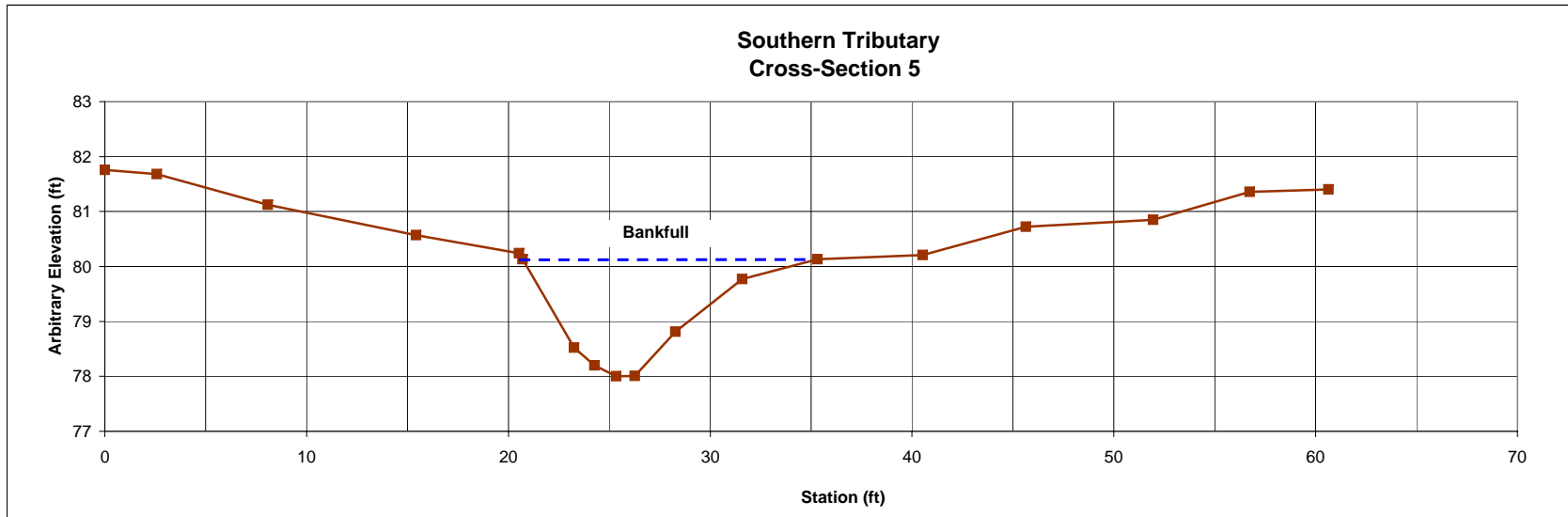
<b>Field Crew:</b>	Jan Patterson, Chad Holland, and Wade Patton
<b>Watershed:</b>	Fork Creek
<b>Stream Reach:</b>	Southern Tributary
<b>Date:</b>	11/7-15/2005
<b>Station:</b>	24+17
<b>Feature:</b>	Pool

STATION (FEET)	ELEVATION (FEET)	NOTES
0+00.0	81.76	LPIN
0+02.6	81.68	
0+08.1	81.12	
0+15.4	80.57	
0+20.5	80.24	
0+20.7	80.13	LBKF
0+23.3	78.52	
0+24.3	78.20	
0+25.3	78.00	TW
0+26.3	78.01	
0+28.3	78.81	
0+31.6	79.77	
0+35.3	80.13	RBKF
0+40.5	80.21	
0+45.7	80.72	
0+52.0	80.85	
0+56.7	81.36	
0+60.6	81.40	RPIN

BANKFULL/TOB Hydraulic Geometry		
Width (Feet)	Depth (Feet)	Area (Sq. Ft.)
0.0	0.0	0.0
2.6	1.6	2.1
1.0	1.9	1.8
1.1	2.1	2.2
0.9	2.1	2.0
2.0	1.3	3.5
3.3	0.4	2.8
3.7	0.0	0.7
<b>TOTALS</b>	<b>14.6</b>	<b>14.9</b>

SUMMARY DATA (TOB)			
A(BKF)	14.9		
W(BKF)	14.6	Wetted Perimeter*	16.6
Max d	2.1	Hyd. Radius	0.89
Mean d	1.0		

\*Approximated as  $Wp=(2*MeanD)+W$



**Deaton Farm Stream Restoration Site  
EEP Site Number 110  
Monitoring Year 2005**

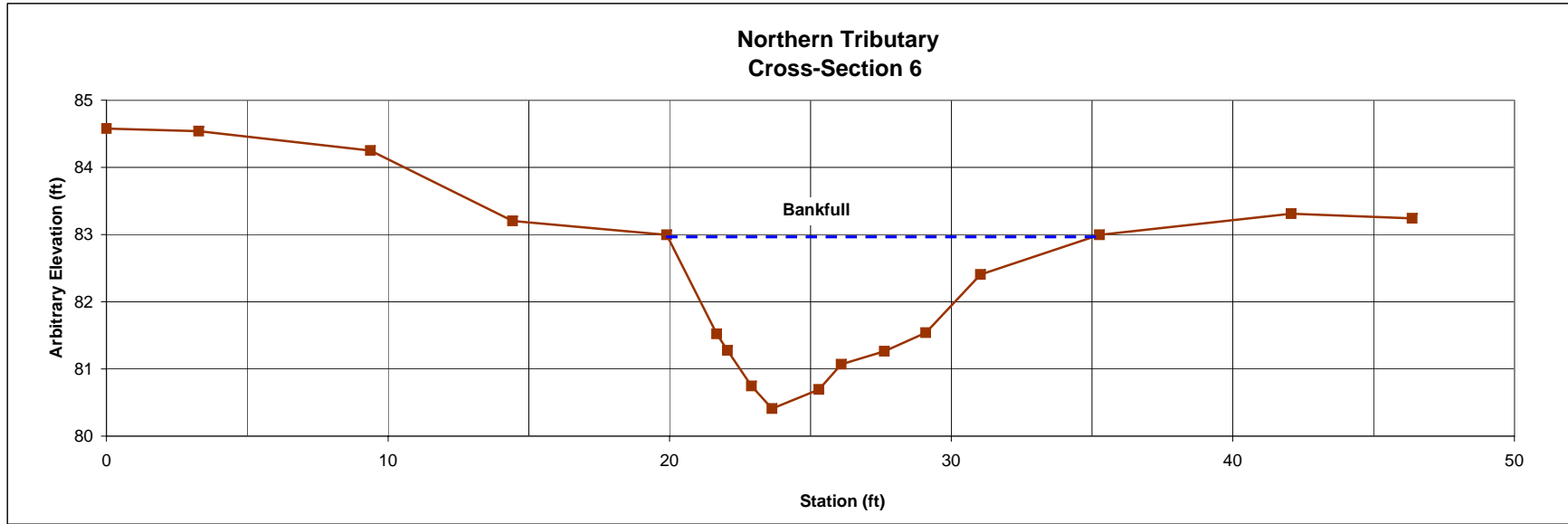
<b>Field Crew:</b>	Jan Patterson, Chad Holland, and Wade Patton
<b>Watershed:</b>	Fork Creek
<b>Stream Reach:</b>	Northern Tributary
<b>Date:</b>	11/7-15/2005
<b>Station:</b>	4+51
<b>Feature:</b>	Pool

STATION (FEET)	ELEVATION (FEET)	NOTES
0+00.0	85.05	LPIN
0+03.3	85.01	
0+09.4	84.72	
0+14.4	83.65	
0+19.9	83.44	RBKF
0+21.7	81.94	
0+22.1	81.69	LEW
0+22.9	81.15	
0+23.6	80.81	TW
0+25.3	81.10	
0+26.1	81.48	
0+27.6	81.68	REW/WS
0+29.1	81.96	
0+31.0	82.84	
0+35.3	83.44	RBKF
0+42.1	83.76	
0+46.4	83.69	

BANKFULL Hydraulic Geometry			
Width (Feet)	Depth (Feet)	Area (Sq. Ft.)	
0.0	0.0	0.0	
1.8	1.5	1.3	
0.4	1.8	0.6	
0.9	2.3	1.7	
0.7	2.6	1.8	
1.7	2.3	4.1	
0.8	2.0	1.7	
1.5	1.8	2.8	
1.5	1.5	2.4	
1.9	0.6	2.0	
4.2	0.0	1.3	
<b>TOTALS</b>	<b>15.4</b>	<b>19.8</b>	

SUMMARY DATA (TOB)			
A(BKF)	19.8		
W(BKF)	15.4	Wetted Perimeter*	18.0
Max d	2.6	Hyd. Radius	1.11
Mean d	1.3		

\*Approximated as  $Wp=(2*MeanD)+W$



**Deaton Farm Stream Restoration Site**  
**EEP Site Number 110**  
**Monitoring Year 2005**

<b>Field Crew:</b>	Jan Patterson, Chad Holland, and Wade Patton
<b>Watershed:</b>	Fork Creek
<b>Stream Reach:</b>	Northern Tributary
<b>Date:</b>	11/7-15/2005
<b>Station:</b>	5+76
<b>Feature:</b>	Riffle

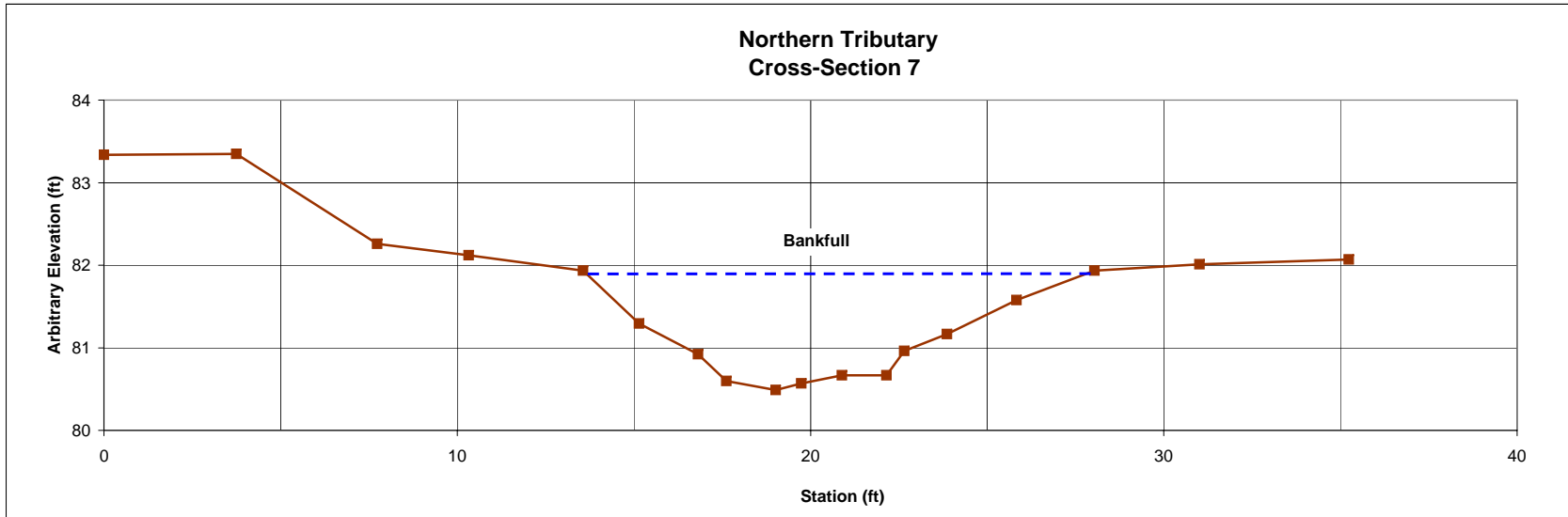
STATION (FEET)	ELEVATION (FEET)	NOTES
0+00.0	83.79	LPIN
0+03.8	83.80	
0+07.7	82.69	
0+10.3	82.55	
0+13.6	82.36	LBKF
0+15.2	81.71	
0+16.8	81.33	
0+17.6	81.00	
0+19.0	80.89	TW
0+19.7	80.97	
0+20.9	81.07	REW
0+22.2	81.07	
0+22.7	81.37	
0+23.9	81.58	
0+25.8	82.00	
0+28.0	82.36	RBKF
0+31.0	82.44	
0+35.2	82.50	RPIN

BANKFULL Hydraulic Geometry		
Width (Feet)	Depth (Feet)	Area (Sq. Ft.)
0.0	0.0	0.0
1.6	0.7	0.5
1.7	1.0	1.4
0.8	1.4	1.0
1.4	1.5	2.0
0.7	1.4	1.0
1.2	1.3	1.5
1.3	1.3	1.6
0.5	1.0	0.6
1.2	0.8	1.1
2.0	0.4	1.1
2.2	0.0	0.4
<b>TOTALS</b>	<b>14.5</b>	<b>12.2</b>

SUMMARY DATA (BANKFULL)		
A(BKF)	12.2	W(FPA) >35
W(BKF)	14.5	Wetted Perimeter* 16.2
Max d	1.5	Hyd. Radius 0.76
Mean d	0.8	Area= A
W/D	17.2	Width= W
Entrenchment	2.4	Depth= D
Stream Type	C	Bankfull= BKF

\*Approximated as  $Wp=(2*MeanD)+W$

83.83





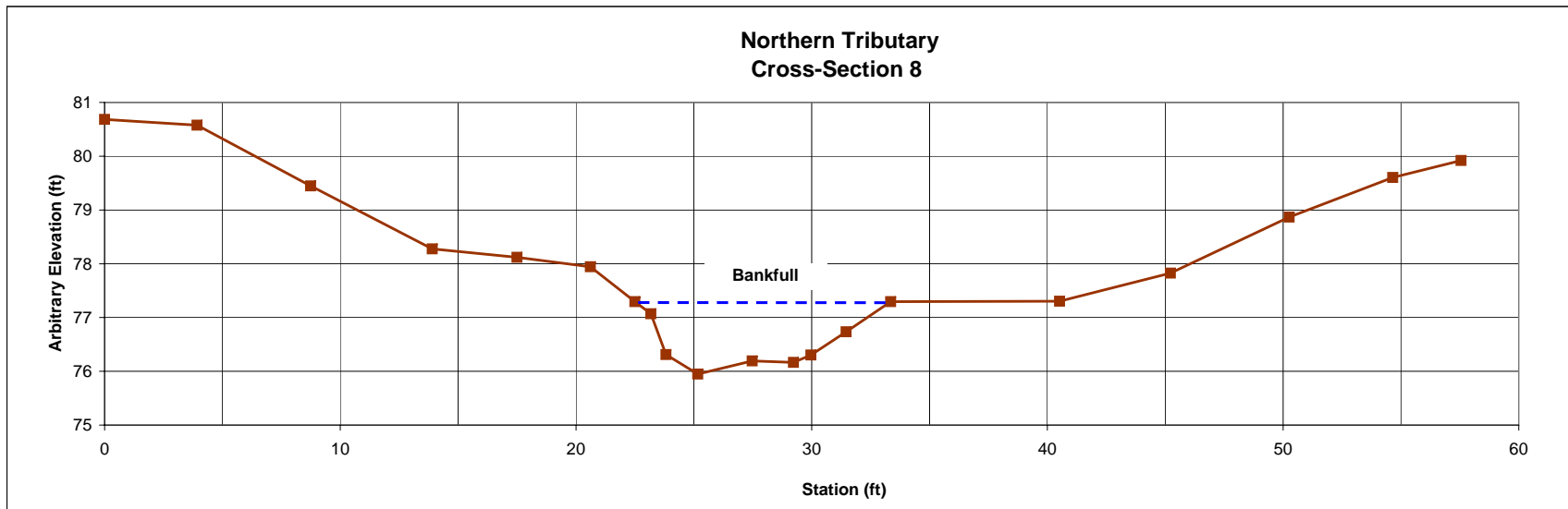
**Deaton Farm Stream Restoration Site  
EEP Site Number 110  
Monitoring Year 2005**

<b>Field Crew:</b>	Jan Patterson, Chad Holland, and Wade Patton
<b>Watershed:</b>	Fork Creek
<b>Stream Reach:</b>	Northern Tributary
<b>Date:</b>	11/7-15/2005
<b>Station:</b>	10+91
<b>Feature:</b>	Riffle

STATION (FEET)	ELEVATION (FEET)	NOTES	BANKFULL/TOB Hydraulic Geometry		
			Width (Feet)	Depth (Feet)	Area (Sq. Ft.)
0+00.0	81.09	LPIN			
0+03.9	80.98		0.0	0.0	0.0
0+08.7	79.83		0.7	0.2	0.1
0+13.9	78.64		0.6	1.0	0.4
0+17.5	78.48		1.4	1.4	1.6
0+20.6	78.30		2.3	1.1	2.9
0+22.5	77.64	LBKF	1.8	1.2	2.0
0+23.2	77.41		0.7	1.0	0.8
0+23.8	76.64	LEW/WS	1.5	0.6	1.2
0+25.2	76.27	TW	1.9	0.0	0.5
0+27.5	76.52				
0+29.2	76.49				
0+30.0	76.63				
0+31.5	77.07				
0+33.4	77.64	RBKF			
0+40.5	77.65				
0+45.2	78.18				
0+50.3	79.24				
0+54.7	79.99				
0+57.6	80.31	RPIN			
<b>TOTALS</b>			<b>10.9</b>		<b>9.4</b>

SUMMARY DATA (BANKFULL)			
A(BKF)	9.4	W(FPA)	>36
W(BKF)	10.9	Wetted Perimeter*	12.6
Max d	1.4	Hyd. Radius	0.75
Mean d	0.9	Area= A	
W/D	12.5	Width= W	
Entrenchment	>3.3	Depth= D	
Stream Type	C	Bankfull= BKF	

\*Approximated as  $Wp=(2*MeanD)+W$



## Deaton Farm Stream Restoration Site Monitoring Year 2005

<b>Field Crew:</b>	Jan Patterson, Chad Holland, and Wade Patton
<b>Watershed:</b>	<b>Fork Creek</b>
<b>Stream Reach:</b>	Northern Tributary
<b>Date:</b>	11/7-15/2005

### LONGITUDINAL PROFILE

<u>Station</u>	<u>TW</u>	<u>WS</u>	<u>BKF</u>	<u>NOTES</u>
0+00	85.20	85.55	86.90	Riffle
0+10	84.83	85.14		Run
0+26	84.63	85.17		Pool
0+31	83.85	85.11	87.20	Pool
0+51	82.85	85.14		Max Pool
0+57	83.79			Glide
0+61	85.06	85.13		Riffle
0+63	84.97		86.74	CV
0+76	83.77	84.78		Pool
0+85	81.85	84.87		Max Pool
0+95	83.49		86.66	Glide
1+06	84.74	84.93	86.09	Riffle
1+49	83.89	84.12	85.31	CV
1+50	84.10	84.12	85.31	IM
1+58	83.00	83.98		Max Pool
1+64	83.45	83.87	84.73	Glide
1+85	83.98	84.02	85.59	Riffle
1+99	83.08	83.48		Pool
2+10	82.57	83.51		Pool
2+24	82.44	83.54	84.57	Max Pool
2+38	83.07	83.51	84.40	CV
2+56	82.28	83.52	84.40	Max Pool
2+62	83.31	83.41	84.50	Riffle
2+74	83.01	83.18	84.50	Riffle
3+41	82.30	82.61	83.48	Pool
3+45	81.82		83.48	Max Pool
3+52	82.15		83.48	Riffle
3+59.2	82.12			Riffle
3+83.1	81.87	82.55	83.78	Pool
390.5	81.40	82.58	83.78	Max Pool
399.3	81.87		83.78	Glide
401.9	82.24		83.78	Riffle
433.9	81.65		82.84	Pool
441.8	80.81	81.68		Max Pool
447.7	81.11		82.85	Glide
454.5	81.49	81.64	82.85	CV
461.2	81.07			Pool
465.1	80.45	81.56	83.37	Pool
475.2	80.37		83.37	Max Pool
484.3	81.10		83.17	Glide
496.4	81.40	81.36	83.17	Riffle
500.9	80.85		83.17	Pool
505.4	80.71	81.13	82.72	Pool
508.8	80.70	81.13	82.72	Max Pool

## Deaton Farm Stream Restoration Site Monitoring Year 2005

513.8	80.88	81.16	82.72	Glide
515.9	81.01	81.13	82.72	Riffle
529.9	80.82			Pool
555.6	80.30	81.08		Max Pool
568.7	80.60	81.07		Glide
571.9	80.89	81.07	82.36	Glide
574.7	80.92	80.97		Riffle
583.6	80.18		82.43	Pool
590.5	79.95	80.55	82.43	Max Pool
600.3	80.60	80.59	82.43	Riffle/CV
608.2	80.24	80.46	82.43	Pool
611.0	79.82	80.46	82.43	Pool
619.2	78.89			Max Pool
626.4	79.97	80.39		Riffle
637.5	79.69	80.38		Pool
642.9	79.27	80.43		Pool
648.0	78.95		81.62	Max Pool
662.0	79.32	80.4	81.62	Glide
685.4	80.32	79.92	81.7	Riffle
694.3	79.78	80.21	81.7	Run
723.1	79.42	79.86	81.09	Pool
727.0	78.64	79.85	81.09	Max Pool
736.0	78.81		80.9	IM
742.3	79.03	79.85	80.9	Glide
752.6	79.68	79.9	80.79	CV
755.4	79.07	79.81	80.79	Pool
756.9	78.39	79.86	80.79	Max Pool
761.5	79.23	79.88	80.83	IM
763.7	79.13	79.88	80.83	Glide
777.9	79.72	79.84	80.52	Riffle
788.9	79.32	79.34	80.52	Pool
795.5	78.12	79.2	80.37	Pool
797.9	78.22	79.3	80.37	Pool
801.7	77.79	79.16	80.22	Max Pool
810.2	77.93	79.2	80.22	Glide
817.0	78.74	79.03	80.26	Riffle
856.5	78.76	78.98	80.26	Run
875.8	78.27	79.02	80.09	Run
893.1	78.25	78.9	80.14	CV
901.9	77.81	78.89	79.79	Max Pool
906.5	78.25	78.98		Glide/Fence
915.6	78.74			Riffle
926.2	78.51			Pool
931.1	77.14	78.67		Max Pool
937.7	78.47	78.59	80.06	Vane
940.4	76.92	78.16	80.06	Pool
944.6	76.89			Pool
949.2	76.77	77.98	78.97	Vane
9+54.5	76.74	77.98	78.97	Pool
9+61.6	76.00	77.99	78.94	Max Pool
9+68.6	76.78	77.98	78.94	Glide
9+75.4	77.08	77.45	79.18	Riffle
9+93.7	76.65		79.18	Run

## Deaton Farm Stream Restoration Site Monitoring Year 2005

10+19.7	76.37		79.04	Pool
10+30.9	75.62	76.76	78.89	Max Pool
10+35.3	76.08	76.77	78.89	IM
10+41.8	76.63	77.16	78.79	Glide
10+52.8	77.05	77.22	78.76	Vane
10+56.7	75.20	77.22	78.76	Max Pool
10+61.7	76.06		78.76	IM
10+67.2	76.42	77.07	78.76	Glide
10+81.9	77.02	77.22	78.22	Riffle
10+87.9	76.27	76.64	78.3	Run
11+06.4	76.28	76.54	77.1	Run
11+09.9	76.01	76.57	77.1	Run
11+24.6	76.49			Vane
11+31.0	76.08	76.63	77.76	Run
11+52.6	76.21	76.65	77.74	Run
11+77.6	75.93	76.18	77.71	Pool
11+85.3	75.07	76.18	77.71	Max Pool
11+94.8	75.29	76.3	77.32	Glide
12+06.6	75.93	76.23	77.48	Riffle
12+28.3	75.73	75.85	77	Pool
12+38.3	74.72	75.75	77.19	Pool
12+42.6	74.52	75.83	77.19	Max Pool
12+51.9	74.91	75.84	76.6	Glide
12+71.3	75.11	75.46	76.97	Glide
12+78.5	75.23	75.5	76.97	Pool
12+94.7	74.52	75.41	76.39	Pool
12+97.8	74.00	75.41	76.39	Max Pool
13+03.5	74.62	75.55	76.39	IM
13+10.6	74.59	75.2	76.39	Glide
13+29.7	75.27	75.54	76.18	Riffle
13+63.6	74.73	74.98	76.48	Culvert

## Deaton Farm Stream Restoration Site Monitoring Year 2005

<b>Field Crew:</b>	Jan Patterson, Chad Holland, and Wade Patton
<b>Watershed:</b>	<b>Fork Creek</b>
<b>Stream Reach:</b>	Southern Tributary
<b>Date:</b>	11/7-15/2005

### LONGITUDINAL PROFILE

<u>Station</u>	<u>TW</u>	<u>WS</u>	<u>BKF</u>	<u>NOTES</u>
0+00	114.82		114.81	Riffle
0+07	113.79		114.83	Pool
0+11	113.69		114.78	Max Pool
0+17	114.14		114.51	Riffle
0+23	113.54		114.32	Pool
0+26	113.39		114.21	Max Pool
0+29	113.48		114.05	Glide
0+37	113.70		113.99	Riffle
0+40	113.22	113.35	113.78	Riffle
0+45	112.99		113.41	Riffle
0+51	112.41			Run
0+56	112.17		112.71	Pool
0+61	111.92	112.45	112.69	Pool
0+69	111.42	112.45	113.71	Max Pool
0+77	111.91	112.45	112.61	Glide
0+85	112.08		112.47	Riffle
0+98	111.93		112.39	Run
1+10	111.53	111.79	112.16	Pool
1+16	111.19	111.67		Pool
1+22	110.97	111.66	111.76	Max Pool
1+28	111.13	111.50	111.87	Glide
1+34	111.28		111.63	Run
1+47	111.06	111.44	111.97	Run
1+74	111.26	111.39	111.58	Riffle
1+76	111.06	111.19	111.58	Pool
1+84	110.61	110.92		Pool
1+86	110.42	111.09	111.35	Max Pool
1+87.4	110.69			Glide
1+89.4	110.78	110.96	111.40	Riffle
221.9	109.98	110.18	110.47	Riffle
234.5	109.89		110.54	Pool
249.9	109.20	109.57	110.20	Max Pool
253.1	109.46	109.54		Riffle
265.4	109.00	109.21		Pool
267.2	108.56	109.22	109.69	Max Pool
270.1	108.89			Glide
281.8	109.22	109.13	109.52	Riffle
287.3	108.45	108.58	109.17	Run
304.4	108.13	108.31	108.70	Pool
308.8	107.92	108.31		Pool
310.5	107.77	108.31		Max Pool
315.6	108.29	108.31	108.59	CV
317.6	107.94	108.3		Max Pool
321.6	108.08	108.26	109.07	Riffle
337.8	107.16	107.3	108.55	Run
345.3	107.05	107.2	108.12	Run
347.8	106.85			Run



## Deaton Farm Stream Restoration Site Monitoring Year 2005

351.9	107.12	107.14	108.03	Run
358.8	106.88	107.04		Pool/CV
361.0	106.54	107.06		Pool
361.9	106.65	107.06	107.84	Pool
371.6	106.39	107.14	107.41	Pool
375.9	105.80	107.14	107.41	Max Pool
378.5	106.31	106.97		Glide
381.7	106.78	107.01		Riffle
391.7	106.52	106.97	107.16	Run
400.0	106.25		107.03	Pool
404.9	105.65	106.55		Max Pool
407.8	106.00	106.54	107.06	Glide
415.2	106.18	106.56	106.9	Riffle
430.8	105.87	106.08	106.57	Run
435.4	105.63		106.6	Pool
438.3	105.11	106.07	106.62	Max Pool
444.8	105.75	106.09	106.34	Riffle
468.4	105.12	105.2		Pool
472.5	104.21	105.15	105.95	Max Pool
476.8	104.53	105.14		Glide
482.7	104.86	105.22	105.5	Riffle
499.2	104.63	104.72		Run
503.8	104.07		104.65	Run
506.0	104.44	104.65		Riffle
513.6	104.29	104.49	104.93	Riffle
525.0	104.17	104.45	104.56	Run
534.1	103.89		104.26	Headcut
534.8	102.90		104.26	Headcut
540.8	102.13	103.18	104.2	Max Pool
545.3	102.88	103.2	104.2	Glide
555.4	103.18			CV
556.2	101.80	102.42	104.05	Max Pool
559.9	102.16		104.19	Glide
563.2	102.66	102.72	104.19	Riffle
576.1	101.86	102.02	103.66	Run
581.4	101.68		103.6	Run
584.3	101.62	102	103.6	Run
588.1	101.58		103.6	Run
592.4	101.32		103.57	Run
600.6	101.51		103.55	Run
607.9	101.43	101.94		Run
613.8	101.91	101.94	103	Run
624.6	101.46	101.9	102.77	Run
636.0	101.53		102.77	Riffle
642.3	100.52	101.33	102.34	Run
660.2	100.81	101.35	102.31	Riffle
6+74.9	100.70	101.13	102.19	Riffle
6+83.2	100.65	100.93		Run
6+85.5	100.50	100.88	102.77	Run
6+90.0	100.65	100.7	102.77	Pool
6+95.9	99.46	100.73	102.77	Max Pool
7+10.3	99.99	100.72	102.08	Glide
7+15.7	100.73	100.73	102.08	Riffle
7+24.6	100.19	100.3	102.08	Pool
7+27.2	99.30	100.27	102.3	Max Pool
7+32.4	100.13	100.22	102.3	Riffle

## Deaton Farm Stream Restoration Site Monitoring Year 2005

7+74.8	98.42	98.88		Pool
7+81.8	96.27	98.79	100.94	Max Pool
7+92.1	97.63	98.79		Glide
8+04.7	98.79	98.84	99.58	Riffle
8+20.7	98.43	98.56		Run
8+25.4	97.90	98.36	98.96	Run
8+35.2	98.01	98.29	98.89	Run
8+45.3	97.67	98.24		Run
8+50.4	97.78	98.24	99.19	Run
8+53.1	98.25	98.23	99.19	Riffle
8+58.3	97.84		99.18	Run
8+63.4	96.95		99.18	Max Pool
8+69.8	97.48	97.7	98.58	Glide
8+81.1	96.19	97.71	98.58	Max Pool
8+86.5	96.84	97.71		Glide
8+93.1	97.44	97.71	98.5	Pool
9+05.7	96.61	97.64		Max Pool
9+14.6	97.53	97.74	98.23	Riffle
9+31.1	96.56	97.08	98.18	Pool
9+34.7	95.84	97.14	98.18	Max Pool
9+38.5	96.06			Glide
9+43.2	96.90	97.02		Riffle
9+63.1	96.29	96.29		Pool
9+66.9	95.56	96.3	97.65	Max Pool
9+78.3	95.79	95.85	97.32	CV
9+82.2	95.54	95.87	97.32	Pool
9+83.8	95.53	95.82	97.32	Pool
9+97.5	95.19	95.75	96.64	Pool
10+00.6	95.03	95.71	96.64	Max Pool
10+05.6	95.45	95.77	96.64	Pool
10+08.3	94.95	95.77	96.64	Pool
10+13.5	94.73	95.8	96.43	Max Pool
10+16.7	95.65	95.8	96.43	Riffle
10+28.2	95.55	95.81	96.45	Pool
10+34.3	94.71	95.76	96.45	Pool
10+37.0	94.93	95.74	96.45	CV
10+40.2	94.40	95.74	96.45	Max Pool
10+46.4	95.44			Glide/Xing
10+54.5	95.68	95.8		Riffle
10+68.0	95.28		95.99	Xing
10+70.5	95.13		95.99	Run
10+71.5	94.40		95.99	Pool
10+76.5	93.39		95.99	Max Pool
10+81.7	94.01	95.44		Glide
10+83.2	94.18	95.44		Riffle
11+11.6	93.77	94.04	95.47	Run
11+19.1	93.69	94.1		CV
11+24.9	93.10	93.87	95.09	Max Pool
11+29.3	93.26	93.87	95.09	Glide
11+31.8	93.61	93.87	95.09	Pool
11+41.8	92.87	93.73	95.03	Pool
11+45.4	92.68	93.77	95.03	Max Pool
11+49.8	92.94	93.69	95.03	Glide
11+53.5	93.24	93.7	94.78	Riffle
11+75.1	93.12	93.35	94.81	Pool
11+96.9	92.15	93.13	94.8	Max Pool

## Deaton Farm Stream Restoration Site Monitoring Year 2005

12+08.4	93.02	93.02	94.04 CV
12+12.4	92.03	92.8	94.32 Max Pool
12+16.5	92.09	92.79	94.32 Glide
12+32.7	92.86		Riffle
12+40.2	91.32	92.03	Pool
12+45.3	90.54	92.09	93.44 Max Pool
12+53.6	91.98	91.98	CV
12+60.0	90.26	91.97	Max Pool
12+63.6	90.65	92	93.67 Glide
12+75.2	91.98		Riffle
12+90.6	91.67	91.35	92.26 CV
12+99.8	90.67		Pool
13+01.5	90.64	91.31	92.18 Max Pool
13+05.8	91.18		92.18 Riffle
13+16.0	91.08		93.44 CV
13+20.5	90.44	90.92	93.44 Pool
13+25.0	89.94	90.95	93.67 Max Pool
13+28.8	90.07	90.9	93.67 Glide
13+56.5	90.72	90.91	91.88 Riffle
13+69.1	90.47		91.67 Pool
13+75.6	89.69	90.47	91.46 Max Pool
13+80.6	89.92	90.39	91.46 Glide
13+87.9	90.44		91.77 Riffle
14+10.1	90.20		91.01 CV
14+15.9	89.90		91.01 Pool
14+20.2	89.50		91.01 Max Pool
14+24.6	89.63		91.17 Glide
14+26.1	89.85		91.17 Riffle
14+41.5	89.56		90.08 Pool
14+49.0	88.42		90.43 Max Pool
14+50.8	88.75		90.43 Glide
14+56.7	89.11		90.72 Riffle
14+74.1	89.01		90.48 Run
14+85.4	88.76		90.54 Pool
14+90.2	88.43		90.54 Max Pool
14+95.1	88.66		Glide
14+97.2	88.94		89.73 CV
15+00.9	88.29		89.73 Max Pool
15+02.9	88.54		89.73 Glide
15+09.6	88.77		90.1 Riffle
15+28.6	88.59		89.88 Pool
15+38.4	87.44		89.93 Max Pool
15+43.9	87.88		89.93 Glide
15+55.1	88.17		89.48 Glide
15+65.4	88.71		89.65 Riffle
15+70.7	88.58		Pool
15+79.6	86.99		89.12 Max Pool
15+83.0	87.47		CV
15+90.4	87.23		89.27 Pool
15+92.7	87.62		89.27 Glide
15+95.5	88.06		89.27 Riffle
16+21.8	87.41		88.27 Pool
16+34.7	86.45		88.59 Max Pool
16+36.6	86.88		88.59 Glide
16+40.5	86.99		88.59 Riffle
16+65.6	86.60		87.96 CV

## Deaton Farm Stream Restoration Site Monitoring Year 2005

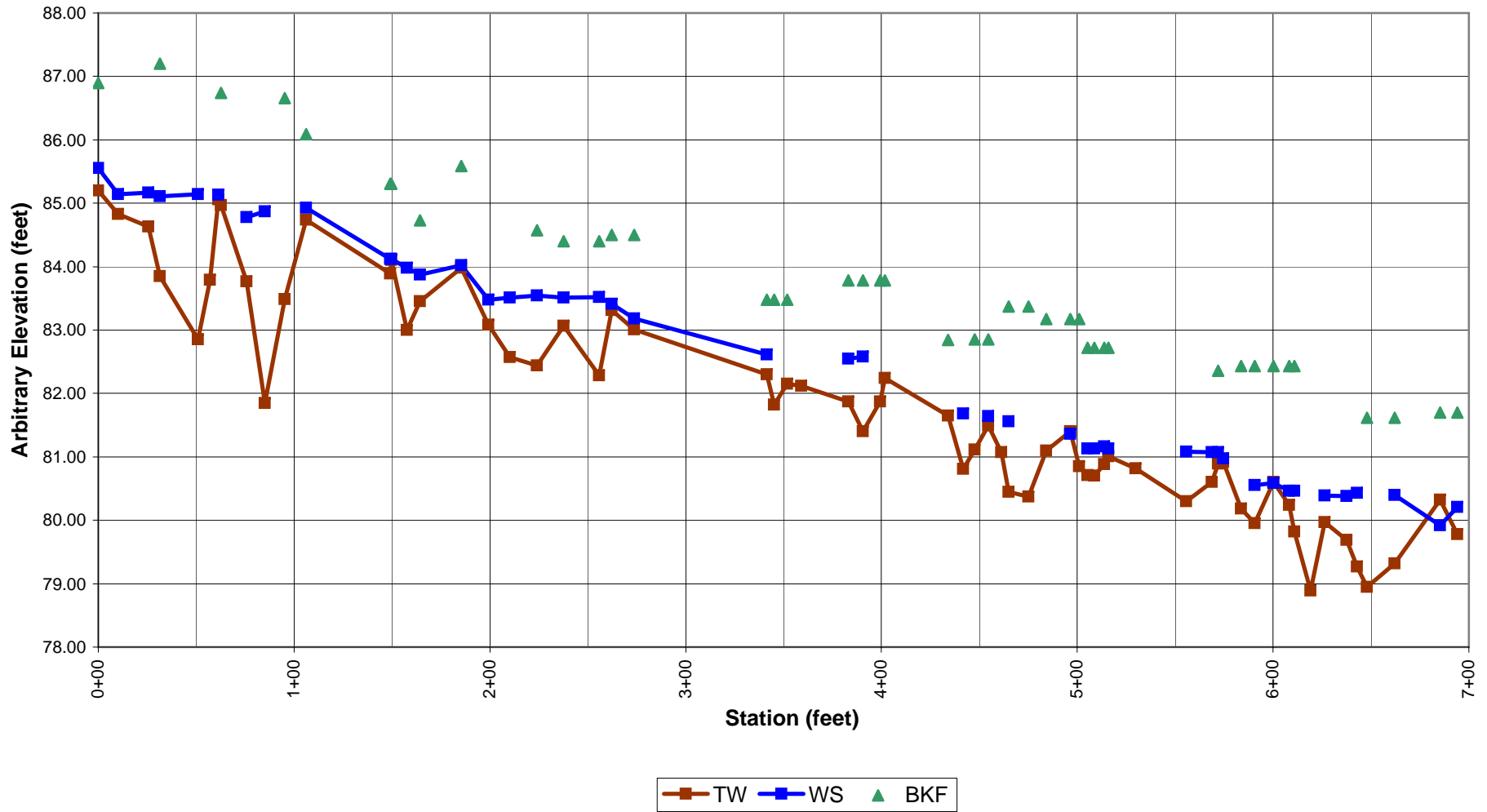
16+71.0	85.94		87.96 Max Pool
16+74.6	86.16		Glide
16+76.8	86.39		Glide
17+01.6	86.75		87.34 Pool
17+08.5	85.52	85.87	87.34 Max Pool
17+13.1	85.44	85.56	
17+17.1	85.96		87.15 Riffle
17+46.7	86.11		87.15 Pool
17+56.1	84.37	85.84	87.29 Max Pool
17+60.9	84.97		86.82 Glide
17+63.4	85.87	85.95	86.82 Pool
17+67.6	84.86	85.98	86.82 Max Pool
17+72.1	85.22		86.82 Glide
17+74.8	85.92		86.82 Riffle
17+90.9	85.70		87.13 Pool
17+97.6	84.40	85.45	87.31 Max Pool
18+03.9	85.29	85.52	Glide
18+06.2	85.42		86.14 Riffle
18+29.1	84.96		Pool
18+36.4	84.22	84.97	86 Max Pool
18+38.3	84.23		84.98
18+45.8	84.70	84.92	85.84 Glide
18+50.2	84.92		CV
18+58.5	84.18		84.63 Max Pool
18+61.5	84.31		85.83 Pool
18+64.9	84.27	84.63	85.83 Pool
18+66.3	84.30	84.62	85.83 Pool
18+70.9	84.56		Riffle
18+78.8	83.81		84.38 Riffle
18+80.3	83.31		Max Pool/Culvert
18+86.4	83.84		Glide
18+96.8	84.23		85.41 Riffle
19+12.1	83.76		85.06 Run
19+25.9	82.81	83.68	Run
19+33.0	82.99	83.71	Run
19+51.5	82.89	83.65	Pool
19+56.6	82.35	83.67	Max Pool
19+73.4	82.68	83.71	84.39 Glide
20+04.4	83.51	83.75	84.39 Run
20+31.7	82.91	83.7	84.15 Run
20+34.5	83.12	83.68	84.15 Xing
20+37.4	83.20	83.67	84.15 Run
20+39.9	83.45	83.67	84.15 Riffle
20+55.0	83.01	83.15	84.23 Run/Fence
20+72.4	82.23	82.57	83.21 Pool
20+76.3	81.15	82.55	83.21 Max Pool
20+80.6	81.53	82.52	83.21 Glide
20+87.1	82.28	82.56	83.21 Riffle
21+15.5	81.25	81.83	82.63 Pool
21+18.1	79.93	81.83	82.63 Max Pool
21+29.0	80.91	81.88	82.63 Glide
21+43.3	81.52	81.87	82.54 CV
21+51.8	80.54	81.86	82.54 Max Pool
21+54.7	80.91		82.54 Glide
21+60.3	81.86	81.86	82.54 Riffle
21+87.0	80.80	80.88	81.85 Pool

## Deaton Farm Stream Restoration Site Monitoring Year 2005

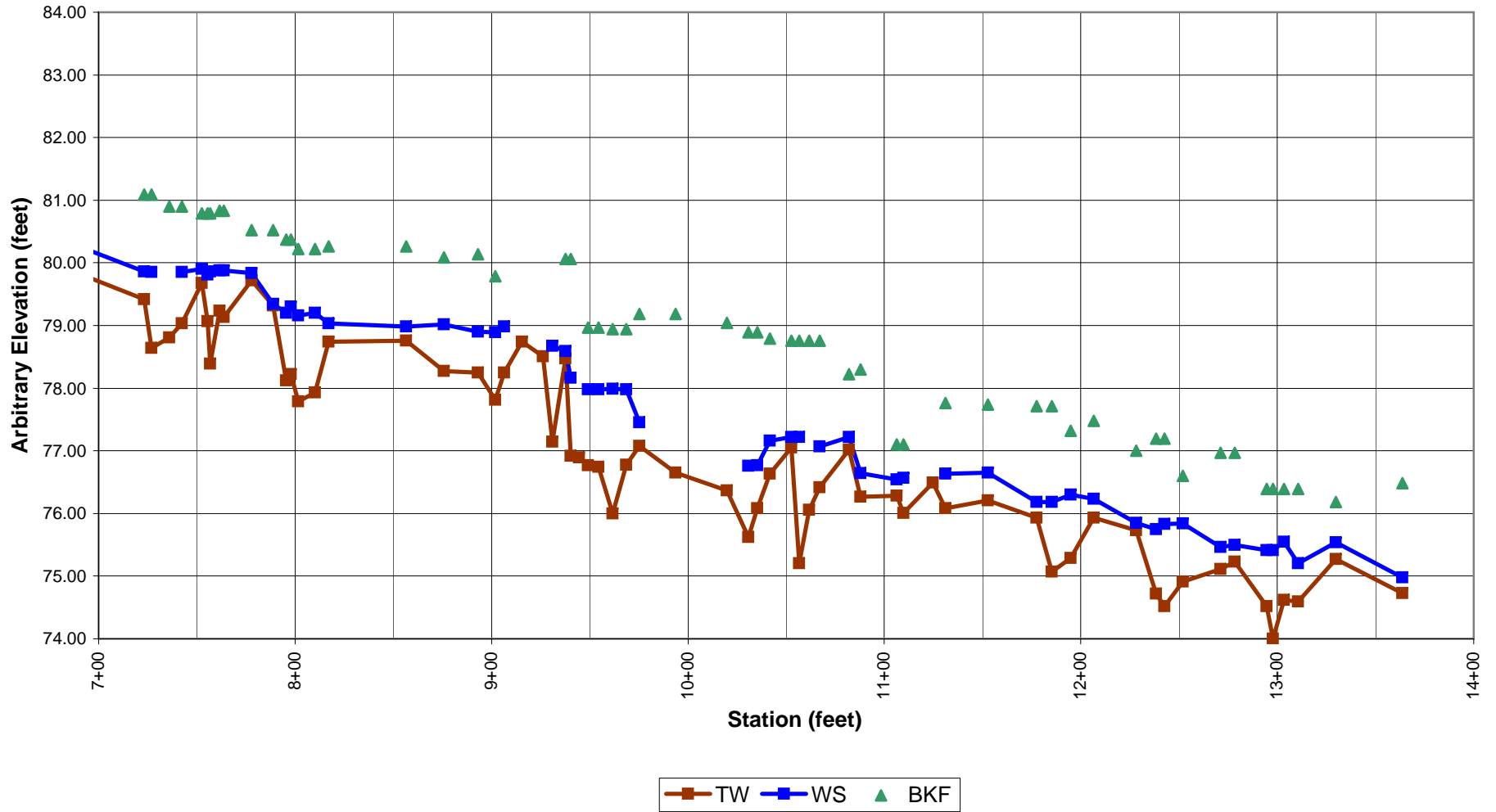
21+96.9	79.42	80.84	81.85 Max Pool
22+06.1	79.97		81.85 Glide
22+07.5	80.82		Riffle
22+43.6	80.50		81.81 Pool
22+49.7	79.59	80.54	81.67 Pool
22+55.1	79.33	80.53	81.67 Max Pool
22+61.4	80.32	80.58	81.67 Pool
22+69.0	79.68		81.67 CV
22+72.9	79.64	80.45	Max Pool
22+74.9	80.01	80.45	Glide
22+77.8	80.23	80.53	80.98 Riffle
23+00.2	79.71	79.78	Pool
23+06.8	78.69	80.01	80.84 Max Pool
23+11.2	79.26	79.99	80.84 Glide
23+15.2	79.53	80.01	80.84 Glide
23+21.3	79.94	79.98	80.84 Riffle/XSC
23+41.2	79.27	79.5	80.84 Pool
23+52.0	78.50	79.5	80.2 Max Pool
23+54.5	78.91	79.45	80.21 Glide
23+59.8	79.42	79.47	80.44 Riffle
23+95.1	78.07		80.24 Run
23+98.1	78.00		80.24 Run
24+01.0	78.08		80.24 Run
24+05.9	78.62	78.94	80.24 Riffle
24+31.7	78.25		79.8 Pool
24+42.7	76.60		Max Pool
24+48.4	78.52		79.01 CV
24+52.1	77.42		Run
24+58.7	77.73		Run
24+62.3	77.55		Run
24+80.9	77.74		78.88 Run
24+86.0	77.28		78.86 Run
24+91.1	77.52		78.86 Run
24+94.6	78.14		78.86 Riffle
25+16.0	77.45		78.89 Pool
25+25.3	76.43		78.89 Max Pool
25+29.7	77.03		78.89 Glide
25+32.7	77.36		78.89 Riffle
25+60.1	77.18		77.82 Pool
25+69.3	75.77		77.82 Max Pool
25+71.6	76.36		77.82 Glide
25+75.7	77.07		77.82 Riffle
2594.09	76.75		Pool
25+99.8	75.83		78.02 Max Pool
26+02.3	76.16		78.02 Glide
26+04.5	76.65		78.02 Riffle
26+37.3	75.82		77.36 Riffle
26+63.1	75.65		76.48 Riffle
26+77.8	75.07		Riffle
26+79.2	74.73		74.98 Culvert



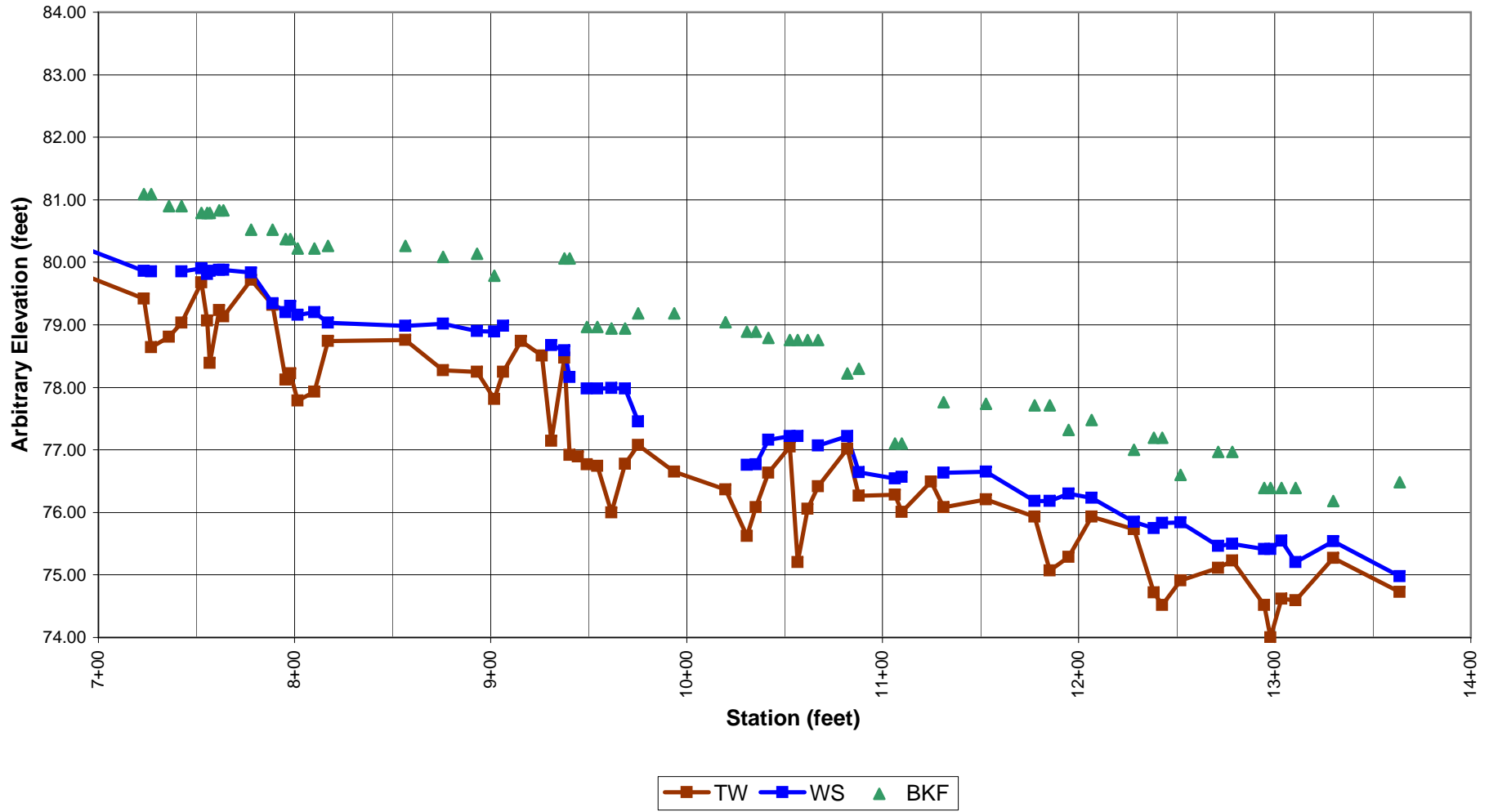
Deaton Farm Stream Restoration  
Northern Tributary  
Longitudinal Profile



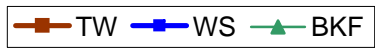
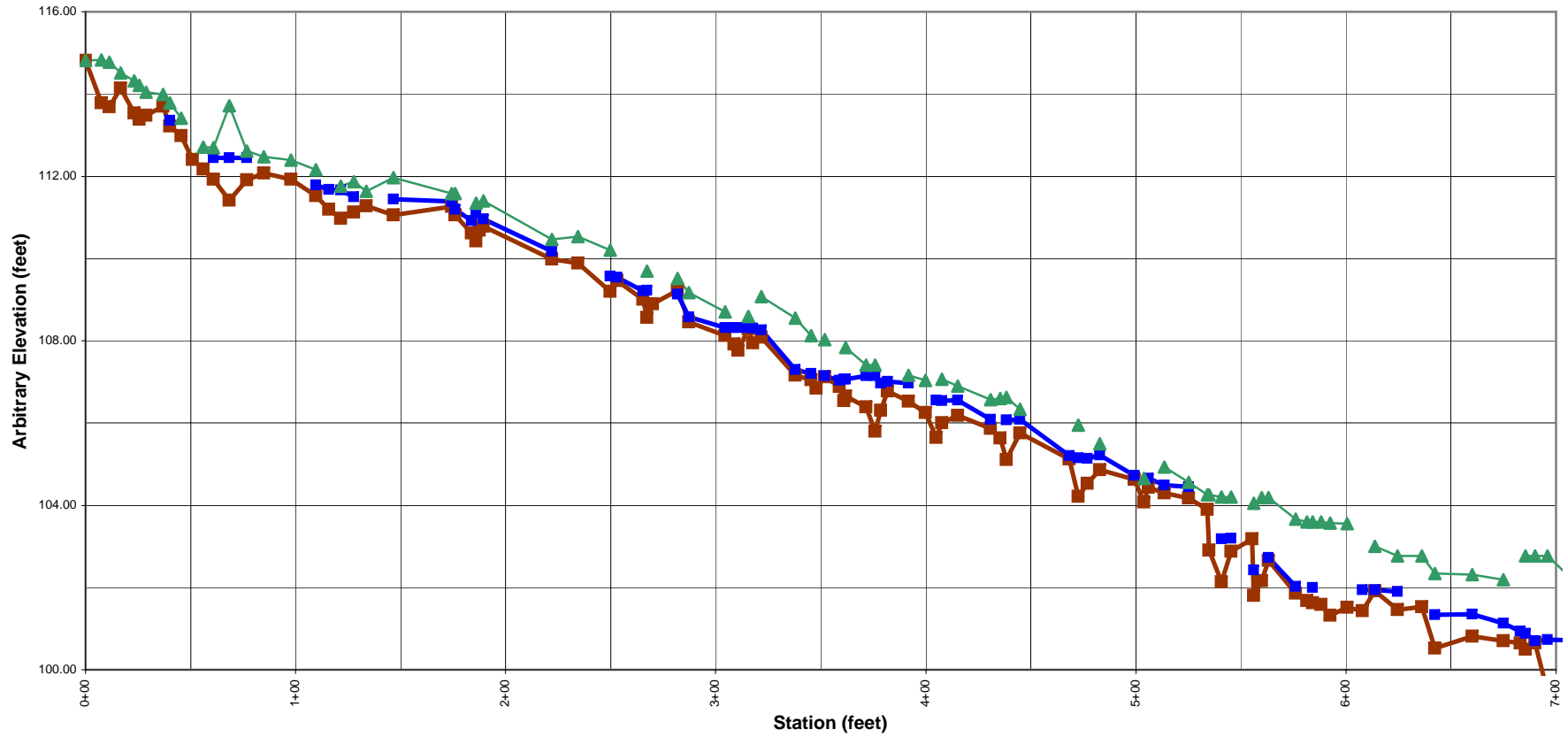
Deaton Farm Stream Restoration  
Northern Tributary  
Longitudinal Profile



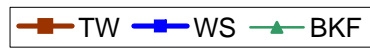
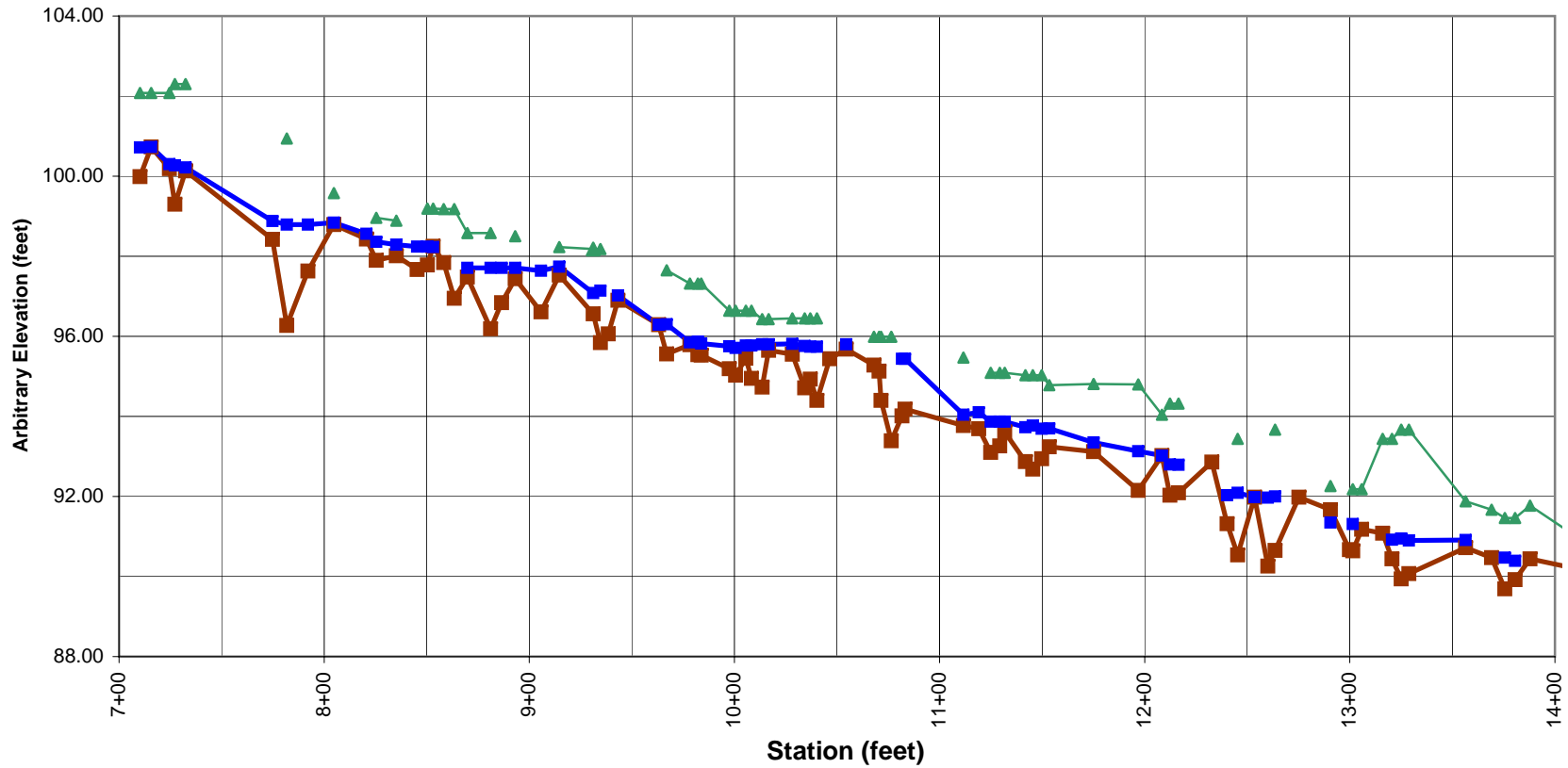
Deaton Farm Stream Restoration  
Northern Tributary  
Longitudinal Profile



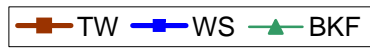
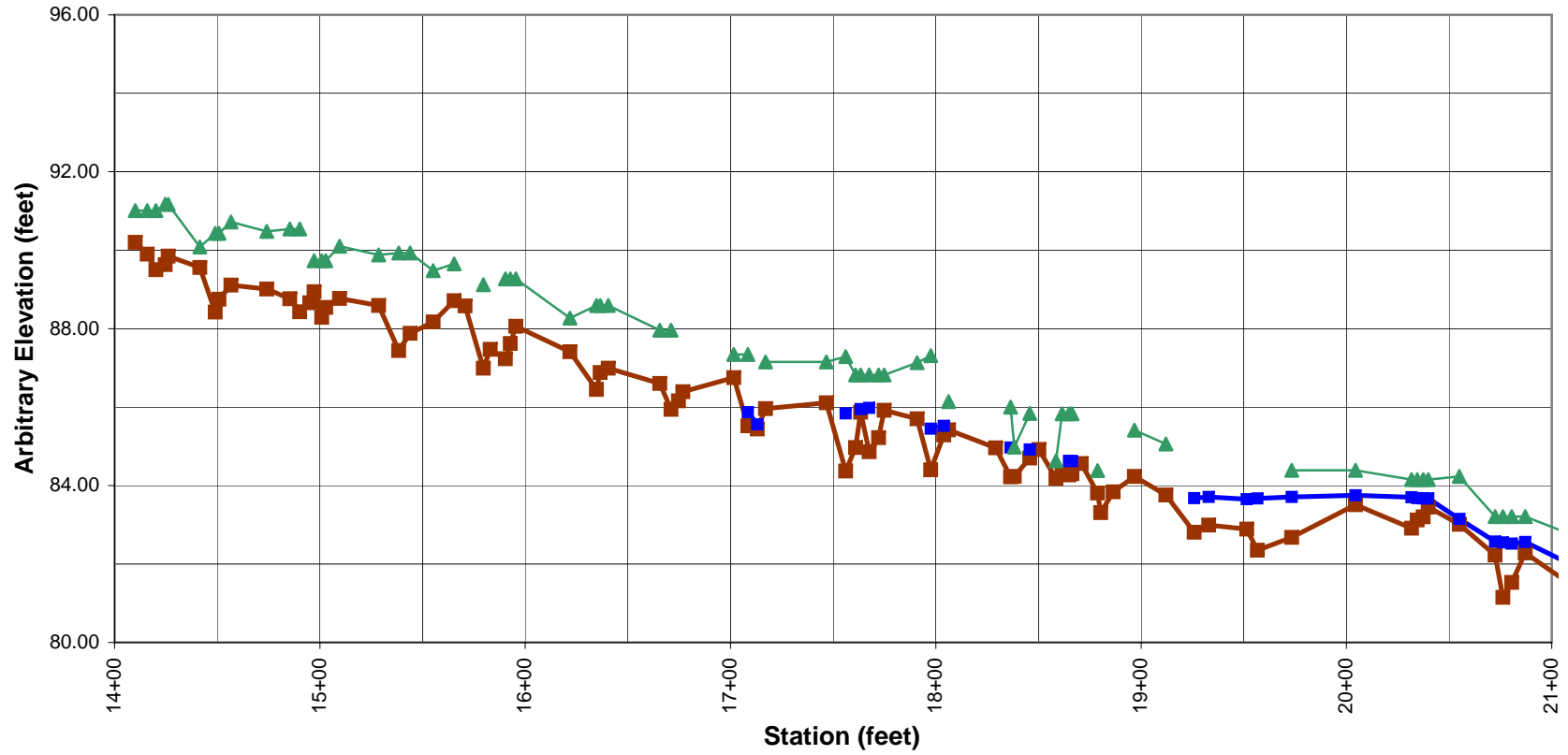
Deaton Farm Stream Restoration  
Southern Tributary  
Longitudinal Profile



Deaton Farm Stream Restoration  
Southern Tributary  
Longitudinal Profile

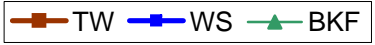
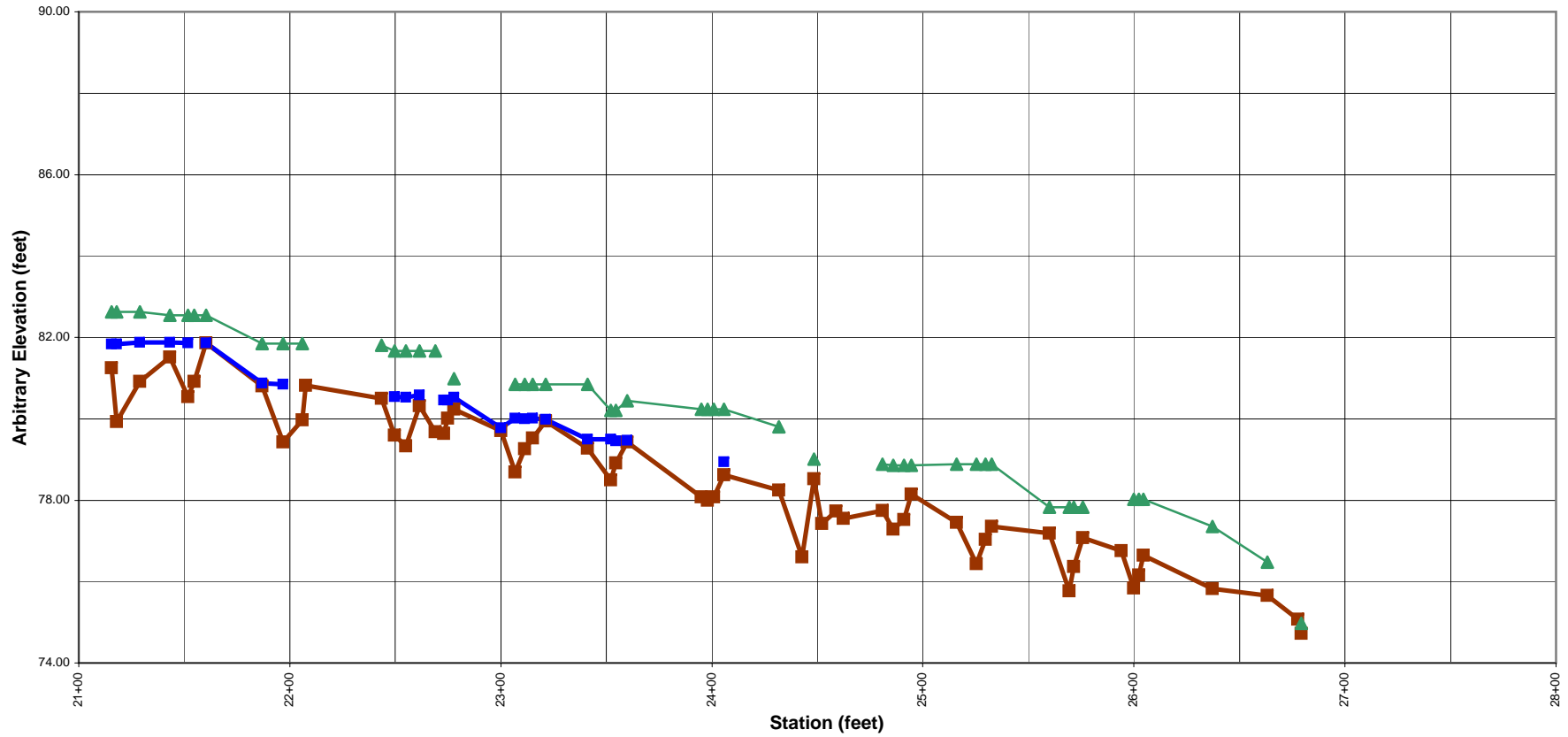


Deaton Farm Stream Restoration  
Southern Tributary  
Longitudinal Profile



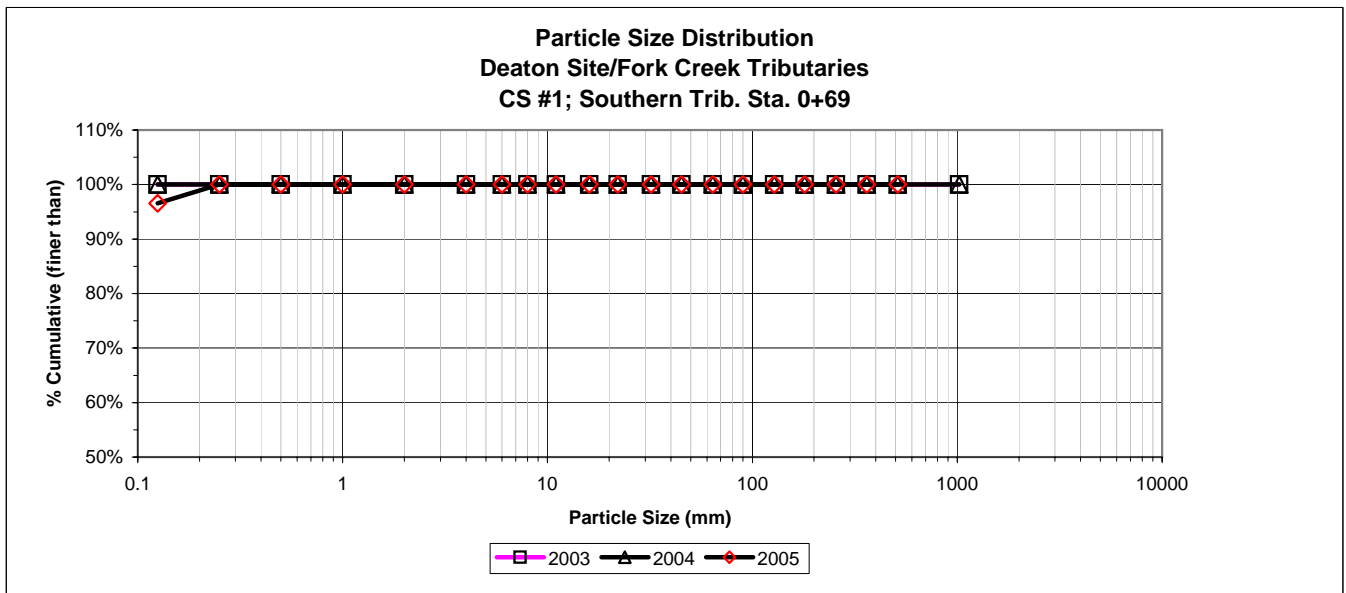


Deaton Farm Stream Restoration  
Southern Tributary  
Longitudinal Profile



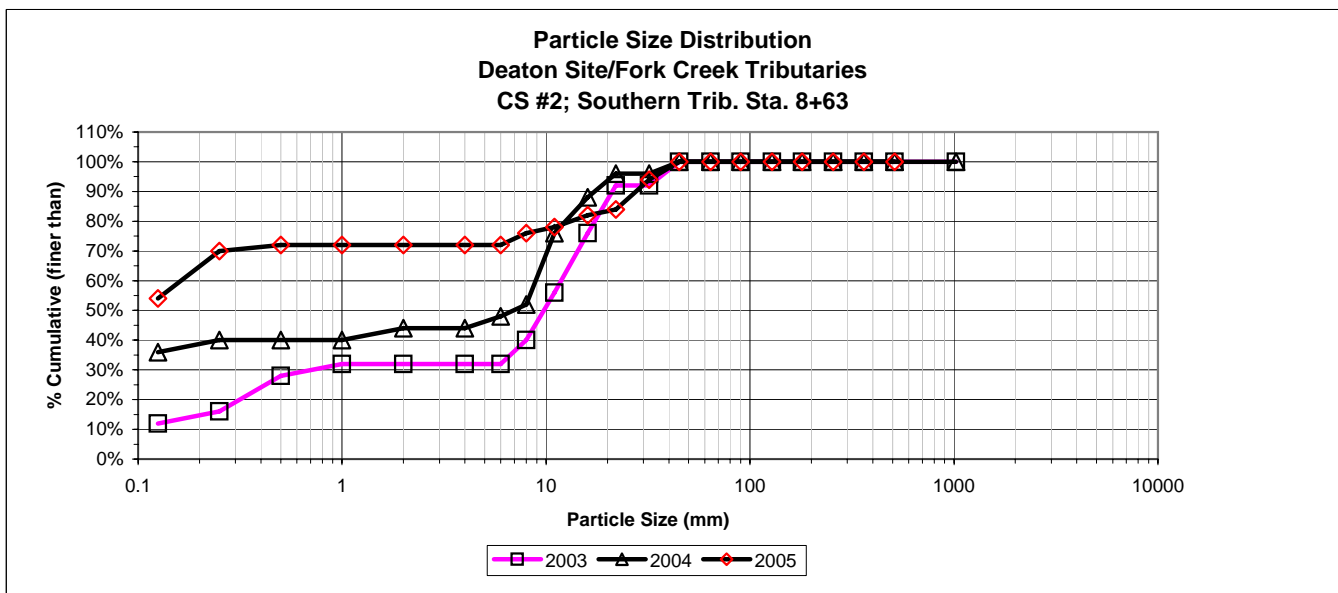
**Deaton Farm Stream Restoration Site**  
**EEP Site Number 110**  
**Monitoring Year 2005**

PEBBLE COUNT									
Site: Deaton Farm/Fork Creek							11/15/2005		
Party: Jan Patterson, Chad Holland, & Wade Patton							CS#1 (Southern Trib. Sta. 0+69)		
Particle Count									
Inches	Particle	Millimeter		Pool			Total No.	Item %	% Cumulative
	Silt/Clay	< 0.062	<b>S/C</b>	50			50	86%	86%
.04 - .08	Very Fine	.062 - .125	<b>S</b>	6			6	10%	97%
	Fine	.125 - .25	<b>A</b>	2			2	3%	100%
	Medium	.25 - .50	<b>N</b>	0			0	0%	100%
	Coarse	.50 - 1.0	<b>D</b>	0			0	0%	100%
	Very Coarse	1.0 - 2.0	<b>S</b>	0			0	0%	100%
.08 - .16	Very Fine	2.0 - 4.0		0			0	0%	100%
.16 - .22	Fine	4.0 - 5.7	<b>G</b>	0			0	0%	100%
.22 - .31	Fine	5.7 - 8.0	<b>R</b>	0			0	0%	100%
.31 - .44	Medium	8.0 - 11.3	<b>A</b>	0			0	0%	100%
.44 - .63	Medium	11.3 - 16.0	<b>V</b>	0			0	0%	100%
.63 - .89	Coarse	16.0 - 22.6	<b>E</b>	0			0	0%	100%
.89 - 1.26	Coarse	22.6 - 32.0	<b>L</b>	0			0	0%	100%
1.26 - 1.77	Very Coarse	32.0 - 45.0	<b>S</b>	0			0	0%	100%
1.77 - 2.5	Very Coarse	45.0 - 64.0		0			0	0%	100%
2.5 - 3.5	Small	64 - 90	<b>C</b>	0			0	0%	100%
3.5 - 5.0	Small	90 - 128	<b>O</b>	0			0	0%	100%
5.0 - 7.1	Large	128 - 180	<b>B</b>	0			0	0%	100%
7.1 - 10.1	Large	180 - 256	<b>L</b>	0			0	0%	100%
10.1 - 14.3	Small	256 - 362	<b>B</b>	0			0	0%	100%
14.3 - 20	Small	362 - 512	<b>L</b>	0			0	0%	100%
20 - 40	Medium	512 - 1024	<b>D</b>	0			0	0%	100%
40 - 80	Lrg- Very Lrg	1024 - 2048	<b>R</b>	0			0	0%	100%
	Bedrock		<b>BDRK</b>	0			0	0%	100%
<b>Totals</b>				<b>58</b>			<b>58</b>	<b>100%</b>	<b>100%</b>



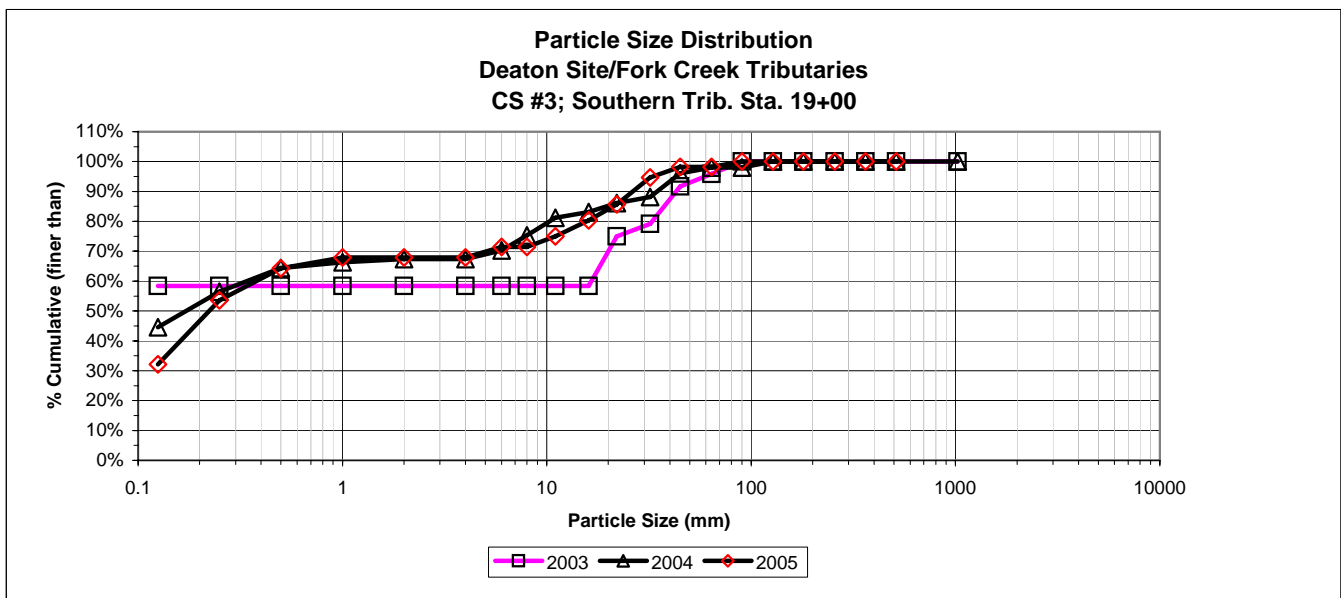
**Deaton Farm Stream Restoration Site**  
**EEP Site Number 110**  
**Monitoring Year 2005**

PEBBLE COUNT									
Site: Deaton Farm/Fork Creek						11/15/2005			
Party: Jan Patterson, Chad Holland, & Wade Patton						CS#2 (Southern Trib. Sta. 8+63)			
Particle Count									
Inches	Particle	Millimeter		Riffle			Total No.	Item %	% Cumulative
< 0.062	Silt/Clay	< 0.062	S/C	19			19	38%	38%
.062 - .125	Very Fine	.062 - .125	S	8			8	16%	54%
.125 - .25	Fine	.125 - .25	A	8			8	16%	70%
.25 - .50	Medium	.25 - .50	N	1			1	2%	72%
.50 - 1.0	Coarse	.50 - 1.0	D	0			0	0%	72%
.04 - .08	Very Coarse	1.0 - 2.0	S	0			0	0%	72%
.08 - .16	Very Fine	2.0 - 4.0		0			0	0%	72%
.16 - .22	Fine	4.0 - 5.7	G	0			0	0%	72%
.22 - .31	Fine	5.7 - 8.0	R	2			2	4%	76%
.31 - .44	Medium	8.0 - 11.3	A	1			1	2%	78%
.44 - .63	Medium	11.3 - 16.0	V	2			2	4%	82%
.63 - .89	Coarse	16.0 - 22.6	E	1			1	2%	84%
.89 - 1.26	Coarse	22.6 - 32.0	L	5			5	10%	94%
1.26 - 1.77	Very Coarse	32.0 - 45.0	S	3			3	6%	100%
1.77 - 2.5	Very Coarse	45.0 - 64.0		0			0	0%	100%
2.5 - 3.5	Small	64 - 90	C	0			0	0%	100%
3.5 - 5.0	Small	90 - 128	O	0			0	0%	100%
5.0 - 7.1	Large	128 - 180	B	0			0	0%	100%
7.1 - 10.1	Large	180 - 256	L	0			0	0%	100%
10.1 - 14.3	Small	256 - 362	B	0			0	0%	100%
14.3 - 20	Small	362 - 512	L	0			0	0%	100%
20 - 40	Medium	512 - 1024	D	0			0	0%	100%
40 - 80	Lrg- Very Lrg	1024 - 2048	R	0			0	0%	100%
	Bedrock		BDRK	0			0	0%	100%
<b>Totals</b>				<b>50</b>			<b>50</b>	<b>100%</b>	<b>100%</b>



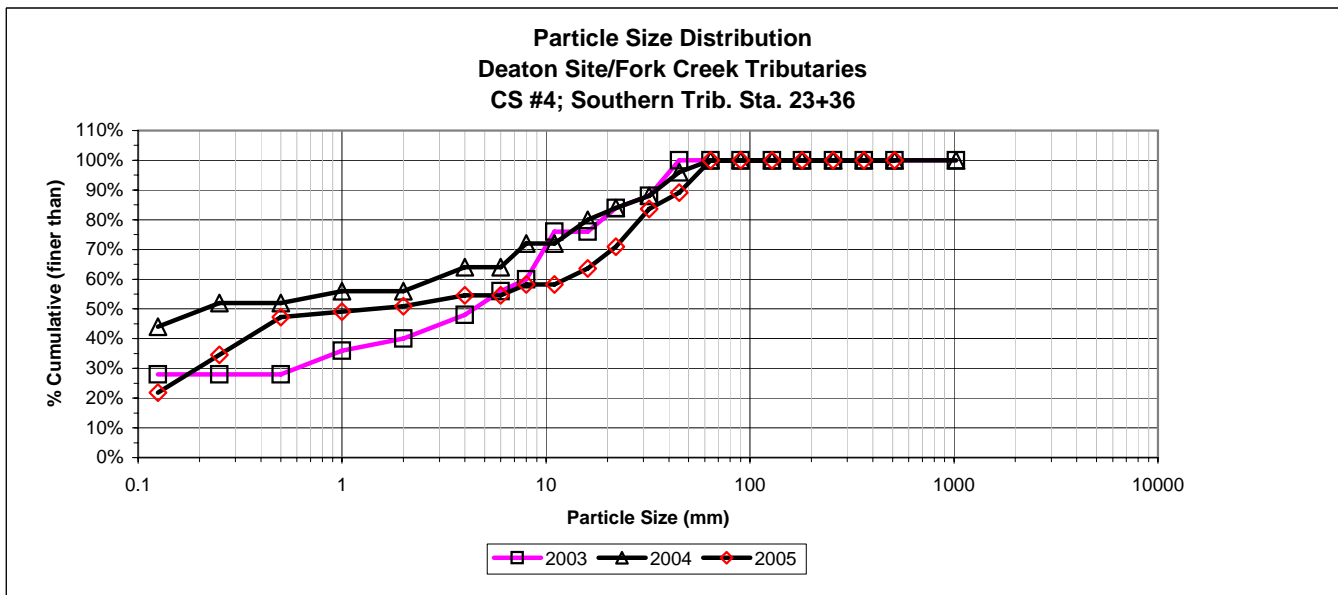
**Deaton Farm Stream Restoration Site  
EEP Site Number 110  
Monitoring Year 2005**

PEBBLE COUNT									
Site: Deaton Farm/Fork Creek						11/15/2005			
Party: Jan Patterson, Chad Holland, & Wade Patton						CS#3 (Southern Trib. Sta. 19+00)			
Particle Count									
Inches	Particle	Millimeter		Rifle/Glide			Total No.	Item %	% Cumulative
	Silt/Clay	< 0.062	S/C	7			7	13%	13%
.04 - .08	Very Fine	.062 - .125	S	11			11	20%	32%
	Fine	.125 - .25	A	12			12	21%	54%
	Medium	.25 - .50	N	6			6	11%	64%
	Coarse	.50 - 1.0	D	2			2	4%	68%
	Very Coarse	1.0 - 2.0	S	0			0	0%	68%
.08 - .16	Very Fine	2.0 - 4.0		0			0	0%	68%
.16 - .22	Fine	4.0 - 5.7	G	2			2	4%	71%
.22 - .31	Fine	5.7 - 8.0	R	0			0	0%	71%
.31 - .44	Medium	8.0 - 11.3	A	2			2	4%	75%
.44 - .63	Medium	11.3 - 16.0	V	3			3	5%	80%
.63 - .89	Coarse	16.0 - 22.6	E	3			3	5%	86%
.89 - 1.26	Coarse	22.6 - 32.0	L	5			5	9%	95%
1.26 - 1.77	Very Coarse	32.0 - 45.0	S	2			2	4%	98%
1.77 - 2.5	Very Coarse	45.0 - 64.0		0			0	0%	98%
2.5 - 3.5	Small	64 - 90	C	1			1	2%	100%
3.5 - 5.0	Small	90 - 128	O	0			0	0%	100%
5.0 - 7.1	Large	128 - 180	B	0			0	0%	100%
7.1 - 10.1	Large	180 - 256	L	0			0	0%	100%
10.1 - 14.3	Small	256 - 362	B	0			0	0%	100%
14.3 - 20	Small	362 - 512	L	0			0	0%	100%
20 - 40	Medium	512 - 1024	D	0			0	0%	100%
40 - 80	Lrg- Very Lrg	1024 - 2048	R	0			0	0%	100%
	Bedrock		BDRK	0			0	0%	100%
<b>Totals</b>				<b>56</b>			<b>56</b>	<b>100%</b>	<b>100%</b>



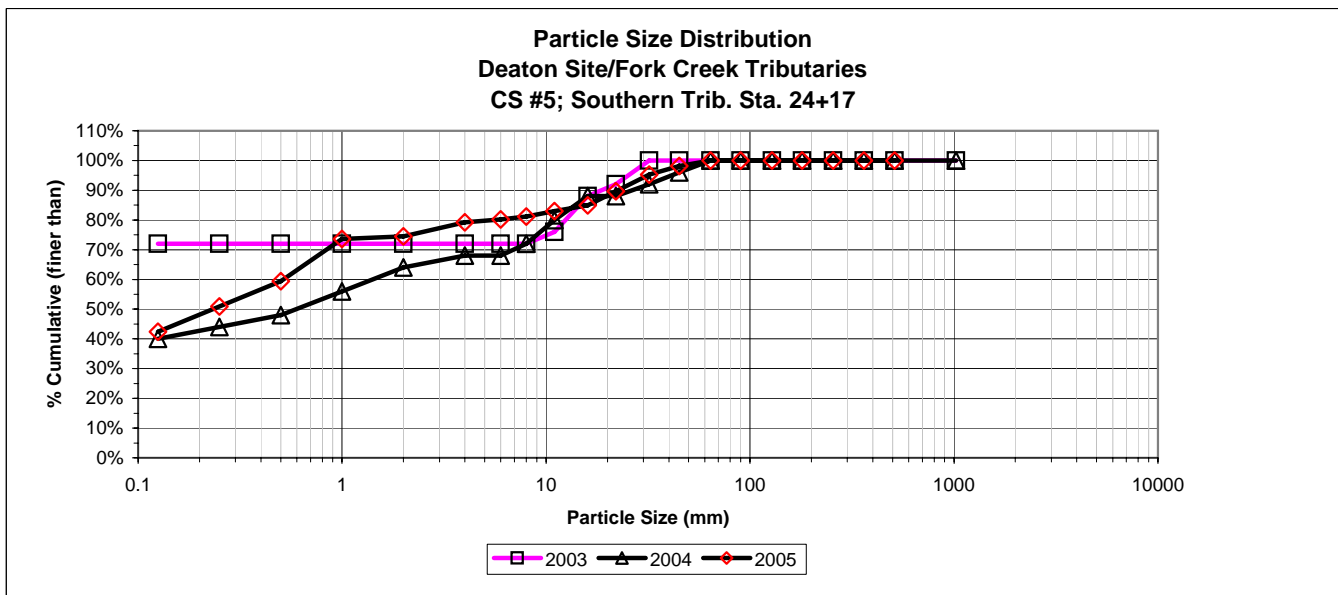
**Deaton Farm Stream Restoration Site**  
**EEP Site Number 110**  
**Monitoring Year 2005**

PEBBLE COUNT								
Site: Deaton Farm/Fork Creek						11/15/2005		
Party: Jan Patterson, Chad Holland, & Wade Patton						CS#4 (Southern Trib. Sta. 23+36)		
Particle Count								
Inches	Particle	Millimeter		Riffle		Total No.	Item %	% Cumulative
	Silt/Clay	< 0.062	<b>S/C</b>	2		2	4%	4%
.04 - .08	Very Fine	.062 - .125	<b>S</b>	10		10	18%	22%
	Fine	.125 - .25	<b>A</b>	7		7	13%	35%
	Medium	.25 - .50	<b>N</b>	7		7	13%	47%
	Coarse	.50 - 1.0	<b>D</b>	1		1	2%	49%
	Very Coarse	1.0 - 2.0	<b>S</b>	1		1	2%	51%
.08 - .16	Very Fine	2.0 - 4.0		2		2	4%	55%
.16 - .22	Fine	4.0 - 5.7	<b>G</b>	0		0	0%	55%
.22 - .31	Fine	5.7 - 8.0	<b>R</b>	2		2	4%	58%
.31 - .44	Medium	8.0 - 11.3	<b>A</b>	0		0	0%	58%
.44 - .63	Medium	11.3 - 16.0	<b>V</b>	3		3	5%	64%
.63 - .89	Coarse	16.0 - 22.6	<b>E</b>	4		4	7%	71%
.89 - 1.26	Coarse	22.6 - 32.0	<b>L</b>	7		7	13%	84%
1.26 - 1.77	Very Coarse	32.0 - 45.0	<b>S</b>	3		3	5%	89%
1.77 - 2.5	Very Coarse	45.0 - 64.0		6		6	11%	100%
2.5 - 3.5	Small	64 - 90	<b>C</b>	0		0	0%	100%
3.5 - 5.0	Small	90 - 128	<b>O</b>	0		0	0%	100%
5.0 - 7.1	Large	128 - 180	<b>B</b>	0		0	0%	100%
7.1 - 10.1	Large	180 - 256	<b>L</b>	0		0	0%	100%
10.1 - 14.3	Small	256 - 362	<b>B</b>	0		0	0%	100%
14.3 - 20	Small	362 - 512	<b>L</b>	0		0	0%	100%
20 - 40	Medium	512 - 1024	<b>D</b>	0		0	0%	100%
40 - 80	Lrg- Very Lrg	1024 - 2048	<b>R</b>	0		0	0%	100%
	Bedrock		<b>BDRK</b>	0		0	0%	100%
<b>Totals</b>				<b>55</b>		<b>55</b>	<b>100%</b>	<b>100%</b>



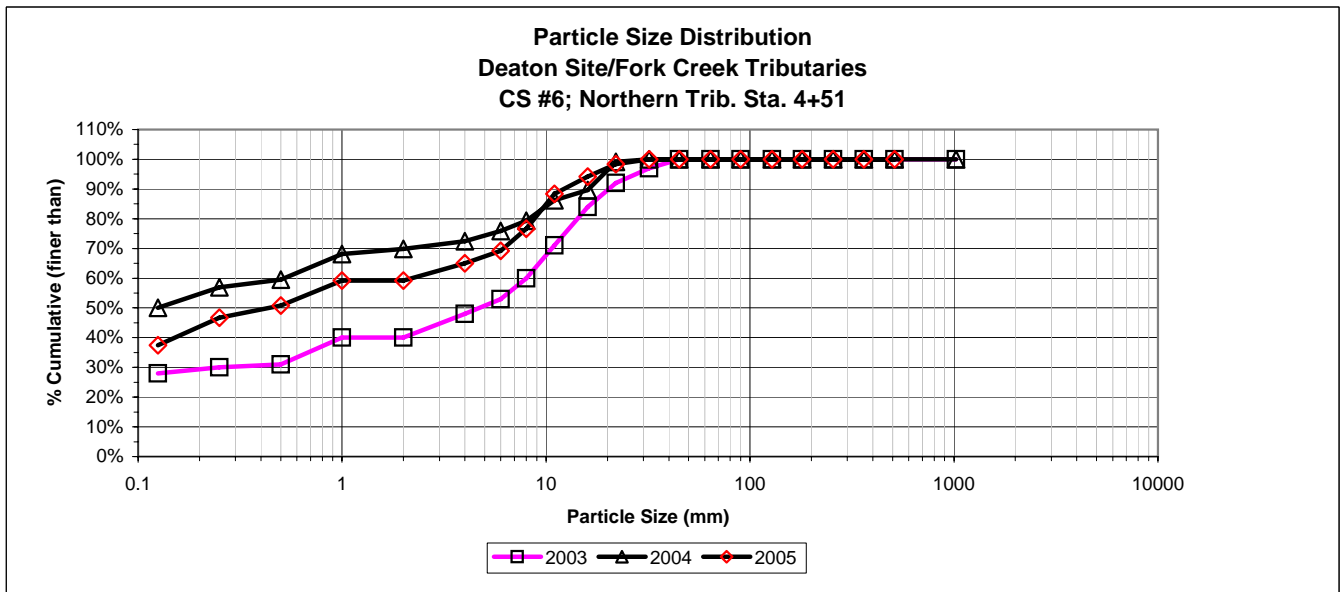
**Deaton Farm Stream Restoration Site  
EEP Site Number 110  
Monitoring Year 2005**

PEBBLE COUNT									
Site: Deaton Farm/Fork Creek							11/7/2005		
Party: Jan Patterson, Chad Holland, & Wade Patton							CS#5 (Southern Trib. Sta. 24+17)		
Particle Count									
Inches	Particle	Millimeter		Pool			Total No.	Item %	% Cumulative
	Silt/Clay	< 0.062	<b>S/C</b>	34			34	32%	32%
.04 - .08	Very Fine	.062 - .125	<b>S</b>	11			11	10%	42%
	Fine	.125 - .25	<b>A</b>	9			9	8%	51%
	Medium	.25 - .50	<b>N</b>	9			9	8%	59%
	Coarse	.50 - 1.0	<b>D</b>	15			15	14%	74%
	Very Coarse	1.0 - 2.0	<b>S</b>	1			1	1%	75%
.08 - .16	Very Fine	2.0 - 4.0		5			5	5%	79%
.16 - .22	Fine	4.0 - 5.7	<b>G</b>	1			1	1%	80%
.22 - .31	Fine	5.7 - 8.0	<b>R</b>	1			1	1%	81%
.31 - .44	Medium	8.0 - 11.3	<b>A</b>	2			2	2%	83%
.44 - .63	Medium	11.3 - 16.0	<b>V</b>	2			2	2%	85%
.63 - .89	Coarse	16.0 - 22.6	<b>E</b>	5			5	5%	90%
.89 - 1.26	Coarse	22.6 - 32.0	<b>L</b>	6			6	6%	95%
1.26 - 1.77	Very Coarse	32.0 - 45.0	<b>S</b>	3			3	3%	98%
1.77 - 2.5	Very Coarse	45.0 - 64.0		2			2	2%	100%
2.5 - 3.5	Small	64 - 90	<b>C</b>	0			0	0%	100%
3.5 - 5.0	Small	90 - 128	<b>O</b>	0			0	0%	100%
5.0 - 7.1	Large	128 - 180	<b>B</b>	0			0	0%	100%
7.1 - 10.1	Large	180 - 256	<b>L</b>	0			0	0%	100%
10.1 - 14.3	Small	256 - 362	<b>B</b>	0			0	0%	100%
14.3 - 20	Small	362 - 512	<b>L</b>	0			0	0%	100%
20 - 40	Medium	512 - 1024	<b>D</b>	0			0	0%	100%
40 - 80	Lrg- Very Lrg	1024 - 2048	<b>R</b>	0			0	0%	100%
	Bedrock		<b>BDRK</b>	0			0	0%	100%
<b>Totals</b>				<b>106</b>			<b>106</b>	<b>100%</b>	<b>100%</b>



**Deaton Farm Stream Restoration Site  
EEP Site Number 110  
Monitoring Year 2005**

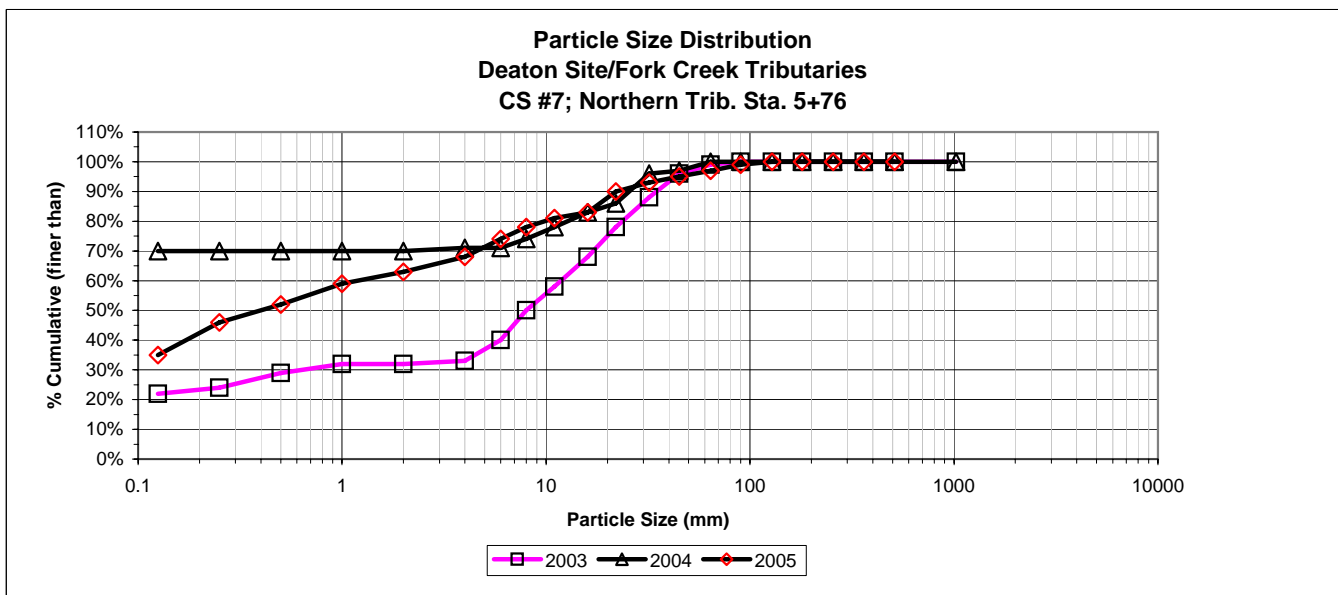
PEBBLE COUNT									
Site: Deaton Farm/Fork Creek							11/7/05/2005		
Party: Jan Patterson, Chad Holland, & Wade Patton							CS#6 (Northern Trib, Sta. 4+51)		
Particle Count									
Inches	Particle	Millimeter		Pool			Total No.	Item %	% Cumulative
	Silt/Clay	< 0.062	S/C	32			32	27%	27%
.04 - .08	Very Fine	.062 - .125	S	13			13	11%	38%
	Fine	.125 - .25	A	11			11	9%	47%
	Medium	.25 - .50	N	5			5	4%	51%
	Coarse	.50 - 1.0	D	10			10	8%	59%
	Very Coarse	1.0 - 2.0	S	0			0	0%	59%
.08 - .16	Very Fine	2.0 - 4.0		7			7	6%	65%
.16 - .22	Fine	4.0 - 5.7	G	5			5	4%	69%
.22 - .31	Fine	5.7 - 8.0	R	9			9	8%	77%
.31 - .44	Medium	8.0 - 11.3	A	14			14	12%	88%
.44 - .63	Medium	11.3 - 16.0	V	7			7	6%	94%
.63 - .89	Coarse	16.0 - 22.6	E	5			5	4%	98%
.89 - 1.26	Coarse	22.6 - 32.0	L	2			2	2%	100%
1.26 - 1.77	Very Coarse	32.0 - 45.0	S	0			0	0%	100%
1.77 - 2.5	Very Coarse	45.0 - 64.0		0			0	0%	100%
2.5 - 3.5	Small	64 - 90	C	0			0	0%	100%
3.5 - 5.0	Small	90 - 128	O	0			0	0%	100%
5.0 - 7.1	Large	128 - 180	B	0			0	0%	100%
7.1 - 10.1	Large	180 - 256	L	0			0	0%	100%
10.1 - 14.3	Small	256 - 362	B	0			0	0%	100%
14.3 - 20	Small	362 - 512	L	0			0	0%	100%
20 - 40	Medium	512 - 1024	D	0			0	0%	100%
40 - 80	Lrg- Very Lrg	1024 - 2048	R	0			0	0%	100%
	Bedrock		BDRK	0			0	0%	100%
<b>Totals</b>				<b>120</b>			<b>120</b>	<b>100%</b>	<b>100%</b>





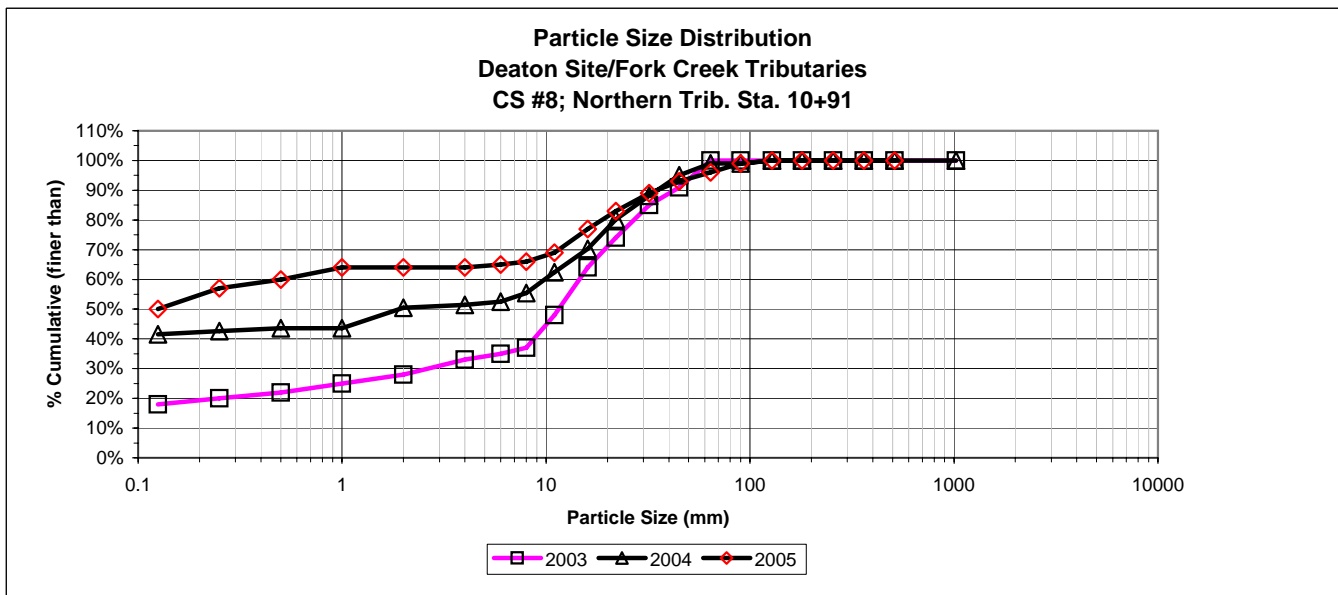
**Deaton Farm Stream Restoration Site  
EEP Site Number 110  
Monitoring Year 2005**

PEBBLE COUNT									
Site: Deaton Farm/Fork Creek						11/7/2005			
Party: Jan Patterson, Chad Holland, & Wade Patton						CS#7 (Northern Trib. Sta. 5+76)			
Particle Count									
Inches	Particle	Millimeter		Riffle			Total No.	Item %	% Cumulative
	Silt/Clay	< 0.062	S/C	17			17	17%	17%
.04 - .08	Very Fine	.062 - .125	S	18			18	18%	35%
	Fine	.125 - .25	A	11			11	11%	46%
	Medium	.25 - .50	N	6			6	6%	52%
	Coarse	.50 - 1.0	D	7			7	7%	59%
	Very Coarse	1.0 - 2.0	S	4			4	4%	63%
.08 - .16	Very Fine	2.0 - 4.0		5			5	5%	68%
.16 - .22	Fine	4.0 - 5.7	G	6			6	6%	74%
.22 - .31	Fine	5.7 - 8.0	R	4			4	4%	78%
.31 - .44	Medium	8.0 - 11.3	A	3			3	3%	81%
.44 - .63	Medium	11.3 - 16.0	V	2			2	2%	83%
.63 - .89	Coarse	16.0 - 22.6	E	7			7	7%	90%
.89 - 1.26	Coarse	22.6 - 32.0	L	3			3	3%	93%
1.26 - 1.77	Very Coarse	32.0 - 45.0	S	2			2	2%	95%
1.77 - 2.5	Very Coarse	45.0 - 64.0		2			2	2%	97%
2.5 - 3.5	Small	64 - 90	C	2			2	2%	99%
3.5 - 5.0	Small	90 - 128	O	1			1	1%	100%
5.0 - 7.1	Large	128 - 180	B	0			0	0%	100%
7.1 - 10.1	Large	180 - 256	L	0			0	0%	100%
10.1 - 14.3	Small	256 - 362	B	0			0	0%	100%
14.3 - 20	Small	362 - 512	L	0			0	0%	100%
20 - 40	Medium	512 - 1024	D	0			0	0%	100%
40 - 80	Lrg- Very Lrg	1024 - 2048	R	0			0	0%	100%
	Bedrock		BDRK	0			0	0%	100%
<b>Totals</b>				<b>100</b>			<b>100</b>	<b>100%</b>	<b>100%</b>



**Deaton Farm Stream Restoration Site  
EEP Site Number 110  
Monitoring Year 2005**

PEBBLE COUNT									
Site: Deaton Farm/Fork Creek							11/7/2005		
Party: Jan Patterson, Chad Holland, & Wade Patton							CS#8 (Northern Trib. Sta. 10+91)		
Particle Count									
Inches	Particle	Millimeter		Riffle			Total No.	Item %	% Cumulative
	Silt/Clay	< 0.062	<b>S/C</b>	44			44	44%	44%
.04 - .08	Very Fine	.062 - .125	<b>S</b>	6			6	6%	50%
	Fine	.125 - .25	<b>A</b>	7			7	7%	57%
	Medium	.25 - .50	<b>N</b>	3			3	3%	60%
	Coarse	.50 - 1.0	<b>D</b>	4			4	4%	64%
	Very Coarse	1.0 - 2.0	<b>S</b>	0			0	0%	64%
.08 - .16	Very Fine	2.0 - 4.0		0			0	0%	64%
.16 - .22	Fine	4.0 - 5.7	<b>G</b>	1			1	1%	65%
.22 - .31	Fine	5.7 - 8.0	<b>R</b>	1			1	1%	66%
.31 - .44	Medium	8.0 - 11.3	<b>A</b>	3			3	3%	69%
.44 - .63	Medium	11.3 - 16.0	<b>V</b>	8			8	8%	77%
.63 - .89	Coarse	16.0 - 22.6	<b>E</b>	6			6	6%	83%
.89 - 1.26	Coarse	22.6 - 32.0	<b>L</b>	6			6	6%	89%
1.26 - 1.77	Very Coarse	32.0 - 45.0	<b>S</b>	4			4	4%	93%
1.77 - 2.5	Very Coarse	45.0 - 64.0		3			3	3%	96%
2.5 - 3.5	Small	64 - 90	<b>C</b>	3			3	3%	99%
3.5 - 5.0	Small	90 - 128	<b>O</b>	1			1	1%	100%
5.0 - 7.1	Large	128 - 180	<b>B</b>	0			0	0%	100%
7.1 - 10.1	Large	180 - 256	<b>L</b>	0			0	0%	100%
10.1 - 14.3	Small	256 - 362	<b>B</b>	0			0	0%	100%
14.3 - 20	Small	362 - 512	<b>L</b>	0			0	0%	100%
20 - 40	Medium	512 - 1024	<b>D</b>	0			0	0%	100%
40 - 80	Lrg- Very Lrg	1024 - 2048	<b>R</b>	0			0	0%	100%
	Bedrock		<b>BDRK</b>	0			0	0%	100%
<b>Totals</b>				<b>100</b>			<b>100</b>	<b>100%</b>	<b>100%</b>



**USGS ROCKY RIVER AT SR1300 NR CRUTCHFIELD CROSSROADS, NC**

Site Number 0210166029

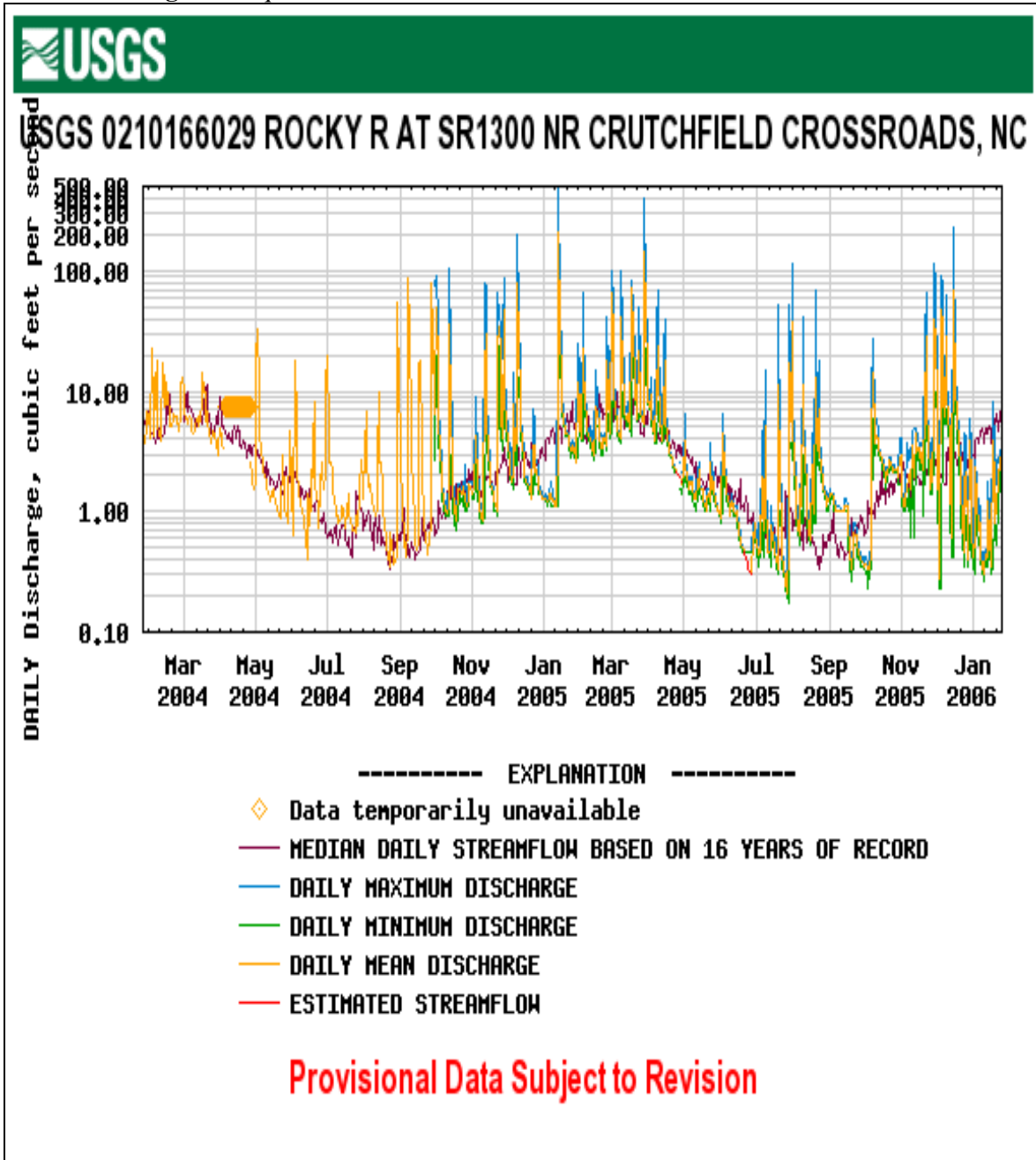
HUC 03030003

Latitude 35°48'25"

Longitude 79°31'39"

Altitude 620 feet

Drainage 7.42 sq miles



Data spans March 2004 to Jan26, 2006 <http://water.usgs.gov/>

Two dates, one in January and one in March, show daily maximum discharge equal to or greater than 400 cfs. Downloaded 01-20-02.