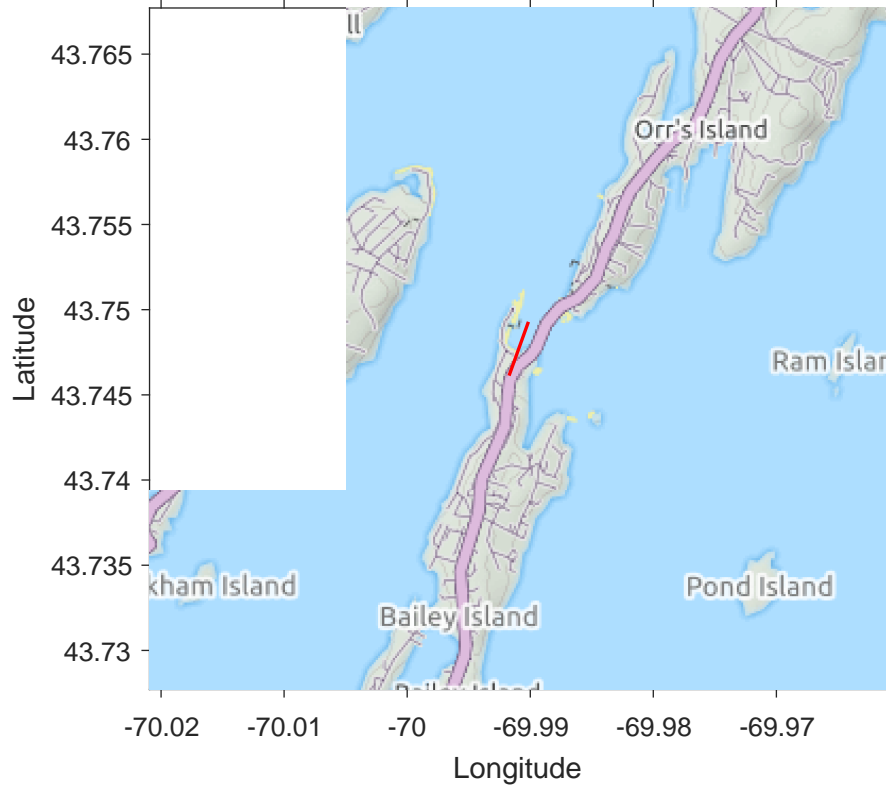
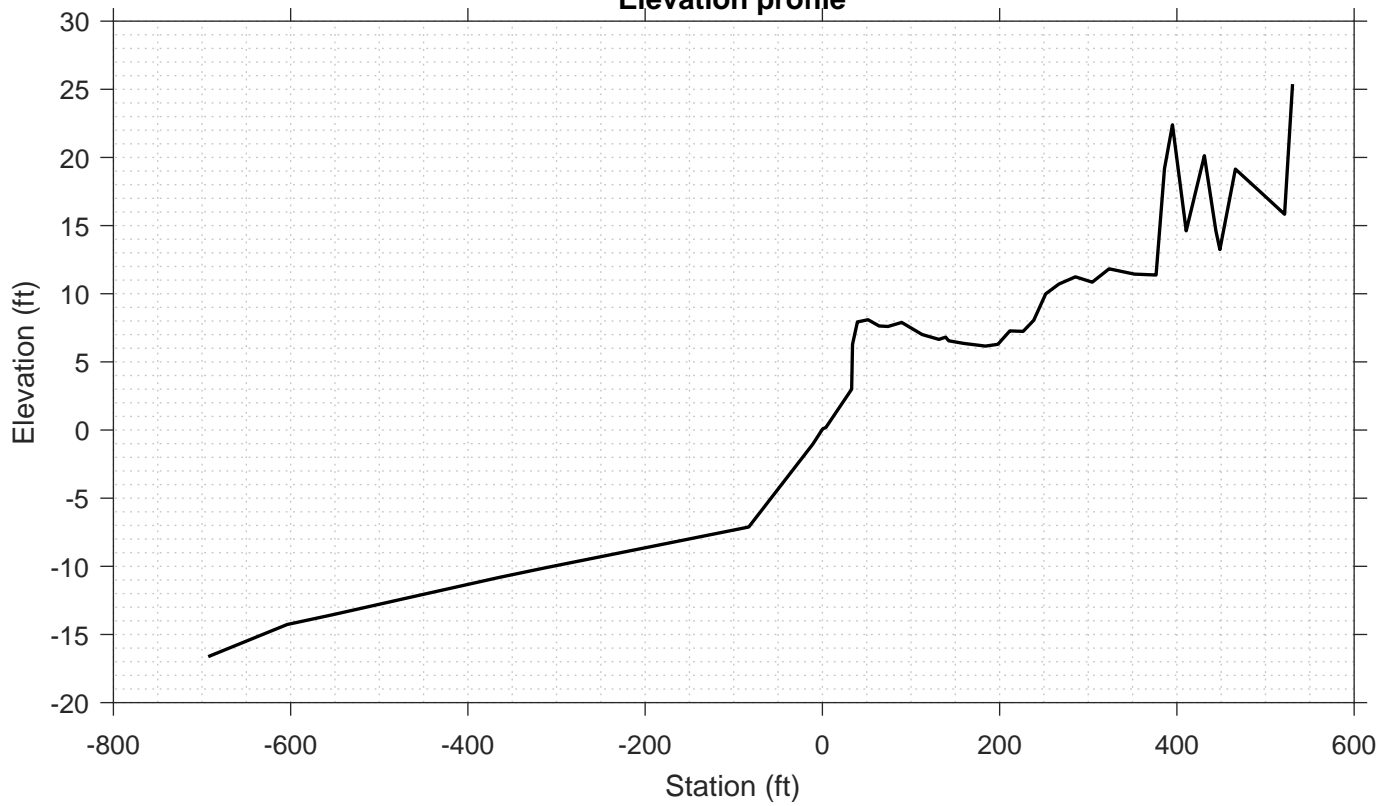


Transect Number: CM-135-2



Elevation profile



DATA LOG FOR TRANSECT ID: CM-135-2

PART 1: USER INPUT

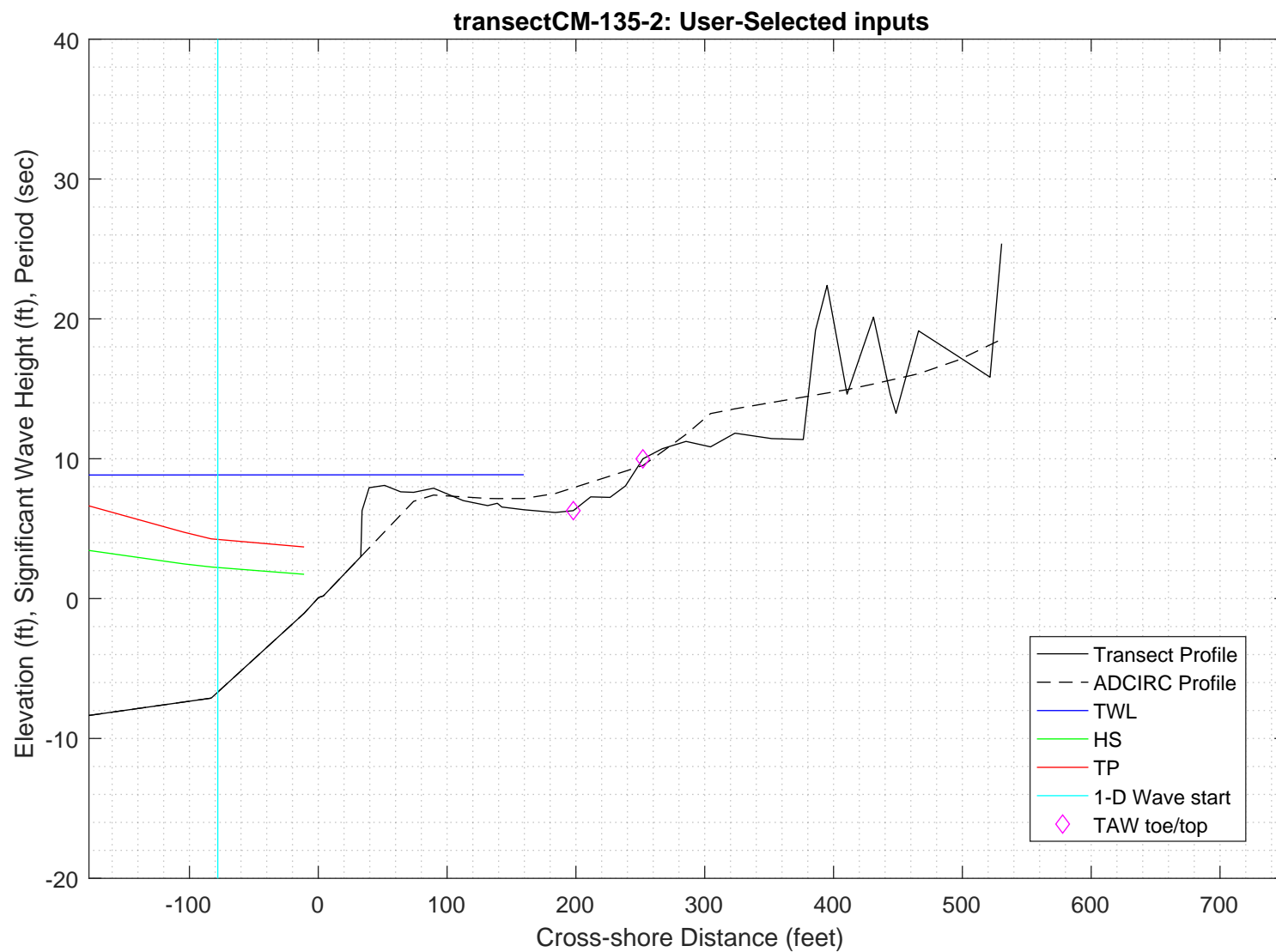
SWAN 1-D / WHAFIS input

station: -78 ft
LON: -69.9909 deg E
LAT: 43.7477 deg N
Bottom ELEV: -6.6854 ft-NAVD88
TWL: 8.8436 ft-NAVD88
HS: 2.2235 ft
TP: 4.2307 sec
Wave Direction bin: 225 deg CCW from East (90 deg sector)
Transect Direction: 243.5546 deg CCW from East

TAW/RUNUP input

toe sta: 198 ft
toe elev: 6.2894 ft-NAVD88
top sta: 252 ft
top elev: 9.9934 ft-NAVD88
Wave and water level conditions at toe to be calculated in SWAN 1-D

PART 1 COMPLETE



PART 2: SWAN 1-D

swan input grid name: 2_swan/gridfiles/CM-135-2zmeters_xmeters.grd
swan file name: 2_swan/swanfiles/CM-135-2.swn
swan output name: 2_swan/swanfiles/CM-135-2.dat

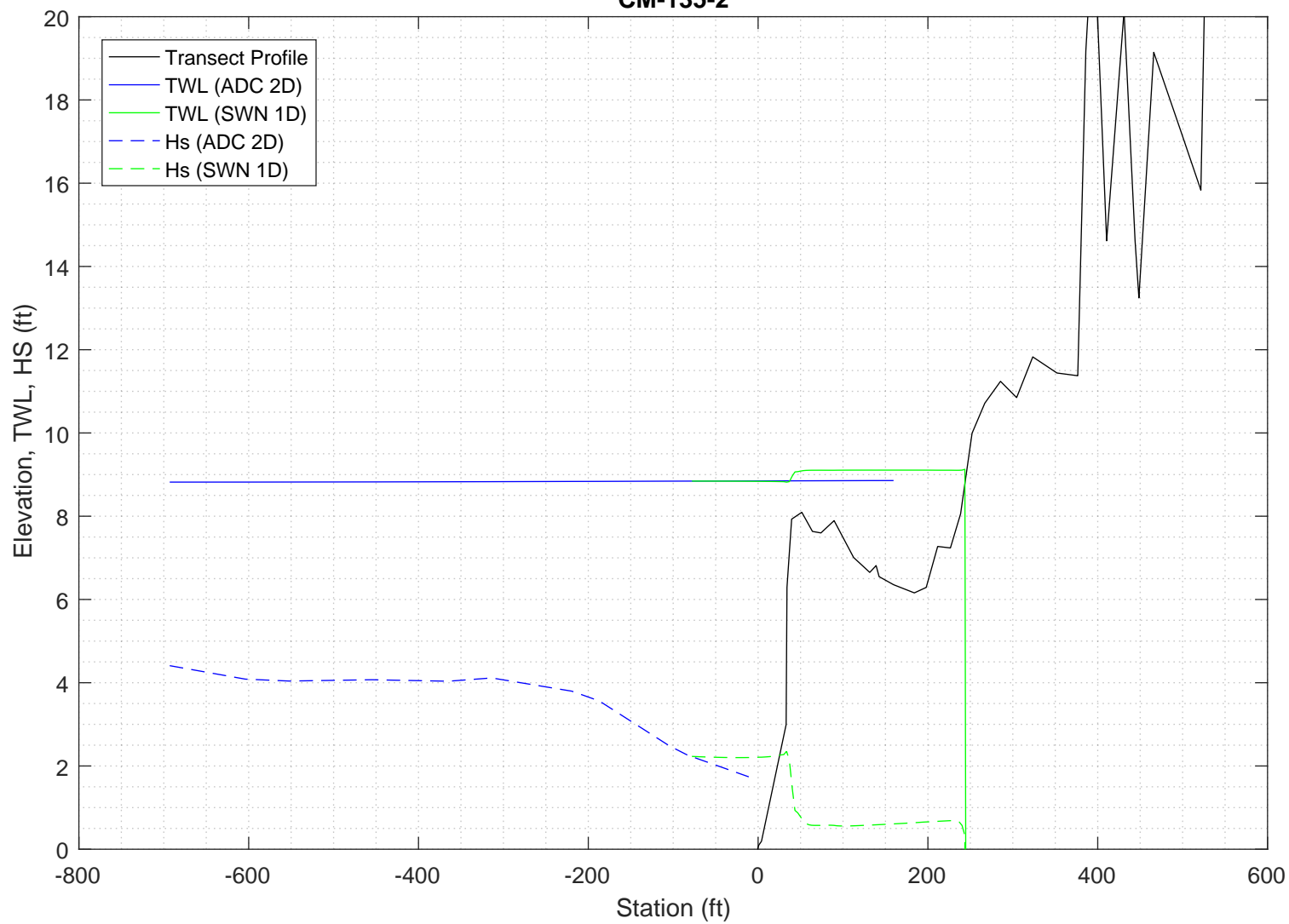
Boundary Conditions:
TWL- 2.6955 meters
HS- 0.67773 meters
PER- 4.2307 seconds

Batch File: 2_swan/swanfiles/runswan.dat

SWAN maximum additional wave setup: 0.28398 feet
SWAN output at toe:
SETUP- 0.26319 feet
HS- 0.65495 feet
PER- 2.0989 seconds

PART 2 COMPLETE

2-D ADCIRC+SWAN and SWAN 1-D results, Transect:
CM-135-2



Execution started at 20200220.141935

```

-----
                        SWAN
SIMULATION OF WAVES IN NEAR SHORE AREAS
VERSION NUMBER 41.20A
-----

```

```

PROJECT '2018FemaAppeal' '1'
    '100-year Wind and Wave conditions'

! -- SET commands -----
SET DEPMIN=0.01 MAXMES=999 MAXERR=3 PWTAIL=4
SET LEVEL 0
SET CARTESIAN

! -- MODE commands -----
MODE STATIONARY ONED

!-- COORDINATES commands-----
COORDINATES CART

!

! -- computational (CGRID) grid commands -----

!                                xlenc=length of grid in meters
!  mxc = number of mesh cells (one less than number of grid points)
!CGRID REGular [xpc] [ypc] [alpc] [xlenc] [ylenc] [mxc] [myc] &
!      [ CIRCle|SECTor[dir1] [dir2] ] [mdc] [flow] [fhigh] [msc]
CGRID REGULAR    0      0      0      100      0.    100      0      &
CIRCLE           36      0.03    0.8      30
Resolution in sigma-space: df/f = 0.1157

! -- READgrid ---- not used in 1-D mode -----

! -- INPgrid commands -----

!INPgrid BOTtom REGular [xpinp] [ypinp] [alpinp] [mxinp] [myinp] [dxinp] [dyinp]
!
INPGRID BOTTOM REGULAR    0      0      0      100    0      1      1
!READinp BOTtom [fac] 'fname1' [idla] [nhedf] [FREe|FORmat[form]|UNFormatted]
READ    BOTTOM    -1. '../gridfiles/CM-135-2zmeters_xmeters.grd'    1      0      FREE

!-----

! -- WIND [vel] [dir]
WIND      25.1  0

! -- BOUNd SHAPespec
BOUND SHAPE JONSWAP 3.3  PEAK DSPR POWER

! -- BOUNdspec
! BOU SIDE W CCW CON FILE 'swanspec.txt' 1
BOUN SIDE W CCW CONSTANT PAR    0.67773      4.2307      0  2

!-- BOUNdnest1 - optional for boundary from parent run
!-- BOUNdnest2
!-- BOUNdnest3

!-- INITIAL -- usest to specify initial values
!

```

```

!----- P H Y S I C S -----
!-- GEN1 [cf10] [cf20] [cf30] [cf40] [edmlpm] [cdrag] [umin] [cfpm]
!-- GEN2 [cf10] [cf20] [cf30] [cf40] [cf50] [cf60] [edmlpm] [cdrag] [umin] [cfpm]
    GEN3 KOMEN
!   whitecapping ( on by default)
!-- WCApping KOMen [cds2] [stpm] [powst] [delta] [powk]
    WCAP KOM
!   quadruplet wave interactions
!-- QUADrupl [iquad] [lambda] [Cn14] [Csh1] [Csh2]
! -- BREaking CONstant [alpha] [gamma]
    BREAK      CON      1.      0.73
!-- FRIction JONswap CONstant [cfjon]
    FRIC      JONSWAP CON      0.038
!-- TRIad [itriad] [trfac] [cutfr] [a] [b] [urcrit] [urslim]
! TRIAD      1      0.65      2.5      0.95 -0.75 0.2      0.01
    TRIAD
!-- VEGETation [height] [diamtr] [nstems] [drag]
!-- MUD [layer] [rhom] [viscm]
!- LIMiter [ursell] [qb] deactivates quadruplets with Ursell number exceeds ursell
!-- OBSTacle -- not in 1-D
!-- SETUP [supcor]
    SETUP      0
!
! ----- N U M E R I C S -----
!
!-- PROP can use BBST or GSE instead of default
! -- NUMeric -- lots of options
!     NUM ACCUR npnts=100. stat 30
    NUMeric STOPC
!
! -----O U T P U T -----
!
!OUTPut OPTIOns "comment" (TABLE [field]) (BLOck [ndec] [len]) (SPEC [ndec])
    OUTPUT OPTIONS '%' TABLE 16
    $BLOCK 9 1000 SPEC 8
!CURve 'sname' [xpl] [yp1] <[int] [xp] [yp] >
    CURVE 'curve' 0 0 100 100 0
!TABLE 'sname' < HEADER|NOHEAdER|INDEXed > 'fname' <output parameters> (output time)
    Table 'curve' HEADER 'CM-135-2.dat' XP YP HSIGN TPS RTP TMM10 DIR &
    DSPR DEPTH SETUP
!QUANTITY XP hexp=99999
!
!-----
COMPUTE STATIONARY
-----
COMPUTATIONAL PART OF SWAN
-----

```

```

One-dimensional mode of SWAN is activated
Gridresolution      : MXC          101 MYC          1
                   : MCGRD         102
                   : MSC           31 MDC           36
                   : MTC           1
                   : NSTATC        0 ITERMX        50
Propagation flags   : ITFRE        1 IREFR         1
Source term flags   : IBOT         1 ISURF         1
                   : IWCAP         1 IWIND         3
                   : ITRIAD        1 IQUAD         2
                   : IVEG          0 ITURBV         0
                   : IMUD          0
Spatial step        : DX           0.1000E+01 DY           0.1000E+01
Spectral bin        : df/f         0.1157E+00 DDIR        0.1000E+02
Physical constants   : GRAV         0.9810E+01 RHO         0.1025E+04
Wind input          : WSPEED       0.2510E+02 DIR         0.0000E+00
Tail parameters     : E(f)         0.4000E+01 E(k)         0.2500E+01
                   : A(f)         0.5000E+01 A(k)         0.3000E+01
Accuracy parameters : DREL         0.1000E-01 NPNTS       0.9950E+02
                   : DHABS        0.0000E+00 CURVAT       0.5000E-02
                   : GRWMX        0.1000E+00
Drying/flooding     : LEVEL        0.0000E+00 DEPMIN      0.1000E-01
The Cartesian convention for wind and wave directions is used
Scheme for geographic propagation is SORDUP
Scheme geogr. space : PROPSC        2 ICMAx          7
Scheme spectral space: CSS          0.5000E+00 CDD         0.5000E+00
Current is off
Quadruplets         : IQUAD        2
                   : LAMBDA       0.2500E+00 CNL4         0.3000E+08
                   : CSH1         0.5500E+01 CSH2         0.8330E+00
                   : CSH3        -0.1250E+01
Maximum Ursell nr for Snl4 : 0.1000E+02
Triads              : ITRIAD        1 TRFAC         0.8000E+00
                   : CUTFR        0.2500E+01 URCRI        0.2000E+00
Minimum Ursell nr for Snl3 : 0.1000E-01
JONSWAP ('73)       : GAMMA       0.3800E-01
Vegetation is off
Turbulence is off
Fluid mud is off
W-cap Komen ('84)   : EMPCOF (CDS2): 0.2360E-04
W-cap Komen ('84)   : APM (STPM)   : 0.3020E-02
W-cap Komen ('84)   : POWST        : 0.2000E+01
W-cap Komen ('84)   : DELTA         : 0.1000E+01
W-cap Komen ('84)   : POWK         : 0.1000E+01
Wind drag is fit
Snyder/Komen wind input
Battjes&Janssen ('78): ALPHA       0.1000E+01 GAMMA       0.7300E+00
Set-up              : SUPCOR        0.0000E+00
Diffraction is off
Janssen ('89,'90)   : ALPHA       0.1000E-01 KAPPA        0.4100E+00
Janssen ('89,'90)   : RHOA         0.1280E+01 RHOW        0.1025E+04

1st and 2nd gen. wind: CF10        0.1880E+03 CF20        0.5900E+00
                   : CF30         0.1200E+00 CF40        0.2500E+03
                   : CF50         0.2300E-02 CF60       -0.2230E+00
                   : CF70         0.0000E+00 CF80       -0.5600E+00
                   : RHOAW        0.1249E-02 EDMLEPM      0.3600E-02
                   : CDRAG        0.1230E-02 UMIN         0.1000E+01
                   : LIM_PM       0.1300E+00

```

First guess by 2nd generation model flags for first iteration:

```

ITER      1 GRWMX      0.1000E+23 ALFA      0.0000E+00
IWIND     2 IWCAP      0 IQUAD      0
ITRIAD    1 IBOT      1 ISURF      1
IVEG      0 ITURBV     0 IMUD      0

```

```

iteration   1; sweep 1
iteration   1; sweep 2
iteration   1; sweep 3
iteration   1; sweep 4
not possible to compute, first iteration

```

Options given by user are activated for proceeding calculation:

```

ITER      2 GRWMX      0.1000E+00 ALFA      0.0000E+00
IWIND     3 IWCAP      1 IQUAD      2
ITRIAD    1 IBOT      1 ISURF      1
IVEG      0 ITURBV     0 IMUD      0

```

```

iteration   2; sweep 1
iteration   2; sweep 2
iteration   2; sweep 3
iteration   2; sweep 4
accuracy OK in 23.24 % of wet grid points ( 99.50 % required)

```

```

iteration   3; sweep 1
iteration   3; sweep 2
iteration   3; sweep 3

```



```
iteration    3; sweep 4
accuracy OK in 1.02 % of wet grid points ( 99.50 % required)

iteration    4; sweep 1
iteration    4; sweep 2
iteration    4; sweep 3
iteration    4; sweep 4
accuracy OK in 27.28 % of wet grid points ( 99.50 % required)

iteration    5; sweep 1
iteration    5; sweep 2
iteration    5; sweep 3
iteration    5; sweep 4
accuracy OK in 56.57 % of wet grid points ( 99.50 % required)

iteration    6; sweep 1
iteration    6; sweep 2
iteration    6; sweep 3
iteration    6; sweep 4
accuracy OK in 96.97 % of wet grid points ( 99.50 % required)

iteration    7; sweep 1
iteration    7; sweep 2
iteration    7; sweep 3
iteration    7; sweep 4
accuracy OK in 96.97 % of wet grid points ( 99.50 % required)

iteration    8; sweep 1
iteration    8; sweep 2
iteration    8; sweep 3
iteration    8; sweep 4
accuracy OK in 96.97 % of wet grid points ( 99.50 % required)

iteration    9; sweep 1
iteration    9; sweep 2
iteration    9; sweep 3
iteration    9; sweep 4
accuracy OK in 96.97 % of wet grid points ( 99.50 % required)

iteration   10; sweep 1
iteration   10; sweep 2
iteration   10; sweep 3
iteration   10; sweep 4
accuracy OK in 96.97 % of wet grid points ( 99.50 % required)

iteration   11; sweep 1
iteration   11; sweep 2
iteration   11; sweep 3
iteration   11; sweep 4
accuracy OK in 96.97 % of wet grid points ( 99.50 % required)

iteration   12; sweep 1
iteration   12; sweep 2
iteration   12; sweep 3
iteration   12; sweep 4
accuracy OK in 96.97 % of wet grid points ( 99.50 % required)

iteration   13; sweep 1
iteration   13; sweep 2
iteration   13; sweep 3
iteration   13; sweep 4
accuracy OK in 96.97 % of wet grid points ( 99.50 % required)

iteration   14; sweep 1
iteration   14; sweep 2
iteration   14; sweep 3
iteration   14; sweep 4
accuracy OK in 97.98 % of wet grid points ( 99.50 % required)

iteration   15; sweep 1
iteration   15; sweep 2
iteration   15; sweep 3
iteration   15; sweep 4
accuracy OK in 97.98 % of wet grid points ( 99.50 % required)

iteration   16; sweep 1
iteration   16; sweep 2
iteration   16; sweep 3
iteration   16; sweep 4
accuracy OK in 97.98 % of wet grid points ( 99.50 % required)

iteration   17; sweep 1
iteration   17; sweep 2
iteration   17; sweep 3
iteration   17; sweep 4
accuracy OK in 100.00 % of wet grid points ( 99.50 % required)
```

STOP

Run: 1

Table:curve

SWAN version:41.20A

Xp [m]	Yp [m]	Hsig [m]	TPsmoo [sec]	RTpeak [sec]	Tm_l0 [sec]	Dir [degr]	Dspr [degr]	Depth [m]	Setup [m]
0.	0.	0.67969	4.1552	4.1664	3.8133	0.000	31.5060	4.7300	0.000000
1.	0.	0.67873	4.1553	4.1664	3.8113	0.000	31.2200	4.6500	-0.000036
2.	0.	0.67781	4.1555	4.1664	3.8095	0.000	30.9689	4.5599	-0.000077
3.	0.	0.67701	4.1557	4.1664	3.8077	0.000	30.7514	4.4799	-0.000115
4.	0.	0.67622	4.1558	4.1664	3.8060	0.000	30.5262	4.3998	-0.000154
5.	0.	0.67545	4.1561	4.1664	3.8045	0.000	30.2966	4.3098	-0.000201
6.	0.	0.67475	4.1563	4.1664	3.8030	0.000	30.0623	4.2298	-0.000245
7.	0.	0.67409	4.1565	4.1664	3.8018	0.000	29.8246	4.1397	-0.000298
8.	0.	0.67353	4.1568	4.1664	3.8006	0.000	29.5930	4.0597	-0.000348
9.	0.	0.67300	4.1570	4.1664	3.7994	0.000	29.3514	3.9796	-0.000401
10.	0.	0.67252	4.1573	4.1664	3.7986	0.000	29.1061	3.8895	-0.000463
11.	0.	0.67210	4.1576	4.1664	3.7977	0.000	28.8632	3.8095	-0.000522
12.	0.	0.67175	4.1579	4.1664	3.7971	0.000	28.6289	3.7194	-0.000591
13.	0.	0.67148	4.1581	4.1664	3.7964	0.000	28.4046	3.6393	-0.000656
14.	0.	0.67123	4.1584	4.1664	3.7959	0.000	28.1738	3.5593	-0.000725
15.	0.	0.67107	4.1587	4.1664	3.7956	0.000	27.9344	3.4692	-0.000807
16.	0.	0.67094	4.1590	4.1664	3.7952	0.000	27.6875	3.3891	-0.000885
17.	0.	0.67093	4.1593	4.1664	3.7953	0.000	27.4358	3.2990	-0.000978
18.	0.	0.67098	4.1596	4.1664	3.7951	0.000	27.1872	3.2189	-0.001067
19.	0.	0.67107	4.1599	4.1664	3.7951	0.000	26.9244	3.1388	-0.001162
20.	0.	0.67127	4.1603	4.1664	3.7954	0.000	26.6401	3.0487	-0.001276
21.	0.	0.67155	4.1606	4.1664	3.7959	0.000	26.3344	2.9586	-0.001399
22.	0.	0.67202	4.1611	4.1664	3.7967	0.000	26.0035	2.8585	-0.001546
23.	0.	0.67266	4.1615	4.1664	3.7976	0.000	25.6735	2.7583	-0.001706
24.	0.	0.67363	4.1618	4.1664	3.7980	0.000	25.4225	2.6681	-0.001862
25.	0.	0.67391	4.1619	4.1664	3.7957	0.000	25.2000	2.6381	-0.001923
26.	0.	0.67513	4.1624	4.1664	3.7960	0.000	24.8882	2.5379	-0.002118
27.	0.	0.67660	4.1628	4.1664	3.7955	0.000	24.5570	2.4377	-0.002333
28.	0.	0.67820	4.1631	4.1664	3.7932	0.000	24.2082	2.3475	-0.002547
29.	0.	0.68040	4.1635	4.1664	3.7893	0.000	23.8295	2.2472	-0.002810
30.	0.	0.68318	4.1639	4.1664	3.7823	0.000	23.4450	2.1469	-0.003104
31.	0.	0.68633	4.1643	4.1664	3.7705	0.000	23.0482	2.0566	-0.003401
32.	0.	0.69048	4.1647	4.1664	3.7535	0.000	22.6192	1.9562	-0.003770
33.	0.	0.69324	4.1652	4.1664	3.7298	0.000	21.2931	1.8558	-0.004207
34.	0.	0.71669	4.1696	4.1664	3.6576	0.013	18.1769	1.2222	-0.007837
35.	0.	0.65086	4.1863	4.1664	3.4326	359.957	15.7032	0.5163	-0.003748
36.	0.	0.45115	4.2221	4.1664	3.2412	358.468	14.8584	0.3160	0.035

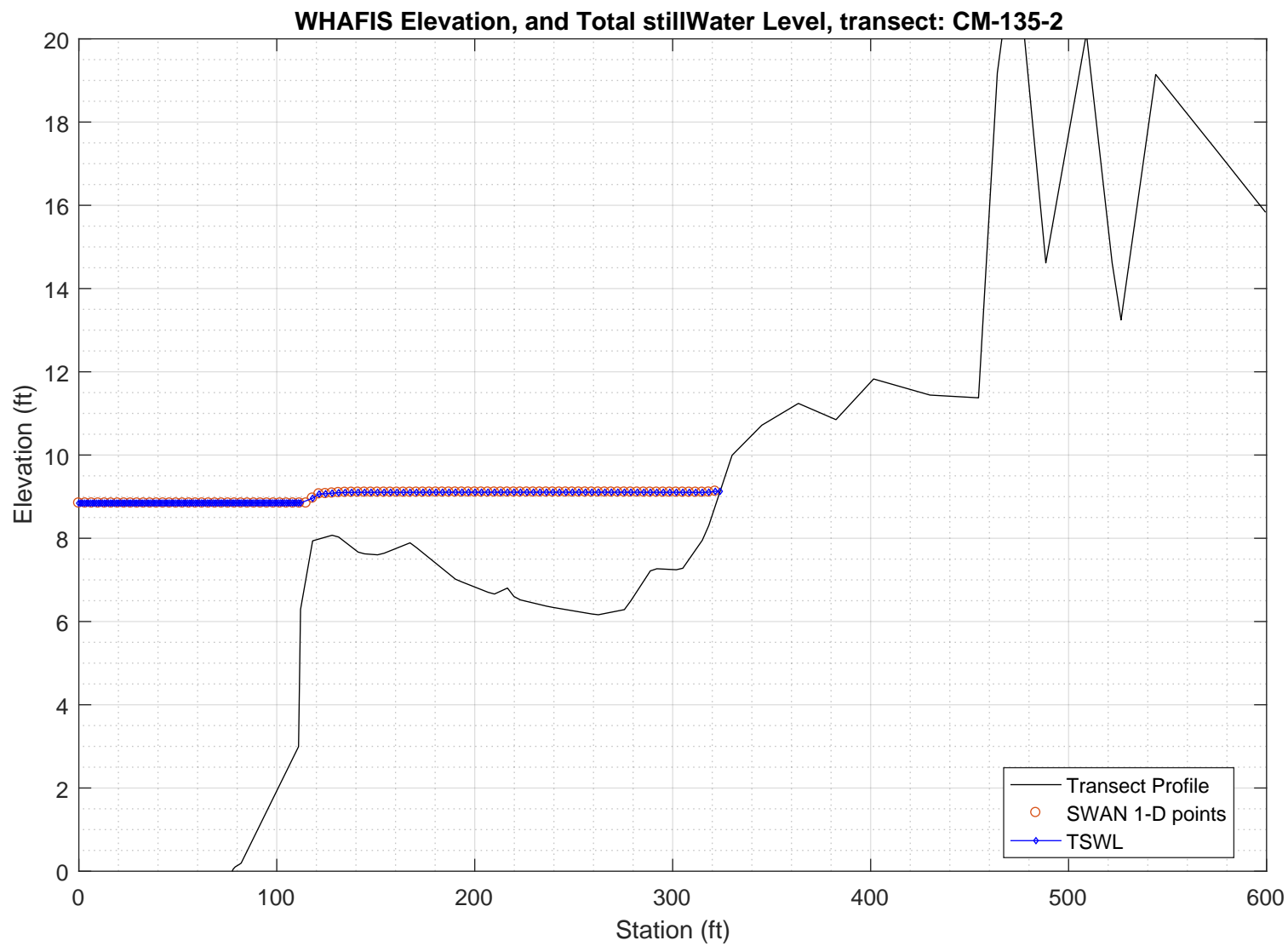
60.	0.	0.17313	2.1031	2.1606	1.8417	1.563	21.4548	0.6803	0.080277
61.	0.	0.17403	2.1029	2.1606	1.8345	1.586	21.6048	0.6903	0.080280
62.	0.	0.17492	2.1027	2.1606	1.8253	1.615	21.7734	0.7103	0.080296
63.	0.	0.17585	2.1024	2.1606	1.8161	1.646	21.9341	0.7303	0.080311
64.	0.	0.17673	2.1022	2.1606	1.8067	1.670	21.9451	0.7503	0.080324
65.	0.	0.17770	2.1023	2.1606	1.8076	1.661	21.9210	0.7203	0.080274
66.	0.	0.17879	2.1024	2.1606	1.8066	1.663	22.1306	0.7002	0.080234
67.	0.	0.17976	2.1018	2.1606	1.7891	1.721	22.3584	0.7603	0.080301
68.	0.	0.18078	2.1014	2.1606	1.7782	1.763	22.4028	0.7903	0.080325
69.	0.	0.18181	2.1012	2.1606	1.7710	1.789	22.4448	0.8003	0.080325
70.	0.	0.18287	2.1010	2.1606	1.7638	1.814	22.4950	0.8103	0.080325
71.	0.	0.18393	2.1008	2.1606	1.7565	1.838	22.5311	0.8203	0.080325
72.	0.	0.18502	2.1007	2.1606	1.7492	1.863	22.5599	0.8303	0.080324
73.	0.	0.18612	2.1005	2.1606	1.7419	1.887	22.5838	0.8403	0.080323
74.	0.	0.18724	2.1003	2.1606	1.7346	1.912	22.6032	0.8503	0.080322
75.	0.	0.18839	2.1001	2.1606	1.7272	1.938	22.6192	0.8603	0.080321
76.	0.	0.18955	2.0998	2.1606	1.7199	1.963	22.6342	0.8703	0.080320
77.	0.	0.19072	2.0996	2.1606	1.7125	1.987	22.6232	0.8803	0.080318
78.	0.	0.19189	2.0995	2.1606	1.7066	2.006	22.6349	0.8803	0.080308
79.	0.	0.19314	2.0993	2.1606	1.6993	2.029	22.6741	0.8903	0.080306
80.	0.	0.19436	2.0991	2.1606	1.6917	2.052	22.6391	0.9003	0.080304
81.	0.	0.19570	2.0991	2.1606	1.6853	2.123	22.5652	0.8903	0.080284
82.	0.	0.19709	2.0990	2.1606	1.6784	2.207	22.4582	0.8803	0.080263
83.	0.	0.19851	2.0989	2.1606	1.6714	2.291	22.3470	0.8702	0.080241
84.	0.	0.19963	2.0989	2.1606	1.6650	2.341	21.9771	0.8602	0.080219
85.	0.	0.20033	2.0993	2.1606	1.6678	2.367	21.3315	0.7901	0.080130
86.	0.	0.20121	2.0997	2.1606	1.6721	2.381	20.6680	0.7200	0.080019
87.	0.	0.20234	2.1002	2.1606	1.6782	2.381	19.9492	0.6499	0.079877
88.	0.	0.20389	2.1007	2.1606	1.6862	2.382	19.4167	0.5797	0.079693
89.	0.	0.20512	2.1008	2.1606	1.6845	2.393	19.2268	0.5596	0.079617
90.	0.	0.20619	2.1007	2.1606	1.6784	2.422	19.2922	0.5596	0.079599
91.	0.	0.20723	2.1006	2.1606	1.6700	2.459	19.4443	0.5696	0.079610
92.	0.	0.20835	2.1005	2.1606	1.6640	2.486	19.5099	0.5696	0.079592
93.	0.	0.20932	2.1005	2.1606	1.6606	2.473	19.2168	0.5595	0.079543
94.	0.	0.21000	2.1011	2.1606	1.6743	2.410	18.4615	0.4893	0.079304
95.	0.	0.20779	2.1022	2.1606	1.6942	2.338	17.4634	0.4191	0.079114
96.	0.	0.19885	2.1033	2.1606	1.7223	2.212	16.0625	0.3492	0.079230
97.	0.	0.17364	2.1027	2.1606	1.7784	1.954	14.1293	0.2403	0.080346
98.	0.	0.09990	2.1165	2.1606	2.1197	0.082	16.6699	0.1066	0.086557
99.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000
100.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000

PART 3: WHAFIS

WHAFIS input: CM-135-2.dat

WHAFIS output: CM-135-2.out

PART 3 COMPLETE



WAVE HEIGHT COMPUTATIONS FOR FLOOD INSURANCE STUDIES (WHAFIS VERSION 4.0G, 08_2007)

Executed on: Thu Feb 20 14:57:36 2020

Input file: C:\FEMA-TransectAnalysis\LOMR-TransectAnalysis-Harpswell\3_whafis\whafis4\CM-135-2.dat

Output file: C:\FEMA-TransectAnalysis\LOMR-TransectAnalysis-Harpswell\3_whafis\whafis4\CM-135-2.out

header

THIS IS A 100-YEAR CASE
 THE FOLLOWING NON-DEFAULT WIND SPEEDS ARE BEING USED
 WINDIF 56.14 WINDOF 56.14 WINDVH 60.00

PART1 INPUT

IE	0.000	-6.685	1.000	1.000	8.844	3.558	4.231	56.140	0.084	0.000
OF	1.000	-6.601	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
OF	2.000	-6.517	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
OF	3.000	-6.433	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
OF	4.000	-6.349	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
OF	5.000	-6.265	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
OF	6.000	-6.181	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
OF	7.000	-6.096	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
OF	8.000	-6.012	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
OF	9.000	-5.928	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
OF	10.000	-5.844	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
OF	11.000	-5.760	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
OF	12.000	-5.676	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
OF	13.000	-5.592	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
OF	14.000	-5.508	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
OF	15.000	-5.424	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
OF	16.000	-5.340	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
OF	17.000	-5.256	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
OF	18.000	-5.172	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000
OF	19.000	-5.088	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000
OF	20.000	-5.003	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000
OF	21.000	-4.919	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000
OF	22.000	-4.835	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000
OF	23.000	-4.751	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000
OF	24.000	-4.667	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000
OF	25.000	-4.583	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000
OF	26.000	-4.499	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000
OF	27.000	-4.415	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000
OF	28.000	-4.331	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000
OF	29.000	-4.247	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000
OF	30.000	-4.162	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000
OF	31.000	-4.078	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000
OF	32.000	-3.994	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000
OF	33.000	-3.910	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000
OF	34.000	-3.826	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000
OF	35.000	-3.742	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000
OF	36.000	-3.658	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000
OF	37.000	-3.574	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
OF	38.000	-3.490	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
OF	39.000	-3.406	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
OF	40.000	-3.322	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
OF	41.000	-3.237	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
OF	42.000	-3.153	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
OF	43.000	-3.069	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
OF	44.000	-2.985	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
OF	45.000	-2.901	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
OF	46.000	-2.817	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
OF	47.000	-2.733	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
OF	48.000	-2.649	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
OF	49.000	-2.565	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
OF	50.000	-2.481	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
OF	51.000	-2.397	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
OF	52.000	-2.312	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
OF	53.000	-2.228	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
OF	54.000	-2.144	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
OF	55.000	-2.060	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
OF	56.000	-1.976	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
OF	57.000	-1.892	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
OF	58.000	-1.808	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
OF	59.000	-1.724	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
OF	60.000	-1.640	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
OF	61.000	-1.556	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
OF	62.000	-1.471	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
OF	63.000	-1.387	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
OF	64.000	-1.303	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
OF	65.000	-1.219	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
OF	66.000	-1.135	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
OF	67.000	-1.051	0.000	8.847	0.000	0.000	0.000	0.000	0.091	0.000
OF	68.000	-0.954	0.000	8.847	0.000	0.000	0.000	0.000	0.099	0.000
OF	69.000	-0.853	0.000	8.847	0.000	0.000	0.000	0.000	0.101	0.000
OF	70.000	-0.753	0.000	8.847	0.000	0.000	0.000	0.000	0.101	0.000
OF	71.000	-0.652	0.000	8.847	0.000	0.000	0.000	0.000	0.101	0.000
OF	72.000	-0.551	0.000	8.847	0.000	0.000	0.000	0.000	0.101	0.000
OF	73.000	-0.451	0.000	8.848	0.000	0.000	0.000	0.000	0.101	0.000
OF	74.000	-0.350	0.000	8.848	0.000	0.000	0.000	0.000	0.101	0.000
OF	75.000	-0.249	0.000	8.848	0.000	0.000	0.000	0.000	0.101	0.000
OF	76.000	-0.148	0.000	8.848	0.000	0.000	0.000	0.000	0.101	0.000
OF	77.000	-0.048	0.000	8.848	0.000	0.000	0.000	0.000	0.101	0.000
IF	78.000	0.053	0.000	8.848	0.000	0.000	0.000	0.000	0.076	0.000
IF	79.000	0.104	0.000	8.848	0.000	0.000	0.000	0.000	0.040	0.000
IF	80.000	0.133	0.000	8.848	0.000	0.000	0.000	0.000	0.029	0.000
IF	81.000	0.162	0.000	8.848	0.000	0.000	0.000	0.000	0.031	0.000
IF	82.000	0.194	0.000	8.848	0.000	0.000	0.000	0.000	0.064	0.000
IF	83.000	0.290	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
IF	84.000	0.387	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
IF	85.000	0.483	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
IF	86.000	0.580	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
IF	87.000	0.676	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
IF	88.000	0.773	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
IF	89.000	0.870	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
IF	90.000	0.966	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
IF	91.000	1.063	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
IF	92.000	1.159	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000

IF	93.000	1.256	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
IF	94.000	1.353	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
IF	95.000	1.449	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
IF	96.000	1.546	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
IF	97.000	1.642	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
IF	98.000	1.739	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
IF	99.000	1.835	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
IF	100.000	1.932	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
IF	101.000	2.029	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
IF	102.000	2.125	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
IF	103.000	2.221	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
IF	104.000	2.318	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
IF	105.000	2.414	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
IF	106.000	2.511	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
IF	107.000	2.608	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
IF	108.000	2.704	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
IF	109.000	2.801	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
IF	110.000	2.897	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
IF	111.000	2.994	0.000	8.849	0.000	0.000	0.000	0.000	1.696	0.000
IF	112.000	6.289	0.000	8.849	0.000	0.000	0.000	0.000	0.696	0.000
IF	118.100	7.938	0.000	8.962	0.000	0.000	0.000	0.000	0.180	0.000
IF	121.400	7.983	0.000	9.064	0.000	0.000	0.000	0.000	0.014	0.000
IF	124.700	8.028	0.000	9.071	0.000	0.000	0.000	0.000	0.014	0.000
IF	128.000	8.073	0.000	9.084	0.000	0.000	0.000	0.000	0.000	0.000
IF	131.200	8.030	0.000	9.095	0.000	0.000	0.000	0.000	-0.025	0.000
IF	134.500	7.910	0.000	9.101	0.000	0.000	0.000	0.000	-0.036	0.000
IF	137.800	7.789	0.000	9.103	0.000	0.000	0.000	0.000	-0.036	0.000
IF	141.100	7.668	0.000	9.104	0.000	0.000	0.000	0.000	-0.025	0.000
IF	144.400	7.626	0.000	9.104	0.000	0.000	0.000	0.000	-0.008	0.000
IF	147.600	7.614	0.000	9.104	0.000	0.000	0.000	0.000	-0.004	0.000
IF	150.900	7.602	0.000	9.105	0.000	0.000	0.000	0.000	0.004	0.000
IF	154.200	7.640	0.000	9.104	0.000	0.000	0.000	0.000	0.015	0.000
IF	157.500	7.703	0.000	9.104	0.000	0.000	0.000	0.000	0.019	0.000
IF	160.800	7.765	0.000	9.104	0.000	0.000	0.000	0.000	0.019	0.000
IF	164.000	7.828	0.000	9.104	0.000	0.000	0.000	0.000	0.019	0.000
IF	167.300	7.890	0.000	9.104	0.000	0.000	0.000	0.000	-0.008	0.000
IF	170.600	7.774	0.000	9.105	0.000	0.000	0.000	0.000	-0.037	0.000
IF	173.900	7.648	0.000	9.105	0.000	0.000	0.000	0.000	-0.038	0.000
IF	177.200	7.522	0.000	9.106	0.000	0.000	0.000	0.000	-0.039	0.000
IF	180.400	7.395	0.000	9.106	0.000	0.000	0.000	0.000	-0.039	0.000
IF	183.700	7.269	0.000	9.106	0.000	0.000	0.000	0.000	-0.038	0.000
IF	187.000	7.142	0.000	9.107	0.000	0.000	0.000	0.000	-0.038	0.000
IF	190.300	7.016	0.000	9.107	0.000	0.000	0.000	0.000	-0.029	0.000
IF	193.600	6.950	0.000	9.107	0.000	0.000	0.000	0.000	-0.020	0.000
IF	196.800	6.888	0.000	9.107	0.000	0.000	0.000	0.000	-0.019	0.000
IF	200.100	6.827	0.000	9.107	0.000	0.000	0.000	0.000	-0.019	0.000
IF	203.400	6.765	0.000	9.107	0.000	0.000	0.000	0.000	-0.019	0.000
IF	206.700	6.703	0.000	9.107	0.000	0.000	0.000	0.000	-0.016	0.000
IF	210.000	6.661	0.000	9.107	0.000	0.000	0.000	0.000	0.004	0.000
IF	213.300	6.732	0.000	9.107	0.000	0.000	0.000	0.000	0.022	0.000
IF	216.500	6.804	0.000	9.107	0.000	0.000	0.000	0.000	-0.020	0.000
IF	219.800	6.601	0.000	9.107	0.000	0.000	0.000	0.000	-0.043	0.000
IF	223.100	6.519	0.000	9.107	0.000	0.000	0.000	0.000	-0.018	0.000
IF	226.400	6.482	0.000	9.107	0.000	0.000	0.000	0.000	-0.011	0.000
IF	229.700	6.444	0.000	9.107	0.000	0.000	0.000	0.000	-0.012	0.000
IF	232.900	6.407	0.000	9.107	0.000	0.000	0.000	0.000	-0.012	0.000
IF	236.200	6.370	0.000	9.107	0.000	0.000	0.000	0.000	-0.010	0.000
IF	239.500	6.339	0.000	9.107	0.000	0.000	0.000	0.000	-0.009	0.000
IF	242.800	6.313	0.000	9.107	0.000	0.000	0.000	0.000	-0.008	0.000
IF	246.100	6.286	0.000	9.107	0.000	0.000	0.000	0.000	-0.008	0.000
IF	249.300	6.260	0.000	9.107	0.000	0.000	0.000	0.000	-0.008	0.000
IF	252.600	6.234	0.000	9.107	0.000	0.000	0.000	0.000	-0.008	0.000
IF	255.900	6.207	0.000	9.107	0.000	0.000	0.000	0.000	-0.008	0.000
IF	259.200	6.181	0.000	9.107	0.000	0.000	0.000	0.000	-0.007	0.000
IF	262.500	6.162	0.000	9.107	0.000	0.000	0.000	0.000	0.002	0.000
IF	265.700	6.193	0.000	9.107	0.000	0.000	0.000	0.000	0.009	0.000
IF	269.000	6.224	0.000	9.107	0.000	0.000	0.000	0.000	0.009	0.000
IF	272.300	6.255	0.000	9.107	0.000	0.000	0.000	0.000	0.009	0.000
IF	275.600	6.286	0.000	9.107	0.000	0.000	0.000	0.000	0.037	0.000
IF	278.900	6.499	0.000	9.106	0.000	0.000	0.000	0.000	0.068	0.000
IF	282.200	6.738	0.000	9.106	0.000	0.000	0.000	0.000	0.074	0.000
IF	285.400	6.977	0.000	9.106	0.000	0.000	0.000	0.000	0.074	0.000
IF	288.700	7.216	0.000	9.105	0.000	0.000	0.000	0.000	0.044	0.000
IF	292.000	7.268	0.000	9.105	0.000	0.000	0.000	0.000	0.007	0.000
IF	295.300	7.260	0.000	9.105	0.000	0.000	0.000	0.000	-0.002	0.000
IF	298.600	7.252	0.000	9.105	0.000	0.000	0.000	0.000	-0.002	0.000
IF	301.800	7.244	0.000	9.105	0.000	0.000	0.000	0.000	0.004	0.000
IF	305.100	7.280	0.000	9.104	0.000	0.000	0.000	0.000	0.039	0.000
IF	308.400	7.504	0.000	9.104	0.000	0.000	0.000	0.000	0.068	0.000
IF	311.700	7.728	0.000	9.103	0.000	0.000	0.000	0.000	0.068	0.000
IF	315.000	7.952	0.000	9.104	0.000	0.000	0.000	0.000	0.089	0.000
IF	318.200	8.307	0.000	9.107	0.000	0.000	0.000	0.000	0.127	0.000
IF	321.500	8.778	0.000	9.128	0.000	0.000	0.000	0.000	0.141	0.000
IF	324.000	9.128	0.000	9.128	0.000	0.000	0.000	0.000	0.140	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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	END STATION	END ELEVATION	FETCH LENGTH	SURGE ELEV 10-YEAR	SURGE ELEV 100-YEAR	INITIAL WAVE HEIGHT	INITIAL W. PERIOD		BOTTOM SLOPE	AVERAGE A-ZONES
IE	0.000	-6.685	1.000	1.000	8.844	3.558	4.231	56.140	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	1.000	-6.601	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	2.000	-6.517	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	3.000	-6.433	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	4.000	-6.349	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE

	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	5.000	-6.265	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	6.000	-6.181	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	7.000	-6.096	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	8.000	-6.012	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	9.000	-5.928	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	10.000	-5.844	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	11.000	-5.760	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	12.000	-5.676	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	13.000	-5.592	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	14.000	-5.508	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	15.000	-5.424	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	16.000	-5.340	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	17.000	-5.256	0.000	8.844	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	18.000	-5.172	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	19.000	-5.088	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	20.000	-5.003	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	21.000	-4.919	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	22.000	-4.835	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	23.000	-4.751	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	24.000	-4.667	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	25.000	-4.583	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	26.000	-4.499	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	27.000	-4.415	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	28.000	-4.331	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	29.000	-4.247	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	30.000	-4.162	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	31.000	-4.078	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	32.000	-3.994	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	33.000	-3.910	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	34.000	-3.826	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	35.000	-3.742	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	36.000	-3.658	0.000	8.845	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	37.000	-3.574	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
OF	38.000	-3.490	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	

	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	39.000	-3.406	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	40.000	-3.322	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	41.000	-3.237	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	42.000	-3.153	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	43.000	-3.069	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	44.000	-2.985	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	45.000	-2.901	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	46.000	-2.817	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	47.000	-2.733	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	48.000	-2.649	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	49.000	-2.565	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	50.000	-2.481	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	51.000	-2.397	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	52.000	-2.312	0.000	8.846	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	53.000	-2.228	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	54.000	-2.144	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	55.000	-2.060	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	56.000	-1.976	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	57.000	-1.892	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	58.000	-1.808	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	59.000	-1.724	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	60.000	-1.640	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	61.000	-1.556	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	62.000	-1.471	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	63.000	-1.387	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	64.000	-1.303	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	65.000	-1.219	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	66.000	-1.135	0.000	8.847	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	67.000	-1.051	0.000	8.847	0.000	0.000	0.000	0.000	0.091	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	68.000	-0.954	0.000	8.847	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	69.000	-0.853	0.000	8.847	0.000	0.000	0.000	0.000	0.101	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	70.000	-0.753	0.000	8.847	0.000	0.000	0.000	0.000	0.101	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	71.000	-0.652	0.000	8.847	0.000	0.000	0.000	0.000	0.101	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	72.000	-0.551	0.000	8.847	0.000	0.000	0.000	0.000	0.101	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE

	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	73.000	-0.451	0.000	8.848	0.000	0.000	0.000	0.000	0.101	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	74.000	-0.350	0.000	8.848	0.000	0.000	0.000	0.000	0.101	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	75.000	-0.249	0.000	8.848	0.000	0.000	0.000	0.000	0.101	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	76.000	-0.148	0.000	8.848	0.000	0.000	0.000	0.000	0.101	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	77.000	-0.048	0.000	8.848	0.000	0.000	0.000	0.000	0.101	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	78.000	0.053	0.000	8.848	0.000	0.000	0.000	0.000	0.076	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	79.000	0.104	0.000	8.848	0.000	0.000	0.000	0.000	0.040	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	80.000	0.133	0.000	8.848	0.000	0.000	0.000	0.000	0.029	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	81.000	0.162	0.000	8.848	0.000	0.000	0.000	0.000	0.031	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	82.000	0.194	0.000	8.848	0.000	0.000	0.000	0.000	0.064	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	83.000	0.290	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	84.000	0.387	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	85.000	0.483	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	86.000	0.580	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	87.000	0.676	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	88.000	0.773	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	89.000	0.870	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	90.000	0.966	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	91.000	1.063	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	92.000	1.159	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	93.000	1.256	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	94.000	1.353	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	95.000	1.449	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	96.000	1.546	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	97.000	1.642	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	98.000	1.739	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	99.000	1.835	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	100.000	1.932	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	101.000	2.029	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	102.000	2.125	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	103.000	2.221	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	104.000	2.318	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	105.000	2.414	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	106.000	2.511	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE

	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	107.000	2.608	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	108.000	2.704	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	109.000	2.801	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	110.000	2.897	0.000	8.849	0.000	0.000	0.000	0.000	0.097	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	111.000	2.994	0.000	8.849	0.000	0.000	0.000	0.000	1.696	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	112.000	6.289	0.000	8.849	0.000	0.000	0.000	0.000	0.696	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	118.100	7.938	0.000	8.962	0.000	0.000	0.000	0.000	0.180	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	121.400	7.983	0.000	9.064	0.000	0.000	0.000	0.000	0.014	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	124.700	8.028	0.000	9.071	0.000	0.000	0.000	0.000	0.014	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	128.000	8.073	0.000	9.084	0.000	0.000	0.000	0.000	0.000	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	131.200	8.030	0.000	9.095	0.000	0.000	0.000	0.000	-0.025	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	134.500	7.910	0.000	9.101	0.000	0.000	0.000	0.000	-0.036	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	137.800	7.789	0.000	9.103	0.000	0.000	0.000	0.000	-0.036	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	141.100	7.668	0.000	9.104	0.000	0.000	0.000	0.000	-0.025	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	144.400	7.626	0.000	9.104	0.000	0.000	0.000	0.000	-0.008	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	147.600	7.614	0.000	9.104	0.000	0.000	0.000	0.000	-0.004	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	150.900	7.602	0.000	9.105	0.000	0.000	0.000	0.000	0.004	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	154.200	7.640	0.000	9.104	0.000	0.000	0.000	0.000	0.015	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	157.500	7.703	0.000	9.104	0.000	0.000	0.000	0.000	0.019	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	160.800	7.765	0.000	9.104	0.000	0.000	0.000	0.000	0.019	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	164.000	7.828	0.000	9.104	0.000	0.000	0.000	0.000	0.019	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	167.300	7.890	0.000	9.104	0.000	0.000	0.000	0.000	-0.008	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	170.600	7.774	0.000	9.105	0.000	0.000	0.000	0.000	-0.037	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	173.900	7.648	0.000	9.105	0.000	0.000	0.000	0.000	-0.038	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	177.200	7.522	0.000	9.106	0.000	0.000	0.000	0.000	-0.039	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	180.400	7.395	0.000	9.106	0.000	0.000	0.000	0.000	-0.039	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	183.700	7.269	0.000	9.106	0.000	0.000	0.000	0.000	-0.038	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	187.000	7.142	0.000	9.107	0.000	0.000	0.000	0.000	-0.038	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	190.300	7.016	0.000	9.107	0.000	0.000	0.000	0.000	-0.029	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	193.600	6.950	0.000	9.107	0.000	0.000	0.000	0.000	-0.020	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	196.800	6.888	0.000	9.107	0.000	0.000	0.000	0.000	-0.019	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	200.100	6.827	0.000	9.107	0.000	0.000	0.000	0.000	-0.019	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	203.400	6.765	0.000	9.107	0.000	0.000	0.000	0.000	-0.019	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	206.700	6.703	0.000	9.107	0.000	0.000	0.000	0.000	-0.016	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	

	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	210.000	6.661	0.000	9.107	0.000	0.000	0.000	0.000	0.004	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	213.300	6.732	0.000	9.107	0.000	0.000	0.000	0.000	0.022	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	216.500	6.804	0.000	9.107	0.000	0.000	0.000	0.000	-0.020	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	219.800	6.601	0.000	9.107	0.000	0.000	0.000	0.000	-0.043	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	223.100	6.519	0.000	9.107	0.000	0.000	0.000	0.000	-0.018	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	226.400	6.482	0.000	9.107	0.000	0.000	0.000	0.000	-0.011	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	229.700	6.444	0.000	9.107	0.000	0.000	0.000	0.000	-0.012	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	232.900	6.407	0.000	9.107	0.000	0.000	0.000	0.000	-0.012	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	236.200	6.370	0.000	9.107	0.000	0.000	0.000	0.000	-0.010	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	239.500	6.339	0.000	9.107	0.000	0.000	0.000	0.000	-0.009	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	242.800	6.313	0.000	9.107	0.000	0.000	0.000	0.000	-0.008	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	246.100	6.286	0.000	9.107	0.000	0.000	0.000	0.000	-0.008	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	249.300	6.260	0.000	9.107	0.000	0.000	0.000	0.000	-0.008	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	252.600	6.234	0.000	9.107	0.000	0.000	0.000	0.000	-0.008	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	255.900	6.207	0.000	9.107	0.000	0.000	0.000	0.000	-0.008	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	259.200	6.181	0.000	9.107	0.000	0.000	0.000	0.000	-0.007	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	262.500	6.162	0.000	9.107	0.000	0.000	0.000	0.000	0.002	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	265.700	6.193	0.000	9.107	0.000	0.000	0.000	0.000	0.009	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	269.000	6.224	0.000	9.107	0.000	0.000	0.000	0.000	0.009	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	272.300	6.255	0.000	9.107	0.000	0.000	0.000	0.000	0.009	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	275.600	6.286	0.000	9.107	0.000	0.000	0.000	0.000	0.037	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	278.900	6.499	0.000	9.106	0.000	0.000	0.000	0.000	0.068	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	282.200	6.738	0.000	9.106	0.000	0.000	0.000	0.000	0.074	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	285.400	6.977	0.000	9.106	0.000	0.000	0.000	0.000	0.074	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	288.700	7.216	0.000	9.105	0.000	0.000	0.000	0.000	0.044	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	292.000	7.268	0.000	9.105	0.000	0.000	0.000	0.000	0.007	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	295.300	7.260	0.000	9.105	0.000	0.000	0.000	0.000	-0.002	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	298.600	7.252	0.000	9.105	0.000	0.000	0.000	0.000	-0.002	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	301.800	7.244	0.000	9.105	0.000	0.000	0.000	0.000	0.004	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	305.100	7.280	0.000	9.104	0.000	0.000	0.000	0.000	0.039	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	308.400	7.504	0.000	9.104	0.000	0.000	0.000	0.000	0.068	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	311.700	7.728	0.000	9.103	0.000	0.000	0.000	0.000	0.068	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	315.000	7.952	0.000	9.104	0.000	0.000	0.000	0.000	0.089	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES	
IF	318.200	8.307	0.000	9.107	0.000	0.000	0.000	0.000	0.127	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	

	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	321.500	8.778	0.000	9.128	0.000	0.000	0.000	0.000	0.141	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	324.000	9.128	0.000	9.128	0.000	0.000	0.000	0.000	0.140	0.000

-----END OF TRANSECT-----

NOTE:

SURGE ELEVATION INCLUDES CONTRIBUTIONS FROM ASTRONOMICAL AND STORM TIDES.

1

PART2: CONTROLLING WAVE HEIGHTS, SPECTRAL
PEAK WAVE PERIOD, AND WAVE CREST ELEVATIONS

LOCATION	CONTROLLING WAVE HEIGHT	SPECTRAL PEAK WAVE PERIOD	WAVE CREST ELEVATION
IE 0.00	3.56	4.23	11.33
OF 1.00	3.56	4.23	11.33
OF 2.00	3.56	4.23	11.34
OF 3.00	3.56	4.23	11.34
OF 4.00	3.56	4.23	11.34
OF 5.00	3.56	4.23	11.34
OF 6.00	3.56	4.23	11.34
OF 7.00	3.56	4.23	11.34
OF 8.00	3.56	4.23	11.34
OF 9.00	3.56	4.23	11.34
OF 10.00	3.56	4.23	11.34
OF 11.00	3.56	4.23	11.34
OF 12.00	3.56	4.23	11.34
OF 13.00	3.57	4.23	11.34
OF 14.00	3.57	4.23	11.34
OF 15.00	3.57	4.23	11.34
OF 16.00	3.57	4.23	11.34
OF 17.00	3.57	4.23	11.34
OF 18.00	3.57	4.23	11.34
OF 19.00	3.57	4.23	11.34
OF 20.00	3.57	4.23	11.35
OF 21.00	3.57	4.23	11.35
OF 22.00	3.57	4.23	11.35
OF 23.00	3.57	4.23	11.35
OF 24.00	3.58	4.23	11.35
OF 25.00	3.58	4.23	11.35
OF 26.00	3.58	4.23	11.35
OF 27.00	3.58	4.23	11.35
OF 28.00	3.58	4.23	11.35
OF 29.00	3.58	4.23	11.35
OF 30.00	3.58	4.23	11.35
OF 31.00	3.59	4.23	11.36
OF 32.00	3.59	4.23	11.36
OF 33.00	3.59	4.23	11.36
OF 34.00	3.59	4.23	11.36
OF 35.00	3.59	4.23	11.36
OF 36.00	3.59	4.23	11.36
OF 37.00	3.60	4.23	11.36
OF 38.00	3.60	4.23	11.37
OF 39.00	3.60	4.23	11.37
OF 40.00	3.60	4.23	11.37
OF 41.00	3.61	4.23	11.37
OF 42.00	3.61	4.23	11.37
OF 43.00	3.61	4.23	11.37
OF 44.00	3.61	4.23	11.37
OF 45.00	3.61	4.23	11.38
OF 46.00	3.62	4.23	11.38
OF 47.00	3.62	4.23	11.38
OF 48.00	3.62	4.23	11.38
OF 49.00	3.62	4.23	11.38
OF 50.00	3.63	4.23	11.39
OF 51.00	3.63	4.23	11.39
OF 52.00	3.63	4.23	11.39
OF 53.00	3.64	4.23	11.39
OF 54.00	3.64	4.23	11.39
OF 55.00	3.64	4.23	11.40
OF 56.00	3.65	4.23	11.40
OF 57.00	3.65	4.23	11.40
OF 58.00	3.65	4.23	11.40
OF 59.00	3.66	4.23	11.41
OF 60.00	3.66	4.23	11.41
OF 61.00	3.66	4.23	11.41
OF 62.00	3.67	4.23	11.41
OF 63.00	3.67	4.23	11.42
OF 64.00	3.67	4.23	11.42
OF 65.00	3.68	4.23	11.42
OF 66.00	3.68	4.23	11.43
OF 67.00	3.69	4.23	11.43
OF 68.00	3.69	4.23	11.43
OF 69.00	3.70	4.23	11.44
OF 70.00	3.70	4.23	11.44
OF 71.00	3.71	4.23	11.44
OF 72.00	3.71	4.23	11.45
OF 73.00	3.72	4.23	11.45
OF 74.00	3.73	4.23	11.46
OF 75.00	3.73	4.23	11.46
OF 76.00	3.74	4.23	11.47
OF 77.00	3.75	4.23	11.47
IF 78.00	3.75	4.23	11.47
IF 79.00	3.76	4.23	11.48
IF 80.00	3.76	4.23	11.48
IF 81.00	3.76	4.23	11.48
IF 82.00	3.76	4.24	11.48
IF 83.00	3.77	4.24	11.49
IF 84.00	3.78	4.24	11.49
IF 85.00	3.78	4.24	11.50
IF 86.00	3.79	4.24	11.50
IF 87.00	3.80	4.24	11.51
IF 88.00	3.81	4.24	11.51

IF	89.00	3.82	4.24	11.52
IF	90.00	3.83	4.24	11.53
IF	91.00	3.83	4.24	11.53
IF	92.00	3.84	4.24	11.54
IF	93.00	3.85	4.24	11.55
IF	94.00	3.86	4.24	11.55
IF	95.00	3.87	4.24	11.56
IF	96.00	3.88	4.24	11.57
IF	97.00	3.89	4.24	11.57
IF	98.00	3.90	4.24	11.58
IF	99.00	3.91	4.24	11.59
IF	100.00	3.92	4.24	11.60
IF	101.00	3.94	4.24	11.60
IF	102.00	3.95	4.24	11.61
IF	103.00	3.96	4.24	11.62
IF	104.00	3.95	4.24	11.61
IF	105.00	3.93	4.24	11.60
IF	106.00	3.92	4.24	11.59
IF	107.00	3.90	4.24	11.58
IF	108.00	3.88	4.24	11.57
IF	109.00	3.87	4.24	11.56
IF	110.00	3.85	4.24	11.55
IF	111.00	3.84	4.24	11.53
IF	112.00	1.91	4.24	10.19
IF	118.10	0.78	4.24	9.51
IF	121.40	0.80	4.24	9.62
IF	124.70	0.79	4.24	9.63
IF	128.00	0.78	4.24	9.63
IF	131.20	0.79	4.24	9.65
IF	134.50	0.81	4.24	9.67
IF	137.80	0.83	4.24	9.69
IF	141.10	0.86	4.24	9.70
IF	144.40	0.87	4.24	9.71
IF	147.60	0.87	4.24	9.71
IF	150.90	0.88	4.24	9.72
IF	154.20	0.87	4.24	9.72
IF	157.50	0.87	4.24	9.71
IF	160.80	0.86	4.24	9.71
IF	164.00	0.86	4.24	9.70
IF	167.30	0.85	4.24	9.70
IF	170.60	0.87	4.24	9.72
IF	173.90	0.89	4.24	9.73
IF	177.20	0.91	4.24	9.75
IF	180.40	0.93	4.24	9.76
IF	183.70	0.91	4.24	9.74
IF	187.00	0.89	4.24	9.73
IF	190.30	0.88	4.24	9.72
IF	193.60	0.88	4.24	9.72
IF	196.80	0.87	4.24	9.72
IF	200.10	0.87	4.24	9.72
IF	203.40	0.87	4.24	9.72
IF	206.70	0.87	4.24	9.72
IF	210.00	0.87	4.24	9.72
IF	213.30	0.89	4.24	9.73
IF	216.50	0.90	4.24	9.74
IF	219.80	0.89	4.24	9.73
IF	223.10	0.88	4.24	9.72
IF	226.40	0.89	4.24	9.73
IF	229.70	0.89	4.24	9.73
IF	232.90	0.89	4.24	9.73
IF	236.20	0.89	4.24	9.73
IF	239.50	0.90	4.24	9.73
IF	242.80	0.90	4.24	9.74
IF	246.10	0.90	4.24	9.74
IF	249.30	0.91	4.24	9.74
IF	252.60	0.91	4.24	9.75
IF	255.90	0.92	4.24	9.75
IF	259.20	0.92	4.24	9.75
IF	262.50	0.92	4.24	9.75
IF	265.70	0.93	4.24	9.76
IF	269.00	0.94	4.24	9.77
IF	272.30	0.95	4.24	9.77
IF	275.60	0.96	4.24	9.78
IF	278.90	0.99	4.24	9.80
IF	282.20	1.03	4.24	9.83
IF	285.40	1.08	4.24	9.86
IF	288.70	1.10	4.24	9.88
IF	292.00	1.10	4.24	9.87
IF	295.30	1.10	4.24	9.88
IF	298.60	1.11	4.24	9.88
IF	301.80	1.11	4.24	9.88
IF	305.10	1.11	4.24	9.88
IF	308.40	1.08	4.24	9.86
IF	311.70	1.04	4.24	9.83
IF	315.00	0.88	4.24	9.72
IF	318.20	0.62	4.24	9.54
IF	321.50	0.27	4.24	9.32
IF	324.00	0.01	4.24	9.13

PART3 LOCATION OF AREAS ABOVE 100-YEAR SURGE
NO AREAS ABOVE 100-YEAR SURGE IN THIS TRANSECT

PART4 LOCATION OF SURGE CHANGES		
STATION	10-YEAR SURGE	100-YEAR SURGE
18.00	1.00	8.85
37.00	1.00	8.85
53.00	1.00	8.85
73.00	1.00	8.85
93.00	1.00	8.85
118.10	1.00	8.96
121.40	1.00	9.06
124.70	1.00	9.07
128.00	1.00	9.08
131.20	1.00	9.10

134.50	1.00	9.10
137.80	1.00	9.10
141.10	1.00	9.10
150.90	1.00	9.10
154.20	1.00	9.10
170.60	1.00	9.10
177.20	1.00	9.11
187.00	1.00	9.11
278.90	1.00	9.11
288.70	1.00	9.10
305.10	1.00	9.10
311.70	1.00	9.10
315.00	1.00	9.10
318.20	1.00	9.11
321.50	1.00	9.13

PART5 LOCATION OF V ZONES

STATION OF GUTTER	LOCATION OF ZONE
-------------------	------------------

111.43 WINDWARD

PART6 NUMBERED A ZONES AND V ZONES

STATION OF GUTTER	ELEVATION	ZONE DESIGNATION	FHF
0.00	11.33		
		V22 EL=11	120
17.00	11.34		
		V22 EL=11	120
18.00	11.34		
		V22 EL=11	120
36.00	11.36		
		V22 EL=11	120
37.00	11.36		
		V22 EL=11	120
52.00	11.39		
		V22 EL=11	120
53.00	11.39		
		V22 EL=11	120
72.00	11.45		
		V22 EL=11	120
73.00	11.45		
		V22 EL=11	120
85.47	11.50		
		V22 EL=12	120
92.00	11.54		
		V22 EL=12	120
93.00	11.55		
		V22 EL=12	120
111.03	11.50		
		V22 EL=11	120
111.43	10.95		
		A17 EL=11	85
111.77	10.50		
		A17 EL=10	85
112.00	10.19		
		A17 EL=10	85
118.10	9.51		
		A17 EL=10	85
121.40	9.62		
		A17 EL=10	85
124.70	9.63		
		A17 EL=10	85
128.00	9.63		
		A17 EL=10	85
131.20	9.65		
		A17 EL=10	85
134.50	9.67		
		A17 EL=10	85
137.80	9.69		
		A17 EL=10	85
141.10	9.70		
		A17 EL=10	85
147.60	9.71		
		A17 EL=10	85
150.90	9.72		
		A17 EL=10	85
154.20	9.72		
		A17 EL=10	85
167.30	9.70		
		A17 EL=10	85
170.60	9.72		
		A17 EL=10	85
173.90	9.73		
		A17 EL=10	85
177.20	9.75		
		A17 EL=10	85
183.70	9.74		
		A17 EL=10	85
187.00	9.73		
		A17 EL=10	85
275.60	9.78		
		A17 EL=10	85
278.90	9.80		
		A17 EL=10	85
285.40	9.86		
		A17 EL=10	85
288.70	9.88		
		A17 EL=10	85
301.80	9.88		
		A17 EL=10	85
305.10	9.88		
		A17 EL=10	85
308.40	9.86		
		A17 EL=10	85
311.70	9.83		
		A17 EL=10	85

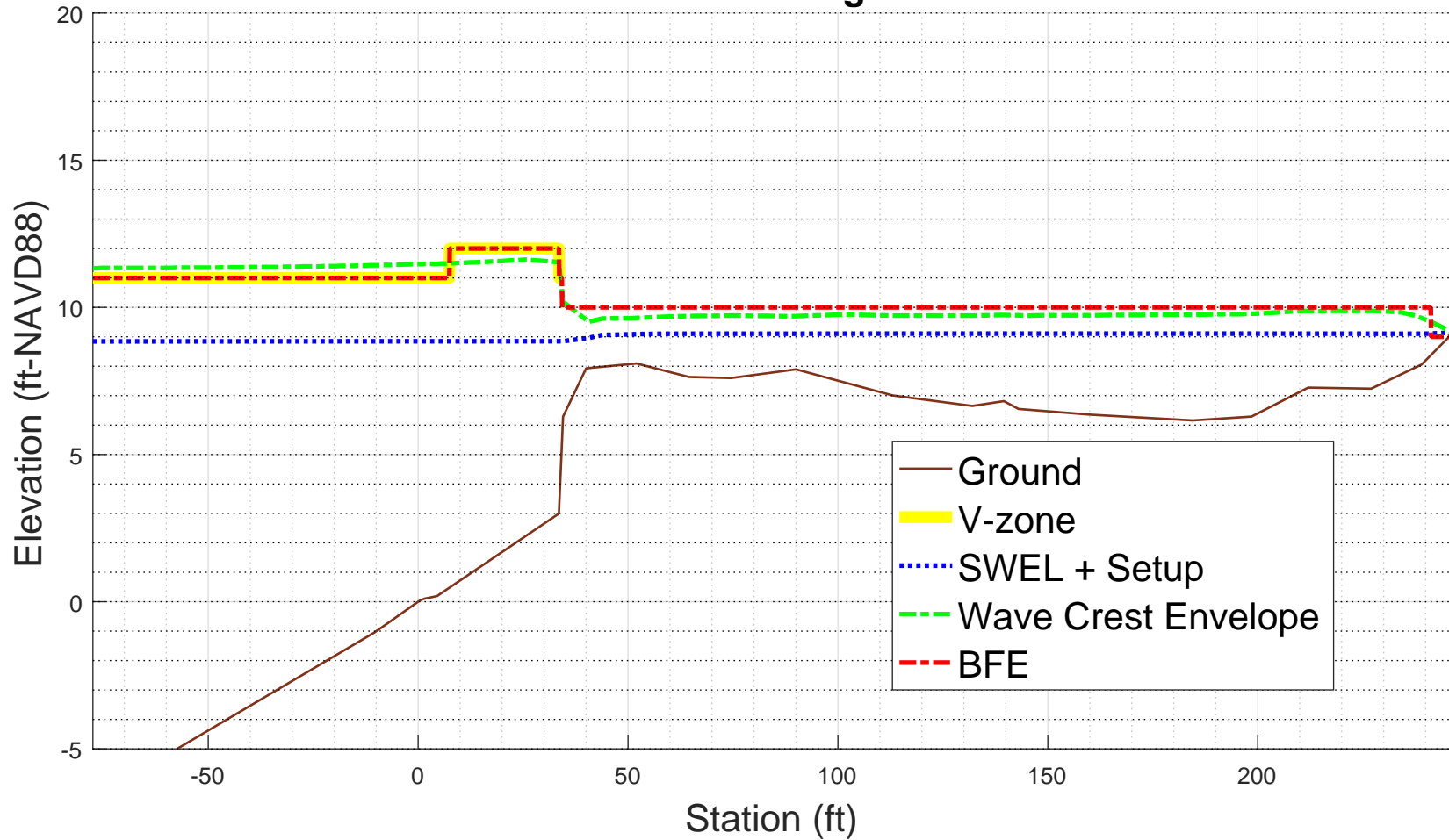
315.00	9.72		
318.20	9.54	A17 EL=10	85
318.77	9.50	A17 EL=10	85
321.50	9.32	A17 EL= 9	85
324.00	9.13	A17 EL= 9	85

ZONE TERMINATED AT END OF TRANSECT
PART 7 POSTSCRIPT NOTES

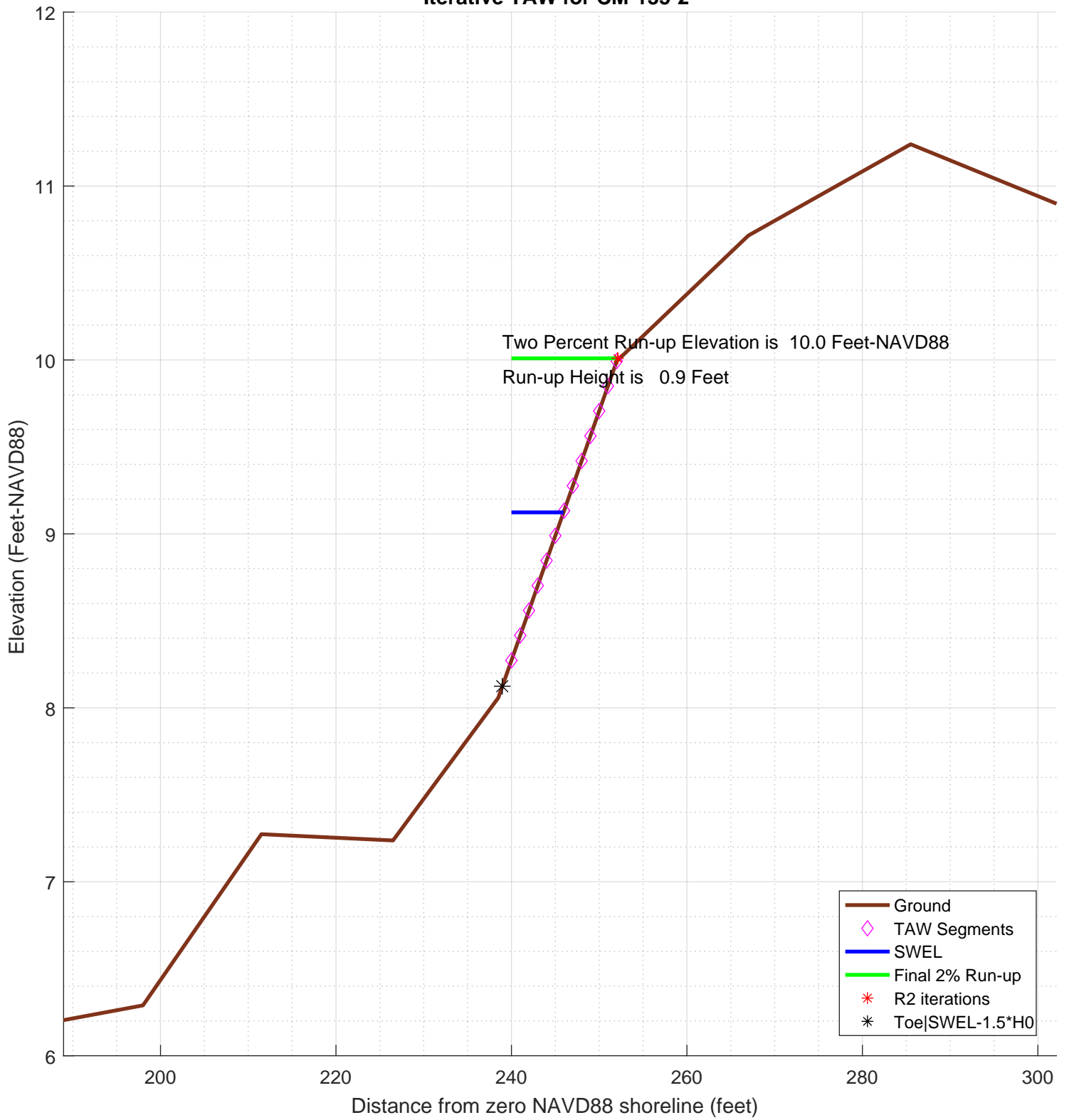
PS# 1 START(420216.3981,4844328.0166)
PS# 2 END(420152.3662,4844156.8746)

-1.000000e+00

CM-135-2
100-year WHAFIS Output
Zero Station: -69.99103692, 43.74749884
Onshore Dir: -110.5 deg CCW from E



Iterative TAW for CM-135-2



```

diary on          % begin recording

% FEMA appeal for The Town of Harpswell, Cumberland county, Maine
% TRANSECT ID: CM-135-2
% calculation by SJH, Ransom Consulting, Inc. 20-Feb-2020
% 100-year wave runup using TAW methodology
% including berm and weighted average with foreshore if necessary
%
% chk nld 20200220
%
% This script assumes that the incident wave conditions provided
% as input in the configuration section below are the
% appropriate values located at the end of the foreshore
% or toe of the slope on which the run-up is being calculated
% the script does not attempt to apply a depth limit or any other
% transformation to the incident wave conditions other than
% conversion of the peak wave period to the spectral mean wave
% as recommended in the references below
%
% references:
%
% Van der Meer, J.W., 2002. Technical Report Wave Run-up and
% Wave Overtopping at Dikes. TAW Technical Advisory Committee on
% Flood Defence, The Netherlands.
%
% FEMA. 2007, Atlantic Ocean and Gulf of Mexico Coastal Guidelines Update
%
%
%-----
% CONFIG
%-----
fname='inpfiles/CM-135-2sta_ele_include.csv'; % file with station, elevation, include
% third column is 0 for excluded points
imgname='logfiles/CM-135-2-runup';
SWEL=8.8436; % 100-yr still water level including wave setup.
H0=0.65495; % significant wave height at toe of structure
Tp=2.0989; % peak period, 1/fma,
T0=Tp/1.1;

gamma_berm=1; % this may get changed automatically below
gamma_rough=1;
gamma_beta=1;
gamma_perm=1;

setupAtToe=0.26319;
maxSetup=0.28398; % only used in case of berm/shallow foreshore weighted average

plotTitle='Iterative TAW for CM-135-2'

plotTitle =

Iterative TAW for CM-135-2

% END CONFIG
%-----

SWEL=SWEL+setupAtToe

SWEL =

          9.10679

SWEL_fore=SWEL+maxSetup

SWEL_fore =

          9.39077

% FIND WAVELENGTH USING DEEPWATER DISPERSION RELATION
% using English units
L0=32.15/(2*pi)*T0^2

L0 =

          18.6294156976755

% Find Hb (Munk, 1949)
%Hb=H0/(3.3*(H0/L0)^(1/3))
%Db=-Hb/.78+SWEL; % depth at breaking

% The toe elevation here is only used to determine the average
% structure slope, it is not used to depth limit the wave height.
% Any depth limiting or other modification of the wave height

```

```

% to make it consistent with TAW guidance should be performed
% prior to the input of the significant wave height given above.
Ztoe=SWEL-1.5*H0

Ztoe =

            8.124365

% read the transect
[sta,dep,inc] = textread(fname,'%n%n%n%[^\\n]','delimiter',' ','headerlines',0);

% remove unselected points
k=find(inc==0);
sta(k)=[];
dep(k)=[];

sta_org=sta; % used for plotting purposes
dep_org=dep;

% initial guess at maximum run-up elevation to estimate slope
Z2=SWEL+1.5*H0

Z2 =

            10.089215

% determine station at the max runup and -1.5*H0 (i.e. the toe)
top_sta=-999;
toe_sta=-999;
for kk=1:length(sta)-1
    if ((Z2 > dep(kk)) & (Z2 <= dep(kk+1))) % here is the intersection of z2 with profile
        top_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Z2)
    end
    if ((Ztoe > dep(kk)) & (Ztoe <= dep(kk+1))) % here is the intersection of Ztoe with profile
        toe_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Ztoe)
    end
end
toe_sta =

            238.952109722576

% check to make sure we got them, if not extend the end slopes outward
S=diff(dep)./diff(sta);
if toe_sta== -999
    dy=dep(1)-Ztoe;
    toe_sta=sta(1)-dy/S(1)
end
if top_sta== -999
    dy=Z2-dep(end);
    top_sta=sta(end)+dy/S(end)
end
top_sta =

            252.667963873487

% just so the reader can tell the values aren't -999 anymore
top_sta

top_sta =

            252.667963873487

toe_sta

toe_sta =

            238.952109722576

% check for case where the toe of slope is below SWL-1.5*H0
% in this case interpolate setup from the setupAtToe(really setup as first station), and the max setup
% also un-include points seaward of SWL-1.5*H0
if Ztoe > dep(1)
    dd=SWEL_fore-dep;
    k=find(dd<0,1); % k is index of first land point
    staAtSWL=interp1(dep(k-1:k),sta(k-1:k),SWEL_fore);
    dsta=staAtSWL-sta(1);
    dsetup=maxSetup-setupAtToe;
    dsetdsta=dsetup/dsta;
    setup=setupAtToe+dsetdsta*(toe_sta-sta(1));
    sprintf('!!- Location of SWEL-1.5*H0 is %4.1f ft landward of toe of slope',dsta)
    sprintf('!!- Setup is interpolated between setup at toe of slope and max setup')

```

```

    sprintf('!!!-      setup is adjusted to %4.2f feet',setup)
    SWEL=SWEL-setupAtToe+setup;
    sprintf('!!!-      SWEL is adjusted to %4.2f feet',SWEL)
    k=find(dep < SWEL-1.5*H0)
    sta(k)=[];
    dep(k)=[];
else
    sprintf('!!!- The User has selected a starting point that is %4.2f feet above the elevation of SWEL-1.5H0\n',dep(1)
    sprintf('!!!- This may be reasonable for some cases. However the user may want to consider:\n')
    sprintf('!!!-      1) Selecting a starting point that is at or below %4.2f feet elevation, or\n', Ztoe)
    sprintf('!!!-      2) Reducing the incident wave height to a depth limited condition.\n')
end

ans =

-!!!- Location of SWEL-1.5*H0 is 49.8 ft landward of toe of slope

ans =

-!!!- Setup is interpolated between setup at toe of slope and max setup

ans =

-!!!-      setup is adjusted to 0.28 feet

ans =

-!!!-      SWEL is adjusted to 9.12 feet

k =

    1
    2
    3
    4
    5
    6
    7
    8
    9
   10
   11
   12
   13
   14
   15
   16
   17
   18
   19
   20
   21
   22
   23
   24
   25
   26
   27
   28
   29
   30
   31
   32
   33
   34
   35
   36
   37
   38
   39
   40
   41
   42

% now iterate converge on a runup elevation
tol=0.01; % convergence criteria
R2del=999;
R2_new=3*H0; %initial guess
R2=R2_new;
iter=0;
R2_all=[];
topStaAll=[];
Berm_Segs=[];

```

```

TAW_ALWAYS_VALID=1;
while(abs(R2del) > tol && iter <= 25)
    iter=iter+1;
    sprintf('!----- STARTING ITERATION %d -----!',iter)
    % elevation of toe of slope
    Ztoe
    % station of toe slope (relative to 0-NAVD88 shoreline)
    toe_sta
    % station of top of slope/extent of 2% run-up
    top_sta
    % elevation of top of slope/extent of 2% run-up
    Z2
    % incident significant wave height
    H0
    % incident spectral peak wave period
    Tp
    % incident spectral mean wave period
    T0

    R2=R2_new
    Z2=R2+SWEL
    % determine slope for this iteration
    top_sta=-999;
    for kk=1:length(sta)-1
        if ((Z2 > dep(kk)) & (Z2 <= dep(kk+1))) % here is the intersection of z2 with profile
            top_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Z2)
            break;
        end
    end
    if top_sta== -999
        dy=Z2-dep(end);
        top_sta=sta(end)+dy/S(end)
    end

    % get the length of the slope (not accounting for berm)
    Lslope=top_sta-toe_sta

    % loop over profile segments to determine berm factor
    % re-calculate influence of depth of berm based on this run-up elevation
    % check for berm, berm width, berm height
    berm_width=0;
    rdh_sum=0;
    Berm_Segs=[];
    Berm_Heights=[];
    for kk=1:length(sta)-1
        ddep=dep(kk+1)-dep(kk);
        dsta=sta(kk+1)-sta(kk);
        s=ddep/dsta;
        if (s < 1/15) % count it as a berm if slope is flatter than 1:15 (see TAW manual)
            sprintf('Berm Factor Calculation: Iteration %d, Profile Segment: %d',iter,kk)
            berm_width=berm_width+dsta; % tally the width of all berm segments
            % compute the rdh for this segment and weight it by the segment length
            dh=SWEL-(dep(kk)+dep(kk+1))/2
            if dh < 0
                chi=R2;
            else
                chi=2* H0;
            end
            if (dh <= R2 & dh >=-2*H0)
                rdh=(0.5-0.5*cos(3.14159*dh/chi)) ;
            else
                rdh=1;
            end
            rdh_sum=rdh_sum + rdh * dsta
            Berm_Segs=[Berm_Segs, kk];
            Berm_Heights=[Berm_Heights, (dep(kk)+dep(kk+1))/2];
        end
        if dep(kk) >= Z2 % jump out of loop if we reached limit of run-up for this iteration
            break
        end
    end
    sprintf('!----- End Berm Factor Calculation, Iter: %d -----!',iter)
    berm_width
    rB=berm_width/Lslope
    if (berm_width > 0)
        rdh_mean=rdh_sum/berm_width
    else
        rdh_mean=1
    end
    gamma_berm=1- rB * (1-rdh_mean)
    if gamma_berm > 1
        gamma_berm=1
    end
    if gamma_berm < 0.6
        gamma_berm =0.6
    end
    % Iribarren number
    slope=(Z2-Ztoe)/(Lslope-berm_width)
    Irb=(slope/(sqrt(H0/L0)))
    % runup height

```

```

gamma_berm
gamma_perm
gamma_beta
gamma_rough
gamma=gamma_berm*gamma_perm*gamma_beta*gamma_rough

% check validity
TAW_VALID=1;
if (Irb*gamma_berm < 0.5 | Irb*gamma_berm > 10 )
    sprintf('!!! - - Iribaren number: %6.2f is outside the valid range (0.5-10), TAW NOT VALID - - !!!\n', Irb*gamma_berm)
    TAW_VALID=0;
else
    sprintf('!!! - - Iribaren number: %6.2f is in the valid range (0.5-10), TAW RECOMMENDED - - !!!\n', Irb*gamma_berm)
end
islope=1/slope;
if (slope < 1/8 | slope > 1)
    sprintf('!!! - - slope: 1:%3.1f V:H is outside the valid range (1:8 - 1:1), TAW NOT VALID - - !!!\n', islope)
    TAW_VALID=0;
else
    sprintf('!!! - - slope: 1:%3.1f V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!\n', islope)
end
if TAW_VALID == 0
    % do the foreshore calculation
    TAW_ALWAYS_VALID=0;
end

if (Irb*gamma_berm < 1.8)
    R2_new=gamma*H0*1.77*Irb
else
    R2_new=gamma*H0*(4.3-(1.6/sqrt(Irb)))
end

% check to see if we need to evaluate a shallow foreshore
if berm_width > 0.25 * L0;
    disp('! Berm_width is greater than 1/4 wave length')
    disp('! Runup will be weighted average with foreshore calculation assuming depth limited wave height on berm')
    % do the foreshore calculation
    fore_H0=0.78*(SWEL_fore-min(Berm_Heights))
    % get upper slope
    fore_toe_sta=-999;
    fore_toe_dep=-999;
    for kk=length(dep)-1:-1:1
        ddep=dep(kk+1)-dep(kk);
        dsta=sta(kk+1)-sta(kk);
        s=ddep/dsta;
        if s < 1/15
            break
        end
        fore_toe_sta=sta(kk);
        fore_toe_dep=dep(kk);
        upper_slope=(Z2-fore_toe_dep)/(top_sta-fore_toe_sta)
    end
    fore_Irb=upper_slope/(sqrt(fore_H0/L0));
    fore_gamma=gamma_perm*gamma_beta*gamma_rough;
    if (fore_Irb < 1.8)
        fore_R2=fore_gamma*fore_H0*1.77*fore_Irb;
    else
        fore_R2=fore_gamma*fore_H0*(4.3-(1.6/sqrt(fore_Irb)));
    end
    if berm_width >= L0
        R2_new=fore_R2
        disp('berm is wider than one wavelength, use full shallow foreshore solution');
    else
        w2=(berm_width-0.25*L0)/(0.75*L0)
        w1=1-w2
        R2_new=w2*fore_R2 + w1*R2_new
    end
end % end berm width check
% convergence criterion
R2del=abs(R2-R2_new)
R2_all(iter)=R2_new;
% get the new top station (for plot purposes)
Z2=R2_new+SWEL
top_sta=-999;
for kk=1:length(sta)-1
    if ((Z2 > dep(kk)) & (Z2 <= dep(kk+1))) % here is the intersection of z2 with profile
        top_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Z2)
        break;
    end
end
if top_sta== -999
    dy=Z2-dep(end);
    top_sta=sta(end)+dy/S(end);
end
topStaAll(iter)=top_sta;
end
ans =
!----- STARTING ITERATION 1 -----!
Ztoe =

8.124365

```

```

toe_sta =
    238.952109722576
top_sta =
    252.667963873487
Z2 =
    10.089215
H0 =
    0.65495
Tp =
    2.0989
T0 =
    1.90809090909091
R2 =
    1.96485
Z2 =
    11.0887373545786
top_sta =
    259.638862883695
Lslope =
    20.6867531611184
ans =
!----- End Berm Factor Calculation, Iter: 1 -----!
berm_width =
    0
rB =
    0
rdh_mean =
    1
gamma_berm =
    1
slope =
    0.143298096684899
Irb =
    0.764250911991575
gamma_berm =
    1
gamma_perm =
    1
gamma_beta =
    1
gamma_rough =
    1
gamma =
    1
ans =
!!! - - Iribaren number:    0.76 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:7.0 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
    0.885966658611721
R2del =
    1.07888334138828
Z2 =
    10.0098540131903
ans =
!----- STARTING ITERATION 2 -----!
Ztoe =
    8.124365
toe_sta =
    238.952109722576
top_sta =
    252.114482081043
Z2 =
    10.0098540131903
H0 =
    0.65495
Tp =
    2.0989
T0 =
    1.90809090909091
R2 =
    0.885966658611721
Z2 =
    10.0098540131903
top_sta =
    252.114482081043
Lslope =
    13.1623723584662
ans =
!----- End Berm Factor Calculation, Iter: 2 -----!
berm_width =
    0
rB =
    0
rdh_mean =
    1
gamma_berm =
    1
slope =
    0.143248417674306

```



```

Irb =
    0.763985959211104
gamma_berm =
    1
gamma_perm =
    1
gamma_beta =
    1
gamma_rough =
    1
gamma =
    1
ans =
!!! - - Iribaren number: 0.76 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:7.0 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
    0.885659509054003
R2del =
    0.000307149557718378
Z2 =
    10.0095468636326
% final 2% runup elevation
Z2=R2_new+SWEL
Z2 =
    10.0095468636326
diary off
-1.000000e+00
-1.000000e+00

```

PART 5: RUNUP2

for transect: CM-135-2

Station locations shifted by: -0.52 feet from their
original location to set the shoreline to
elevation 0 for RUNUP2 input

RUNUP2 INPUT CONVERSIONS

for transect: CM-135-2

Incident significant wave height: 2.22 feet

Peak wave period: 4.23 seconds

Mean wave height: 1.39 feet

Local Depth below SWEL: 15.53 feet

Mean wave height deshoaled using Hunt approximation for
celerity assuming constant wave energy flux.

References: R.G. Dean and R.A. Dalrymple. 2000. Water

Wave Mechanics for Engineers and Scientists. World
Scientific Publishing Company, River Edge New Jersey

USACE (1985), Direct Methods for Calculating Wavelength, CETN-1-17
US Army Engineer Waterways Experiment Station Coastal Engineering
Research Center, Vicksburg, MS

also see Coastal Engineering Manual Part II-3
for discussion of shoaling coefficient

Depth, $D = 15.53$

Period, $T = 3.60$

Waveheight, $H = 1.39$

Deep water wavelength, L_0 (ft)

$L_0 = g \cdot T^2 / 2\pi$

$L_0 = 32.17 \cdot 3.60^2 / 6.28 = 66.22$

Deep water wave celerity, C_0 (ft/s)

$C_0 = L_0 / T$

$C_0 = 66.22 / 3.60 = 18.41$

Angular frequency, σ (rad/s)

$\sigma = 2\pi / T$

$\sigma = 6.28 / 3.60 = 1.75$

Hunts (1979) approximation for Celerity C_{1H} (ft/s) at Depth D (ft)

$y = \sigma \cdot \sigma \cdot D / g$

$y = 1.75 \cdot 1.75 \cdot 15.53 / 32.17 = 1.47$

$C_{1H} = \sqrt{g \cdot D / (y + 1. / (1 + 0.6522 \cdot y + 0.4622 \cdot y^2 + 0.0864 \cdot y^4 + 0.0675 \cdot y^5))}$

$C_{1H} = 16.98$

Shoaling Coefficient K_{sH}

$K_{sH} = \sqrt{C_0 / C_{1H}}$

$K_{sH} = \sqrt{18.41 / 16.98} = 1.04$

Deepwater Wave Height H_{0_H} (ft)

$H_{0_H} = H / K_{sH}$

$H_{0_H} = 1.39 / 1.04 = 1.34$

Deepwater mean wave height: 1.34 feet

END RUNUP2 CONVERSIONS

RUNUP2 RESULTS

for transect: CM-135-2

RUNUP2 SWEL:

8.80

8.80

8.80

8.80

8.80
8.80
8.80
8.80
8.80

RUNUP2 deepwater mean wave heights:

1.27
1.27
1.27
1.34
1.34
1.34
1.40
1.40
1.40

RUNUP2 mean wave periods:

3.42
3.60
3.78
3.42
3.60
3.78
3.42
3.60
3.78

RUNUP2 runup above SWEL:

0.92
0.93
0.96
0.85
0.85
0.88
0.78
0.79
0.81

RUNUP2 Mean runup height above SWEL: 0.86 feet

RUNUP2 2-percent runup height above SWEL: 1.90 feet

RUNUP2 2-percent runup elevation: 10.70 feet-NAVD88

RUNUP2 Messages:

No Messages

END RUNUP2 RESULTS

ACES BEACH RUNUP

Incident significant wave height: 2.22 feet

Significant wave height deshoaled using Hunt equation

Deepwater significant wave height: 1.87 feet

Peak wave period: 4.23 seconds

Average beach Slope: 1:19.79 (H:V)

ACES RUNUP CALCULATED USING 'Aces_Beach_Runup.m'

ACES Beach 2-percent runup height above SWEL: 1.66 feet

ACES Beach 2-percent runup elevation: 10.46 feet-NAVD88

ACES BEACH RUNUP is valid

_____END ACES BEACH RESULTS_____

PART 5 COMPLETE_____

FEMA
RUNUP2 transect: CM-135-2

sjh

job 2
1

7.00
-6.69 -77.5 1.0
-6.10 -70.5 1.0
-5.00 -57.5 1.0
-4.41 -50.5 1.0
-3.32 -37.5 1.0
-2.73 -30.5 1.0
-2.23 -24.5 1.0
-1.05 -10.5 1.0
-0.95 -9.5 1.0
0.05 0.5 1.0
0.10 1.5 1.0
0.16 3.5 1.0
0.19 4.5 1.0
1.93 22.5 1.0
2.99 33.5 1.0
6.29 34.5 1.0
7.93 40.0 1.0
8.09 52.0 1.0
8.09 239.0 1.0
1 9.99 252.5 1.0
8.8 1.27 3.42
8.8 1.27 3.60
8.8 1.27 3.78
8.8 1.34 3.42
8.8 1.34 3.60
8.8 1.34 3.78
8.8 1.40 3.42
8.8 1.40 3.60
8.8 1.40 3.78

CLIENT- FEMA
PROJECT-RUNUP2 transect: CM-135-2

** WAVE RUNUP-VERSION 2.0 **

ENGINEERED BY sjh

JOB job 2
RUN 1 PAGE 1

CROSS SECTION PROFILE

	LENGTH	ELEV.	SLOPE	ROUGHNESS
1	-77.5	-6.7		
2	-70.5	-6.1	.00	1.00
3	-57.5	-5.0	11.82	1.00
4	-50.5	-4.4	11.86	1.00
5	-37.5	-3.3	11.93	1.00
6	-30.5	-2.7	11.86	1.00
7	-24.5	-2.2	12.00	1.00
8	-10.5	-1.0	11.86	1.00
9	-9.5	-.9	10.00	1.00
10	.5	.1	10.00	1.00
11	1.5	.1	20.00	1.00
12	3.5	.2	33.33	1.00
13	4.5	.2	33.33	1.00
14	22.5	1.9	10.34	1.00
15	33.5	3.0	10.38	1.00
16	34.5	6.3	.30	1.00
17	40.0	7.9	3.35	1.00
18	52.0	8.1	75.00	1.00
19	239.0	8.1	FLAT	1.00
20	252.5	10.0	7.11	1.00
	LAST SLOPE		7.00	LAST ROUGHNESS 1.00

CLIENT- FEMA
PROJECT-RUNUP2 transect: CM-135-2

** WAVE RUNUP-VERSION 2.0 **

ENGINEERED BY sjh

JOB job 2
RUN 1 PAGE 2

OUTPUT TABLE

INPUT PARAMETERS			RUNUP RESULTS			
-----			-----			
WATER LEVEL ABOVE DATUM (FT.)	DEEP WATER WAVE HEIGHT (FT.)	WAVE PERIOD (SEC.)	BREAKING SLOPE NUMBER	RUNUP SLOPE NUMBER	RUNUP ABOVE WATER LEVEL (FT.)	BREAKER DEPTH (FT.)
8.80	1.27	3.42	11	19	.92	1.96
8.80	1.27	3.60	11	19	.93	1.99
8.80	1.27	3.78	11	19	.96	2.02
8.80	1.34	3.42	11	19	.85	2.06
8.80	1.34	3.60	11	19	.85	2.09
8.80	1.34	3.78	11	19	.88	2.12
8.80	1.40	3.42	11	19	.78	2.14
8.80	1.40	3.60	11	19	.79	2.17
8.80	1.40	3.78	11	19	.81	2.20

Runup2 2% runup elevation for Transect: CM-135-2

