

Project# _____
TIP# _____
Let Date _____
WBS# _____

PREDESIGN-PRESURVEY REPORT

County YANCEY

Bridge# 990 134
Road# SR 1379 ✓
Stream CANE RIVER ✓

Type Of Request: POC Force Account TIP NCMA

Date 4/4/12 Name WSh

Assigned To RCH

Checked By _____

Prior Survey Date NO (attach copy of prior survey) BB: NO CO. FILE: NO

Study By Scour Section _____

Flood Zone AE Detail Study REDELINEATION Date 6/2/09 Panel# 9890 J

B.M. Info N/A

Quad Map BALD CREEK Drainage Area 105.1 sq From QUAD SHEET DASS
Q25 12000 cfs Q50 14000 cfs Q100 16000 cfs Method REG. EQU.
 $Q_{25} = 398(105.1)^{0.724} = 11575.1$ $Q_{50} = 479(105.1)^{0.718} = 13547.1$ $Q_{100} = 575(105.1)^{0.713} = 15868.1$ RURAL REGION 2

EXISTING BRIDGE INFORMATION

Location 0.02 MI. E. JCT. US 19 W

Average Daily Traffic 150 (2000), TRK-6%

Length 122' Bed- To Crown 20' Water Depth 2'

Type Structure TIMBER FLOOR ON I-BEAMS, ABUTMENTS & PIERS YOUNT MASONRY,

Type Spans 1c 41', 1c 40' 3", 1c 41'

Upstream Structure _____ Bridge # 990009

Location 0.2 MI. E. JCT SR 1115

Bed- To Crown 28' Prior Survey _____

Downstream Structure _____ Bridge # 990072

Location 0.01 MI. E. JCT. US 19 W

Bed- To Crown 17 FT Prior Survey _____

SCS Watershed NO

ESM ENVIRONMENTAL

Trout Stream YES Anadromous Fish NO Primary Nursery Area NO Yes 3030

High Quality Waters NO Nutrient Sensitive Waters NO

Near Water Supply Intake NO CAMA County NO

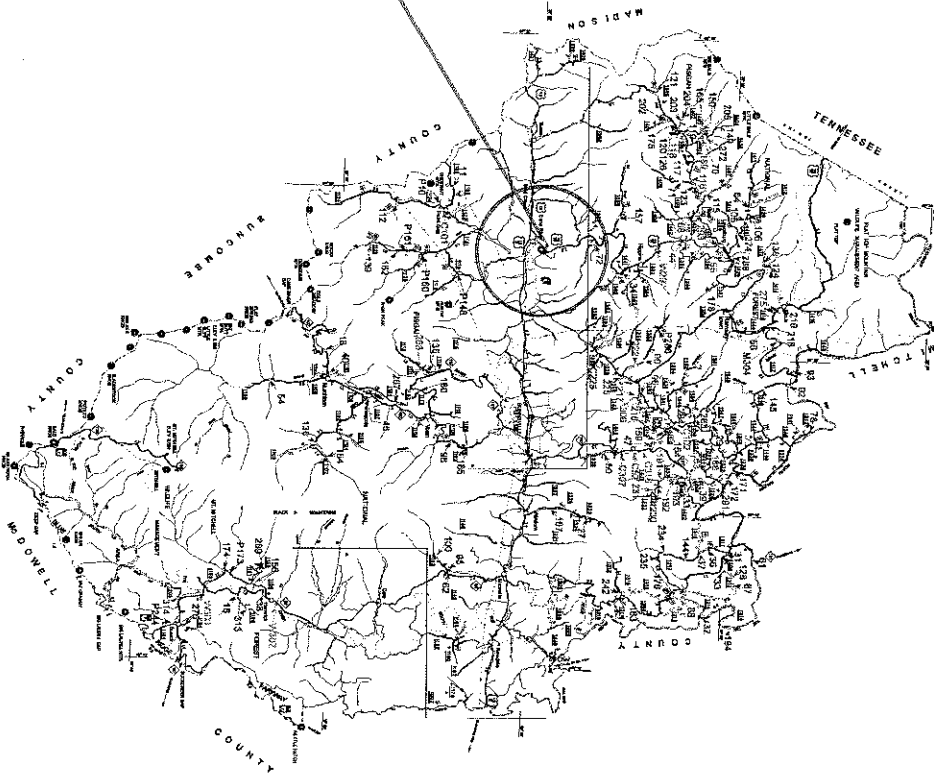
Stream Classification CJT Stream # 7-3-(13.7)

DENR River Basin Info. FRENCH' BROAD

Cane River from Town of Burnsville water supply intake to Big Creek 7-3-(13.7)



The hydro contained in this map is from USGS 1:100,000 DLR files that have been edited using the USGS 1:24,000 DDB.



YANCEY COUNTY
NORTH CAROLINA
BRIDGE LOCATION MAP

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
INFORMATION TECHNOLOGY - GIS UNIT
2000 COMPTON HWY. 104
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

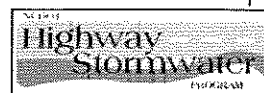


- [illegible]

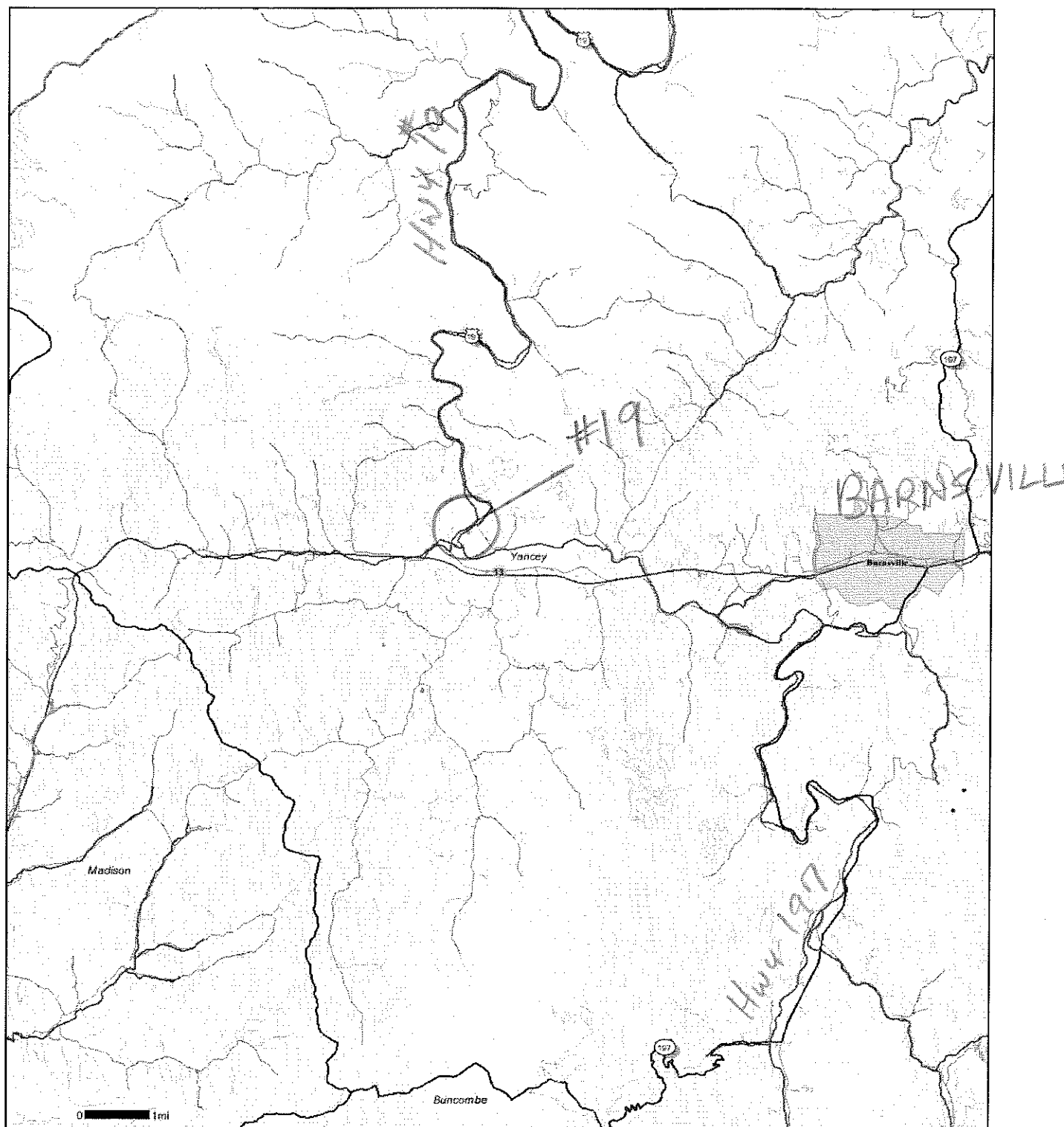
990134

Environmental Sensitivity Map - 2008

4/9/2012 9:41 AM



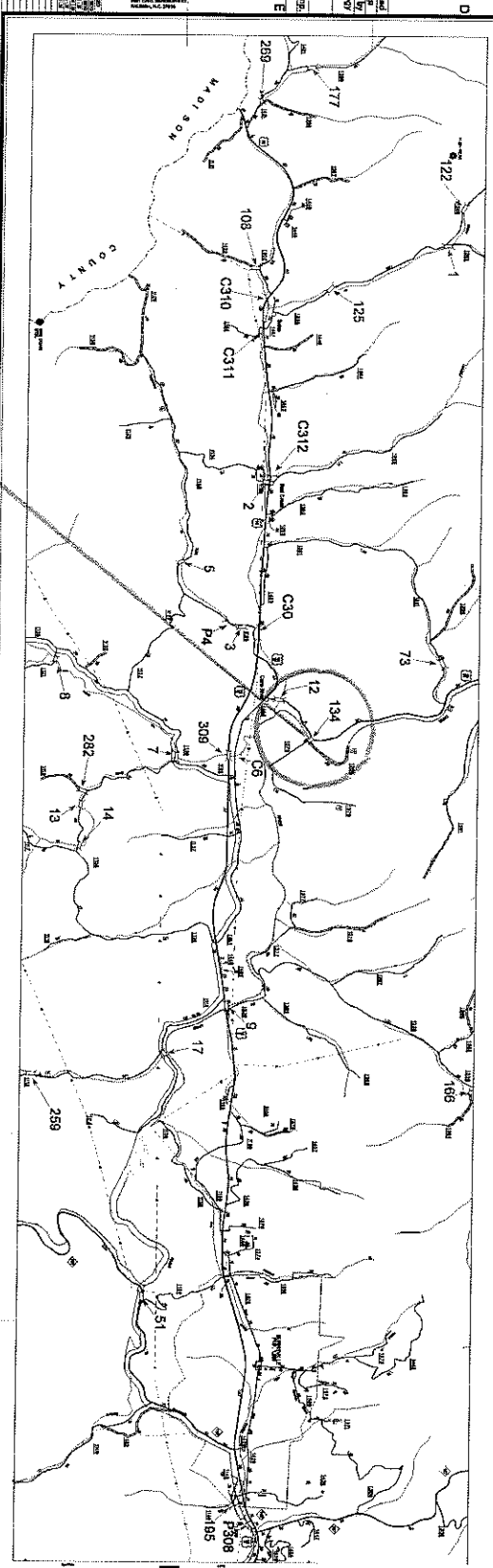
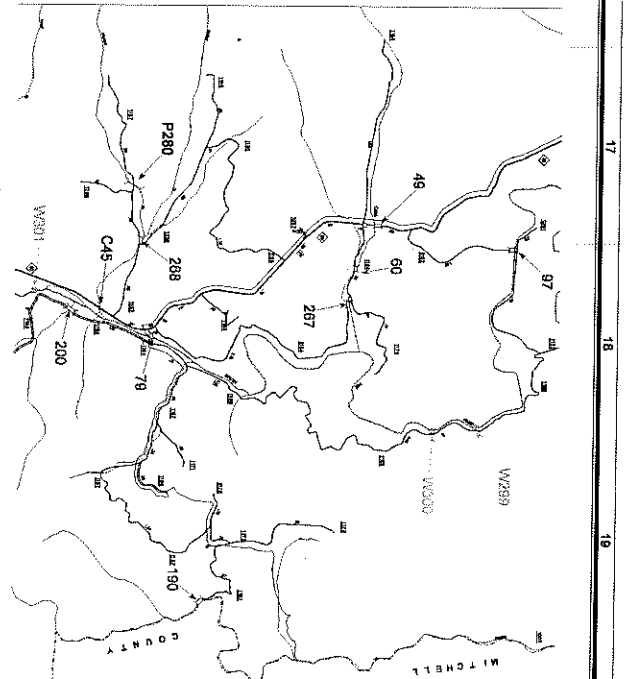
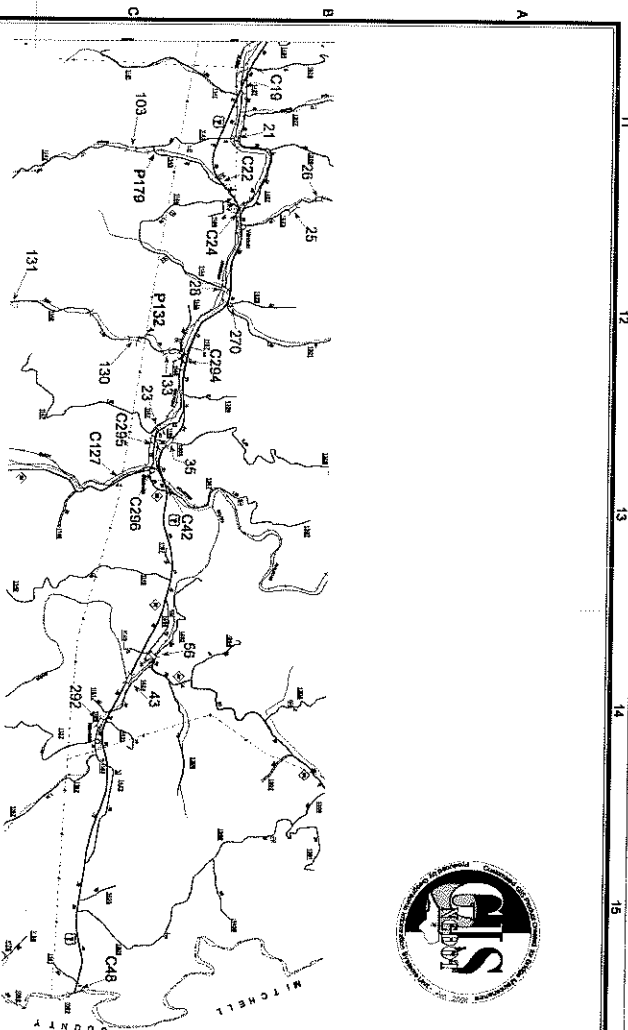
990134 LOCATION



Legend

- | | | | | | |
|--|---|--|---|--|---|
| <ul style="list-style-type: none"> City/Town DOQQ Grid 24K Grid 100K Grid Drainage Areas of Selected Sites USGS Continuous Gage Station 2003 USGS Gage Stations CGIA Copy Ambient Water Monitoring Stations Industrial Outfalls 2006 Implicit Outfalls 2007 DRAFT Stormwater Controls IDEP | <ul style="list-style-type: none"> NPDES Sites TIP Intersections 2004 To 2010 TIP Bridge 2004 To 2010 NCDOT Bridges TIP Road Section 2004 To 2010 TIP Intersections 2007 To 2013 TIP Bridge 2007 To 2013 TIP Road Section 2007 To 2013 Airports Ferry Routes Power/Transmission Line Rest Areas | <ul style="list-style-type: none"> Railroad Local Roads Secondary Road Interstate Highway US Route Highway NC Route Surface Water Intake Anadromous Spawning Streams Water Supply Watersheds Primary Nursery Secondary Nursery Special Secondary Nursery | <ul style="list-style-type: none"> SA Water ORW HQW_ORW_DWQ_2006 High Quality Water Zone Hazardous Spill Basin Line 303D Streams 24K Hydrography Line Federal Lands National Wetlands Inventory Hazardous Spill Basin Polygon HSB Boundary 24K Hydrography Polygon 100K Hydrography Line | <ul style="list-style-type: none"> 100K Hydrography Polygon Streambed Mapping (19 Counties) Trout Water WRC Trout Water DWQ Soil State Boundary EEP TLW Local Planning EEP TLW Basinwide Planning 14 Digit Hydrologic Catalog Unit 8 Digit Hydrologic Catalog Unit River Basin Major Urban | <ul style="list-style-type: none"> Minor Urban Jordan Boundary Falls Lake Boundary High Rock Boundary Catawba Main Stem RND Boundary Goose Creek Boundary Piedmont Hydrogeology County Physiographic Frame Data 500K Physiographic Region DOT Division Background County |
|--|---|--|---|--|---|

Disclaimer: The GDS Data's goal is to provide the most accurate information as possible, the magnitude of the data prevents any guarantee of accuracy or completeness. If you find any information that is incorrect, please send your request to the GDS Unit.



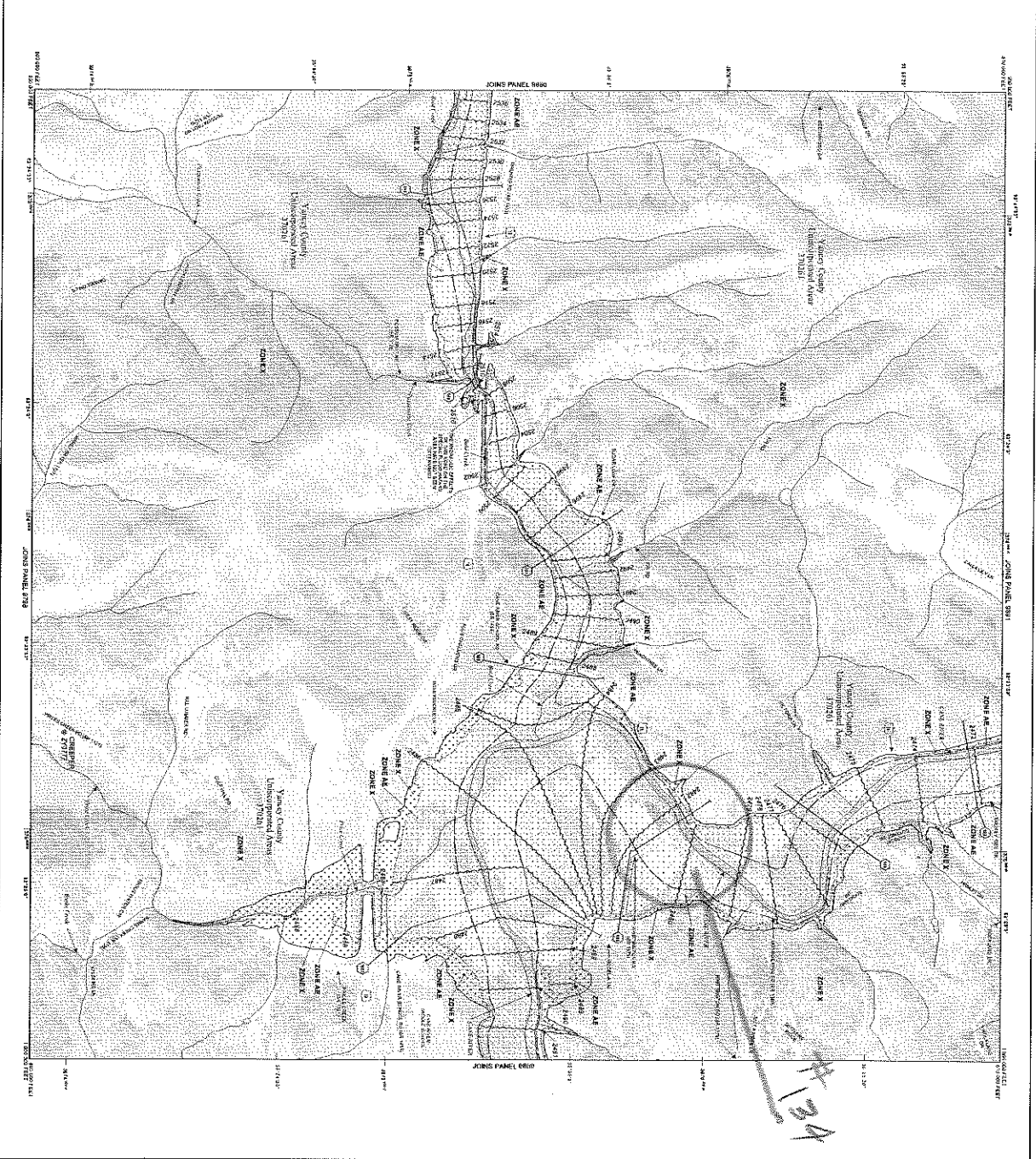
ENHANCED MUNICIPAL AND STATISTICAL AREAS
YANCEY COUNTY
NORTH CAROLINA
BRIDGE LOCATION MAP

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PREPARED BY THE
INFORMATION TECHNOLOGY - GIS UNIT
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION



10
 SECTION 18
 MAPSHEET 3
 YANCEY COUNTY

15



NOTES TO USERS

The study is a descriptive, exploratory, field-based research design. It was an observational study as we were unable to randomly select the subjects and control the study environment. The study was exploratory as we were unable to predict the exact nature of the results.

The data were collected through a series of four focus group discussions. Focus group discussions have been previously used as a means to explore a topic (Kleinman, 1989). Focus group discussions have been found to be a useful method for gathering information on a topic (Kleinman, 1989). Focus group discussions have been found to be a useful method for gathering information on a topic (Kleinman, 1989). Focus group discussions have been found to be a useful method for gathering information on a topic (Kleinman, 1989).

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Certain areas will be studied that have not previously been covered in detail, including the following:

- Section 4: First Instance: Changes at the First Instance Study (April 1998)
- Section 5: The 1998/99 Academic Year (April 1999)
- Section 6: The 1999/00 Academic Year (April 2000)

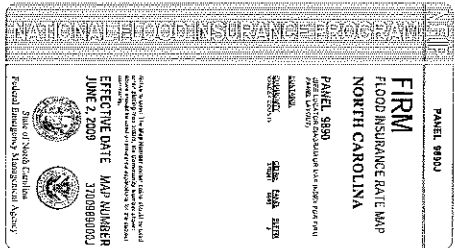
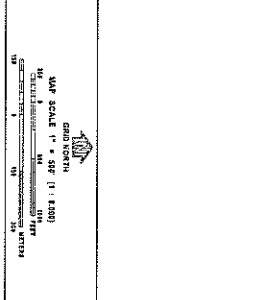
Each module will be evaluated and evaluated data will be used by FdM to evaluate how well our students are doing. The following areas will be covered in the evaluation:

- The primary focus for the FdM will be on entry statistics for the first year. The first year is the most important year for the FdM and the first year is the most important year for the FdM.
- The second focus for the FdM will be on the first year. The first year is the most important year for the FdM and the first year is the most important year for the FdM.
- The third focus for the FdM will be on the first year. The first year is the most important year for the FdM and the first year is the most important year for the FdM.
- The fourth focus for the FdM will be on the first year. The first year is the most important year for the FdM and the first year is the most important year for the FdM.
- The fifth focus for the FdM will be on the first year. The first year is the most important year for the FdM and the first year is the most important year for the FdM.
- The sixth focus for the FdM will be on the first year. The first year is the most important year for the FdM and the first year is the most important year for the FdM.
- The seventh focus for the FdM will be on the first year. The first year is the most important year for the FdM and the first year is the most important year for the FdM.
- The eighth focus for the FdM will be on the first year. The first year is the most important year for the FdM and the first year is the most important year for the FdM.
- The ninth focus for the FdM will be on the first year. The first year is the most important year for the FdM and the first year is the most important year for the FdM.
- The tenth focus for the FdM will be on the first year. The first year is the most important year for the FdM and the first year is the most important year for the FdM.

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LEGEND

2016 1A 2016 1B 2016 1C 2016 1D 2016 1E 2016 1F 2016 1G 2016 1H 2016 1I 2016 1J 2016 1K 2016 1L 2016 1M 2016 1N 2016 1O 2016 1P 2016 1Q 2016 1R 2016 1S 2016 1T 2016 1U 2016 1V 2016 1W 2016 1X 2016 1Y 2016 1Z	2016 1A 2016 1B 2016 1C 2016 1D 2016 1E 2016 1F 2016 1G 2016 1H 2016 1I 2016 1J 2016 1K 2016 1L 2016 1M 2016 1N 2016 1O 2016 1P 2016 1Q 2016 1R 2016 1S 2016 1T 2016 1U 2016 1V 2016 1W 2016 1X 2016 1Y 2016 1Z
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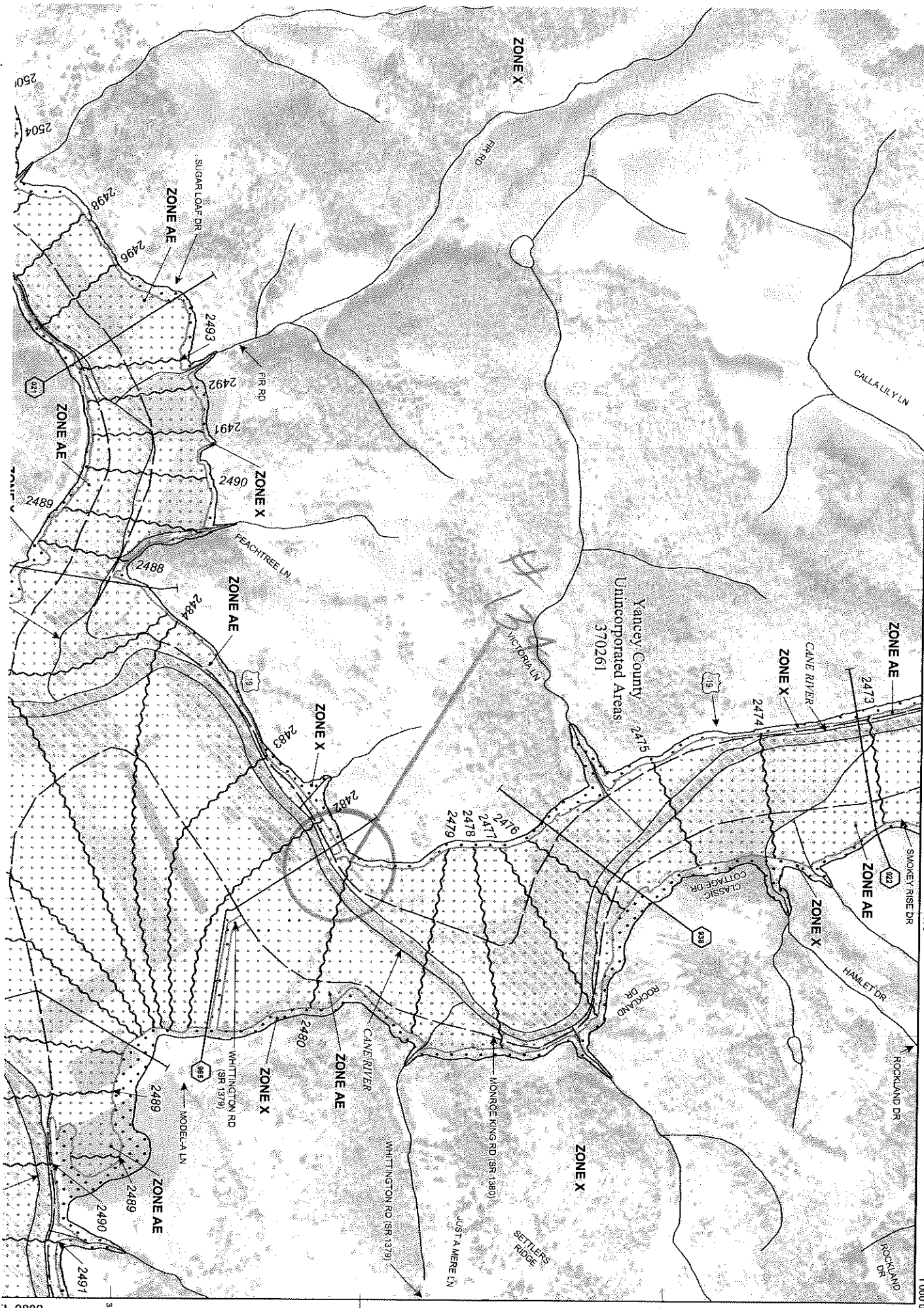
374 000 M JOINS PANEL 9891

82 23 30"

375 000 M

82 23 10"

1 000 000 P
810



0080 T

990 134



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY YANCEY

BRIDGE NUMBER 990134

INSPECTION CYCLE 2 YRS

ROUTE SR1379

ACROSS CANE RIVER

M.P. 0

LOCATION .02 M.I.E. JCT. US19W

SUPERSTRUCTURE TIMBER FLOOR ON I-BEAMS

SUBSTRUCTURE ABUTMENTS & PIERS: YOUNT MASONRY

SPANS 1 @ 41', 1 @ 40'-3", 1 @ 41'

LONGITUDE 82° 23' 10.1"

LATITUDE 35° 55' 8.8"

PRESENT CONDITION FAIR

INVENTORY RATING

INSPECTION DATE 08/24/2011

OPERATING RATING

PRESENT POSTING SV 39 TTST 42

PROPOSED POSTING

COMPUTER UPDATE

ANALYSIS DATE

POSTING LETTER DATE

SUFFICIENCY RATING

OTHER SIGNS PRESENT DELINEATORS, ONE LANE BRIDGE



EAST

SIGN NOTICE
ISSUED FOR

NUMBERED
REQUIRED

No

WEIGHT LIMIT

Yes

DELINEATORS

2

No

NARROW BRIDGE

No

ONE LANE BRIDGE

No

LOW CLEARANCE

990134

NATIONAL BRIDGE INVENTORY----- STRUCTURE INVENTORY AND APPRAISAL Run Date: 10/06/2011

IDENTIFICATION				CLASSIFICATION		CODE
(1) STATE NAME -NORTH CAROLINA	BRIDGE	990134		SUFFICIENCY RATING =		36.1
(8) STRUCTURE NUMBER(FEDERAL)		000000001990134		STATUS =	Structurally Deficient	
INVENTORY ROUTE (ON/UNDER) - ON		134013790				
(2) STATE HIGHWAY DEPARTMENT DISTRICT		13				
(3) COUNTY CODE	199	(4) PLACE CODE	00000	(112)NBIS BRIDGE SYSTEM -		YES
(6) FEATURE INTERSECTED -	CANE RIVER			(104)HIGHWAY SYSTEM	NON NHS Route	0
(7) FACILITY CARRIED	SR1379			(26) FUNCTIONAL CLASS -	Local	09
(9) LOCATION	.02 M.I.E.JCT.US19W			(100)STRAHNET HIGHWAY -	Not a STRAHNET Route	0
(11)MILEPOINT		0		(101)PARALLEL STRUCTURE -	No Parallel Structure	N
(16)LAT	35° 55' 8.8"	(17)LONG	82° 23' 10.1"	(102)DIRECTION OF TRAFFIC -	2-way Traffic	2
(98)BORDER BRIDGE STATE CODE		PCT SHARE		(103)TEMPORARY STRUCTURE -	Not Temporary	
(99)BORDER BRIDGE STRUCTURE NO				(110)DESIGNATED NATIONAL NETWORK -	Not Part of	0
				(20) TOLL	On Free Road	3
				(31) MAINTAIN -	State Highway Agency	01
				(22) OWNER -	State Highway Agency	01
				(37) HISTORICAL SIGNIFICANCE -	Not Eligible	5
STRUCTURE TYPE AND MATERIAL				CONDITION		CODE
(43) STRUCTURE TYPE MAIN:	Steel			(58) DECK		4
TYPE -	Stringer Multibeam or Girder	CODE	302	(59) SUPERSTRUCTURE		4
(44) STRUCTURE TYPE APPR :				(60) SUBSTRUCTURE		5
TYPE -		CODE		(61) CHANNEL & CHANNEL PROTECTION		7
(45) NUMBER OF SPANS IN MAIN UNIT			3	(62) CULVERTS		N
(46) NUMBER OF APPROACH SPANS						
(107)DECK STRUCTURE TYPE -	Timber	CODE	8			
(108)WEARING SURFACE / PROTECTIVE SYSTEM :						
(A) TYPE OF WEARING SURFACE -	Bituminous	CODE	6			
(B) TYPE OF MEMBRANE -	None	CODE	0			
(C) TYPE OF DECK PROTECTION -	None	CODE	0			
AGE AND SERVICE				LOAD RATING AND POSTING		CODE
(27) YEAR BUILT			1955	(31) DESIGN LOAD	Other or Unknown	0
(106)YEAR RECONSTRUCTED				(64) OPERATING RATING -	HS-23	142
(42) TYPE OF SERVICE : ON -	Highway			(66) INVENTORY RATING -	HS-14	125
UNDER -	Waterway	CODE	15	(70) BRIDGE POSTING -	Posting Required	3
(28) LANES: ON STRUCTURE	2 UNDER STRUCTURE			(41) STRUCTURE OPEN, POSTED ,OR CLOSED		P
(29) AVERAGE DAILY TRAFFIC			150	DESCRIPTION -	Posted for Load	
(30) YEAR OF ADT	2000	(109) TRUCK ADT PCT	6 %			
(19) BYPASS OR DETOUR LENGTH			99 MI			
GEOMETRIC DATA				APPRAISAL		CODE
(48) LENGTH OF MAXIMUM SPAN			40 FT	(67) STRUCTURAL EVALUATION		4
(49) STRUCTURE LENGTH			122 FT	(68) DECK GEOMETRY		2
(50)CURB OR SIDEWALK: LEFT	0.3 FT RIGHT		0.3 FT	(69) UNDERCLEARANCES,VERTI & HORIZ		N
(51) BRIDGE ROADWAY WIDTH CURB TO CURB			17.5 FT	(71) WATERWAY ADEQUACY		7
(52) DECK WIDTH OUT TO OUT			18.5 FT	(72) APPROACH ROADWAY ALIGNMENT		5
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)			18.0 FT	(36) TRAFFIC SAFETY FEATURES		0000
(33) BRIDGE MEDIAN -	No Median	CODE	0	(113)SCOUR CRITICAL BRIDGES		U
(34) SKEW	0° (35) STRUCTURE FLARED		NO	SCOUR PLAN OF ACTION	Z	
(10) INVENTORY ROUTE MIN VERT CLEAR		99 FT 99 IN		PROPOSED IMPROVEMENTS		
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR		17.5 FT		(75) TYPE OF WORK -		CODE 311
(53) MIN VERT CLEAR OVER BRIDGE RDWY		99 FT 99 IN		(76) LENGTH OF STRUCTURE IMPROVEMENT		149 FT
(54) MIN VERT UNDERCLEAR REF	Not a Highway or Railroad			(94) BRIDGE IMPROVEMENT COST		\$318,000
(55) MIN LAT UNDERCLEAR RT REF	Not a Highway or Railroad	99.9 FT		(95) ROADWAY IMPROVEMENT COST		\$80,000
(56) MIN LAT UNDERCLEAR LT REF -		0.0 FT		(96) TOTAL PROJECT COST		\$447,000
				(97) YEAR OF IMPROVEMENT COST ESTIMATE		2006
				(114)FUTURE ADT	300	(115) YEAR FUTURE ADT 2025
NAVIGATION DATA				INSPECTIONS		
(38) NAVIGATION CONTROL -	No Navigational Control	CODE	0	(90) INSPECTION DATE		08/24/2011
(111)PIER PROTECTION -	Not Applicable	CODE		(92) CRITICAL FEATURE INSPECTION :		(93) CFI DATE
(39) NAVIGATION VERTICAL CLEARANCE			0	A) FRACTURE CRIT DETAIL -	NO	A)
(116)VERT - LIFT BRIDGE NAV MIN VERT CLEAR				B) UNDERWATER INSP -	YES 48Mo	B) 04/01/2010
(40) NAVIGATION HORIZONTAL CLEARANCE			0	C) OTHER SPECIAL INSP	NO	C)
				SCOUR		

990134

BRIDGE MANAGEMENT UNIT
DATA ON EXISTING STRUCTURE

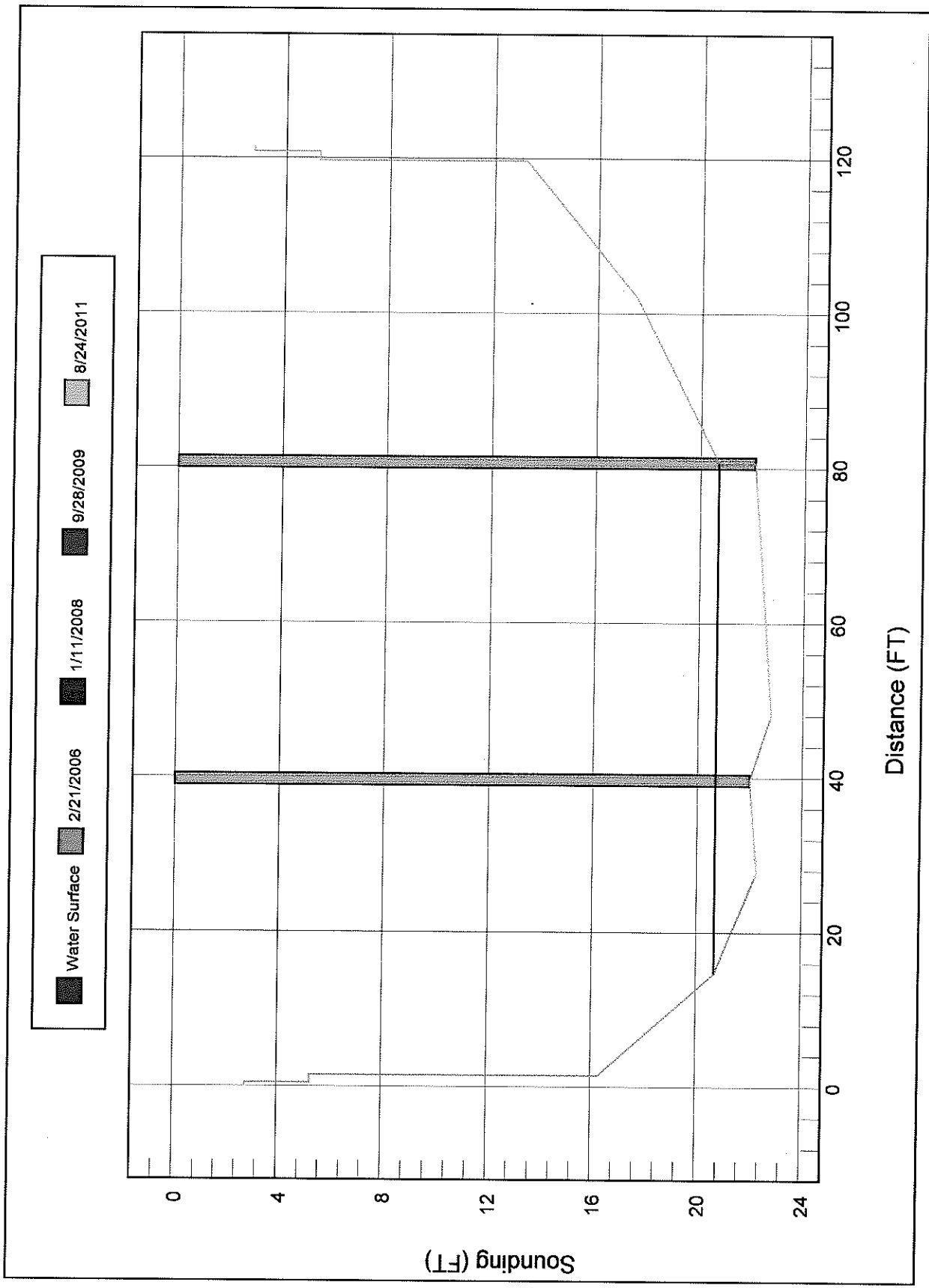
Run Date: 10/06/2011

COUNTY : YANCEY		DIV : 13		DIST : 2		STRUCTURE NUMBER : 990134		LENGTH : 122 FEET	
ROUTE CARRIED : SR1379				FEATURE INTERSECTED : CANE RIVER					
LOCATED : .02 MI.E.JCT.US19W				BRIDGE NAME :				CITY :	
FUNC. CLASS : 09		SYST.ON : NFA		SYST.UNDER : NFA		ADT & YR : 150 2000		RAIL TYPE : LT 227 RT 227	
BUILT : 1955		BY : BMU		PROJ :		FED.AID PROJ :		DESIGN LOAD : Other or Unknown	
REHAB :		BY : BMU		PROJ : 5.9051		ALIGNMENT : TAN		SKEW : 90	
								LANES : ON 2 UNDER	
NAVIGATION : VC 0.0 FT HC 0.0 FT				HT. CRN. TO BED : 20 FT				WATER DEPTH : 2 FT	
SUPERSTRUCTURE : TIMBER FLOOR ON I-BEAMS									
SUBSTRUCTURE : ABUTMENTS & PIERS:YOUNT MASONRY									
SPANS : 1 @ 41', 1 @ 40'-3", 1 @ 41'									
BEAMS OR GIRDERS : 7 LINES 21" I-BEAMS @ 2'-9.5" CENTERS									
FLOOR : 4X8 TIM/1.5 AWS		ENCROACHMENT :				DECK (OUT TO OUT) : 18.5 FT			
CLEAR ROADWAY : 17.5 FT		BETWEEN RAILS : 18.2 FT				SIDEWALK OR CURB : LT 0.3 FT RT 0.3 FT			
VERT.CL.OVER : 99 FT 99 IN		VERT.CL.UNDER : 00 FT 00 IN				HOR.CL.UNDER : 0.0 FT			
INV.RTG. : HS-14		OPE.RTG. : HS-23		CONTR.MEMBER : IntBeam		POSTED : SV 35 TTST 40		DATE 10/05/2011	
SYSTEM : Secondary S.R. Route						GREEN LINE ROUTE : N			
2ND OPENING :		3RD OPENING :		4TH OPENING :		5TH OPENING :			
REMARKS :									

Bridge: 990134 County YANCEY Date: 08/24/2011

TOTAL BRIDGE LENGTH: 120 FT

STREAMBED PROFILE



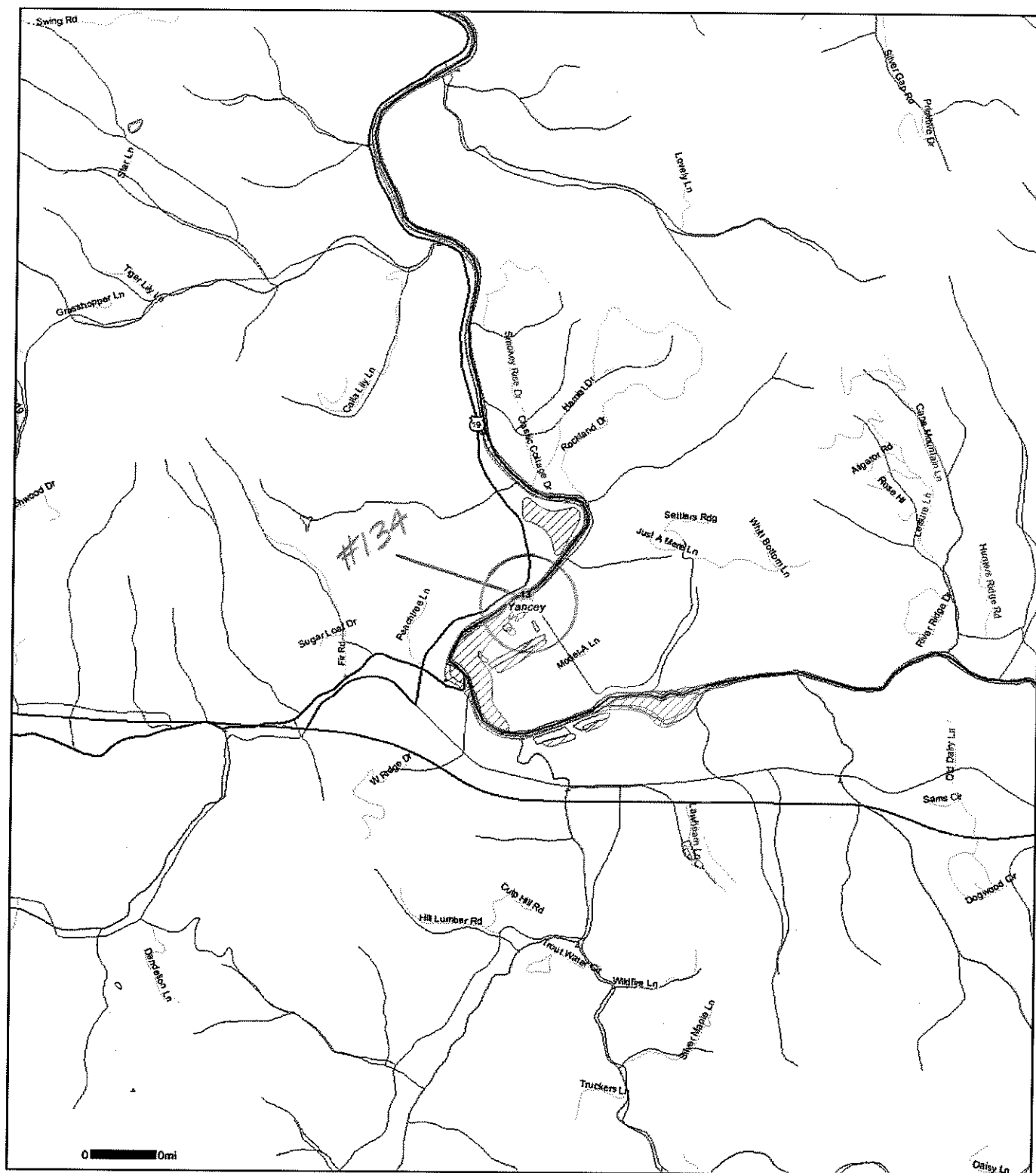
Environmental Sensitivity Map - 2008

4/9/2012 9:39 AM



Highway Stormwater

990134w/Tr/NWI/Redlinea



Legend

- | | | | | | |
|-----------------------------------|--------------------------------|-----------------------------|-------------------------------|----------------------------------|---------------------------|
| City/Town | NPDES Sites | Railroad | SA Water | 100K Hydrography Polygon | Minor Urban |
| DOQQ Grid | TIP Intersections 2004 To 2010 | Local Roads | ORW | Streambed Mapping (19 Counties) | Jordan Boundary |
| 24K Grid | TIP Bridge 2004 To 2010 | Secondary Road | HQW_ORW_DWQ_2006 | Trout Water WRC | Falls Lake Boundary |
| 100K Grid | NCDOT Bridges | Interstate | High Quality Water Zone | Trout Water DWQ | High Rock Boundary |
| Drainage Areas of Selected Sites | TIP Road Section 2004 To 2010 | Highway US Route | Hazardous Spill Basin Line | Soil | Catawba Main Stem |
| USGS Continuous Gage Station 2003 | TIP Intersections 2007 To 2013 | Highway NC Route | 303D Streams | State Boundary | RND Boundary |
| USGS Gage Stations CGIA Copy | TIP Bridge 2007 To 2013 | Surface Water Intake | 24K Hydrography Line | EFP TLW Local Planning | Goose Creek Boundary |
| Ambient Water Monitoring Stations | TIP Road Section 2007 To 2013 | Anadromous Spawning Streams | Federal Lands | EFP TLW Basinwide Planning | Piedmont Hydrogeology |
| Industrial Outfalls 2006 | Airports | Water Supply Watersheds | National Wetlands Inventory | Sub River Basin | County |
| Implicit Outfalls 2007 | Ferry Routes | Primary Nursery | Hazardous Spill Basin Polygon | 14 Digit Hydrologic Catalog Unit | Physiographic Frame Data |
| DRAFT Stormwater Controls | Power/Transmission Line | Secondary Nursery | HSB Boundary | 8 Digit Hydrologic Catalog Unit | 500K Physiographic Region |
| IDDEP | Rest Areas | Special Secondary Nursery | 24K Hydrography Polygon | River Basin | DOT Division |
| | | | 100K Hydrography Line | Major Urban | Background County |

Section 4.0 – Area Studied

Table 3—Flooding Sources Studied by Detailed Methods: Revised or Newly Studied

Source	Riverine Sources		Affected Communities
	From	To	
McIntosh Branch	The confluence with Pine Swamp Branch	Approximately 50 feet upstream of Van Kirk Lane	Yancey County (Unincorporated Areas), Town of Burnsville
Mitchell Branch	The confluence with Little Crabtree Creek	Approximately 300 feet upstream of Mitchell Branch (SR 1373)	Yancey County (Unincorporated Areas), Town of Burnsville
Pine Swamp Branch	Approximately 150 feet downstream of McIntosh Branch	Approximately 400 feet upstream of East Main Street	Yancey County (Unincorporated Areas), Town of Burnsville

*Revised to reflect backwater effects from a new limited detailed study

Table 4, “Flooding Sources Studied by Detailed Methods: Redelineated,” contains a list of flooding sources that were studied by detailed methods for previous FISs, but were only partially revised in the current study. Their effective analyses remain valid; however, their floodplain delineations have been revised on the current FIRM.

Table 4—Flooding Sources Studied by Detailed Methods: Redelineated

Source	Riverine Sources		Affected Communities
	From	To	
Ayles Creek	The confluence with Little Crabtree Creek	Approximately 400 feet upstream of Hickory Springs Road (SR 1153)	Yancey County (Unincorporated Areas)
Bald Creek	The confluence with Cane River	Approximately 700 feet upstream of US Highway 19	Yancey County (Unincorporated Areas)
Bald Mountain Creek	The confluence with Cane River	Just downstream of Bee Log Road (SR 1408)	Yancey County (Unincorporated Areas)
Big Creek	The confluence with Cane River	Approximately 0.5 mile upstream of Fire Scald Road	Yancey County (Unincorporated Areas)
Bowlens Creek	The confluence with Cane River	Approximately 950 feet upstream of Sutton Ridge Road	Yancey County (Unincorporated Areas)
Cane River (Downstream Reach)	Approximately 1,200 feet upstream of the confluence with Nolichucky River and North Toe River	Just upstream of the confluence of Bald Mountain Creek	Yancey County (Unincorporated Areas)
Cane River (Middle Reach)	Approximately 0.6 mile downstream of US Highway 19	Approximately 0.7 mile downstream of the confluence of Pine Swamp Branch	Yancey County (Unincorporated Areas)

Section 4.0 – Area Studied

Table 4—Flooding Sources Studied by Detailed Methods: Redelineated

Source	Riverine Sources		Affected Communities
	From	To	
Cane River (Upstream Reach)	The confluence of Bowlens Creek	Approximately 1,100 feet upstream of South Face Lane	Yancey County (Unincorporated Areas)
Cattail Creek	The confluence with Cane River	Mountain Farm Road	Yancey County (Unincorporated Areas)
Elk Fork	The confluence with Haney Creek	Approximately 260 feet upstream of NC 197	Yancey County (Unincorporated Areas)
Haney Creek	The confluence with Cane River	The confluence of Elk Fork	Yancey County (Unincorporated Areas)
Jacks Creek	Approximately 0.8 mile downstream of Clearmont School Road (SR 1416)	Approximately 1,600 feet upstream of Bob White Drive	Yancey County (Unincorporated Areas)
Little Crabtree Creek	The confluence with South Toe River	Approximately 500 feet downstream of Depot Street (SR 1140)	Yancey County (Unincorporated Areas)
South Toe River (Downstream Reach)	Approximately 200 feet downstream of the confluence of Little Crabtree Creek	Approximately 0.5 mile upstream of US Highway 19	Yancey County (Unincorporated Areas)
South Toe River (Upstream Reach)	Approximately 1,100 feet downstream of the confluence of Brown Creek	Approximately 5.3 miles upstream of NC Highway 80	Yancey County (Unincorporated Areas)
Whiteoak Creek	The confluence with South Toe River	Approximately 0.4 mile upstream of Fork Field Road	Yancey County (Unincorporated Areas)

Table 5, “Flooding Sources Studied by Detailed Methods: Limited Detailed” contains a list of flooding sources that were studied by approximate methods in previous FISs but were revised using limited detailed methods for this FIS.

Table 5—Flooding Sources Studied by Detailed Methods: Limited Detailed

Source	Riverine Sources		Affected Communities
	From	To	
Bailey Branch	The confluence with Pine Swamp Branch	Approximately 1,700 feet upstream of the confluence with Pine Swamp Branch	Yancey County (Unincorporated Areas)
Bald Mountain Creek	Just downstream of Bee Log Road (SR 1408)	Approximately 1,600 feet upstream of Bee Log Road (SR 1408)	Yancey County (Unincorporated Areas)
Big Crabtree Creek	The confluence with North Toe River	Approximately 1.4 miles upstream of Seven Mile Ridge Road (SR 1167)	Yancey County (Unincorporated Areas)
Brown Creek	Approximately 700 feet upstream of Virgels Mountain Road	Approximately 1.2 miles upstream of Upper Browns Creek Road (SR 1154)	Yancey County (Unincorporated Areas)

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Table 7—Summary of Discharges

Flooding Source	Location	Drainage Area (square miles)	Discharges (cfs)			
			10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Brown Creek	At the confluence with South Toe River	4.0	2,280	4,250	5,360	8,710
	Approximately 1,500 feet downstream of NC Highway 80	2.5	1,700	3,200	4,060	6,660
	Approximately 450 feet downstream of Hydrangea Drive	1.8	*	*	3,320	*
	Approximately 0.5 mile upstream of Upper Browns Creek Road (SR 1154)	1.0	*	*	2,300	*
Cane River	Mile 0.0	158.0	14,460	31,420	42,490	81,560
	Mile 3.5	148.0	13,990	30,410	41,120	78,950
	Mile 8.4	141.0	13,660	29,690	40,140	77,060
	Mile 10.0	120.0	12,600	27,390	37,030	71,090
	At the confluence of Bald Mountain Creek	119.4	*	*	19,800	*
	Approximately 1.1 miles upstream of the confluence of Bald Mountain Creek	117.5	*	*	19,370	*
	Approximately 0.8 mile upstream of Featheredge Drive	115.1	*	*	18,840	*
	Mile 18.7	105.0	11,780	25,620	34,630	66,500
	Approximately 0.7 mile downstream of the confluence of Pine Swamp Branch	58.7	*	*	13,300	*
	Approximately 1,850 feet downstream of the confluence of Bowlens Creek	53.5	*	*	12,550	*
	Mile 24.4	53.4	8,400	18,265	24,695 ¹	47,420
	Mile 32.0	36.4	6,940	15,090	20,400	39,180
	Mile 34.5	19.8	5,120	11,120	15,040	28,880
	Approximately 0.4 mile upstream of Bear Path Trail	19.3	*	*	6,640	*
	Approximately 2.1 miles upstream of Bear Path Trail	16.2	*	*	5,960	*
Cattail Creek	Mile 0.4	9.4	1,685	2,955	3,645	5,690
	Mile 2.0	8.1	1,520	2,655	3,270	5,095
	Approximately 400 feet upstream of Mountain Farm Road	6.9	*	*	3,180	*

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Table 10—Limited Detailed Flood Hazard Data

Cross Section ¹	Stream Station ²	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width ³ (feet)
DIG CRABTREE CREEK				
613	61,265	1,420	3,129.1	29 / 13
617	61,657	1,420	3,141.4	19 / 18
619	61,880	1,140	3,147.3	11 / 19
BROWN CREEK				
108	10,832	3,320	2,903.5	58 / 20
109	10,912	3,320	2,910.3	69 / 20
111	11,084	3,320	2,916.6	35 / 37
112	11,232	3,320	2,924.0	43 / 41
113	11,268	3,320	2,929.3	52 / 70
117	11,747	3,320	2,951.8	35 / 24
123	12,306	3,320	2,988.9	31 / 38
128	12,758	3,320	3,017.3	33 / 9
136	13,605	3,320	3,100.3	30 / 16
141	14,108	3,320	3,162.1	33 / 20
142	14,169	3,320	3,168.2	28 / 42
146	14,581	3,320	3,218.7	23 / 7
151	15,084	3,320	3,287.7	6 / 69
158	15,779	2,300	3,375.8	19 / 18
163	16,273	2,300	3,451.9	17 / 18
171	17,086	2,300	3,593.4	13 / 14
179	17,892	2,300	3,786.1	14 / 20
188	18,809	2,300	4,024.2	17 / 21
193	19,329	2,300	4,186.8	6 / 29
197	19,679	2,300	4,299.2	20 / 20
201	20,134	2,300	4,455.5	26 / 27
204	20,360	2,300	4,544.3	8 / 29
207	20,686	2,300	4,690.0	7 / 51
CANE RIVER				
526	52,590	19,800	2,294.9	56 / 110
535	53,467	19,800	2,295.1	51 / 68
543	54,335	19,800	2,296.1	57 / 57
555	55,465	19,800	2,300.0	70 / 58
562	56,211	19,580	2,309.3	76 / 38
572	57,249	19,580	2,319.2	57 / 58
578	57,839	19,580	2,322.1	49 / 49
583	58,263	19,580	2,327.8	139 / 32
587	58,724	19,370	2,333.3	103 / 70
590	58,974	19,370	2,333.7	80 / 73
591	59,110	19,370	2,335.4	64 / 63
592	59,217	19,370	2,335.6	51 / 69
594	59,450	19,370	2,336.5	44 / 65
604	60,408	19,170	2,339.1	52 / 46
612	61,192	19,170	2,343.7	43 / 44

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Table 10—Limited Detailed Flood Hazard Data

Cross Section ¹	Stream Station ²	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width ³ (feet)
CANE RIVER				
624	62,363	19,170	2,354.7	45 / 69
629	62,875	19,060	2,359.3	65 / 47
632	63,153	19,060	2,362.2	154 / 28
633	63,349	19,060	2,362.5	131 / 36
634	63,415	19,060	2,362.6	79 / 76
636	63,634	19,060	2,362.6	76 / 54
638	63,805	19,060	2,364.8	67 / 87
639	63,854	19,060	2,364.9	59 / 91
652	65,165	19,060	2,367.5	60 / 60
661	66,063	19,060	2,370.8	53 / 55
672	67,161	19,060	2,376.2	52 / 52
674	67,397	19,060	2,377.5	53 / 60
675	67,481	19,060	2,381.1	44 / 72
676	67,564	19,060	2,382.5	53 / 72
680	67,991	18,530	2,390.8	64 / 151
CROSS SECTIONS SHOWN ON PROFILE AND FLOODWAY DATA TABLE FOR THIS PORTION				
1166	116,647	13,300	2,539.3	52 / 51
1173	117,344	13,300	2,542.4	61 / 60
1179	117,903	13,300	2,545.0	93 / 41
1186	118,590	13,300	2,548.6	63 / 64
1195	119,539	13,300	2,551.3	64 / 61
1206	120,551	12,670	2,558.3	36 / 80
1217	121,671	12,670	2,568.0	55 / 54
1227	122,701	12,670	2,570.7	59 / 59
1237	123,668	12,670	2,572.5	49 / 47
1246	124,588	12,670	2,577.7	46 / 52
1251	125,121	12,670	2,583.5	56 / 64
1257	125,728	12,670	2,587.0	61 / 104
1265	126,548	12,670	2,590.0	75 / 63
1272	127,214	12,550	2,593.0	80 / 77
1277	127,672	12,550	2,594.8	53 / 112
1288	128,779	12,550	2,601.5	71 / 114
CROSS SECTIONS SHOWN ON PROFILE AND FLOODWAY DATA TABLE FOR THIS PORTION				
1830	182,954	6,840	2,992.5	51 / 41
1837	183,689	6,840	3,002.4	49 / 39
1839	183,866	6,840	3,006.3	41 / 58
1840	184,049	6,840	3,007.9	40 / 67
1851	185,100	6,840	3,023.4	44 / 59
1859	185,862	6,640	3,032.2	28 / 32
1863	186,259	6,640	3,037.0	31 / 31
1866	186,605	6,640	3,041.5	40 / 31
1870	186,970	6,640	3,046.8	31 / 32
1882	188,199	6,420	3,059.6	34 / 34

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Table 10—Limited Detailed Flood Hazard Data

Cross Section ¹	Stream Station ²	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width ³ (feet)
SAN PIERRE RIVER				
1894	189,389	6,420	3,076.3	52 / 27
1905	190,510	6,180	3,092.9	38 / 118
1917	191,666	6,180	3,111.2	63 / 21
1927	192,734	6,180	3,125.7	97 / 20
1938	193,850	6,180	3,142.4	79 / 102
1949	194,890	5,960	3,157.1	60 / 47
CATTANAHO CREEK				
112	11,215	3,870	3,020.0	14 / 35
120	11,977	3,480	3,036.8	22 / 18
129	12,910	3,410	3,071.8	20 / 16
139	13,933	3,410	3,113.3	16 / 86
150	14,970	3,410	3,155.4	20 / 21
JACKSON CREEK				
002	225	6,980	2,136.0 ⁵	42 / 45
003	280	6,980	2,136.0 ⁵	58 / 51
008	841	6,980	2,137.9	77 / 13
018	1,785	6,980	2,159.2	24 / 171
024	2,354	6,980	2,166.5	47 / 45
031	3,083	6,980	2,178.9	40 / 47
038	3,787	6,980	2,199.1	54 / 38
044	4,382	6,980	2,209.8	35 / 74
049	4,881	6,780	2,217.5	58 / 45
053	5,304	6,780	2,222.3	40 / 35
054	5,407	6,780	2,225.1	79 / 24
055	5,461	6,780	2,226.1	78 / 42
060	5,961	6,780	2,228.3	114 / 69
065	6,497	6,780	2,229.4	243 / 31
069	6,938	6,780	2,230.9	60 / 76
070	7,050	6,780	2,234.3	62 / 53
071	7,086	6,780	2,234.6	68 / 62
076	7,634	6,780	2,235.8	22 / 94
082	8,235	6,780	2,238.6	35 / 44
083	8,308	6,780	2,239.6	30 / 66
084	8,407	6,780	2,245.6	51 / 75
090	8,981	6,780	2,250.7	97 / 26
098	9,788	6,780	2,256.4	46 / 50
104	10,372	6,780	2,259.2	38 / 74
105	10,541	6,780	2,262.8	58 / 46
106	10,617	6,780	2,263.0	61 / 30
112	11,186	6,780	2,266.5	114 / 29
116	11,635	6,780	2,269.6	67 / 79
117	11,727	6,780	2,270.7	163 / 32
118	11,763	6,780	2,272.1	149 / 51