

Conceptual Restoration Plan

A, H & W Farm Site
Big Warrior and Little Warrior Creek

by

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and

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June 11, 2000

Introduction

The purpose of this plan is to document, for the landowner, those practices that we propose using to restore or enhance the habitat value of the stream and its riparian zone on his property. This plan gives the landowner the opportunity to evaluate the scope of work that is being proposed and to provide a basis for discussion regarding the acceptability of the proposal. Since we have been discussing these plans with the landowners from the beginning, we hope this plan will serve to put in black and white ideas or general concepts that have already been agreed to. If, however, something in this plan is new or unacceptable, we want to discuss and work out any problems that the landowner may have.

Once you, the landowner, are satisfied with the basic ideas in this plan the conservation easement agreement will need to be agreed upon. The Department of Transportation (DOT), Right-of-Way personnel will be working with the Wildlife Resources Commission (NCWRC) to develop this agreement. They will have a crew survey the easement boundary as described in this document and then we will sit down with the landowner to review the document. This is the point at which the landowner must decide to continue with the mitigation program or not. Once the easement is signed we will develop a more in depth construction plan and schedule a time when the work can begin. In general, nothing will be contained in the construction plan that has not been described in this plan. If something new comes up, it will be discussed with the landowner and included in the work-plan only if the landowner agrees in writing to the new practice.

Objective

The overall objective of this work is to improve the habitat value of streams within Wilkes County. This is being funded by NCDOT to mitigate the general public for streams that were placed in culverts in order to build Highway 421. The biological value of these streams was lost due to construction requirements. By biological value we mean their ability to support trout and other fish populations, to support angling for these fish, to provide cover for wildlife and the many other benefits that streams provide to the public. Since we can not replace the lost streams, we are trying to compensate the public by restoring or enhancing the biological value of streams in the county that have been degraded for various reasons.

Stream channel shape, both longitudinally and in cross-section, determines how well the stream resists erosion, reduces flooding impacts, and provides quality habitat for aquatic and terrestrial animals. We are hoping to improve the habitat value of these streams by reducing erosion, altering the shape of the stream so that it is more stable and by improving aquatic habitat. We are also concerned with enhancing the riparian zone. That is a strip of land of variable width on the sides of the stream. The width required to maintain a functional riparian zone depends on the size of the stream. The riparian zone is important to cold and cool water fish populations because riparian vegetation provides the

shade that keeps the water cold. This is very important in Wilkes County since many streams are at a relatively low elevation and without shade, will warm to a point where they no longer support cold and cool water fish. Riparian areas also provide resting, feeding and travel cover for many species of wildlife. We have listed only a few of the many benefits gained by maintaining a natural riparian zone. We are addressing improvements to streams by proposing enhancement measures for both the stream channel and the riparian zone.

Specific objectives for the A, H & W Farm site are described below. Recommendations for achieving these objectives are described in the next section.

1. Connect Little Warrior Creek to a floodplain by lowering the banks and developing appropriate sinuosity along the channel.
2. Connect Big Warrior Creek to a floodplain in those areas where it has become incised by lowering the banks or by relocating the channel on a more appropriate alignment.
3. Reestablish sinuosity along the lower reach of Big Warrior Creek.
4. Establish at minimum, 60-foot buffers along both Big Warrior Creek and Little Warrior Creek to match the belt-width measured along the existing meanders and abandoned meanders.
5. Plant native trees, bushes and ground cover that will stabilize the creek banks, shade the stream, and provide wildlife cover and food.
6. Place fish habitat improvement structures where needed along all channels.
7. Construct fences and stream crossings where needed to protect the stream riparian buffer established through the conservation easement.
8. Install livestock watering system in fields where cattle are fenced out of the stream, so that the livestock will no longer need to drink from the creek.

Plan Recommendations

Conservation Easement

A condition of participating in this mitigation program is that the landowner agrees to place his stream riparian zone in a conservation easement. When you get this plan, we will have already talked about the easement line, and a proposed easement boundary is shown on the attached aerial photos (see appendix). Please review this line and determine if the area incorporated into the easement is an aspect of this project you can accept. If there are problems, we can review the proposal and determine if the line can be altered. We have marked the line based on the size of the stream, the predicted frequency of flooding, and

the amount of land needed to provide a significant vegetative buffer of the stream. Before we move to the next stage, which is developing the easement document, we need to be fairly firm on where the line will be because this line will be surveyed and the survey description used in the document. Fence installation will follow this boundary line and right-of-access to the easement by NCWRC personnel will be stated in the agreement. The easement agreement will be between the landowner and the Wildlife Resources Commission and administratively established by the DOT. If you have specific concerns that you would like addressed in the easement agreement, please make note of them so that we can insure they are included. A draft of the easement agreement is attached in the appendix for your review. Please note that this is only a draft and this document may need to be altered to better serve your long-term and the interests of the WRC. Specific consideration should be given to future stream crossings or other land uses that may need to be addressed by the easement. After you have reviewed this plan and the easement, we will discuss any concerns that you may have.

Channel Improvements

The existing channels at this site are degraded due to past channel dredging, straightening and the present unrestricted access of livestock. This site has two primary channels, Big Warrior Creek and Little Warrior Creek, and approximately 5 unnamed tributary channels. The primary channels, and at least 3 of the tributaries, are perennial streams. Two of the tributaries are intermittent during the driest of times, but have flow during most of the year. Both primary channels at this site transition from steeper more restricted valleys to flatter and wider valleys (Valley Type II to VIII) as you move downstream across the site. Stream type prior to development is difficult to determine. Based on valley slopes both primary streams were B type streams that transitioned to C type at about halfway through the reach. The B reaches have been moved over time and have become incised to the point that they are now G type streams at various locations. The old C-section on Little Warrior Creek was straightened and has incised to the point of also being a G type stream. The C-section on Big Warrior was also straightened but retained enough floodplain that it did not become incised. It is presently in a condition of cutting and eroding its banks to regain the natural meander pattern found on C type streams.

The flatter reaches of the streams on this site will be altered to increase the meandering pattern that would naturally be found. Meanders decrease the slope of the stream, which in turn decreases the erosive force that the stream has during high water events. Meander pattern for these streams was determined by measuring a few stable meanders on the existing channels and by measuring abandoned meanders that are present in the fields. The belt-width, or width over which the stream meanders, ranged from 45 to 64 feet. This data leads us to propose that the easement width should, in general, be a minimum of 60 feet in width. There are areas where existing uses or structures may require a smaller width for short distances, while some areas will require a greater width, but on average 60 feet should be our guideline. This width will provide the room that we will need to realign the channel in a more stable form. Aerial photos showing the proposed meander pattern are located in the appendix.

A steep reach, such as that found on Big Warrior creek above the bridge, will not be as sinuous. Energy that is dissipated through meanders on low slope streams is dissipated by plunge pools on steeper streams. Our approach on these reaches will be to develop a more natural series of riffles and pools. Most of upper Big Warrior creek is one long riffle with almost no pool habitat. This provides little habitat for fish and increases erosion of the banks. Long-term this causes an entrenched channel; an example can be seen just above the feedlot. We will use rock, rootwads and logs to create pool habitat along the channel. These materials will be used to build structures that will provide habitat while at the same time protecting the stream banks. Photographs of structures built using these natural materials are shown in the appendix. In locations where the stream is cutting into the hillside it has created high, vertical banks. We propose to move the channel away from those banks and develop a floodplain bench at the foot of the bank. The overall approach on the steeper sections will be to increase the number of pools using natural materials. This should increase habitat while reducing the erosive force of high water.

On all streams one primary objective will be to reconnect the bankfull channel to its flood plain. This is not a great problem on Big Warrior Creek below the bridge, but is a problem on almost all of the remaining channels. Due to channelization in the past and down cutting by the stream these channels are extremely entrenched. Because of this, high water results in tremendous erosion of the stream banks. Over time the streams would erode the banks to such an extent that eventually a new flood plain would be established at the elevation of the stream. This would require a great deal of time and result in the loss of pasture and tons of soil into the creek. This situation can be addressed in two ways: by raising the stream to the valley elevation or by lowering the flood plain to the stream. Our preference is to raise the stream by creating a new channel, moving the flow into it and filling the old channel. In our discussions about approaches to solving the existing problems you indicated that you were not interested in this option. The second approach in priority is to lower the adjacent flood plain. The disadvantages of this approach are the cost and the need to waste soil at another location. We have discussed areas to waste soil and this will not be a problem. It is this approach that we propose doing. Cross sections of the proposed channel are located in the appendix. Part of the waste soil will be used to fill the tributary coming from the lake. This is an approximately 500-foot section of degraded channel that will be abandoned and filled. The tributary will be placed in a new channel that will connect to the main stem of Little Warrior Creek approximately 300 feet upstream of the present confluence.

Riparian Improvements

The existing riparian zone at this site is in poor condition. The lower reach of Little Warrior Creek has no woody vegetation on its banks. The upper reach has woody vegetation along one bank but only grass on the other. Most of Big Warrior Creek has grassed riparian zones and some trees are found at spots along the reach. The result is that the water in these creeks probably warms beyond a temperature that will support cold or cool water fish species. The absence of woody root mass in the banks allows the stream to cause extensive erosion. Cattle have access to most of these creeks, grazing the riparian vegetation and trampling banks, further degrading the riparian area. It was very

difficult to determine the bankfull elevation on these streams due to degradation of the banks. All of these factors have contributed to the need for restoration of the riparian zone.

We propose to improve the riparian zone at this site with a number of practices. Reconnecting the stream to the flood plain will result in a natural condition where high water will overflow the flood plain reducing flood velocity, enriching the soil and improving water quality. Banks at the back of the created flood plains will be sloped to approximately a 2:1 slope. At the interface between the bankfull channel and the flood plain we will use erosion control materials to provide stability until vegetation dominates the area. At high velocity points on the channel we will use coir fiber rolls and erosion control blankets. At lower velocity sites we will stabilize the ground surface using erosion control blankets. Both temporary ground cover and permanent riparian vegetation will be seeded under the erosion control blankets. This will be done within the marked easement area. These practices will allow the water to move up the sloped surface rather than eroding a vertical bank. After the creek bank has been shaped it will be vegetated with native grass and woody species such as alder, willow, red twig dogwood and button bush. On the upper banks we will plant taller growing trees that provide shade, wildlife cover and food, and stabilize the creek banks. The native species of trees used on the upper bank is open to the desires of the landowner. Any planting suggestions will be taken into consideration and utilized if possible. Note we will attempt to control non-native species within the easement area.

Livestock Management Practices

An important part of our stream mitigation plan is the exclusion of livestock from the riparian zone of Big and Little Warrior Creeks and their primary tributaries. In large part, livestock management will determine the success of the other practices. The Natural Resource Conservation Service (NRCS) has developed the attached livestock management proposals in consultation with you and NCWRC. The estimated total cost of the livestock practices proposed for installation on your property should be approximately \$113,249.00. These are broken down among the 3 landowners as: Ham - \$8,310, Andrews - \$67,101, Weston - \$37,838. In this program we pay 100% of the costs of carrying out this plan. The attached Conservation Plan details the treatments and the costs by treatment (see appendix for this plan) of the practices proposed in this plan. Note that this plan is commonly used by the NRCS to develop cost-shared, conservation plans. The installation of these livestock treatments can be done by the landowner or a designated contractor hired by NRCS. The NRCS will administer all phases of this part of the mitigation plan. The WRC and NRCS will monitor the functioning of these practices during their initial 2 years of operation. After this period the landowner is responsible for those practices that are not within the easement. This primarily refers to the watering systems. The WRC will continue to maintain the fence and crossings. Landowners are expected to do minor fence maintenance, which may be required, such as tightening due to cattle pushing the wire or farm equipment damaging the fence or gates. Major problems should be reported to the WRC for maintenance.

Fencing: We propose to fence livestock out of all streams within the easement. This will include both left and right banks along the entire easement line up each primary stream. The exception to this would be on upper Little Warrior where the cattle will only be on the pasture side of the easement. If no fence is run on the forest side, a provision in the easement agreement will leave this option open to the NCWRC if it is needed to protect the easement in the future. Five tributaries have crossings proposed. In order to put these crossings in we will have to protect the channels with an easement and fencing. There is a total of 28,000 feet of fencing estimated to protect the easement at this site. A map of the site, showing the proposed location of the fence, is attached in the appendix. The proposed fence is a permanent, high tensile electric fence. Gates can be added to the fence at the request of the landowner and at locations desired by them. The NCWRC may request gates at some locations for ease of access to the easement area. If the landowner would prefer a different type of fence, he should contact the NRCS office to discuss other acceptable fencing options.

Watering facilities: The fencing needed to protect the easement will remove the water source livestock presently use on this farm. A watering system is being proposed that should provide sufficient water for the numbers of cattle that the pasture can support. This should provide better quality drinking water and improve livestock health. A total of twenty watering tanks are proposed on the entire farm. The division of these tanks by pasture can be seen on the accompanying map in the appendix. Six of these tanks will be supplied from spring sources. Six tanks will be supplied from existing wells on the farm. Eight tanks will be supplied from a well that will be dug in the large field that adjoins the farm road. Tanks will be round in shape and constructed out of reinforced concrete. Tank locations will be hardened for high use and overflow returned to the tributaries. Spring, well and tank locations are marked on the map located in the appendix.

Cattle Crossings: In order that cattle can move from pasture to pasture through the easement, a number of stream crossings are proposed. Three culverts are proposed for the small tributaries to Big Warrior Creek. These should be of sufficient size to carry the 10-year storm. They can be managed by being open as the farm management sees fit. The bridge below the present feedlot will be upgraded with decking so that it can be used to move cattle from one side of Big Warrior Creek to the other. Once this bridge is upgraded it will become the responsibility of the landowner to carry out future maintenance. Eight ford type crossings will be installed. These will be stoned crossings that are gated to limit access. These crossings should be used to move cattle from pasture to pasture, but not left open for cattle to use at will. The reason for this is that one objective of this project is to improve water quality and if cattle have constant access to the stream there will be water quality degradation. Two existing culverts in the upper pasture on Little Warrior Creek will be extended so cattle can pass over these tributaries. Location and crossing type are shown on the map in the appendix.

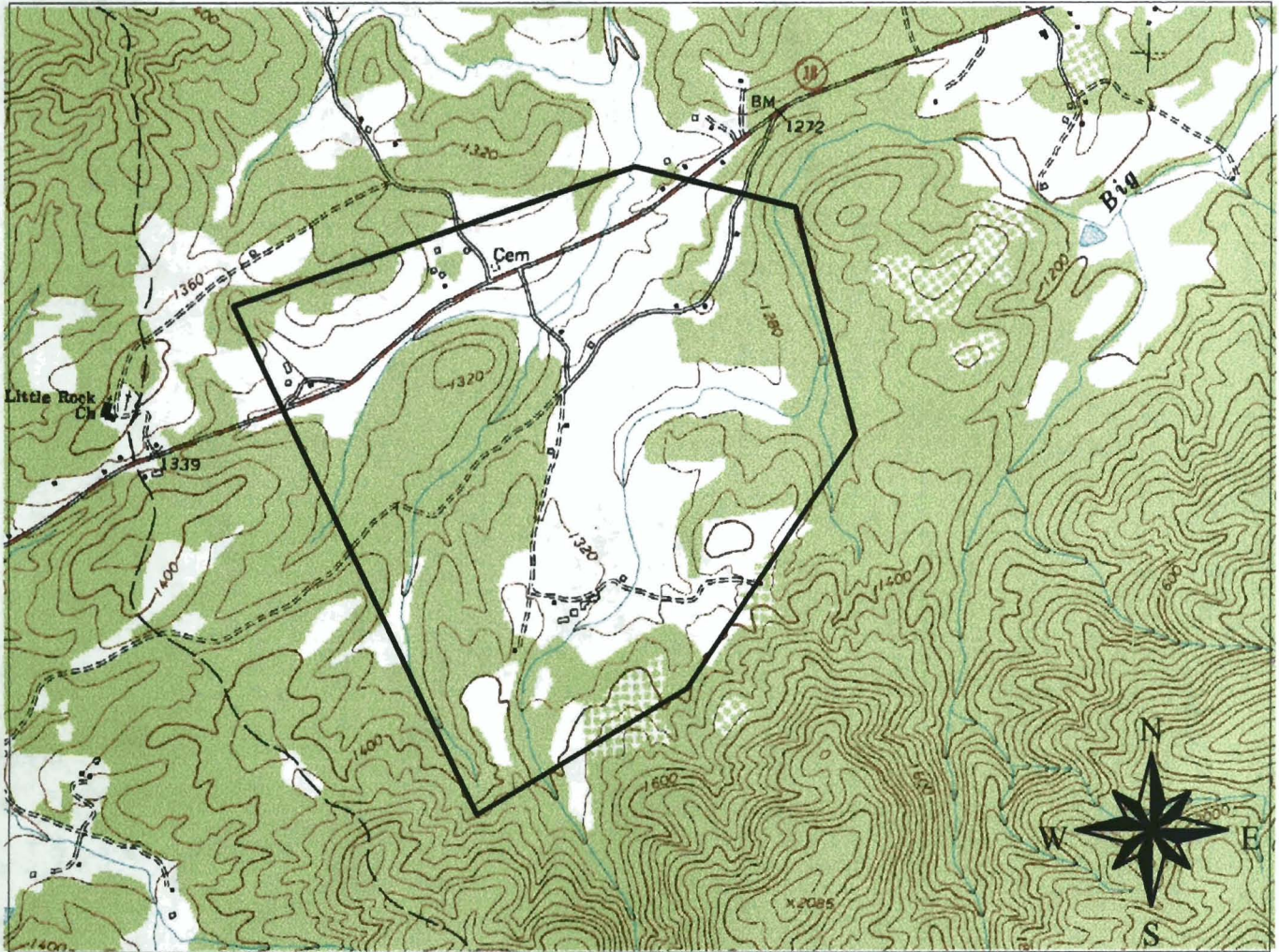
Appendix

Contents:

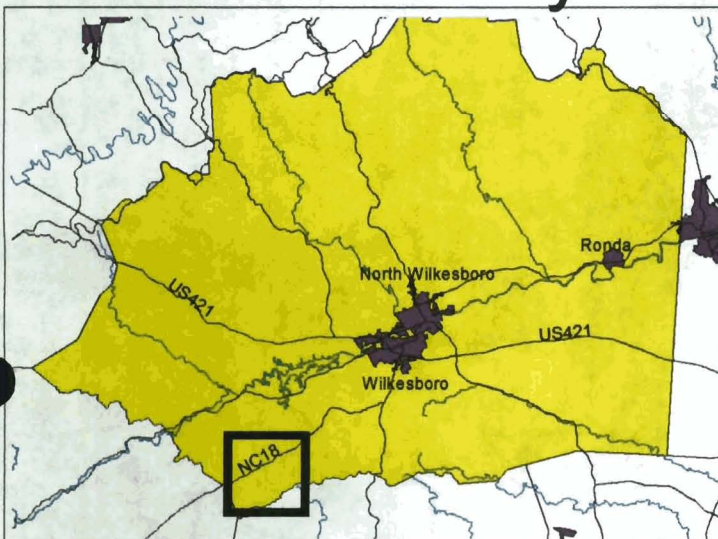
1. Location of A, H, & W Farm mitigation site.
2. Aerial photo of Site showing proposed channel alignment and approximate easement lines.
3. Enlarged aerial photo of lower Big Warrior Creek showing proposed channel alignment and approximate easement lines.
4. Enlarged aerial photo of upper Big Warrior Creek showing proposed channel alignment and approximate easement lines.
5. Enlarged aerial photo of lower Little Warrior Creek showing proposed channel alignment and approximate easement lines.
6. Enlarged aerial photo of upper Little Warrior Creek showing proposed channel alignment and approximate easement lines.
7. Meander cross-section of Big Warrior Creek, the red dashed line shows the proposed channel, sloping and floodplain construction.
8. Riffle cross-section of Big Warrior Creek, the red dashed line shows the proposed channel, sloping and floodplain construction.
9. Cross-section of high clay bank in lower field, on Big Warrior Creek, the red dashed line shows the proposed channel, sloping and floodplain construction.
10. Cross-section of Big Warrior Creek in the upper pasture, the red dashed line shows the proposed channel, sloping and floodplain construction.
11. Cross-section of Little Warrior Creek, the red dashed line shows the proposed channel, sloping and floodplain construction.
12. Pictures of existing conditions of streams on A, H & W Farm (3 pages of pictures).
13. Pictures of the rootwads that may be installed at the site.
14. Pictures of the cross-vanes that may be installed at the site.
15. Pictures of the vanes that may be installed at the site.

16. Map of site showing all livestock management practices proposed.
17. Natural Resource Conservation Service livestock management plan for this site divided between the 3 landowners. First 3 pages are the plans for the Ham farm, the next 4 pages are the plan for the Weston farm, and the last 4 pages are the plan for the Andrews farm.
18. Draft copy of the easement. This document can be altered to meet the needs and objectives of the parties that would enter into the agreement. For the A, H & W Farm there would have to be a conservation easement agreement made with each landowner. This document is 9 pages in length.

A, H, & W Farm Site



Wilkes County



North Carolina



Proposed Stream alignment and approximate easement location for AH&W Farm Site



Lower Big Warrior Creek stream alignment and approximate easement location.



Upper Big Warrior Creek alignment and approximate easement location.



Lower Little Warrior Creek stream alignment and approximate easement location.



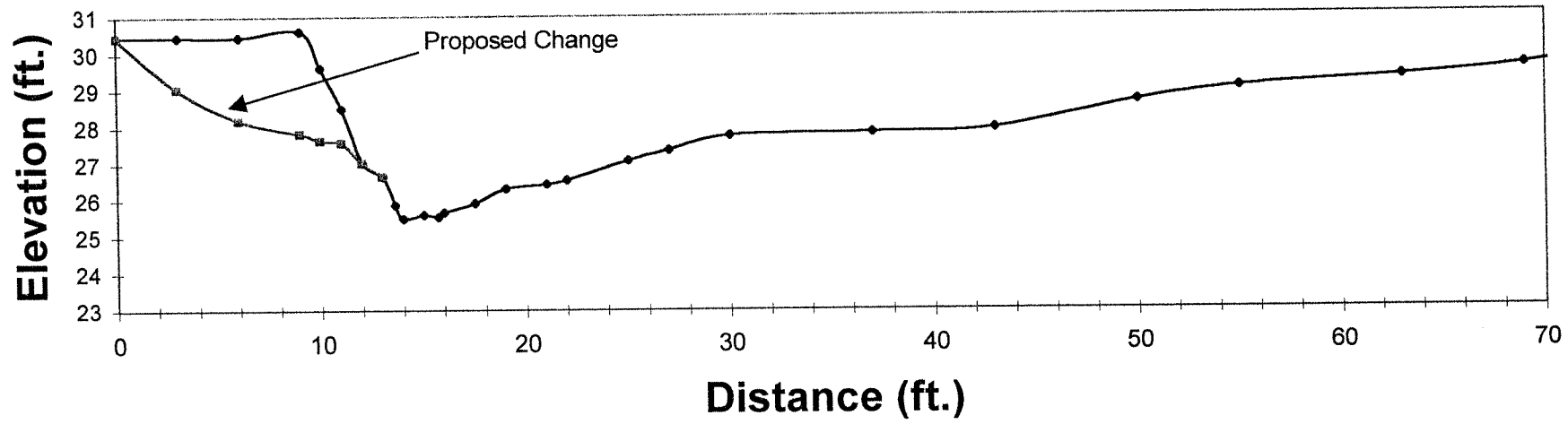
Upper Little Warrior Creek, approximate stream alignment and easement location. Trees block actual stream location.



Existing Hydraulic Geometry										
Feature	Lbkf	Rbkf	Elev.bkf	Wbkf	Dbkf	W/D	Abkf	Dmax	Wfpa	ER
pool	11.8	30	27.75	18.2	1.16	15.76	21.02	2.27	70	3.85

Design Hydraulic Geometry										
Feature	Lbkf	Rbkf	Elev.bkf	Wbkf	Dbkf	W/D	Abkf	Dmax	Wfpa	ER
pool	11	30	27.75	19	1.14	16.69	21.63	2.27	80	4.21

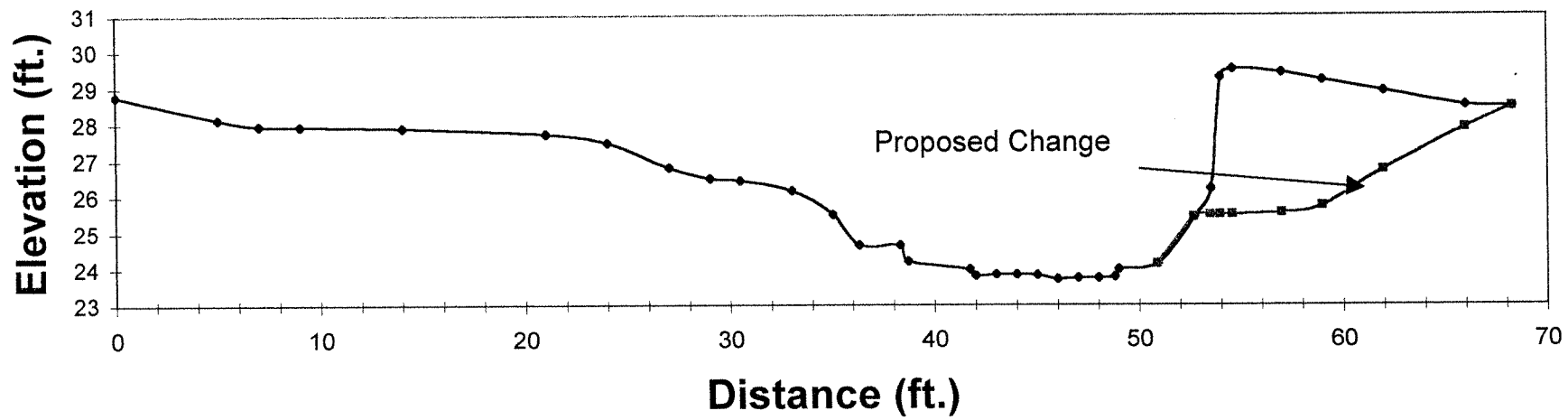
Cross-section 3, on meander



Existing Hydraulic Geometry										
Feature	Lbkf	Rbkf	Elev.bkf	Wbkf	Dbkf	W/D	Abkf	Dmax	Wfpa	ER
	35	52.8	25.5	17.8	1.32	13.53	23.41	1.79	23.8	1.606742

Design Hydraulic Geometry										
Feature	Lbkf	Rbkf	Elev.bkf	Wbkf	Dbkf	W/D	Abkf	Dmax	Wfpa	ER
	35	52.7	25.5	17.7	1.32	13.38	23.41	1.79	24.0	2.259887

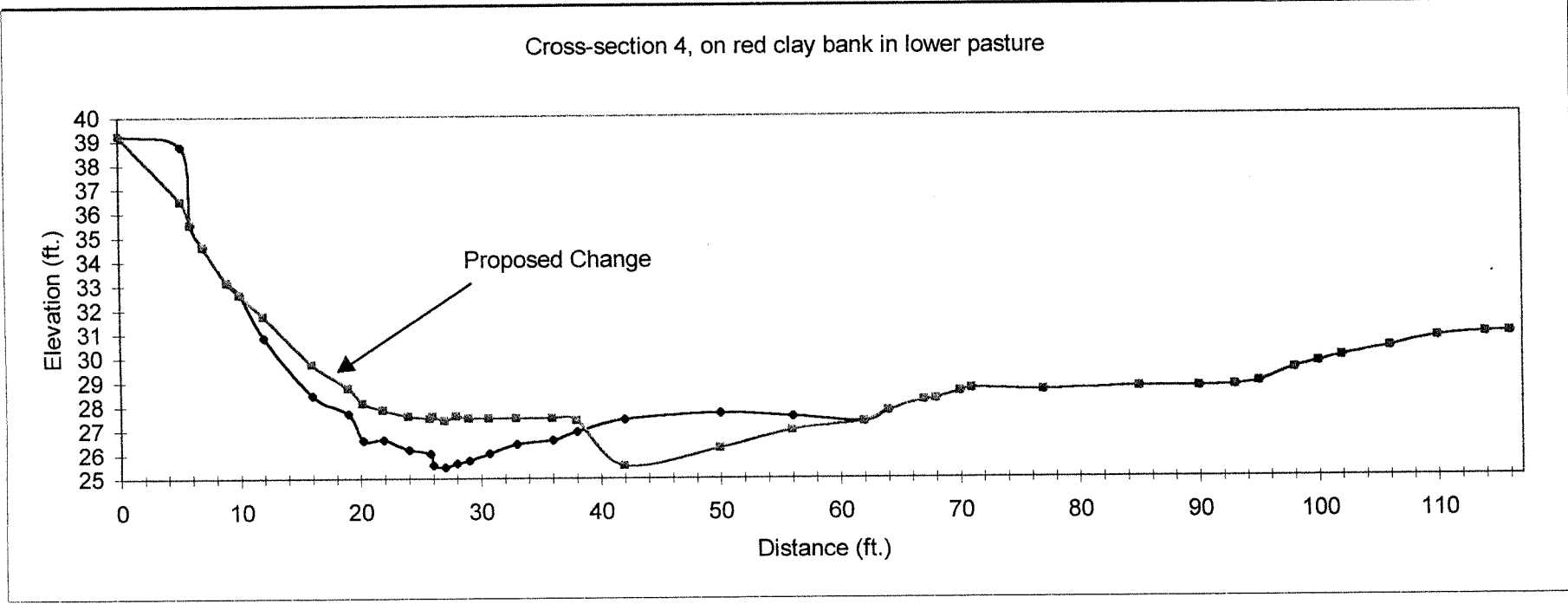
Cross-section 2, on riffle



Existing Hydraulic Geometry										
Feature	Lbkf	Rbkf	Elev.bkf	Wbkf	Dbkf	W/D	Abkf	Dmax	Wfpa	ER
pool	10	24	27.45	18	1.27	14.13	22.92	1.98	85	4.89

Design Hydraulic Geometry										
Feature	Lbkf	Rbkf	Elev.bkf	Wbkf	Dbkf	W/D	Abkf	Dmax	Wfpa	ER
pool	38	62	27.45	16	1.43	11.21	22.83	1.91	86	5.38

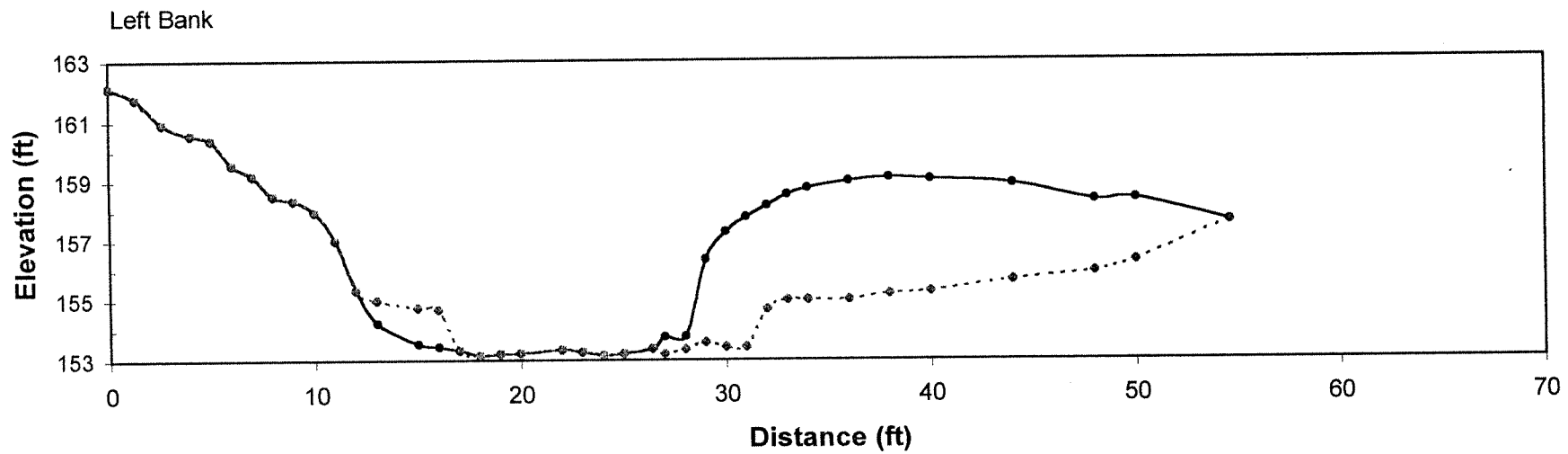
Cross-section 4, on red clay bank in lower pasture



Existing Hydraulic Geometry										
Feature	Lbkf	Rbkf	Elev.bkf	Wbkf	Dbkf	W/D	Abkf	Dmax	Wfpa	ER
	2.6	12	94.12	9.4	-64.80	-0.15	-609.14	-59.04		0

Design Hydraulic Geometry										
Feature	Lbkf	Rbkf	Elev.bkf	Wbkf	Dbkf	W/D	Abkf	Dmax	Wfpa	ER
			94.12	10	-60.91	-0.16	-609.14	-59.04		0

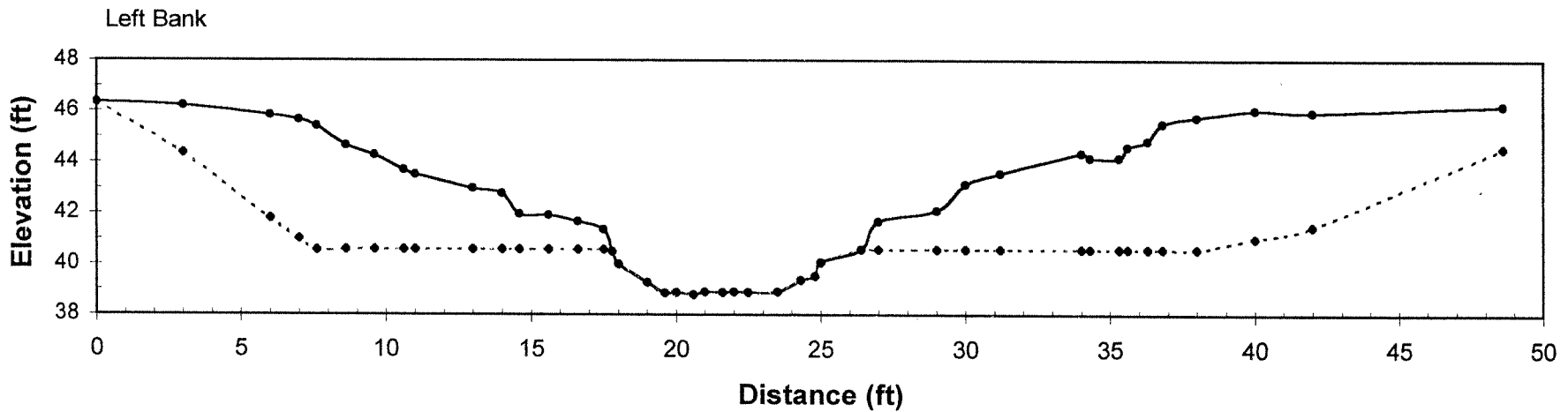
Cross-section 18, entrenched section in upper pasture



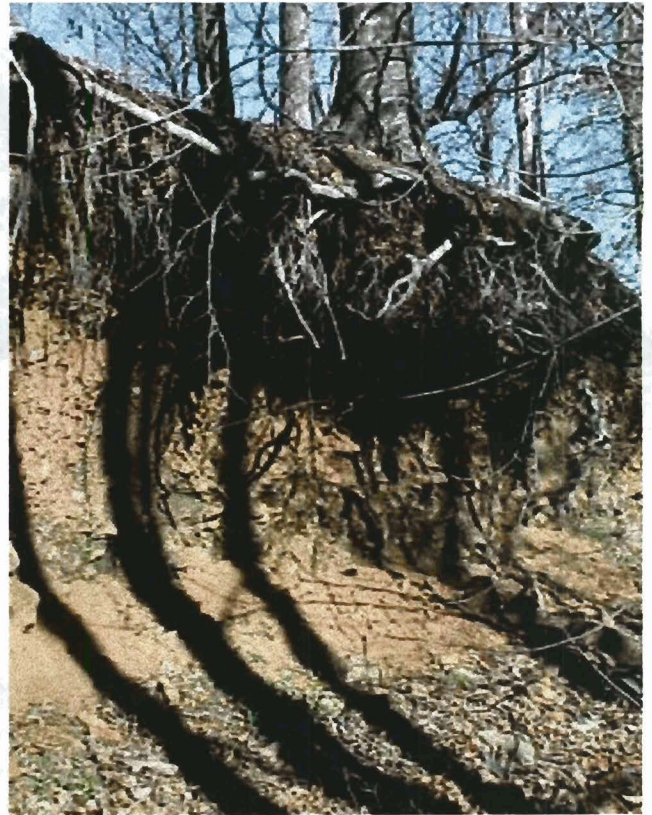
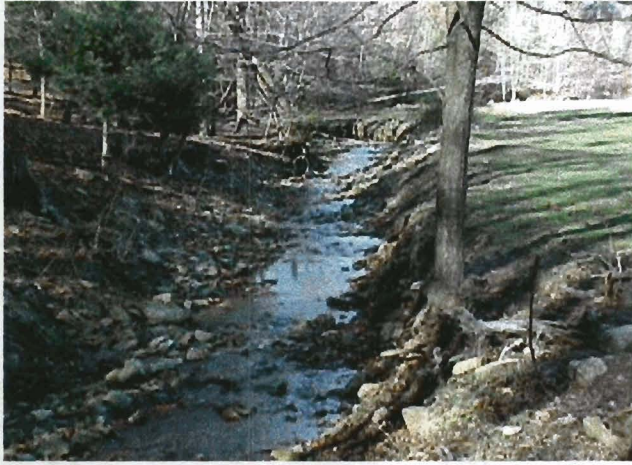
Existing Hydraulic Geometry										
Feature	Lbkf	Rbkf	Elev.bkf	Wbkf	Dbkf	W/D	Abkf	Dmax	Wfpa	ER
	17.8	26.4	40.58	8.6	1.26	6.81	10.86	1.79		0

Design Hydraulic Geometry										
Feature	Lbkf	Rbkf	Elev.bkf	Wbkf	Dbkf	W/D	Abkf	Dmax	Wfpa	ER
			40.58	0	#DIV/0!	#DIV/0!	1.95	1.79		#DIV/0!

Cross-section 2, lower Little Warrior Creek









Pictures 1 and 2 show rootwads used to stabilize a creek bank and provide fish habitat. The trunk of the tree is buried in the bank with the rootfan exposed to the force of the current.



Picture 1



Picture 2

Pictures 1 and 2 show cross-vane structures used to stabilize the stream bank and create in stream habitat. Picture 1 shows a vane built from hemlock logs and picture 2 shows a vane built from boulders.



Picture 1



Picture 2

Photo 1 & 2 show a rock vein used to protect an eroding section of stream bank. Rocks are stacked and pointed up stream at a 30° angle. This raises the stage of the water above the vein and since the mid-stream end of the vein is lower the water falls toward the middle of the stream. Photo 2 shows how the water level is higher upstream (to the right) of the rock vein.












Photo 1.



Photo 2.



-  Ford type stream crossing
-  Culverted type stream crossing
-  Bridge type stream crossing
-  Spring development
-  Stock watering tanks
-  H₂O supply lines
-  Well (existing and constructed)
-  Culvert extension
-  Fencing (approximate location)

Map of site showing all livestock management practices proposed.





Natural Resources Conservation Service
 Wilkesboro Field Office
 Rm 244 Federal Building 207 West Main Street
 Wilkesboro, NC 28697-2465
 336 838-3622

NRCS-LTP-11-E

Wilkes Soil and Water Conservation District
 Post Office Box 194
 Wilkesboro NC 28697

Contract Support Document

Weston, Glen
 1190 Fall View Road
 Boomer, NC 28606-8135

Contract Number: 01-97-01

Tract	Field	Item #	Planned Conservation Treatment	Estimated Amount	Units	Cost / Unit	Program	Cost Share	2000
1 SPRING DEVELOPMENT (574)									
00	12, 18, 19, 20, 21, 23, 24								
	1a		EXCAVATION-spring development	5.0	Hr	\$50.00	WRP	100.0%	\$250
	1b		STONE-gravel	25.0	Ton	\$14.40	WRP	100.0%	\$360
	1c		FILTER CLOTH-geotextile fabric	18.0	SqYd	\$2.00	WRP	100.0%	\$36
	1d		PIPE-PVC 4"	20.0	LinFt	\$2.65	WRP	100.0%	\$53
	1e		Collection Box, Concrete 30" Round	1.0	Each	\$150.00	WRP	100.0%	\$150
2 USE EXCLUSION (472)									
00	12, 18, 19, 20, 21, 23, 24								
	2a		FENCE-perm, electric	18,650.0	LinFt	\$1.50	WRP	100.0%	\$27,975
3 WELL (642)									
00	13								
	3a		PUMP-livestock watering	1.0	Each	\$600.00	WRP	100.0%	\$600
	3b		WELL-construction/head protection	1.0	Job	\$2,666.00	WRP	100.0% AM	\$2,666
4 TROUGH OR TANK (614)									
00	9, 13, 15, 16, 22, 26								
	4a		FILTER CLOTH-geotextile fabric	850.0	SqYd	\$2.00	WRP	100.0%	\$1,700
	4b		PIPE-water supply/fittings, <=2"	6,925.0	LinFt	\$1.50	WRP	100.0%	\$10,388
	4c		STONE-gravel	350.0	Ton	\$14.40	WRP	100.0%	\$5,040
	4d		TANK-permanent watering	10.0	Each	\$533.00	WRP	100.0% AM	\$5,330
	4e		VALVE-float, automatic, brass	9.0	Each	\$33.00	WRP	100.0%	\$297
5 STREAMBANK AND SHORELINE PROTECTION (580)									
00	9, 13, 15, 16, 22, 26								
	5a		FENCE-perm, gates	10.0	Each	\$65.00	WRP	100.0%	\$650
	5b		FILTER CLOTH-geotextile fabric	595.0	SqYd	\$2.00	WRP	100.0%	\$1,190
	5c		STONE-gravel	290.0	Ton	\$14.40	WRP	100.0%	\$4,176
	5d		STREAM CROSS-ford, ex 80-120 cuft	2.0	Job	\$800.00	WRP	100.0%	\$1,600
	5e		STREAM CROSS-ford, ex>120 cuft	4.0	Job	\$1,000.00	WRP	100.0%	\$4,000
	5f		PIPE-RC 18", 4' sections	40.0	LinFt	\$16.00	WRP	100.0%	\$640
Total Cost-Share by Calendar Year									\$67,101

Total Contract Cost-Share \$67,101

NOTES:

- A. All items numbered under "Item #" must be carried out as part of this contract to prevent violation.
- B. When established, the conservation practices listed as "Planned Conservation Treatment" must be maintained by the participant at no cost to the government.
- C. Enter total cost per unit under "Cost/Unit" unless the method of cost-share is flat rate. When flat rate, enter the amount per unit to be paid to the participant.
- D. All cost share rates shown under "Cost Share" are based on average cost (AC) with the following exceptions:
 - AA = Actual costs not to exceed average cost
 - FR = Flat rate
 - NC = Non cost-shared
 - AM = Actual cost not to exceed a specified maximum

This information is used in both the development and implementation of a Conservation, Reclamation or Water Quality plan as the basis for technical assistance and/or cost sharing. The authorities for such work are: 16 U.S.C. 590a-f (Soil and Water Conservation); 16 U.S.C. 590h(b) (Agriculture Conservation); 16 U.S.C. 590p(b) (Great Plains); 30 U.S.C. 1236 et seq. (Rural Abandoned Mine Reclamation); 43 U.S.C. 1592(c) (Colorado River Basin Salinity Control); The Food Security Act of 1985, Public Law 99-198; Federal Agriculture improvement and Reform Act of 1996, Public Law 104-127 and the regulations promulgated thereunder. Furnishing information is voluntary and will be confidential; however, it is necessary in order to receive assistance.

By signing, the participant acknowledges receipt of this practice schedule and agrees to comply with the terms and conditions hereof.

CERTIFICATION OF PARTICIPANTS

 Weston, Glen _____
 Date

 Andrews, Arlee _____
 Date

CONSERVATION DISTRICT

 Wilkes Soil and Water Conservation District _____
 Date

NONDISCRIMINATION STATEMENT

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Contract Support Document

Weston, Glen
 1190 Fall View Road
 Boomer, NC 28606-8135

Contract Number: 01-97-02

Tract	Field	Item #	Planned Conservation Treatment	Estimated Amount	Units	Cost / Unit	Program	Cost Share	2000
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1 TROUGH OR TANK (614)

38 3, 4, 5, 7

1a	FILTER CLOTH-geotextile fabric	680.0	SqYd	\$2.00	WRP	100.0%	\$1,360
1b	PIPE-water supply/fittings, <=2"	3,850.0	LinFt	\$1.50	WRP	100.0%	\$5,775
1c	STONE-gravel	280.0	Ton	\$14.40	WRP	100.0%	\$4,032
1d	TANK-permanent watering	8.0	Each	\$533.00	WRP	100.0% AM	\$4,264
1e	VALVE-float, automatic, brass	7.0	Each	\$33.00	WRP	100.0%	\$231

2 STREAMBANK AND SHORELINE PROTECTION (580)

38 3, 4, 7

2a	FENCE-perm, gates	13.0	Each	\$65.00	WRP	100.0%	\$845
2b	FILTER CLOTH-geotextile fabric	425.0	SqYd	\$2.00	WRP	100.0%	\$850
2c	STONE-gravel	210.0	Ton	\$14.40	WRP	100.0%	\$3,024
2d	STREAM CROSS-ford, ex>120 cuft	1.0	Job	\$1,000.00	WRP	100.0%	\$1,000
2e	18" stormwater conduit(smooth inter, corrug xter)	90.0	Lft	\$18.75	WRP	100.0%	\$1,688

3 SPRING DEVELOPMENT (574)

38 3, 4

3a	EXCAVATION-spring development	24.0	Hr	\$50.00	WRP	100.0%	\$1,200
3b	STONE-gravel	85.0	Ton	\$14.40	WRP	100.0%	\$1,224
3c	Collection Box, Concrete 30" Round	2.0	Each	\$150.00	WRP	100.0%	\$300
3d	FILTER CLOTH-geotextile fabric	32.0	SqYd	\$2.00	WRP	100.0%	\$64
3e	PIPE-PVC 4"	40.0	LinFt	\$2.65	WRP	100.0%	\$106
3f	Storage Tank, Reservoir - 1000 gal	2.0	Each	\$500.00	WRP	100.0%	\$1,000

4 USE EXCLUSION (472)

38 3, 4, 5, 7

4a	FENCE-perm, electric	7,250.0	LinFt	\$1.50	WRP	100.0%	\$10,875
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Total Cost-Share by Calendar Year	\$37,838
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Total Contract Cost-Share	\$37,838
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NOTES:

- A. All items numbered under "Item #" must be carried out as part of this contract to prevent violation.
- B. When established, the conservation practices listed as "Planned Conservation Treatment" must be maintained by the participant at no cost to the government.
- C. Enter total cost per unit under "Cost/Unit" unless the method of cost-share is flat rate. When flat rate, enter the amount per unit to be paid to the participant.
- D. All cost share rates shown under "Cost Share" are based on average cost (AC) with the following exceptions:
 - AA = Actual costs not to exceed average cost
 - FR = Flat rate
 - NC = Non cost-shared
 - AM = Actual cost not to exceed a specified maximum

This information is used in both the development and implementation of a Conservation, Reclamation or Water Quality plan as the basis for technical assistance and/or cost sharing. The authorities for such work are: 16 U.S.C. 590a-f (Soil and Water Conservation); 16 U.S.C. 590h(b) (Agriculture Conservation); 16 U.S.C. 590p(b) (Great Plains); 30 U.S.C. 1236 et seq. (Rural Abandoned Mine Reclamation); 43 U.S.C. 1592(c) (Colorado River Basin Salinity Control); The Food Security Act of 1985, Public Law 99-198; Federal Agriculture improvement and Reform Act of 1996, Public Law 104-127 and the regulations promulgated thereunder. Furnishing information is voluntary and will be confidential; however, it is necessary in order to receive assistance.

By signing, the participant acknowledges receipt of this practice schedule and agrees to comply with the terms and conditions hereof.

CERTIFICATION OF PARTICIPANTS

_____ Weston, Glen	_____ Date
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_____ Weston, Caryle	_____ Date
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CONSERVATION DISTRICT	
_____ Wilkes Soil and Water Conservation District	_____ Date

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Natural Resources Conservation Service
 Wilkesboro Field Office
 Rm 244 Federal Building 207 West Main Street
 Wilkesboro, NC 28697-2465
 336 838-3622

NRCS-LTP-11-E

Wilkes Soil and Water Conservation District
 Post Office Box 194
 Wilkesboro NC 28697

Contract Support Document

Ham, Gozelle A.
 9228 S. NC Hwy 18
 Boomer, NC 28606-9130

Contract Number: 01-97-03

Tract	Field	Item #	Planned Conservation Treatment	Estimated Amount	Units	Cost / Unit	Program	Cost Share	2001
1 TROUGH OR TANK (614)									
001	20, 21, 22	1a	FILTER CLOTH-geotextile fabric	170.0	SqYd	\$2.00	WRP	100.0%	\$340
		1b	PIPE-water supply/fittings, <=2"	1,200.0	LinFt	\$1.50	WRP	100.0%	\$1,800
		1c	STONE-gravel	70.0	Ton	\$14.40	WRP	100.0%	\$1,008
		1d	TANK-permanent watering	2.0	Each	\$533.00	WRP	100.0% AM	\$1,066
		1e	VALVE-float, automatic, brass	2.0	Each	\$33.00	WRP	100.0%	\$66
2 SPRING DEVELOPMENT (574)									
001	20	2a	FILTER CLOTH-geotextile fabric	30.0	SqYd	\$2.00	WRP	100.0%	\$60
		2b	PIPE-water supply/fittings, 4"	60.0	LinFt	\$2.65	WRP	100.0%	\$159
		2c	Spring Development, Backhoe	24.0	Hrs.	\$50.00	WRP	100.0%	\$1,200
		2d	STONE-gravel	24.0	Ton	\$14.40	WRP	100.0%	\$346
3 STREAMBANK AND SHORELINE PROTECTION (580)									
001	20, 21, 22	3a	FENCE-perm, gates	2.0	Each	\$65.00	WRP	100.0%	\$130
		3b	FILTER CLOTH-geotextile fabric	85.0	SqYd	\$2.00	WRP	100.0%	\$170
		3c	STONE-gravel	42.0	Ton	\$14.40	WRP	100.0%	\$605
		3d	STREAM CROSS-ford, ex 80-120 cuft	1.0	Job	\$800.00	WRP	100.0%	\$800
4 USE EXCLUSION (472)									
001	20, 21, 22	4a	FENCE-perm, electric	2,000.0	LinFt	\$1.50	WRP	100.0%	\$3,000

Total Cost-Share by Calendar Year	\$10,750
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Total Contract Cost-Share	\$10,750
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By signing, the participant acknowledges receipt of this practice schedule and agrees to comply with the terms and conditions hereof.

CERTIFICATION OF PARTICIPANTS

_____ Ham, Gozelle A.	_____ Date
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_____ Weston, Glen	_____ Date
-----------------------	---------------

CONSERVATION DISTRICT	
_____ Wilkes Soil and Water Conservation District	_____ Date

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