
 HEC2 VERSION UPDATED JAN 1975
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08
 MODIFICATIONS 52,53,54,55,56,57,58

T1 TRIB. GARDNER & BASIN 15
 T2 FLOODPLAIN STUDY AT WAKE COUNTY M-G JOB NO.6855
 T3 50 YEAR FLOOD WATER SURFACE PROFILE

J1 ICHECK INQ NINV IDIR STRT METRIC HVINS Q WSEL FQ
 -10. 3. 0. 0. 0.008000 0.0 0.0 0. 228.000 0.0

J2 NPROF IPLOT PREVS XSECV XSECH FN ALLDC IBW CHNIM ITRACE
 2.000 0.0 -1.000 0.0 0.0 0.0 0.0 0.0 0.0 0.0

CCHV= 0.100 CEHV= 0.300

3265 DIVIDED FLOW

SECNO	DEPTH	WSEL	CRWS	WSELK	EG	HV	HL	LOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	YLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
400.00	7.03	229.53	0.0	228.00	229.89	0.36	0.0	0.0	230.00
720.	125.	595.	0.	99.	113.	0.	0.	0.	230.10
0.0	1.27	5.26	0.0	0.085	0.060	0.085	0.0	227.50	1145.04
0.000007	400.	400.	400.	0	0	6	0.0	193.75	1385.29

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

SECNO	DEPTH	WSEL	CRWS	WSELK	EG	HV	HL	LOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	YLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
2600.00	5.01	258.01	258.61	0.0	259.08	0.47	25.62	0.0	258.50
700.	11.	417.	272.	11.	61.	113.	10.	9.	258.40
0.12	1.06	6.85	2.41	0.085	0.060	0.085	0.060	253.60	1185.14
0.018744	2200.	2200.	2200.	9	14	1	0.0	180.58	1365.72

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T1 TRIB. GARDNER B BASIN 15
 T2 FLOODPLAIN STUDY AT WAKE COUNTY M-G JOB NO.6855
 T3 100 YEAR FLOOD WATER SURFACE PROFILE

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FR
	-10.	4.	0.	0.	0.008000	0.0	0.0	0.	210.000	0.0

J2	NPROF	IPIOT	PREVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	3.000	0.0	-1.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CCHV= 0.100 CEHV= 0.300

3265 DIVIDED FLOW

SECNO	DEPTH	CWSEL	CRWS	WSELK	EG	HV	HL	LOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENUST
400.00	7.36	229.86	0.0	210.00	230.20	0.34	0.0	0.0	230.00
900.	242.	658.	0.	159.	122.	0.	0.	0.	230.10
0.0	1.52	5.40	0.0	0.085	0.060	0.085	0.0	222.50	1138.08
0.008035	400.	400.	400.	0	0	17	0.0	231.95	1383.70

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

SECNO	DEPTH	CWSEL	CRWS	WSELK	EG	HV	HL	LOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENUST
2600.00	5.20	258.80	258.80	0.0	259.30	0.50	26.24	0.0	258.50
875.	28.	469.	378.	18.	64.	138.	13.	11.	258.40
0.12	1.52	7.31	2.74	0.085	0.060	0.085	0.060	253.60	1183.94
0.019843	2200.	2200.	2200.	10	14	1	0.0	184.87	1368.81

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T1 TRIB. GARDNER 8 BASIN 15
 T2 FLOODPLAIN STUDY AT WAKE COUNTY M-G JOB NO.6855
 T3 500 YEAR FLOOD WATER SURFACE PROFILE

J1	ICHECK	ING	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	-10.	5.	0.	0.	0.008000	0.0	0.0	0.	212.000	0.0

J2	NPROF	IPLOT	PREVS	XSECV	XSECH	EN	ALLDC	IBW	CHNIM	ITRACE
	4.000	0.0	-1.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CCHV= 0.100 CEHV= 0.300

SECNO	DEPTH	WSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

400.00	8.36	230.86	0.0	212.00	231.19	0.33	0.0	0.0	230.00
1810.	884.	916.	11.	382.	150.	11.	0.	0.	230.10
0.0	2.31	6.11	0.95	0.085	0.060	0.085	0.0	222.50	1128.47
0.008017	400.	400.	400.	0	0	19	0.0	283.18	1411.65

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

SECNO	DEPTH	WSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

2600.00	5.70	259.30	259.30	0.0	259.97	0.67	27.88	0.0	258.50
1550.	105.	659.	786.	39.	73.	204.	22.	12.	258.40
0.10	2.72	9.07	3.85	0.085	0.060	0.085	0.060	253.60	1180.91
0.025895	2200.	2200.	2200.	13	18	1	0.0	195.71	1376.62

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T1 IRIB. GARDNER 8 BASIN 15
 T2 FLOODPLAIN STUDY AT WAKE COUNTY M-G JOB NO.6855
 T3 100 YEAR FLOODWAY

J1	ICHECK	ING	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FG
	-10.	6.	0.	0.	0.0	0.0	0.0	0.	0.0	0.0

J2	NPROF	IPLT	PREVS	XSECV	XSECH	EM	ALDCC	IBW	CHNIM	ITRACE
	15.000	0.0	-1.000	0.0%	0.0	0.0	0.0	0.0	0.0	0.0

CCHV= 0.100 CEHV= 0.300
 2800 NAT Q1= 43.51 WSEL= 228.29 ENC Q1= 61.53 WSEL= 229.29 RATIO= -0.4141
 NAT Q1= 69. RATIOS LOB,CH,ROB= 0.1073 0.8927 0.0 WSEL= 229.29
 2096 WSEL NOT GIVEN AVG OF MAX,MIN USED
 3280 CROSS SECTION 400.00 EXTENDED 49864.95 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	FG	HV	HL	LOSS	BANK ELEV
Q	GLOB	ACH	AROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLDBL	XLCH	XLDBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 1356.0 1384.0 TYPE= 4 TARGET= 0.107
 400.00 49888.75 50111.25 0.0 228.29 50111.25 0.00 0.0 0.0 230.00
 900. 0. 898. 2. 18. 1396818. 49. 0. 0. 230.10
 0.0 0.0 0.00 0.05 0.085 0.060 0.085 0.0 222.50 1356.00
 0.000000 400. 400. 400. 0 0 1 0.0 28.00 1384.00

2800 NAT Q1= 26.20 WSEL= 257.87 ENC Q1= 34.35 WSEL= 258.87 RATIO= -0.3107
 NAT Q1= 66. RATIOS LOB,CH,ROB= 0.0374 0.5174 0.4452 WSEL= 258.87
 3280 CROSS SECTION 2600.00 EXTENDED 49835.55 FEET

3470 ENCROACHMENT STATIONS= 1223.0 1240.0 TYPE= 4 TARGET= 0.483
 2600.00 49857.65 50111.25 0.0 257.87 50111.25 0.00 0.00 0.00 258.50
 875. 0. 870. 5. 18. 847574. 49. 56680. 1. 258.40
 357.52 0.0 0.00 0.11 0.085 0.060 0.085 0.060 253.60 1223.00
 0.000000 2200. 2200. 2200. 19 0 1 0.0 17.00 1240.00

1 SUMMARY PRINTOUT FOR MULTIPLE PROFILES 1

4 100 YEAR FLOODWAY 4

6 SECTION CHANNEL MIN EL OF MAX EL OF MIN EL DISCHARGE CWSEL TO EG TOPWID STENCL STENCR VCH 8
 7 NUMBER LENGTH ROADWAY LOW CHORD GROUND (CFS) 9

9	400.00	400.00	0.0	0.0	222.50	390.00	228.29	43.51	228.64	31.84	0.0	0.0	4.73	11
10	A 400.00	400.00	0.0	0.0	222.50	720.00	229.53	80.46	229.89	193.75	0.0	0.0	5.26	13
11	400.00	400.00	0.0	0.0	222.50	900.00	229.86	100.40	230.20	231.93	0.0	0.0	5.40	14
12	400.00	400.00	0.0	0.0	222.50	1810.00	230.86	202.15	231.19	283.18	0.0	0.0	6.11	15
13	400.00	400.00	0.0	0.0	222.50	900.00	50111.25*****	50111.25	28.00	1356.00	1384.00	0.00	0.00	17
15	2600.00	2200.00	0.0	0.0	253.60	370.00	257.87	26.20	258.42	97.81	0.0	0.0	6.43	19
16	B 2600.00	2200.00	0.0	0.0	253.60	700.00	258.61	51.13	259.08	180.58	0.0	0.0	6.85	21
17	2600.00	2200.00	0.0	0.0	253.60	875.00	258.80	62.12	259.30	184.87	0.0	0.0	7.31	22
18	2600.00	2200.00	0.0	0.0	253.60	1550.00	259.30	96.32	259.97	195.71	0.0	0.0	9.07	23
19	2600.00	2200.00	0.0	0.0	253.60	875.00	50111.25*****	50111.25	17.00	1223.00	1240.00	0.00	0.00	24

21 SECTION DISCHARGE CWSEL CWSEL DIFF CWSEL DIFF CWSEL-WSELK TOPWID T.W. DIFF LENGTH 28
 22 NUMBER CFS EACH Q EACH SECTION 29

23	400,000	390,000	228,289	0.0	0.0	0.0	31.845	0.0	400,000	30
24	400,000	720,000	229,532	1.243	0.0	0.0	193,753	-161,908	400,000	31
25	400,000	900,000	229,856	0.324	0.0	0.0	231,933	-200,088	400,000	32
26	400,000	1810,000	230,858	1.002	0.0	0.0	283,177	-251,332	400,000	33
27	400,000	900,000	50111,250	49880,390	0.0	0.0	28,002	3,843	400,000	34
29	2600,000	370,000	257,874	0.0	29,585	0.0	97,810	0.0	2200,000	35
30	2600,000	700,000	258,606	0.731	29,074	0.0	180,583	-82,773	2200,000	36
31	2600,000	875,000	258,800	0.198	28,948	0.0	184,872	-87,062	2200,000	37
32	2600,000	1550,000	259,303	0.499	28,445	0.0	195,707	-97,897	2200,000	38
33	2600,000	875,000	50111,250	49851,940	0.0	0.0	17,002	80,808	2200,000	39

35 DATA FOR LAST CROSS SECTION 46
 36 PROFILE TYPE ENC TARGET TOP WIDTH TOP WIDTH 47

37				AREA-ACRES	AREA-DIFF	48
38						49
39	1	0.0	0.0	3.274	0.0	50
40	2	0.0	0.0	9.453	6.179	51
41	3	0.0	0.0	10.525	7.251	52
42	4	0.0	0.0	12.093	8.819	53
43	5	4.000	0.483	1.136	-2.138	54

44						55
45						56
46						57
47						58
48						59
49						60
50						61
51						62
52						63
53						64
54						65
55						66
56						67
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T1 IRIB. GARDNER B BASIN 15
 T2 FLOODPLAIN STUDY AT WAKE COUNTY M-G JOB NO.6855
 T3 100 YEAR FLOODWAY

J1	ICHECK	INO	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FG
	-10.	6.	0.	0.	0.0	0.0	0.0	0.	230.860	0.0

J2	NPROF	IPLT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	15.000	0.0	-1.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CCHV= 0.100 CEHV= 0.300

SECNO	DEPTH	CWSEL	CRWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLORL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS=	1310.0	1410.0	TYPE=	1	TARGET=	100.000			
400.00	8.36	230.86	0.0	230.86	231.23	0.42	0.0	0.0	230.00
900.	76.	815.	9.	51.	150.	11.	0.	0.	230.10
0.0	1.49	5.44	0.86	0.085	0.060	0.085	0.0	222.50	1310.00
0.006340	400.	400.	400.	0	0	1	0.0	100.00	1410.00

A = 2.12 V = 1.3
 W = 170

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

SECNO	DEPTH	CWSEL	CRWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLORL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST



3470 ENCROACHMENT STATIONS=	1200.0	1300.0	TYPE=	1	TARGET=	100.000			
2600.00	5.62	259.22	259.22	0.0	259.95	0.73	23.19	0.0	258.50
875.	47.	581.	247.	20.	71.	79.	10.	5.	258.40
0.10	2.3	8.14	3.13	0.085	0.060	0.085	0.060	253.60	1200.00
0.021379	2200.	2200.	2200.	11	18	1	0.0	100.00	1300.00

A = 170
 W = 100
 V = 5.2

1	SUMMARY PRINTOUT FOR MULTIPLE PROFILES													1	
2														2	
3														3	
4	100 YEAR FLOODWAY													4	
5														5	
6	SECTION	CHANNEL	MIN EL OF	MAX EL OF	MIN EL	DISCHARGE	CWSEL	TG	EG	TOPWID	STENCL	STENCR	VCH	6	
7	NUMBER	LENGTH	ROADWAY	LOW CHORD	GROUND	(CFS)								7	
8														8	
9	A	400.00	400.00	0.0	0.0	222.50	900.00	229.86	100.40	230.20	231.95	0.0	0.0	5.40	9
10		400.00	400.00	0.0	0.0	222.50	900.00	230.86	113.03	231.28	100.00	1310.00	1410.00	5.44	10
11														11	
12	B	2600.00	2200.00	0.0	0.0	253.60	875.00	258.80	62.12	259.50	184.87	0.0	0.0	7.31	12
13		2600.00	2200.00	0.0	0.0	253.60	875.00	259.22	59.84	259.95	100.00	1200.00	1300.00	8.14	13
14														14	
15	SECTION	DISCHARGE	CWSEL	CWSEL DIFF	CWSEL DIFF	CWSEL-WSELK	TOPWID	T.W. DIFF	LENGTH					15	
16	NUMBER	CFS		EACH Q	EACH SECTION									16	
17	400.000	900.000	229.856	0.0	0.0	0.0	231.933	0.0	400.000					17	
18	400.000	900.000	230.860	1.004	0.0	0.0	99.999	131.934	400.000					18	
19														19	
20	2600.000	875.000	258.894	0.0	28.948	0.0	184.872	0.0	2200.000					20	
21	2600.000	875.000	259.225	0.421	28.365	0.0	99.999	84.873	2200.000					21	
22														22	
23	DATA FOR LAST CROSS SECTION													23	
24	PROFILL	TYPE	ENC	TARGET	TOP WIDTH	TOP WIDTH							24		
25					AREA-ACRES	AREA-DIFF							25		
26														26	
27	1	0.0		0.0	10.525	0.0							27		
28	2	1.000		100.000	5.050	-5.475							28		
29														29	
30														30	
31														31	
32														32	
33														33	
34														34	
35														35	
36														36	
37														37	
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