

Project Number 45646.1.1
TIP Number B-5692
Let Date _____

PREDESIGN-PRESURVEY REPORT

County Bladen

Bridge Number 080 011
Road Number NC 53
Stream Ellis Creek

Type Of Request: POC Force Account TIP
Date 1/5/16 Name EAKpugu Assigned To _____
Checked By _____

Prior Survey Date No (attach copy of prior survey)

Study By Scour Section _____

Panel : 1304

Flood Zone Yes Detail Study Limited Date 1/5/2007 (attach copy of flood map)

B.M. Info _____

Quad Map Dublin Drainage Area 43 Smi From Stream Stats
Q25 2400 Q50 2950 Q100 3550 Method USGS - Rural Reg. eq.
(USGS-SI Report 2009-51)

EXISTING BRIDGE INFORMATION

Location 1.4 MI S Jct SR 1332

Average Daily Traffic 2200 (2013)

Length 88 Bed- To Crown 16 Water Depth 4

Type Structure RC Deck Girders, EBTS & IBTS; RC caps/ Tim pi

Type Spans 4 @ 22'

Upstream Structure Brg # 119

Location (SR 1332) 0.5 M N Jct NC 53

Bed- To Crown 12 Prior Survey 2-90

Downstream Structure Confluence with Cape Fear River

Location _____

Bed- To Crown — Prior Survey —

SCS Watershed —

ENVIRONMENTAL

Trout Stream No Anadromous Fish No Primary Nursery Area No

High Quality Waters No Nutrient Sensitive Waters No

Near Water Supply Intake No CAMA County No

Stream Classification C

DENR River Basin Info. Cape fear

office estimated Brg min length = 110'



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: SHORED STRUCTURE STRUCTURE DATA
CHANGES

Structure Safety Report

Routine Element Inspection

COUNTY: BLADEN STRUCTURE NUMBER: 080011 FREQUENCY: 24 MONTHS

FACILITY CARRIED: NC53 MILE POST:

LOCATION: 1.4 MI S JCT SR1332

FEATURE INTERSECTED: ELLIS CREEK

LATITUDE: 34° 41' 40.89" LONGITUDE: 78° 39' 33.07"

SUPERSTRUCTURE: REINFORCED CONCRETE DECK GIRDERS

SUBSTRUCTURE: EBTS&IBTS:RC CAPS/TIMBER PILES

SPANS: 4@22"

☐ FRACTURE CRITICAL ☒ TEMPORARY SHORING ☐ SCOUR CRITICAL ☐ SCOUR PLAN OF ACTION

PRESENT CONDITION: Poor INSPECTION DATE: 06/02/2015

POSTED SV: Not Posted POSTED TTST: Not Posted

OTHER SIGNS PRESENT: NONE



LOOKING EAST

Sign noticed issued for		Number Required
<u>NO</u>	WEIGHT LIMIT	<u>0</u>
<u>NO</u>	DELINEATORS	<u>0</u>
<u>NO</u>	NARROW BRIDGE	<u>0</u>
<u>NO</u>	ONE LANE BRIDGE	<u>0</u>
<u>NO</u>	LOW CLEARANCE	<u>0</u>

INSPECTED BY Ray L. Kisner	SIGNATURE <i>Ray L. Kisner</i>	ASSISTED BY R.D.Heath
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BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 07/14/2015

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :	
BLADEN	6	3	080011	88	FEET

ROUTE CARRIED :	FEATURE INTERSECTED :
NC53	ELLIS CREEK

LOCATED :	BRIDGE NAME :	CITY :
1.4 MI S JCT SR1332		

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
07	FA	NFA	2200 2013	LT 181 RT 181

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1946	SHPWC	3022		H 15

REHAB :	BY :	PROJ :	ALIGNMENT :	SKEW :	LANES :
	DBM		TAN	90	ON 2 UNDER 0

NAVIGATION :	HT. CRN. TO BED :	WATER DEPTH :
VC 0 FT HC 0 FT	16 FT	4 FT

SUPERSTRUCTURE : REINFORCED CONCRETE DECK GIRDERS

SUBSTRUCTURE : EBT&IBTS:RC CAPS/TIMBER PILES

SPANS : 4@22'

BEAMS OR GIRDERS : 4 LINES REINFORCED CONCRETE DECK GIRDERS 6'9CTS

FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
5.5RC/NO AWS		28.25 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :
23.667 FT	26 FT	LT 1.1665 FT RT 1.1665 FT

VERT.CL.OVER :
999.9 FT

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :	TTST	LGW	DATE
HS-1	HS-1	RCDG	SV 38			07/14/2015

SYSTEM :	GREEN LINE ROUTE :
Primary N.C. Route	Y

UNDER ROUTES AND CLEARANCES

REMARKS :

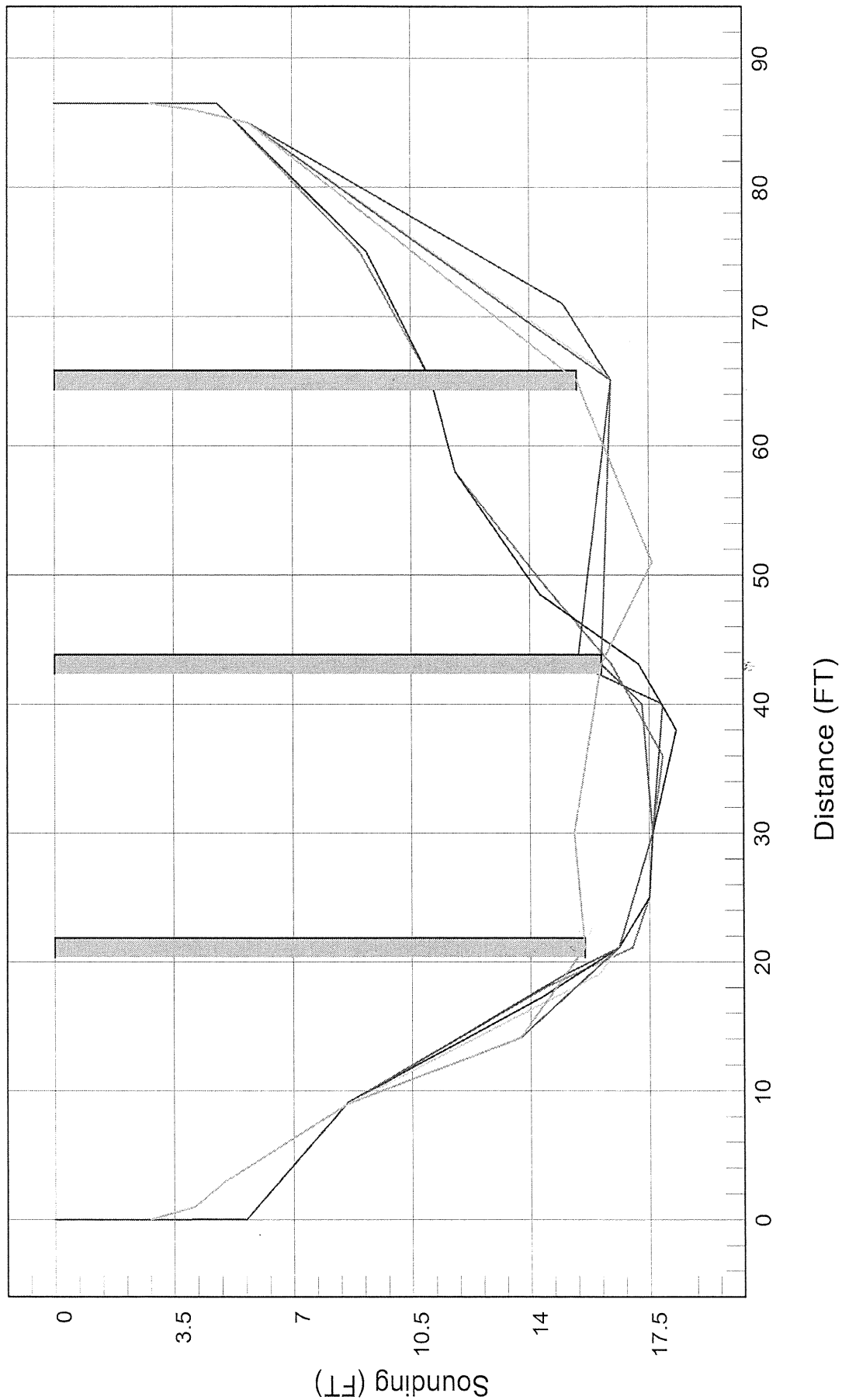
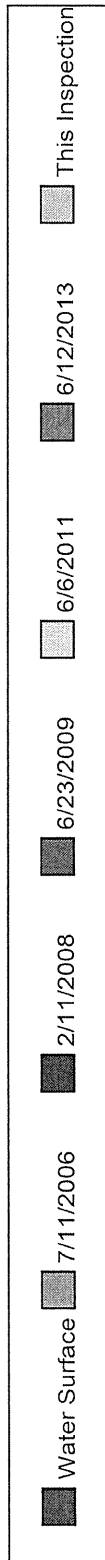
Bridge: 080011

County BLADEN

Date:

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



$16 \times 1.5 = 24 \times 2 = 48 \pm 200 \pm 100$

FRIS | Map Theme

Search

County: **Bladen** ▼

DFIRM: **1304** ▼

Places: ▼

Streams: ▼

Address: 🔍

Coordinates: **Lat - Lon (Decimal Degrees)** ▼

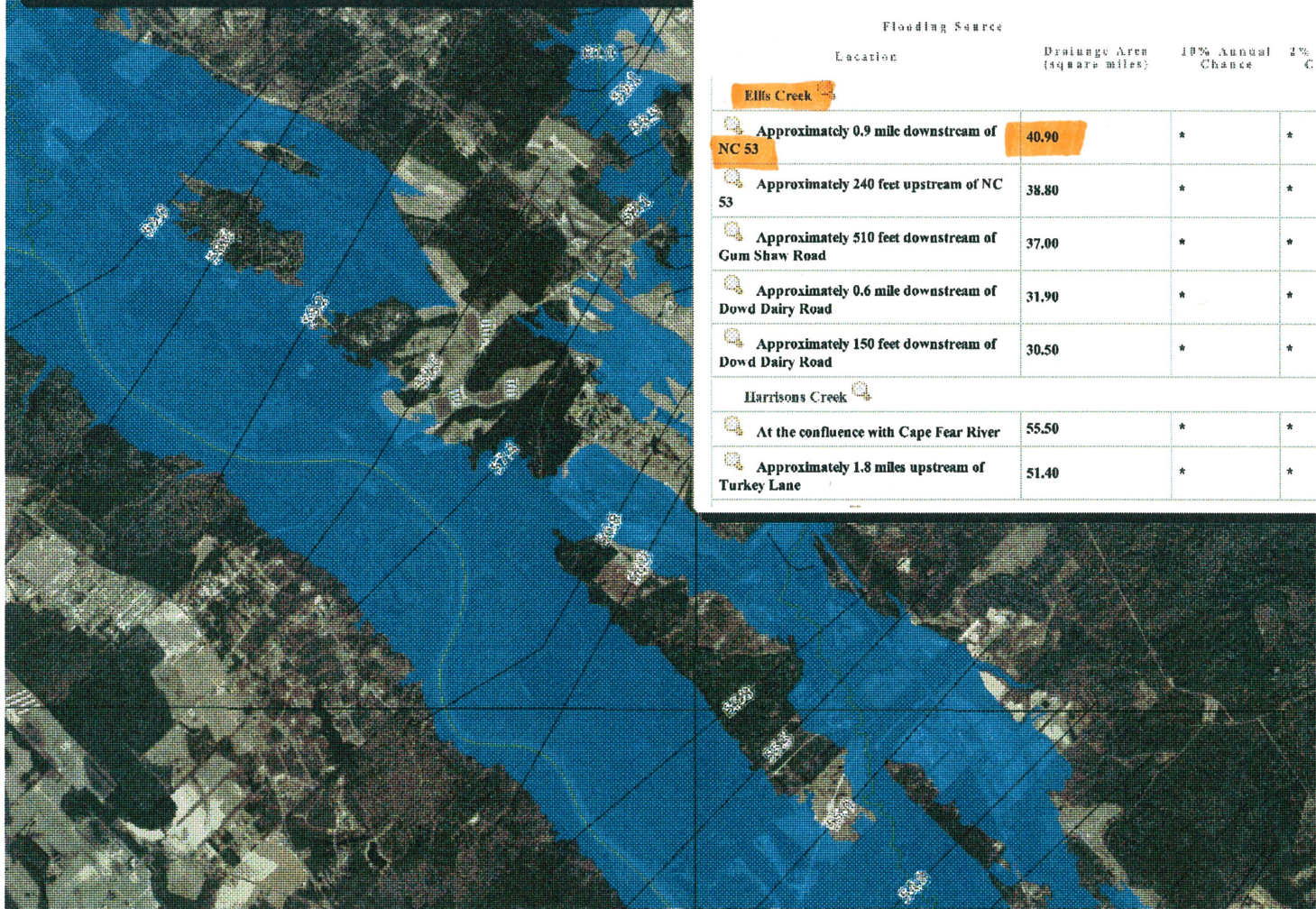
Latitude-Northing-Y:

Longitude-Easting-X: 🔍

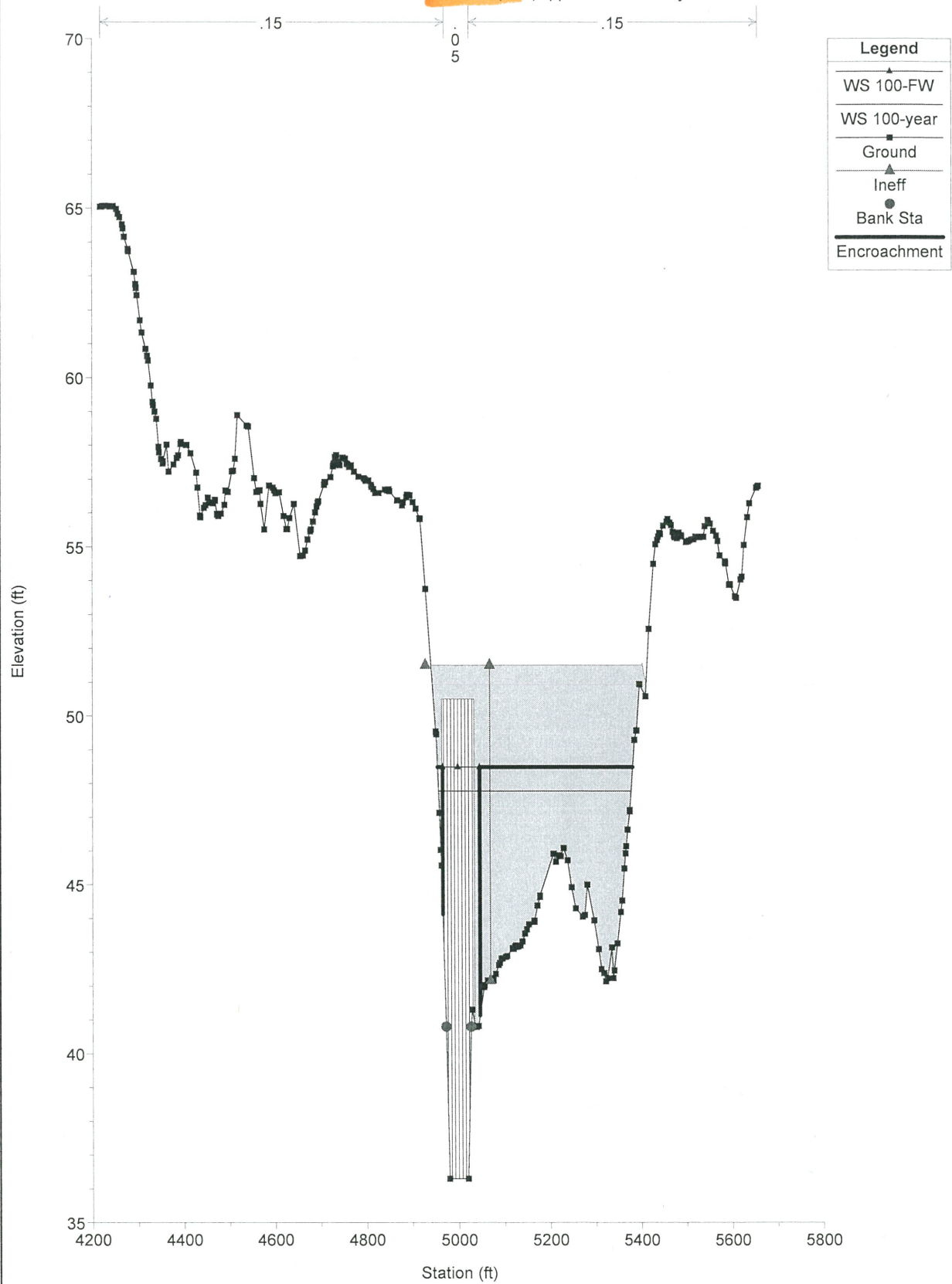


Summary of Discharges

Flooding Source		Drainage Area (square miles)	1% Annual Chance	2% Chance
Location				
Ellis Creek				
NC 53	Approximately 0.9 mile downstream of	40.90	*	*
53	Approximately 240 feet upstream of NC	38.80	*	*
	Approximately 510 feet downstream of Gum Shaw Road	37.00	*	*
	Approximately 0.6 mile downstream of Dowd Dairy Road	31.90	*	*
	Approximately 150 feet downstream of Dowd Dairy Road	30.50	*	*
Harrisons Creek				
	At the confluence with Cape Fear River	55.50	*	*
	Approximately 1.8 miles upstream of Turkey Lane	51.40	*	*



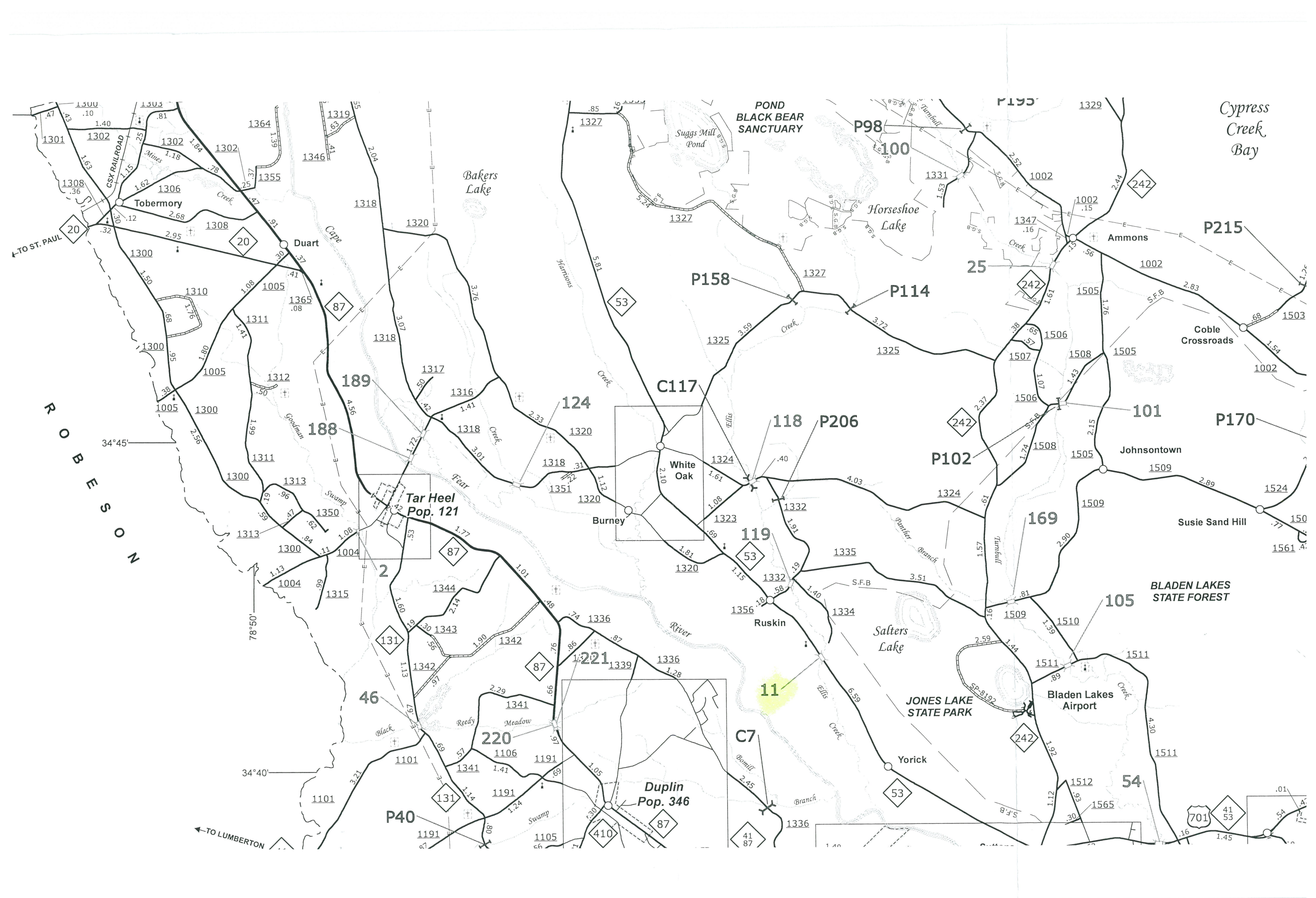
ADJ Plan: Floodway Run 1/7/2016
Ellis - NC 53 Structure ID: NC 53 (Ellis) Approximate Survey Str



HEC-RAS Plan: Floodway River: Ellis Creek Reach: Reach-1

Reach	River Sta	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Reach-1	27641	3710.00	40.95	52.86		53.02	0.000749	3.95	2563.89	611.63	0.20
Reach-1	27641	3710.00	40.95	53.33		53.49	0.000699	3.92	2015.81	277.52	0.20
Reach-1	26330	3710.00	40.68	51.49		51.75	0.001272	4.82	1977.52	552.29	0.26
Reach-1	26330	3710.00	40.68	52.29		52.47	0.000865	4.17	1972.56	306.70	0.22
Reach-1	25422	3710.00	39.63	50.95		51.02	0.000483	3.07	4194.81	986.34	0.16
Reach-1	25422	3710.00	39.63	51.61		51.76	0.000702	3.84	2135.75	273.58	0.20
Reach-1	23799	3710.00	36.86	50.16		50.27	0.000448	3.29	3182.62	588.14	0.16
Reach-1	23799	3710.00	36.86	50.82		50.92	0.000384	3.15	2624.45	275.57	0.15
Reach-1	22682	3710.00	36.41	49.78		49.84	0.000309	2.74	4384.67	839.83	0.13
Reach-1	22682	3710.00	36.41	50.41		50.50	0.000370	3.09	2576.15	245.16	0.15
Reach-1	22085	3710.00	36.40	49.18		49.50	0.001072	4.95	1362.37	363.78	0.25
Reach-1	22085	3710.00	36.40	49.82		50.14	0.000956	4.84	1162.47	146.27	0.23
Reach-1	21379	3820.00	36.30	48.16	42.47	48.59	0.001477	5.56	951.62	424.38	0.29
Reach-1	21379	3820.00	36.30	48.83	42.34	49.29	0.001379	5.59	841.38	80.00	0.28
Reach-1	21334	Bridge									
Reach-1	21282	3820.00	36.05	47.10	42.05	47.68	0.002126	6.35	799.20	166.52	0.35
Reach-1	21282	3820.00	36.05	47.88	42.05	48.42	0.001732	6.02	759.73	80.00	0.32
Reach-1	20258	3820.00	34.05	45.94		46.15	0.000893	4.32	2028.51	374.00	0.22
Reach-1	20258	3820.00	34.05	46.70		46.99	0.000981	4.72	1318.59	139.00	0.24
Reach-1	19833	3820.00	32.97	45.69		45.82	0.000574	3.62	2409.37	330.31	0.18
Reach-1	19833	3820.00	32.97	46.40		46.61	0.000719	4.21	1634.06	178.05	0.20
Reach-1	19376	3820.00	32.04	45.20		45.48	0.000904	4.65	1620.74	330.97	0.23
Reach-1	19376	3820.00	32.04	45.97		46.25	0.000811	4.58	1271.22	130.35	0.22
Reach-1	18736	3820.00	30.22	45.07		45.14	0.000260	2.71	3909.52	559.56	0.12
Reach-1	18736	3820.00	30.22	45.66		45.83	0.000468	3.73	1880.22	196.48	0.17
Reach-1	18160	3820.00	29.43	44.67		44.90	0.000592	4.16	1490.86	205.33	0.19
Reach-1	18160	3820.00	29.43	45.32		45.54	0.000525	4.03	1413.15	121.58	0.18
Reach-1	17669	3820.00	29.42	44.49		44.63	0.000427	3.51	2458.61	410.79	0.16
Reach-1	17669	3820.00	29.42	45.12		45.29	0.000449	3.70	1794.12	159.51	0.17
Reach-1	17197	3820.00	29.17	44.27		44.42	0.000453	3.61	2389.01	400.97	0.16
Reach-1	17197	3820.00	29.17	44.87		45.07	0.000492	3.87	1662.49	168.00	0.17





Zoom To: ▼

StreamStats

Delineation Results

Be sure to thoroughly check the delineated basin for accuracy before using the tools below.



StreamStats Basin Characteristics Report - Google Chro...

streamstatsags.cr.usgs.gov/v3_beta/BCreport.htm?rcode=

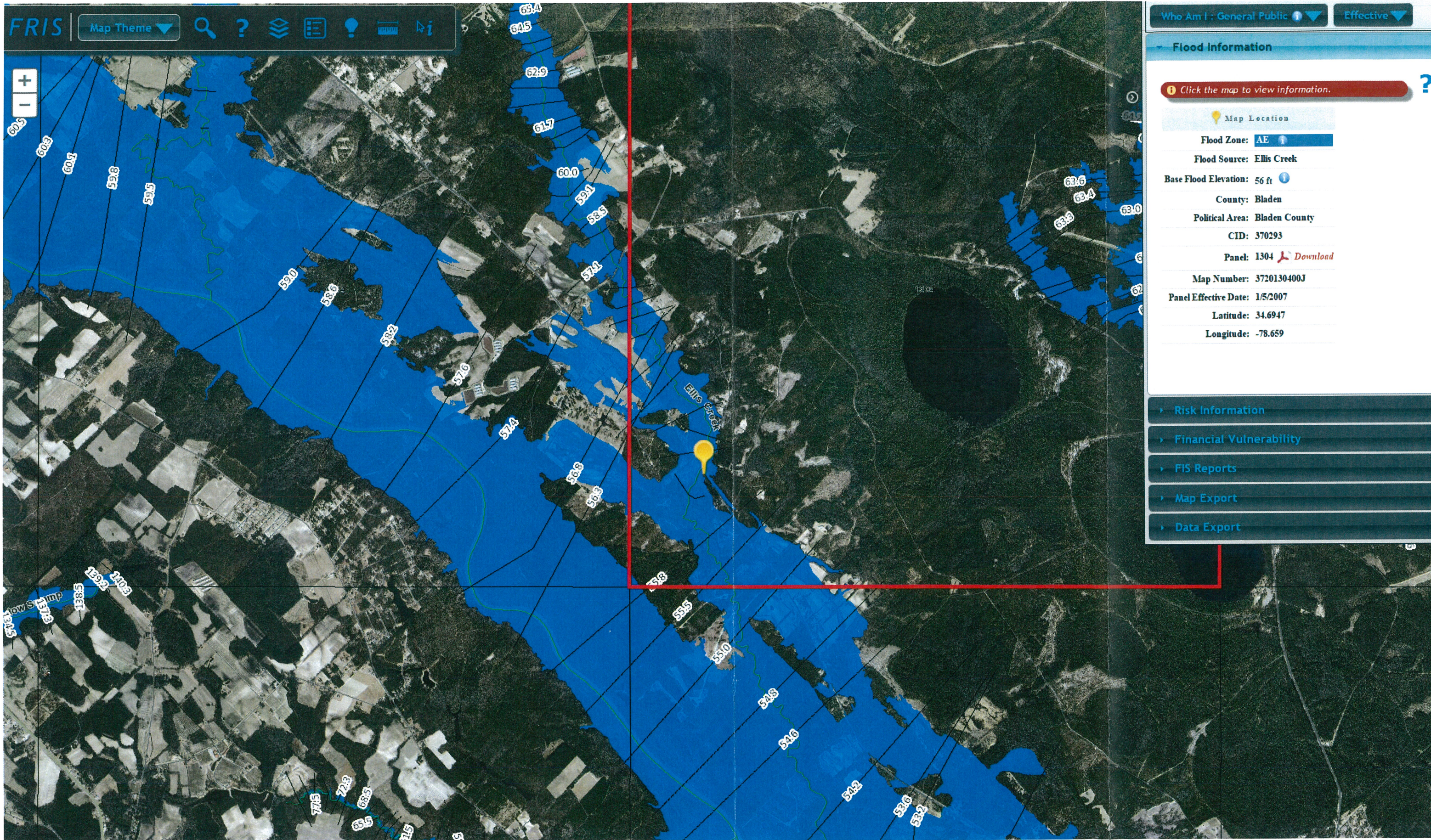
StreamStats Version 3.0

Basin Characteristics Ungaged Site Report

Date: Wed Jan 6, 2016 4:43:33 PM GMT-5
Study Area: North Carolina
NAD 1983 Latitude: 34.6947 (34 41 41)
NAD 1983 Longitude: -78.659 (-78 39 33)

Label	Value	Units	Definition
DRNAREA	42.9	square miles	Area that drains to a point on a stream
LC06IMP	0.14	percent	Percentage of impervious area determined from NLCD 2006 impervious dataset

34.69469, -78.65919



Who Am I : General Public Effective

Flood Information

Click the map to view information.

Map Location

Flood Zone: AE

Flood Source: Ellis Creek

Base Flood Elevation: 56 ft

County: Bladen

Political Area: Bladen County

CID: 370293

Panel: 1304 Download

Map Number: 3720130400J

Panel Effective Date: 1/5/2007

Latitude: 34.6947

Longitude: -78.659

- Risk Information
- Financial Vulnerability
- FIS Reports
- Map Export
- Data Export