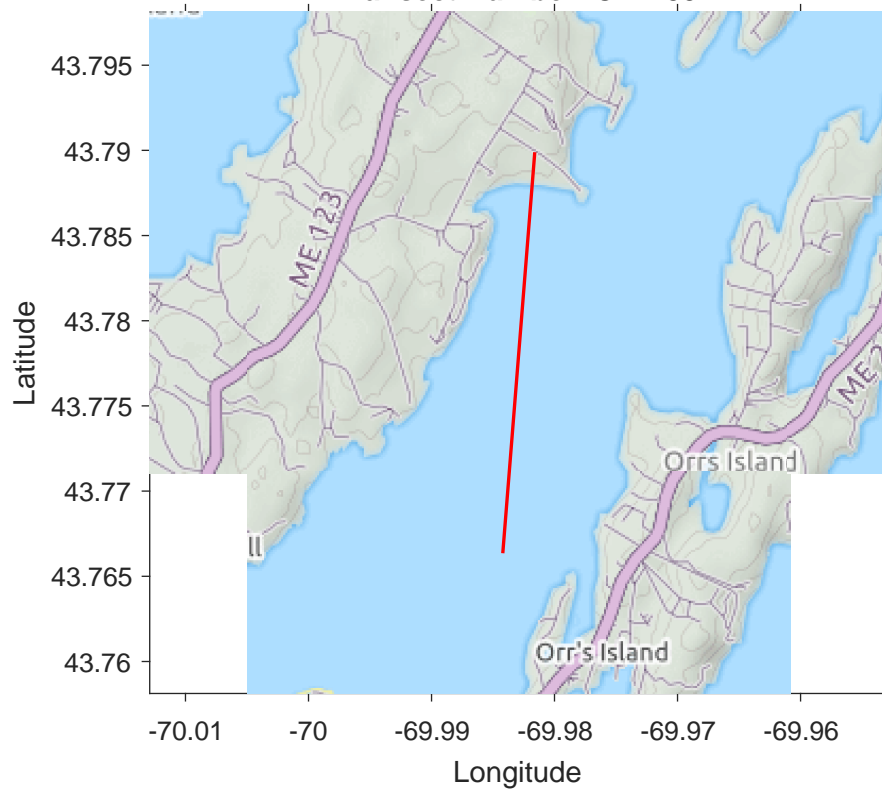
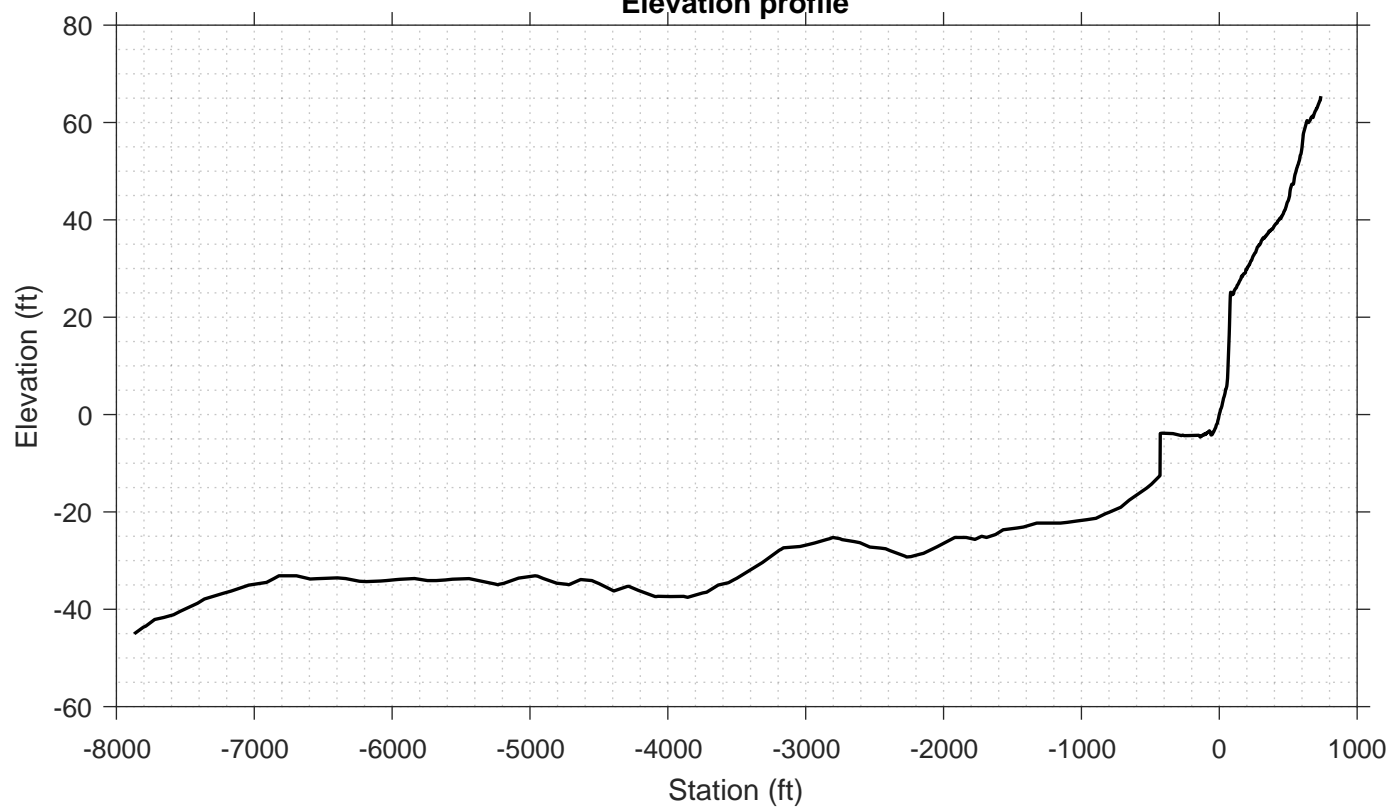


Transect Number: CM-133



Elevation profile



DATA LOG FOR TRANSECT ID: CM-133

PART 1: USER INPUT

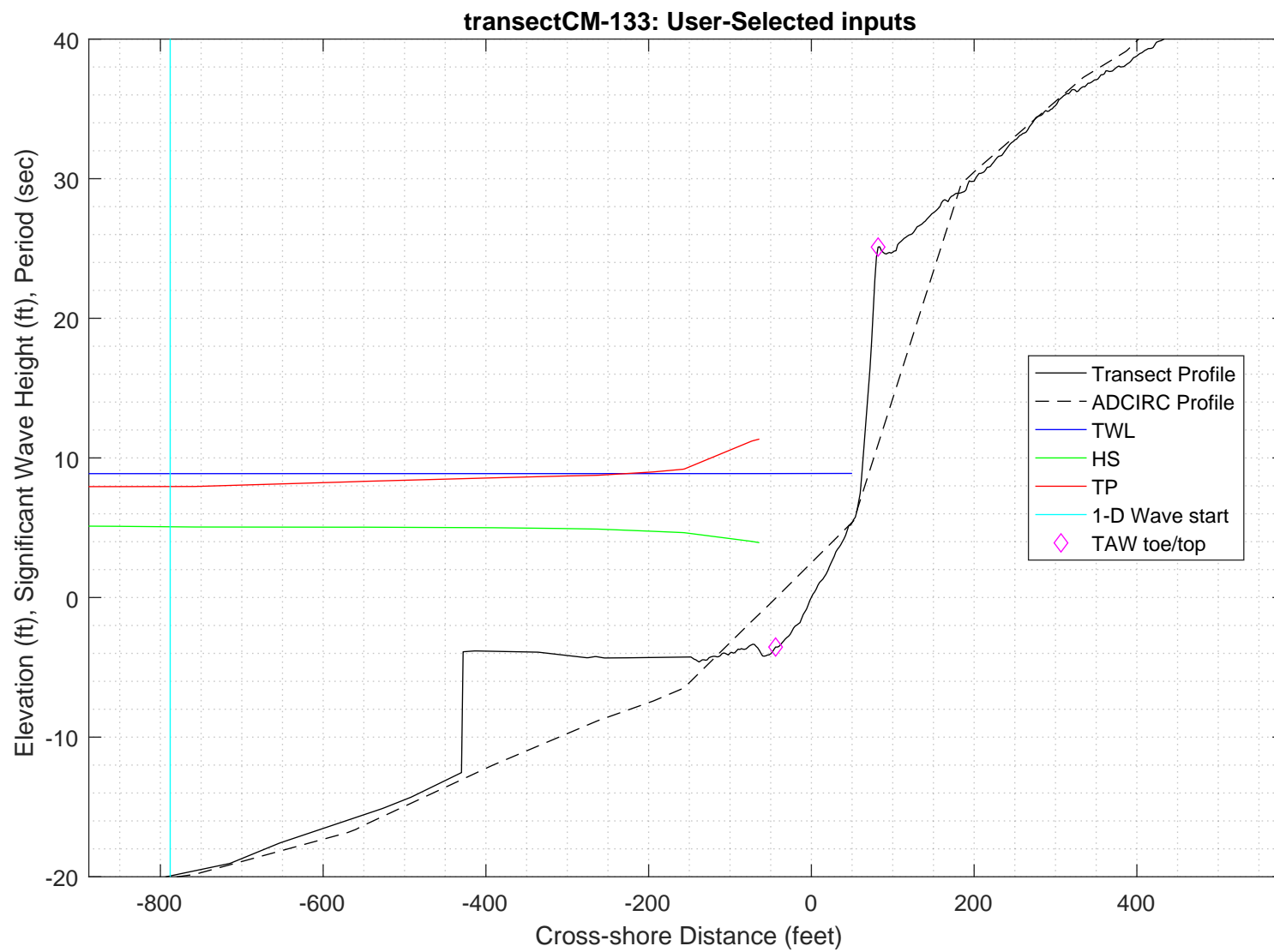
SWAN 1-D / WHAFIS input

station: -788 ft
LON: -69.9821 deg E
LAT: 43.7857 deg N
Bottom ELEV: -19.9401 ft-NAVD88
TWL: 8.8742 ft-NAVD88
HS: 5.0676 ft
TP: 7.9511 sec
Wave Direction bin: 90 deg CCW from East (90 deg sector)
Transect Direction: 83.6832 deg CCW from East

TAW/RUNUP input

toe sta: -44 ft
toe elev: -3.5455 ft-NAVD88
top sta: 82 ft
top elev: 25.1041 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-133zmeters_xmeters.grd
swan file name: 2_swan/swanfiles/CM-133.swn
swan output name: 2_swan/swanfiles/CM-133.dat

Boundary Conditions:

TWL- 2.7049 meters
HS- 1.5446 meters
PER- 7.9511 seconds

Batch File: 2_swan/swanfiles/runswan.dat

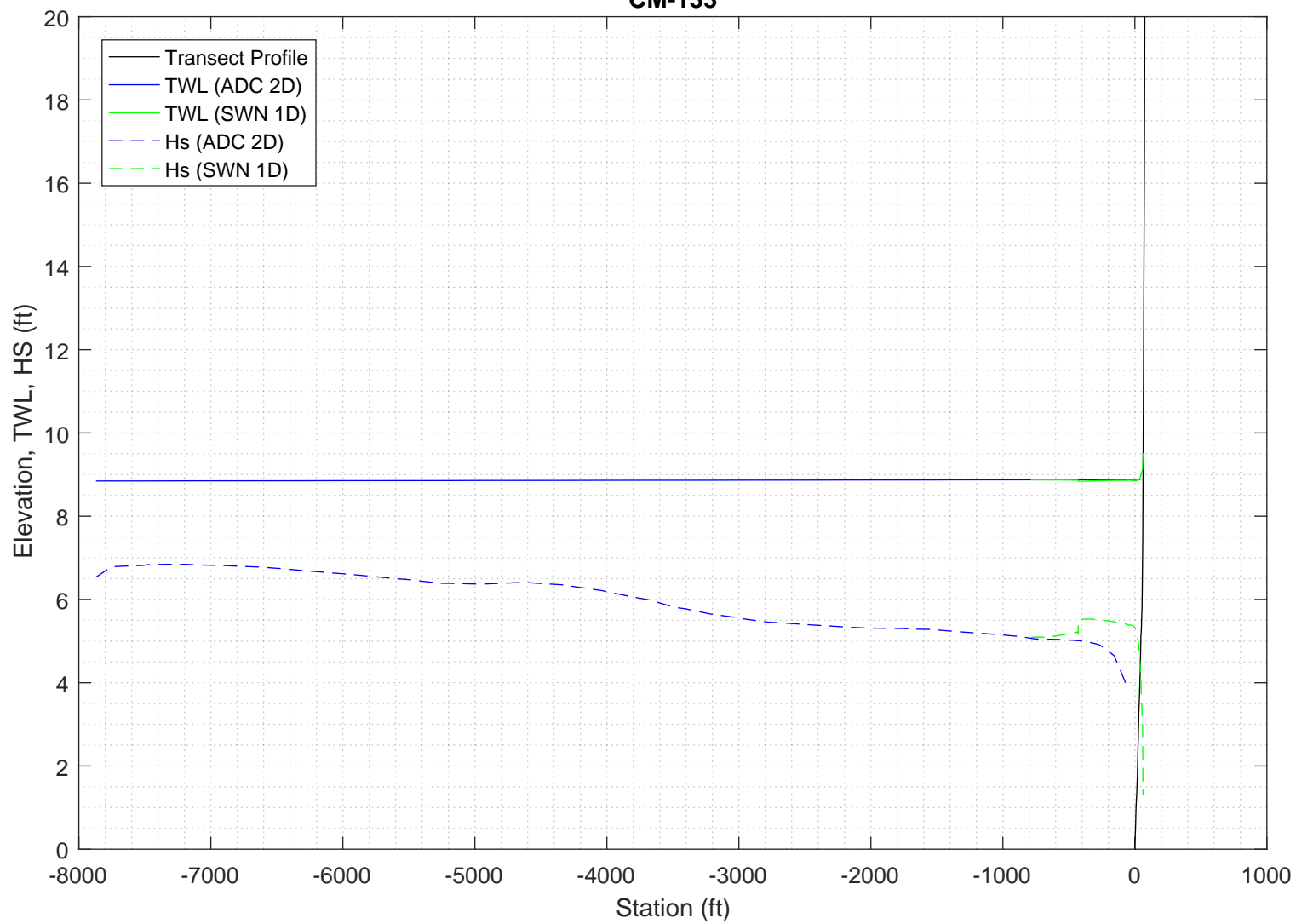
SWAN maximum additional wave setup: 0.63595 feet

SWAN output at toe:

SETUP- -0.011821 feet
HS- 5.3885 feet
PER- 7.957 seconds

PART 2 COMPLETE

2-D ADCIRC+SWAN and SWAN 1-D results, Transect:
CM-133



Execution started at 20200220.141931

```

-----
                        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      259      0.    259      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      259    0      1      1
!READinp BOTtom [fac] 'fname1' [idla] [nhedf] [FREe|FORmat[form]|UNFormatted]
READ    BOTTOM    -1. '../gridfiles/CM-133zmetres_xmetres.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    1.5446      7.9511      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      259 259    0
!TABLE 'sname' < HEADER|NOHEAdER|INDEXed > 'fname' <output parameters> (output time)
Table 'curve'   HEADER 'CM-133.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          260 MYC          1
                   : MCGRD         261
                   : 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 42.70 % 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 0.39 % 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 43.08 % 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 73.85 % 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 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.	1.55248	7.9253	8.0345	7.1885	0.005	31.5219	8.7800	0.000000
1.	0.	1.55250	7.9253	8.0345	7.1878	0.005	31.4937	8.7700	-0.000009
2.	0.	1.55253	7.9253	8.0345	7.1872	0.005	31.4655	8.7600	-0.000019
3.	0.	1.55247	7.9253	8.0345	7.1865	0.005	31.4283	8.7500	-0.000028
4.	0.	1.55251	7.9253	8.0345	7.1860	0.005	31.3881	8.7300	-0.000046
5.	0.	1.55250	7.9253	8.0345	7.1854	0.005	31.3562	8.7199	-0.000055
6.	0.	1.55252	7.9253	8.0345	7.1847	0.005	31.3272	8.7099	-0.000065
7.	0.	1.55248	7.9254	8.0345	7.1840	0.005	31.2901	8.6999	-0.000074
8.	0.	1.55253	7.9254	8.0345	7.1835	0.005	31.2506	8.6799	-0.000092
9.	0.	1.55253	7.9254	8.0345	7.1828	0.005	31.2193	8.6699	-0.000102
10.	0.	1.55256	7.9254	8.0345	7.1822	0.005	31.1908	8.6599	-0.000112
11.	0.	1.55261	7.9254	8.0345	7.1815	0.005	31.1634	8.6499	-0.000122
12.	0.	1.55258	7.9254	8.0345	7.1807	0.006	31.1280	8.6399	-0.000131
13.	0.	1.55265	7.9255	8.0345	7.1802	0.006	31.0930	8.6199	-0.000149
14.	0.	1.55267	7.9255	8.0345	7.1795	0.006	31.0678	8.6098	-0.000159
15.	0.	1.55272	7.9255	8.0345	7.1788	0.006	31.0453	8.5998	-0.000168
16.	0.	1.55278	7.9255	8.0345	7.1781	0.006	31.0240	8.5898	-0.000177
17.	0.	1.55276	7.9255	8.0345	7.1773	0.006	30.9961	8.5798	-0.000186
18.	0.	1.55285	7.9255	8.0345	7.1768	0.006	30.9663	8.5598	-0.000204
19.	0.	1.55289	7.9255	8.0345	7.1760	0.006	30.9427	8.5498	-0.000213
20.	0.	1.55295	7.9255	8.0345	7.1753	0.006	30.9211	8.5398	-0.000223
21.	0.	1.55294	7.9255	8.0345	7.1745	0.006	30.8936	8.5298	-0.000232
22.	0.	1.55296	7.9256	8.0345	7.1739	0.006	30.8574	8.5098	-0.000249
23.	0.	1.55296	7.9256	8.0345	7.1733	0.006	30.8182	8.4897	-0.000267
24.	0.	1.55296	7.9256	8.0345	7.1727	0.007	30.7780	8.4697	-0.000285
25.	0.	1.55289	7.9257	8.0345	7.1719	0.007	30.7306	8.4497	-0.000302
26.	0.	1.55296	7.9257	8.0345	7.1712	0.007	30.6805	8.4197	-0.000329
27.	0.	1.55299	7.9257	8.0345	7.1700	0.007	30.6360	8.3997	-0.000348
28.	0.	1.55299	7.9258	8.0345	7.1688	0.007	30.5866	8.3796	-0.000366
29.	0.	1.55312	7.9258	8.0345	7.1676	0.007	30.5355	8.3496	-0.000394
30.	0.	1.55315	7.9259	8.0345	7.1660	0.007	30.4837	8.3296	-0.000412
31.	0.	1.55331	7.9259	8.0345	7.1647	0.007	30.4316	8.2996	-0.000441
32.	0.	1.55343	7.9259	8.0345	7.1631	0.007	30.3862	8.2795	-0.000460
33.	0.	1.55352	7.9260	8.0345	7.1613	0.008	30.3364	8.2595	-0.000479
34.	0.	1.55376	7.9260	8.0345	7.1596	0.008	30.2850	8.2295	-0.000509
35.	0.	1.55388	7.9261	8.0345	7.1575	0.008	30.2332	8.2095	-0.000529
36.	0.	1.55415	7.9261	8.0345	7.1557	0.008	30.1810	8.1794	-0.000559</

60.	0.	1.56244	7.9270	8.0345	7.0956	0.025	29.2068	7.6889	-0.001126
61.	0.	1.56294	7.9270	8.0345	7.0923	0.027	29.1703	7.6688	-0.001153
62.	0.	1.56347	7.9270	8.0345	7.0890	0.029	29.1343	7.6488	-0.001179
63.	0.	1.56400	7.9271	8.0345	7.0856	0.030	29.0984	7.6288	-0.001206
64.	0.	1.56459	7.9271	8.0345	7.0823	0.032	29.0698	7.6088	-0.001232
65.	0.	1.56501	7.9271	8.0345	7.0789	0.034	29.0445	7.5988	-0.001248
66.	0.	1.56554	7.9272	8.0345	7.0759	0.036	29.0138	7.5787	-0.001275
67.	0.	1.56605	7.9272	8.0345	7.0729	0.039	28.9817	7.5587	-0.001302
68.	0.	1.56656	7.9273	8.0345	7.0699	0.042	28.9494	7.5387	-0.001330
69.	0.	1.56706	7.9273	8.0345	7.0671	0.045	28.9176	7.5186	-0.001357
70.	0.	1.56758	7.9273	8.0345	7.0641	0.048	28.8863	7.4986	-0.001385
71.	0.	1.56810	7.9274	8.0345	7.0611	0.051	28.8555	7.4786	-0.001413
72.	0.	1.56864	7.9274	8.0345	7.0581	0.054	28.8252	7.4586	-0.001442
73.	0.	1.56919	7.9274	8.0345	7.0550	0.058	28.7956	7.4385	-0.001471
74.	0.	1.56975	7.9275	8.0345	7.0519	0.061	28.7667	7.4185	-0.001500
75.	0.	1.57032	7.9275	8.0345	7.0487	0.065	28.7387	7.3985	-0.001529
76.	0.	1.57090	7.9276	8.0345	7.0455	0.069	28.7111	7.3784	-0.001558
77.	0.	1.57148	7.9276	8.0345	7.0424	0.073	28.6844	7.3584	-0.001587
78.	0.	1.57206	7.9276	8.0345	7.0392	0.078	28.6597	7.3384	-0.001617
79.	0.	1.57264	7.9277	8.0345	7.0361	0.082	28.6351	7.3184	-0.001646
80.	0.	1.57323	7.9277	8.0345	7.0329	0.086	28.6105	7.2983	-0.001676
81.	0.	1.57377	7.9278	8.0345	7.0298	0.090	28.5804	7.2783	-0.001706
82.	0.	1.57447	7.9278	8.0345	7.0271	0.094	28.5490	7.2483	-0.001749
83.	0.	1.57503	7.9279	8.0345	7.0241	0.097	28.5218	7.2282	-0.001779
84.	0.	1.57554	7.9279	8.0345	7.0212	0.099	28.4891	7.2082	-0.001809
85.	0.	1.57622	7.9280	8.0345	7.0187	0.101	28.4545	7.1781	-0.001853
86.	0.	1.57677	7.9280	8.0345	7.0159	0.102	28.4257	7.1581	-0.001884
87.	0.	1.57728	7.9280	8.0345	7.0131	0.104	28.3929	7.1381	-0.001915
88.	0.	1.57798	7.9281	8.0345	7.0106	0.105	28.3581	7.1080	-0.001960
89.	0.	1.57853	7.9281	8.0345	7.0079	0.106	28.3285	7.0880	-0.001991
90.	0.	1.57903	7.9282	8.0345	7.0052	0.107	28.2944	7.0680	-0.002023
91.	0.	1.57967	7.9282	8.0345	7.0029	0.107	28.2522	7.0379	-0.002069
92.	0.	1.58028	7.9283	8.0345	7.0007	0.106	28.2058	7.0079	-0.002116
93.	0.	1.58094	7.9284	8.0345	6.9986	0.105	28.1643	6.9778	-0.002163
94.	0.	1.58140	7.9284	8.0345	6.9962	0.103	28.1243	6.9578	-0.002195
95.	0.	1.58203	7.9285	8.0345	6.9941	0.102	28.0784	6.9278	-0.002243
96.	0.	1.58265	7.9285	8.0345	6.9920	0.100	28.0302	6.8977	-0.002292
97.	0.	1.58327	7.9286	8.0345	6.9899	0.098	27.9810	6.8677	-0.002341
98.	0.	1.58390	7.9287	8.0345	6.9879	0.096	27.9311	6.8376	-0.002390
99.	0.	1.58458	7.9287	8.0345	6.9858	0.094	27.8863	6.8076	-0.002440
100.	0.	1.58506	7.9288	8.0345	6.9835	0.092	27.8433	6.7875	-0.002475
101.	0.	1.58573	7.9288	8.0345	6.9814	0.090	27.7943	6.7575	-0.002526
102.	0.	1.58640	7.9289	8.0345	6.9793	0.088	27.7431	6.7274	-0.002578
103.	0.	1.58707	7.9290	8.0345	6.9771	0.086	27.6905	6.6974	-0.002630
104.	0.	1.58775	7.9290	8.0345	6.9750	0.084	27.6369	6.6673	-0.002683
105.	0.	1.58848	7.9291	8.0345	6.9728	0.082	27.5886	6.6373	-0.002736
106.	0.	1.58902	7.9292	8.0345	6.9702	0.080	27.5421	6.6172	-0.002774
107.	0.	1.58974	7.9292	8.0345	6.9680	0.077	27.4894	6.5872	-0.002828
108.	0.	1.59046	7.9293	8.0345	6.9657	0.075	27.4345	6.5571	-0.002883
109.	0.	1.57871	7.9294	8.0345	6.9591	0.073	25.6696	6.5270	-0.002992
110.	0.	1.67348	7.9370	8.0345	7.0226	0.060	23.1270	3.8786	-0.011415
111.	0.	1.67350	7.9382	8.0345	6.9420	0.057	22.2994	3.8685	-0.011451
112.	0.	1.67592	7.9394	8.0345	6.8662	0.050	22.0030	3.8686	-0.011381
113.	0.	1.67787	7.9405	8.0345	6.8011	0.034	21.8969	3.8688	-0.011243
114.	0.	1.68002	7.9416	8.0345	6.7437	0.010	21.8492	3.8589	-0.011149
115.	0.	1.68108	7.9426	8.0345	6.6921	359.980	21.8287	3.8590	-0.010979
116.	0.	1.68187	7.9435	8.0345	6.6453	359.953	21.8185	3.8592	-0.010809
117.	0.	1.68239	7.9443	8.0345	6.6026	359.924	21.8102	3.8594	-0.010641
118.	0.	1.68293	7.9451	8.0345	6.5630	359.899	21.8130	3.8595	-0.010484
119.	0.	1.68297	7.9457	8.0345	6.5255	359.878	21.8204	3.8697	-0.010279
120.	0.	1.68345	7.9464	8.0345	6.4912	359.857	21.8178	3.8699	-0.010144
121.	0.	1.68378	7.9470	8.0345	6.4592	359.840	21.8145	3.8700	-0.010010
122.	0.	1.68418	7.9475	8.0345	6.4286	359.826	21.8098	3.8701	-0.009887
123.	0.	1.68446	7.9480	8.0345	6.4001	359.812	21.8062	3.8702	-0.009766
124.	0.	1.68455	7.9485	8.0345	6.3735	359.798	21.8046	3.8704	-0.009641
125.	0.	1.68475	7.9489	8.0345	6.3479	359.788	21.8029	3.8705	-0.009528
126.	0.	1.68504	7.9494	8.0345	6.3236	359.781	21.8122	3.8706	-0.009421

127.	0.	1.68489	7.9497	8.0345	6.2995	359.777	21.8263	3.8807	-0.009261
128.	0.	1.68511	7.9501	8.0345	6.2777	359.773	21.8310	3.8808	-0.009164
129.	0.	1.68520	7.9504	8.0345	6.2572	359.767	21.8331	3.8809	-0.009066
130.	0.	1.68531	7.9507	8.0345	6.2374	359.764	21.8346	3.8810	-0.008974
131.	0.	1.68533	7.9510	8.0345	6.2187	359.760	21.8360	3.8811	-0.008880
132.	0.	1.68538	7.9513	8.0345	6.2006	359.759	21.8381	3.8812	-0.008791
133.	0.	1.68543	7.9515	8.0345	6.1831	359.759	21.8406	3.8813	-0.008705
134.	0.	1.68545	7.9518	8.0345	6.1664	359.759	21.8435	3.8814	-0.008621
135.	0.	1.68552	7.9520	8.0345	6.1503	359.761	21.8570	3.8815	-0.008537
136.	0.	1.68515	7.9522	8.0345	6.1339	359.762	21.8749	3.8916	-0.008398
137.	0.	1.68514	7.9524	8.0345	6.1192	359.764	21.8834	3.8917	-0.008319
138.	0.	1.68514	7.9525	8.0345	6.1051	359.767	21.8988	3.8918	-0.008241
139.	0.	1.68470	7.9527	8.0345	6.0906	359.768	21.9183	3.9019	-0.008107
140.	0.	1.68468	7.9528	8.0345	6.0778	359.770	21.9380	3.9020	-0.008031
141.	0.	1.68427	7.9530	8.0345	6.0645	359.772	21.9693	3.9121	-0.007900
142.	0.	1.68381	7.9531	8.0345	6.0517	359.774	21.9943	3.9222	-0.007772
143.	0.	1.68375	7.9532	8.0345	6.0405	359.776	22.0169	3.9223	-0.007702
144.	0.	1.68330	7.9533	8.0345	6.0288	359.778	22.0498	3.9324	-0.007576
145.	0.	1.68281	7.9534	8.0345	6.0175	359.780	22.0763	3.9425	-0.007453
146.	0.	1.68270	7.9535	8.0345	6.0077	359.782	22.1005	3.9426	-0.007387
147.	0.	1.68223	7.9536	8.0345	5.9972	359.784	22.1350	3.9527	-0.007266
148.	0.	1.68172	7.9536	8.0345	5.9872	359.786	22.1630	3.9629	-0.007149
149.	0.	1.68159	7.9537	8.0345	5.9785	359.787	22.1878	3.9629	-0.007087
150.	0.	1.68111	7.9538	8.0345	5.9691	359.788	22.2222	3.9730	-0.006972
151.	0.	1.68063	7.9538	8.0345	5.9598	359.790	22.2494	3.9831	-0.006860
152.	0.	1.68056	7.9539	8.0345	5.9517	359.791	22.2738	3.9832	-0.006804
153.	0.	1.68015	7.9540	8.0345	5.9427	359.792	22.3082	3.9933	-0.006695
154.	0.	1.67972	7.9540	8.0345	5.9339	359.793	22.3362	4.0034	-0.006588
155.	0.	1.67965	7.9541	8.0345	5.9264	359.793	22.3616	4.0035	-0.006535
156.	0.	1.67913	7.9541	8.0345	5.9180	359.793	22.3777	4.0136	-0.006431
157.	0.	1.67924	7.9542	8.0345	5.9119	359.794	22.3744	4.0036	-0.006433
158.	0.	1.67933	7.9543	8.0345	5.9059	359.794	22.3725	3.9936	-0.006433
159.	0.	1.67905	7.9543	8.0345	5.8989	359.794	22.3791	3.9936	-0.006379
160.	0.	1.67882	7.9544	8.0345	5.8922	359.794	22.3979	3.9937	-0.006324
161.	0.	1.67830	7.9544	8.0345	5.8847	359.793	22.4310	4.0038	-0.006217
162.	0.	1.67775	7.9544	8.0345	5.8774	359.793	22.4588	4.0139	-0.006112
163.	0.	1.67749	7.9545	8.0345	5.8713	359.792	22.4749	4.0139	-0.006060
164.	0.	1.67720	7.9545	8.0345	5.8654	359.791	22.4875	4.0140	-0.006009
165.	0.	1.67689	7.9546	8.0345	5.8597	359.790	22.4989	4.0140	-0.005958
166.	0.	1.67656	7.9546	8.0345	5.8540	359.789	22.5101	4.0141	-0.005907
167.	0.	1.67623	7.9546	8.0345	5.8484	359.787	22.5213	4.0141	-0.005856
168.	0.	1.67588	7.9547	8.0345	5.8430	359.786	22.5329	4.0142	-0.005805
169.	0.	1.67552	7.9547	8.0345	5.8376	359.785	22.5446	4.0142	-0.005755
170.	0.	1.67516	7.9548	8.0345	5.8324	359.784	22.5564	4.0143	-0.005704
171.	0.	1.67479	7.9548	8.0345	5.8272	359.783	22.5681	4.0143	-0.005653
172.	0.	1.67441	7.9549	8.0345	5.8221	359.782	22.5800	4.0144	-0.005602
173.	0.	1.67403	7.9549	8.0345	5.8171	359.781	22.5918	4.0144	-0.005551
174.	0.	1.67364	7.9549	8.0345	5.8122	359.780	22.6038	4.0145	-0.005501
175.	0.	1.67323	7.9550	8.0345	5.8075	359.778	22.6159	4.0145	-0.005450
176.	0.	1.67282	7.9550	8.0345	5.8027	359.777	22.6284	4.0146	-0.005400
177.	0.	1.67240	7.9550	8.0345	5.7981	359.776	22.6411	4.0147	-0.005349
178.	0.	1.67198	7.9551	8.0345	5.7935	359.774	22.6540	4.0147	-0.005299
179.	0.	1.67151	7.9551	8.0345	5.7890	359.773	22.6599	4.0148	-0.005249
180.	0.	1.67135	7.9552	8.0345	5.7856	359.772	22.6625	4.0048	-0.005250
181.	0.	1.67087	7.9552	8.0345	5.7812	359.770	22.6725	4.0048	-0.005198
182.	0.	1.67038	7.9552	8.0345	5.7769	359.769	22.6844	4.0049	-0.005146
183.	0.	1.66990	7.9553	8.0345	5.7727	359.767	22.6971	4.0049	-0.005095
184.	0.	1.66941	7.9553	8.0345	5.7685	359.766	22.7101	4.0050	-0.005043
185.	0.	1.66891	7.9553	8.0345	5.7645	359.765	22.7229	4.0050	-0.004991
186.	0.	1.66840	7.9554	8.0345	5.7605	359.764	22.7358	4.0051	-0.004940
187.	0.	1.66789	7.9554	8.0345	5.7566	359.763	22.7488	4.0051	-0.004889
188.	0.	1.66739	7.9554	8.0345	5.7527	359.762	22.7620	4.0052	-0.004838
189.	0.	1.66688	7.9555	8.0345	5.7488	359.762	22.7754	4.0052	-0.004787
190.	0.	1.66636	7.9555	8.0345	5.7450	359.761	22.7889	4.0053	-0.004736
191.	0.	1.66584	7.9555	8.0345	5.7413	359.760	22.8025	4.0053	-0.004685
192.	0.	1.66528	7.9556	8.0345	5.7376	359.759	22.8092	4.0054	-0.004635
193.	0.	1.66502	7.9556	8.0345	5.7351	359.758	22.8126	3.9954	-0.004635

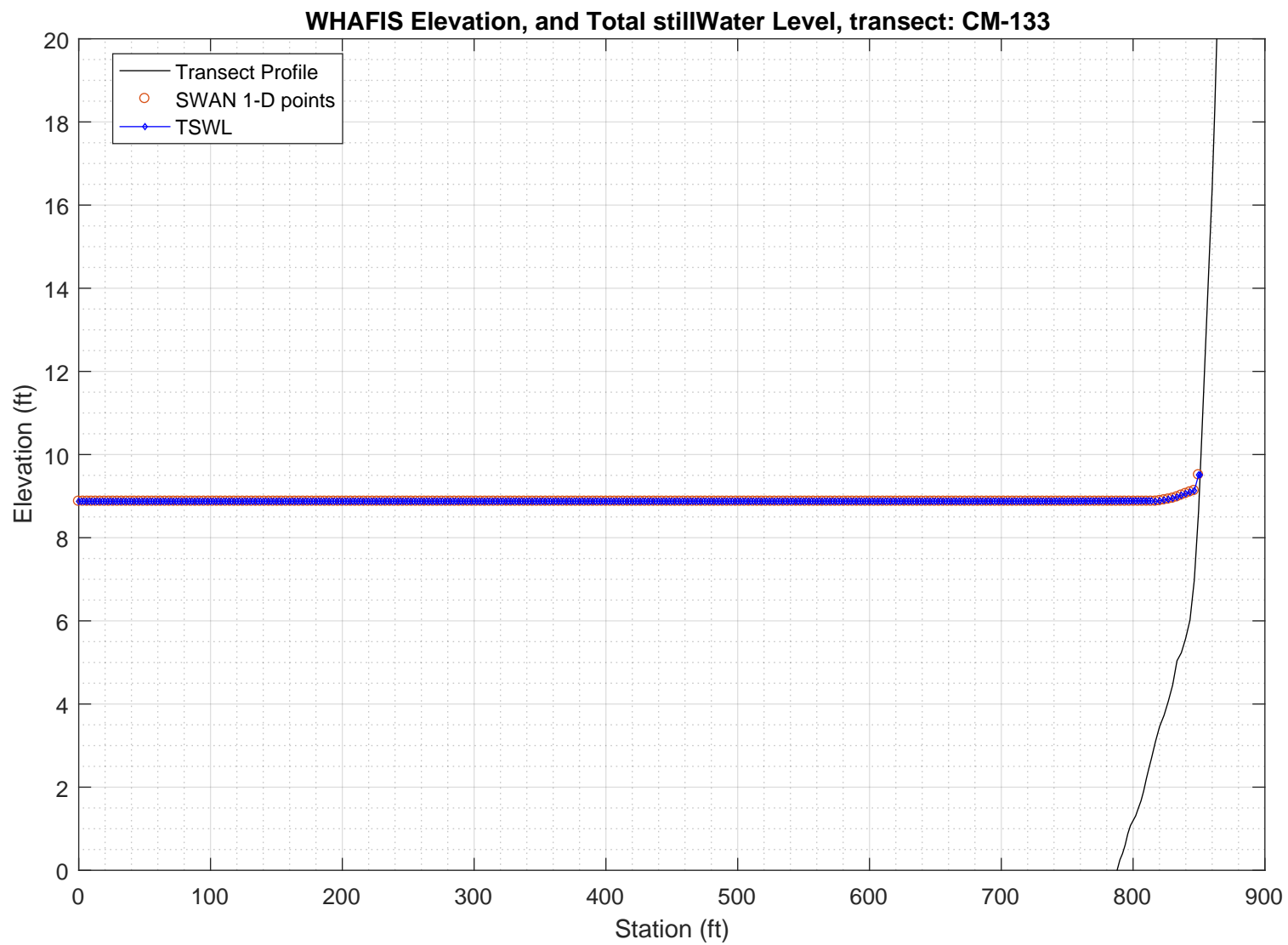
194.	0.	1.66444	7.9556	8.0345	5.7315	359.757	22.8228	3.9954	-0.004583
195.	0.	1.66409	7.9557	8.0345	5.7281	359.756	22.8713	3.9955	-0.004529
196.	0.	1.66271	7.9556	8.0345	5.7205	359.754	22.9640	4.0357	-0.004278
197.	0.	1.66184	7.9556	8.0345	5.7143	359.752	23.0686	4.0659	-0.004085
198.	0.	1.66044	7.9555	8.0345	5.7069	359.751	23.1233	4.1061	-0.003855
199.	0.	1.66091	7.9556	8.0345	5.7072	359.751	23.1116	4.0760	-0.003962
200.	0.	1.66107	7.9556	8.0345	5.7064	359.751	23.1091	4.0560	-0.004019
201.	0.	1.66011	7.9556	8.0345	5.7022	359.751	23.0896	4.0661	-0.003933
202.	0.	1.66083	7.9558	8.0345	5.7047	359.751	23.0292	4.0159	-0.004137
203.	0.	1.66097	7.9559	8.0345	5.7050	359.751	22.9940	3.9858	-0.004240
204.	0.	1.66029	7.9559	8.0345	5.7021	359.751	22.9997	3.9858	-0.004188
205.	0.	1.65925	7.9559	8.0345	5.6980	359.751	23.0022	3.9959	-0.004088
206.	0.	1.65889	7.9560	8.0345	5.6972	359.751	22.9509	3.9759	-0.004139
207.	0.	1.65982	7.9561	8.0345	5.7010	359.752	22.8989	3.9156	-0.004391
208.	0.	1.65874	7.9561	8.0345	5.6970	359.751	22.9288	3.9257	-0.004275
209.	0.	1.65684	7.9561	8.0345	5.6906	359.751	22.9329	3.9559	-0.004062
210.	0.	1.65752	7.9562	8.0345	5.6935	359.751	22.9052	3.9057	-0.004259
211.	0.	1.65607	7.9563	8.0345	5.6894	359.750	22.8838	3.9159	-0.004144
212.	0.	1.65604	7.9564	8.0345	5.6909	359.751	22.8133	3.8757	-0.004290
213.	0.	1.65630	7.9565	8.0345	5.6936	359.751	22.7477	3.8255	-0.004486
214.	0.	1.65529	7.9566	8.0345	5.6917	359.751	22.7304	3.8155	-0.004456
215.	0.	1.65359	7.9566	8.0345	5.6874	359.751	22.7231	3.8257	-0.004316
216.	0.	1.65272	7.9567	8.0345	5.6865	359.751	22.6727	3.8057	-0.004343
217.	0.	1.65273	7.9568	8.0345	5.6891	359.752	22.5978	3.7555	-0.004532
218.	0.	1.65206	7.9570	8.0345	5.6893	359.753	22.5597	3.7254	-0.004600
219.	0.	1.65040	7.9570	8.0345	5.6849	359.752	22.6197	3.7356	-0.004429
220.	0.	1.64771	7.9569	8.0345	5.6750	359.751	22.7960	3.7960	-0.003985
221.	0.	1.64478	7.9567	8.0345	5.6622	359.749	23.0417	3.8866	-0.003415
222.	0.	1.64195	7.9566	8.0345	5.6496	359.748	23.2194	3.9771	-0.002896
223.	0.	1.64152	7.9566	8.0345	5.6472	359.748	23.2657	3.9772	-0.002844
224.	0.	1.64138	7.9566	8.0345	5.6469	359.750	23.2503	3.9571	-0.002895
225.	0.	1.64110	7.9567	8.0345	5.6475	359.753	23.1662	3.9270	-0.002997
226.	0.	1.64210	7.9569	8.0345	5.6539	359.757	23.0287	3.8466	-0.003353
227.	0.	1.64242	7.9570	8.0345	5.6580	359.760	22.9205	3.7864	-0.003603
228.	0.	1.64125	7.9571	8.0345	5.6573	359.763	22.8253	3.7664	-0.003632
229.	0.	1.64122	7.9572	8.0345	5.6613	359.768	22.6883	3.7061	-0.003881
230.	0.	1.64127	7.9574	8.0345	5.6663	359.774	22.5357	3.6358	-0.004183
231.	0.	1.64069	7.9576	8.0345	5.6701	359.780	22.3836	3.5756	-0.004417
232.	0.	1.63975	7.9577	8.0345	5.6734	359.786	22.2040	3.5154	-0.004645
233.	0.	1.63951	7.9580	8.0345	5.6802	359.794	21.9815	3.4249	-0.005058
234.	0.	1.63892	7.9582	8.0345	5.6864	359.804	21.7705	3.3345	-0.005452
235.	0.	1.63618	7.9584	8.0345	5.6868	359.815	21.6000	3.2845	-0.005526
236.	0.	1.63267	7.9585	8.0345	5.6864	359.827	21.3605	3.2344	-0.005576
237.	0.	1.63315	7.9589	8.0345	5.6977	359.846	21.0257	3.0836	-0.006388
238.	0.	1.62997	7.9592	8.0345	5.6998	359.871	20.6820	2.9833	-0.006726
239.	0.	1.62705	7.9596	8.0345	5.7029	359.901	20.2886	2.8527	-0.007251
240.	0.	1.62491	7.9602	8.0345	5.7054	359.970	19.8706	2.7121	-0.007912
241.	0.	1.61967	7.9602	8.0345	5.6977	0.070	19.4890	2.6019	-0.008105
242.	0.	1.61151	7.9598	8.0345	5.6807	0.197	19.1131	2.5121	-0.007874
243.	0.	1.60461	7.9588	8.0345	5.6625	0.372	18.7393	2.3921	-0.007897
244.	0.	1.59047	7.9580	8.0345	5.6327	0.550	18.4243	2.3232	-0.006834
245.	0.	1.57516	7.9571	8.0345	5.6015	0.752	18.1063	2.2443	-0.005676
246.	0.	1.55835	7.9561	8.0345	5.5680	0.976	17.7262	2.1556	-0.004411
247.	0.	1.54284	7.9547	8.0345	5.5380	1.230	17.2681	2.0164	-0.003635
248.	0.	1.52069	7.9537	8.0345	5.4955	1.508	16.7855	1.8982	-0.001847
249.	0.	1.49633	7.9529	8.0345	5.4434	1.796	16.2979	1.7602	0.000227
250.	0.	1.46221	7.9526	8.0345	5.3681	2.099	15.8882	1.6542	0.004191
251.	0.	1.41826	7.9531	8.0345	5.2845	2.398	15.5309	1.5799	0.009884
252.	0.	1.37155	7.9536	8.0345	5.2164	2.680	15.1287	1.4756	0.015554
253.	0.	1.31797	7.9547	8.0345	5.1478	2.932	14.6119	1.3723	0.022294
254.	0.	1.23794	7.9567	8.0345	5.1680	2.900	14.0988	1.2018	0.031779
255.	0.	1.15336	7.9588	8.0345	5.1161	2.973	13.6897	1.1544	0.044423
256.	0.	1.06891	7.9612	8.0345	5.1123	2.961	13.2238	1.0662	0.056223
257.	0.	0.98508	7.9643	8.0345	5.1222	2.732	12.4177	0.9378	0.067838
258.	0.	0.90644	7.9678	8.0345	5.1466	2.037	10.9475	0.6585	0.078543
259.	0.	0.40011	8.0474	8.0345	6.3375	356.962	13.2172	0.2638	0.193839

PART 3: WHAFIS

WHAFIS input: CM-133.dat

WHAFIS output: CM-133.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-133.dat

Output file: C:\FEMA-TransectAnalysis\LOMR-TransectAnalysis-Harpswell\3_whafis\whafis4\CM-133.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	-19.940	1.000	1.000	8.874	8.108	7.951	56.140	0.013	0.000
OF	2.000	-19.915	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	4.000	-19.891	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	6.000	-19.866	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	8.000	-19.842	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	10.000	-19.818	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	12.000	-19.793	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	14.000	-19.769	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	16.000	-19.744	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	18.000	-19.720	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	20.000	-19.696	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	22.000	-19.671	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	24.000	-19.647	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	26.000	-19.622	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	28.000	-19.598	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	30.000	-19.573	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	32.000	-19.549	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	34.000	-19.525	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	36.000	-19.500	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	38.000	-19.476	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	40.000	-19.451	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	42.000	-19.427	0.000	8.874	0.000	0.000	0.000	0.000	0.012	0.000
OF	44.000	-19.403	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
OF	46.000	-19.378	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
OF	48.000	-19.354	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
OF	50.000	-19.329	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
OF	52.000	-19.305	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
OF	54.000	-19.280	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
OF	56.000	-19.256	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
OF	58.000	-19.232	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
OF	60.000	-19.207	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
OF	62.000	-19.183	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
OF	64.000	-19.158	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
OF	66.000	-19.134	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
OF	68.000	-19.110	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
OF	70.000	-19.085	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
OF	72.000	-19.061	0.000	8.875	0.000	0.000	0.000	0.000	0.014	0.000
OF	74.000	-19.030	0.000	8.875	0.000	0.000	0.000	0.000	0.020	0.000
OF	76.000	-18.982	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	78.000	-18.935	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	80.000	-18.887	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	82.000	-18.839	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	84.000	-18.791	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	86.000	-18.743	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	88.000	-18.696	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	90.000	-18.648	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	92.000	-18.600	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	94.000	-18.552	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	96.000	-18.504	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	98.000	-18.457	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	100.000	-18.409	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	102.000	-18.361	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	104.000	-18.313	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	106.000	-18.266	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	108.000	-18.218	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	110.000	-18.170	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	112.000	-18.122	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	114.000	-18.074	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	116.000	-18.027	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	118.000	-17.979	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	120.000	-17.931	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	122.000	-17.883	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	124.000	-17.835	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	126.000	-17.788	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	128.000	-17.740	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	130.000	-17.692	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	132.000	-17.644	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
OF	134.000	-17.596	0.000	8.875	0.000	0.000	0.000	0.000	0.022	0.000
OF	136.000	-17.555	0.000	8.875	0.000	0.000	0.000	0.000	0.020	0.000
OF	138.000	-17.516	0.000	8.875	0.000	0.000	0.000	0.000	0.020	0.000
OF	140.000	-17.477	0.000	8.875	0.000	0.000	0.000	0.000	0.020	0.000
OF	142.000	-17.438	0.000	8.875	0.000	0.000	0.000	0.000	0.020	0.000
OF	144.000	-17.398	0.000	8.875	0.000	0.000	0.000	0.000	0.020	0.000
OF	146.000	-17.359	0.000	8.875	0.000	0.000	0.000	0.000	0.020	0.000
OF	148.000	-17.320	0.000	8.875	0.000	0.000	0.000	0.000	0.020	0.000
OF	150.000	-17.281	0.000	8.875	0.000	0.000	0.000	0.000	0.020	0.000
OF	152.000	-17.242	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	154.000	-17.203	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	156.000	-17.164	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	158.000	-17.125	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	160.000	-17.085	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	162.000	-17.046	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	164.000	-17.007	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	166.000	-16.968	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	168.000	-16.929	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	170.000	-16.890	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	172.000	-16.851	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	174.000	-16.811	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	176.000	-16.772	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	178.000	-16.733	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	180.000	-16.694	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	182.000	-16.655	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	184.000	-16.616	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000

OF	186.000	-16.577	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	188.000	-16.537	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	190.000	-16.498	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	192.000	-16.459	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	194.000	-16.420	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	196.000	-16.381	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	198.000	-16.342	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	200.000	-16.303	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	202.000	-16.264	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	204.000	-16.224	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	206.000	-16.185	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	208.000	-16.146	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	210.000	-16.107	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	212.000	-16.068	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	214.000	-16.029	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	216.000	-15.990	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	218.000	-15.950	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	220.000	-15.911	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	222.000	-15.872	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	224.000	-15.833	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	226.000	-15.794	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	228.000	-15.755	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	230.000	-15.716	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	232.000	-15.676	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	234.000	-15.637	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	236.000	-15.598	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	238.000	-15.559	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	240.000	-15.520	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	242.000	-15.481	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	244.000	-15.442	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	246.000	-15.402	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	248.000	-15.363	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	250.000	-15.324	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	252.000	-15.285	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	254.000	-15.246	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	256.000	-15.207	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	258.000	-15.168	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
OF	260.000	-15.129	0.000	8.876	0.000	0.000	0.000	0.000	0.021	0.000
OF	262.000	-15.085	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
OF	264.000	-15.039	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
OF	266.000	-14.993	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
OF	268.000	-14.947	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
OF	270.000	-14.900	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
OF	272.000	-14.854	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
OF	274.000	-14.808	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
OF	276.000	-14.762	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
OF	278.000	-14.716	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
OF	280.000	-14.669	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
OF	282.000	-14.623	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
OF	284.000	-14.577	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
OF	286.000	-14.531	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
OF	288.000	-14.485	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
OF	290.000	-14.438	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
OF	292.000	-14.392	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
OF	294.000	-14.346	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
OF	296.000	-14.300	0.000	8.876	0.000	0.000	0.000	0.000	0.025	0.000
OF	298.000	-14.244	0.000	8.876	0.000	0.000	0.000	0.000	0.028	0.000
OF	300.000	-14.187	0.000	8.876	0.000	0.000	0.000	0.000	0.029	0.000
OF	302.000	-14.130	0.000	8.876	0.000	0.000	0.000	0.000	0.029	0.000
OF	304.000	-14.073	0.000	8.876	0.000	0.000	0.000	0.000	0.029	0.000
OF	306.000	-14.016	0.000	8.876	0.000	0.000	0.000	0.000	0.028	0.000
OF	308.000	-13.960	0.000	8.876	0.000	0.000	0.000	0.000	0.028	0.000
OF	310.000	-13.903	0.000	8.876	0.000	0.000	0.000	0.000	0.029	0.000
OF	312.000	-13.846	0.000	8.876	0.000	0.000	0.000	0.000	0.029	0.000
OF	314.000	-13.789	0.000	8.876	0.000	0.000	0.000	0.000	0.029	0.000
OF	316.000	-13.732	0.000	8.876	0.000	0.000	0.000	0.000	0.029	0.000
OF	318.000	-13.675	0.000	8.876	0.000	0.000	0.000	0.000	0.028	0.000
OF	320.000	-13.619	0.000	8.876	0.000	0.000	0.000	0.000	0.028	0.000
OF	322.000	-13.562	0.000	8.876	0.000	0.000	0.000	0.000	0.029	0.000
OF	324.000	-13.505	0.000	8.876	0.000	0.000	0.000	0.000	0.029	0.000
OF	326.000	-13.448	0.000	8.876	0.000	0.000	0.000	0.000	0.029	0.000
OF	328.000	-13.391	0.000	8.876	0.000	0.000	0.000	0.000	0.028	0.000
OF	330.000	-13.335	0.000	8.876	0.000	0.000	0.000	0.000	0.028	0.000
OF	332.000	-13.278	0.000	8.876	0.000	0.000	0.000	0.000	0.029	0.000
OF	334.000	-13.221	0.000	8.877	0.000	0.000	0.000	0.000	0.029	0.000
OF	336.000	-13.164	0.000	8.877	0.000	0.000	0.000	0.000	0.029	0.000
OF	338.000	-13.107	0.000	8.877	0.000	0.000	0.000	0.000	0.029	0.000
OF	340.000	-13.050	0.000	8.877	0.000	0.000	0.000	0.000	0.028	0.000
OF	342.000	-12.994	0.000	8.877	0.000	0.000	0.000	0.000	0.028	0.000
OF	344.000	-12.937	0.000	8.877	0.000	0.000	0.000	0.000	0.029	0.000
OF	346.000	-12.880	0.000	8.877	0.000	0.000	0.000	0.000	0.029	0.000
OF	348.000	-12.823	0.000	8.877	0.000	0.000	0.000	0.000	0.029	0.000
OF	350.000	-12.766	0.000	8.877	0.000	0.000	0.000	0.000	0.028	0.000
OF	352.000	-12.710	0.000	8.877	0.000	0.000	0.000	0.000	0.028	0.000
OF	354.000	-12.653	0.000	8.877	0.000	0.000	0.000	0.000	0.029	0.000
OF	356.000	-12.596	0.000	8.877	0.000	0.000	0.000	0.000	0.029	0.000
OF	358.000	-12.539	0.000	8.877	0.000	0.000	0.000	0.000	2.178	0.000
OF	360.000	-3.884	0.000	8.877	0.000	0.000	0.000	0.000	2.166	0.000
OF	362.000	-3.876	0.000	8.877	0.000	0.000	0.000	0.000	0.004	0.000
OF	364.000	-3.867	0.000	8.877	0.000	0.000	0.000	0.000	0.004	0.000
OF	366.000	-3.859	0.000	8.877	0.000	0.000	0.000	0.000	0.004	0.000
OF	368.000	-3.851	0.000	8.877	0.000	0.000	0.000	0.000	0.004	0.000
OF	370.000	-3.843	0.000	8.877	0.000	0.000	0.000	0.000	0.004	0.000
OF	372.000	-3.834	0.000	8.877	0.000	0.000	0.000	0.000	0.004	0.000
OF	374.000	-3.826	0.000	8.877	0.000	0.000	0.000	0.000	0.002	0.000
OF	376.000	-3.826	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	378.000	-3.829	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	380.000	-3.831	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	382.000	-3.833	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	384.000	-3.835	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	386.000	-3.838	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	388.000	-3.840	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000

OF	390.000	-3.842	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	392.000	-3.845	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	394.000	-3.847	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	396.000	-3.849	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	398.000	-3.851	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	400.000	-3.854	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	402.000	-3.856	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	404.000	-3.858	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	406.000	-3.861	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	408.000	-3.863	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	410.000	-3.865	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	412.000	-3.867	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	414.000	-3.870	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	416.000	-3.872	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	418.000	-3.874	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	420.000	-3.876	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	422.000	-3.879	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	424.000	-3.881	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	426.000	-3.883	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	428.000	-3.886	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	430.000	-3.888	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	432.000	-3.890	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	434.000	-3.892	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	436.000	-3.895	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	438.000	-3.897	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	440.000	-3.899	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	442.000	-3.901	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	444.000	-3.904	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	446.000	-3.906	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	448.000	-3.908	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	450.000	-3.911	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	452.000	-3.913	0.000	8.877	0.000	0.000	0.000	0.000	-0.004	0.000
OF	454.000	-3.925	0.000	8.877	0.000	0.000	0.000	0.000	-0.006	0.000
OF	456.000	-3.938	0.000	8.877	0.000	0.000	0.000	0.000	-0.007	0.000
OF	458.000	-3.952	0.000	8.877	0.000	0.000	0.000	0.000	-0.007	0.000
OF	460.000	-3.965	0.000	8.877	0.000	0.000	0.000	0.000	-0.007	0.000
OF	462.000	-3.979	0.000	8.877	0.000					

OF	594.000	-4.294	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	596.000	-4.292	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	598.000	-4.291	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	600.000	-4.289	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	602.000	-4.287	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	604.000	-4.286	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	606.000	-4.285	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	608.000	-4.283	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	610.000	-4.281	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	612.000	-4.280	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	614.000	-4.278	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	616.000	-4.277	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	618.000	-4.275	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	620.000	-4.274	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	622.000	-4.272	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	624.000	-4.271	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	626.000	-4.269	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	628.000	-4.268	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	630.000	-4.266	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	632.000	-4.265	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	634.000	-4.263	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	636.000	-4.262	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	638.000	-4.260	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
OF	640.000	-4.259	0.000	8.877	0.000	0.000	0.000	0.000	-0.020	0.000
OF	642.000	-4.339	0.000	8.877	0.000	0.000	0.000	0.000	-0.040	0.000
OF	644.000	-4.420	0.000	8.877	0.000	0.000	0.000	0.000	-0.030	0.000
OF	646.000	-4.458	0.000	8.877	0.000	0.000	0.000	0.000	-0.031	0.000
OF	648.000	-4.545	0.000	8.877	0.000	0.000	0.000	0.000	-0.040	0.000
OF	650.000	-4.617	0.000	8.877	0.000	0.000	0.000	0.000	0.002	0.000
OF	652.000	-4.537	0.000	8.877	0.000	0.000	0.000	0.000	0.040	0.000
OF	654.000	-4.459	0.000	8.877	0.000	0.000	0.000	0.000	0.019	0.000
OF	656.000	-4.459	0.000	8.877	0.000	0.000	0.000	0.000	-0.008	0.000
OF	658.000	-4.491	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000
OF	660.000	-4.464	0.000	8.877	0.000	0.000	0.000	0.000	0.042	0.000
OF	662.000	-4.321	0.000	8.877	0.000	0.000	0.000	0.000	0.050	0.000
OF	664.000	-4.262	0.000	8.877	0.000	0.000	0.000	0.000	0.023	0.000
OF	666.000	-4.230	0.000	8.877	0.000	0.000	0.000	0.000	0.014	0.000
OF	668.000	-4.205	0.000	8.877	0.000	0.000	0.000	0.000	0.003	0.000
OF	670.000	-4.217	0.000	8.877	0.000	0.000	0.000	0.000	-0.011	0.000
OF	672.000	-4.249	0.000	8.877	0.000	0.000	0.000	0.000	-0.005	0.000
OF	674.000	-4.236	0.000	8.877	0.000	0.000	0.000	0.000	0.021	0.000
OF	676.000	-4.166	0.000	8.877	0.000	0.000	0.000	0.000	0.052	0.000
OF	678.000	-4.027	0.000	8.877	0.000	0.000	0.000	0.000	0.048	0.000
OF	680.000	-3.974	0.000	8.877	0.000	0.000	0.000	0.000	0.009	0.000
OF	682.000	-3.993	0.000	8.877	0.000	0.000	0.000	0.000	-0.021	0.000
OF	684.000	-4.057	0.000	8.877	0.000	0.000	0.000	0.000	-0.031	0.000
OF	686.000	-4.115	0.000	8.877	0.000	0.000	0.000	0.000	0.021	0.000
OF	688.000	-3.975	0.000	8.877	0.000	0.000	0.000	0.000	0.048	0.000
OF	690.000	-3.922	0.000	8.877	0.000	0.000	0.000	0.000	-0.002	0.000
OF	692.000	-3.981	0.000	8.877	0.000	0.000	0.000	0.000	-0.006	0.000
OF	694.000	-3.946	0.000	8.877	0.000	0.000	0.000	0.000	0.041	0.000
OF	696.000	-3.818	0.000	8.877	0.000	0.000	0.000	0.000	0.063	0.000
OF	698.000	-3.695	0.000	8.877	0.000	0.000	0.000	0.000	0.025	0.000
OF	700.000	-3.718	0.000	8.877	0.000	0.000	0.000	0.000	0.009	0.000
OF	702.000	-3.661	0.000	8.877	0.000	0.000	0.000	0.000	0.004	0.000
OF	704.000	-3.700	0.000	8.877	0.000	0.000	0.000	0.000	-0.012	0.000
OF	706.000	-3.710	0.000	8.878	0.000	0.000	0.000	0.000	0.008	0.000
OF	708.000	-3.668	0.000	8.878	0.000	0.000	0.000	0.000	0.036	0.000
OF	710.000	-3.564	0.000	8.878	0.000	0.000	0.000	0.000	0.052	0.000
OF	712.000	-3.461	0.000	8.878	0.000	0.000	0.000	0.000	0.041	0.000
OF	714.000	-3.400	0.000	8.878	0.000	0.000	0.000	0.000	0.029	0.000
OF	716.000	-3.344	0.000	8.878	0.000	0.000	0.000	0.000	0.010	0.000
OF	718.000	-3.361	0.000	8.878	0.000	0.000	0.000	0.000	-0.037	0.000
OF	720.000	-3.493	0.000	8.878	0.000	0.000	0.000	0.000	-0.061	0.000
OF	722.000	-3.605	0.000	8.878	0.000	0.000	0.000	0.000	-0.072	0.000
OF	724.000	-3.780	0.000	8.878	0.000	0.000	0.000	0.000	-0.097	0.000
OF	726.000	-3.993	0.000	8.878	0.000	0.000	0.000	0.000	-0.101	0.000
OF	728.000	-4.184	0.000	8.878	0.000	0.000	0.000	0.000	-0.052	0.000
OF	730.000	-4.199	0.000	8.878	0.000	0.000	0.000	0.000	0.002	0.000
OF	732.000	-4.176	0.000	8.878	0.000	0.000	0.000	0.000	0.020	0.000
OF	734.000	-4.119	0.000	8.879	0.000	0.000	0.000	0.000	0.018	0.000
OF	736.000	-4.106	0.000	8.879	0.000	0.000	0.000	0.000	0.022	0.000
OF	738.000	-4.032	0.000	8.879	0.000	0.000	0.000	0.000	0.050	0.000
OF	740.000	-3.907	0.000	8.879	0.000	0.000	0.000	0.000	0.079	0.000
OF	742.000	-3.716	0.000	8.879	0.000	0.000	0.000	0.000	0.090	0.000
OF	744.000	-3.546	0.000	8.880	0.000	0.000	0.000	0.000	0.042	0.000
OF	746.000	-3.549	0.000	8.880	0.000	0.000	0.000	0.000	0.009	0.000
OF	748.000	-3.511	0.000	8.880	0.000	0.000	0.000	0.000	0.041	0.000
OF	750.000	-3.385	0.000	8.880	0.000	0.000	0.000	0.000	0.069	0.000
OF	752.000	-3.235	0.000	8.880	0.000	0.000	0.000	0.000	0.070	0.000
OF	754.000	-3.106	0.000	8.881	0.000	0.000	0.000	0.000	0.067	0.000
OF	756.000	-2.968	0.000	8.881	0.000	0.000	0.000	0.000	0.062	0.000
OF	758.000	-2.858	0.000	8.881	0.000	0.000	0.000	0.000	0.051	0.000
OF	760.000	-2.766	0.000	8.881	0.000	0.000	0.000	0.000	0.057	0.000
OF	762.000	-2.630	0.000	8.881	0.000	0.000	0.000	0.000	0.086	0.000
OF	764.000	-2.420	0.000	8.882	0.000	0.000	0.000	0.000	0.109	0.000
OF	766.000	-2.194	0.000	8.882	0.000	0.000	0.000	0.000	0.093	0.000
OF	768.000	-2.046	0.000	8.882	0.000	0.000	0.000	0.000	0.055	0.000
OF	770.000	-1.975	0.000	8.882	0.000	0.000	0.000	0.000	0.040	0.000
OF	772.000	-1.885	0.000	8.882	0.000	0.000	0.000	0.000	0.044	0.000
OF	774.000	-1.799	0.000	8.883	0.000	0.000	0.000	0.000	0.095	0.000
OF	776.000	-1.504	0.000	8.883	0.000	0.000	0.000	0.000	0.146	0.000
OF	778.000	-1.214	0.000	8.883	0.000	0.000	0.000	0.000	0.120	0.000
OF	780.000	-1.026	0.000	8.883	0.000	0.000	0.000	0.000	0.095	0.000
OF	782.000	-0.835	0.000	8.883	0.000	0.000	0.000	0.000	0.121	0.000
OF	784.000	-0.540	0.000	8.884	0.000	0.000	0.000	0.000	0.153	0.000
OF	786.000	-0.224	0.000	8.884	0.000	0.000	0.000	0.000	0.139	0.000
IF	788.000	0.016	0.000	8.884	0.000	0.000	0.000	0.000	0.119	0.000
IF	790.000	0.251	0.000	8.884	0.000	0.000	0.000	0.000	0.097	0.000
IF	792.000	0.403	0.000	8.884	0.000	0.000	0.000	0.000	0.090	0.000
IF	794.000	0.611	0.000	8.885	0.000	0.000	0.000	0.000	0.119	0.000
IF	796.000	0.879	0.000	8.885	0.000	0.000	0.000	0.000	0.116	0.000

	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	52.000	-19.305	0.000	8.875	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
OF	54.000	-19.280	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	56.000	-19.256	0.000	8.875	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
OF	58.000	-19.232	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	60.000	-19.207	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	62.000	-19.183	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	64.000	-19.158	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	66.000	-19.134	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	68.000	-19.110	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	70.000	-19.085	0.000	8.875	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	72.000	-19.061	0.000	8.875	0.000	0.000	0.000	0.000	0.014	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	74.000	-19.030	0.000	8.875	0.000	0.000	0.000	0.000	0.020	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	76.000	-18.982	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	78.000	-18.935	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	80.000	-18.887	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	82.000	-18.839	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	84.000	-18.791	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	86.000	-18.743	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	88.000	-18.696	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	90.000	-18.648	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	92.000	-18.600	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	94.000	-18.552	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	96.000	-18.504	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	98.000	-18.457	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	100.000	-18.409	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	102.000	-18.361	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	104.000	-18.313	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	106.000	-18.266	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	108.000	-18.218	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	110.000	-18.170	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	112.000	-18.122	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	114.000	-18.074	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	116.000	-18.027	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	118.000	-17.979	0.000	8.875	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE

	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	120.000	-17.931	0.000	8.875	0.000	0.000	0.000	0.000		0.024	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	122.000	-17.883	0.000	8.875	0.000	0.000	0.000	0.000		0.024	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	124.000	-17.835	0.000	8.875	0.000	0.000	0.000	0.000		0.024	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	126.000	-17.788	0.000	8.875	0.000	0.000	0.000	0.000		0.024	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	128.000	-17.740	0.000	8.875	0.000	0.000	0.000	0.000		0.024	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	130.000	-17.692	0.000	8.875	0.000	0.000	0.000	0.000		0.024	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	132.000	-17.644	0.000	8.875	0.000	0.000	0.000	0.000		0.024	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	134.000	-17.596	0.000	8.875	0.000	0.000	0.000	0.000		0.022	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	136.000	-17.555	0.000	8.875	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
OF	138.000	-17.516	0.000	8.875	0.000	0.000	0.000	0.000		0.020	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	140.000	-17.477	0.000	8.875	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
OF	142.000	-17.438	0.000	8.875	0.000	0.000	0.000	0.000		0.020	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	144.000	-17.398	0.000	8.875	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
OF	146.000	-17.359	0.000	8.875	0.000	0.000	0.000	0.000		0.020	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	148.000	-17.320	0.000	8.875	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
OF	150.000	-17.281	0.000	8.875	0.000	0.000	0.000	0.000		0.020	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	152.000	-17.242	0.000	8.876	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
OF	154.000	-17.203	0.000	8.876	0.000	0.000	0.000	0.000		0.020	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	156.000	-17.164	0.000	8.876	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
OF	158.000	-17.125	0.000	8.876	0.000	0.000	0.000	0.000		0.020	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	160.000	-17.085	0.000	8.876	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
OF	162.000	-17.046	0.000	8.876	0.000	0.000	0.000	0.000		0.020	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	164.000	-17.007	0.000	8.876	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
OF	166.000	-16.968	0.000	8.876	0.000	0.000	0.000	0.000		0.020	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	168.000	-16.929	0.000	8.876	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
OF	170.000	-16.890	0.000	8.876	0.000	0.000	0.000	0.000		0.020	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	172.000	-16.851	0.000	8.876	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
OF	174.000	-16.811	0.000	8.876	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
OF	176.000	-16.772	0.000	8.876	0.000	0.000	0.000	0.000		0.020	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	178.000	-16.733	0.000	8.876	0.000	0.000	0.000	0.000		0.020	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	180.000	-16.694	0.000	8.876	0.000	0.000	0.000	0.000		0.020	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	182.000	-16.655	0.000	8.876	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
OF	184.000	-16.616	0.000	8.876	0.000	0.000	0.000	0.000		0.020	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	186.000	-16.577	0.000	8.876	0.000	0.000	0.000	0.000		0.020	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE

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	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	256.000	-15.207	0.000	8.876	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
OF	258.000	-15.168	0.000	8.876	0.000	0.000	0.000	0.000	0.020	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	260.000	-15.129	0.000	8.876	0.000	0.000	0.000	0.000	0.021	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	262.000	-15.085	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	264.000	-15.039	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	266.000	-14.993	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	268.000	-14.947	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	270.000	-14.900	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	272.000	-14.854	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	274.000	-14.808	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	276.000	-14.762	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	278.000	-14.716	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	280.000	-14.669	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	282.000	-14.623	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	284.000	-14.577	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	286.000	-14.531	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	288.000	-14.485	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	290.000	-14.438	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	292.000	-14.392	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	294.000	-14.346	0.000	8.876	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	296.000	-14.300	0.000	8.876	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
OF	298.000	-14.244	0.000	8.876	0.000	0.000	0.000	0.000	0.028	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	300.000	-14.187	0.000	8.876	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
OF	302.000	-14.130	0.000	8.876	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
OF	304.000	-14.073	0.000	8.876	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
OF	306.000	-14.016	0.000	8.876	0.000	0.000	0.000	0.000	0.028	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	308.000	-13.960	0.000	8.876	0.000	0.000	0.000	0.000	0.028	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	310.000	-13.903	0.000	8.876	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
OF	312.000	-13.846	0.000	8.876	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
OF	314.000	-13.789	0.000	8.876	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
OF	316.000	-13.732	0.000	8.876	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
OF	318.000	-13.675	0.000	8.876	0.000	0.000	0.000	0.000	0.028	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	320.000	-13.619	0.000	8.876	0.000	0.000	0.000	0.000	0.028	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	322.000	-13.562	0.000	8.876	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
OF	324.000	-13.505	0.000	8.876	0.000	0.000	0.000	0.000	0.029	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	326.000	-13.448	0.000	8.876	0.000	0.000	0.000	0.000	0.029	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	328.000	-13.391	0.000	8.876	0.000	0.000	0.000	0.000	0.028	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	330.000	-13.335	0.000	8.876	0.000	0.000	0.000	0.000	0.028	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	332.000	-13.278	0.000	8.876	0.000	0.000	0.000	0.000	0.029	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	334.000	-13.221	0.000	8.877	0.000	0.000	0.000	0.000	0.029	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	336.000	-13.164	0.000	8.877	0.000	0.000	0.000	0.000	0.029	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	338.000	-13.107	0.000	8.877	0.000	0.000	0.000	0.000	0.029	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	340.000	-13.050	0.000	8.877	0.000	0.000	0.000	0.000	0.028	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	342.000	-12.994	0.000	8.877	0.000	0.000	0.000	0.000	0.028	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	344.000	-12.937	0.000	8.877	0.000	0.000	0.000	0.000	0.029	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	346.000	-12.880	0.000	8.877	0.000	0.000	0.000	0.000	0.029	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	348.000	-12.823	0.000	8.877	0.000	0.000	0.000	0.000	0.029	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	350.000	-12.766	0.000	8.877	0.000	0.000	0.000	0.000	0.028	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	352.000	-12.710	0.000	8.877	0.000	0.000	0.000	0.000	0.028	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	354.000	-12.653	0.000	8.877	0.000	0.000	0.000	0.000	0.029	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	356.000	-12.596	0.000	8.877	0.000	0.000	0.000	0.000	0.029	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	358.000	-12.539	0.000	8.877	0.000	0.000	0.000	0.000	2.178	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	360.000	-3.884	0.000	8.877	0.000	0.000	0.000	0.000	2.166	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	362.000	-3.876	0.000	8.877	0.000	0.000	0.000	0.000	0.004	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	364.000	-3.867	0.000	8.877	0.000	0.000	0.000	0.000	0.004	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	366.000	-3.859	0.000	8.877	0.000	0.000	0.000	0.000	0.004	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	368.000	-3.851	0.000	8.877	0.000	0.000	0.000	0.000	0.004	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	370.000	-3.843	0.000	8.877	0.000	0.000	0.000	0.000	0.004	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	372.000	-3.834	0.000	8.877	0.000	0.000	0.000	0.000	0.004	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	374.000	-3.826	0.000	8.877	0.000	0.000	0.000	0.000	0.002	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	376.000	-3.826	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	378.000	-3.829	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	380.000	-3.831	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	382.000	-3.833	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	384.000	-3.835	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	386.000	-3.838	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	388.000	-3.840	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	390.000	-3.842	0.000	8.877	0.000	0.000	0.000	0.000	-0.001	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	

[illegible]

[illegible]

	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	528.000	-4.275	0.000	8.877	0.000	0.000	0.000	0.000	-0.010	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	530.000	-4.295	0.000	8.877	0.000	0.000	0.000	0.000	-0.010	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	532.000	-4.315	0.000	8.877	0.000	0.000	0.000	0.000	-0.009	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	534.000	-4.329	0.000	8.877	0.000	0.000	0.000	0.000	-0.003	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	536.000	-4.328	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	538.000	-4.328	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	540.000	-4.327	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	542.000	-4.326	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	544.000	-4.325	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	546.000	-4.325	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	548.000	-4.324	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	550.000	-4.323	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	552.000	-4.322	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	554.000	-4.321	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	556.000	-4.320	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	558.000	-4.320	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	560.000	-4.319	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	562.000	-4.318	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	564.000	-4.316	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	566.000	-4.315	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	568.000	-4.313	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	570.000	-4.312	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	572.000	-4.310	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	574.000	-4.309	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	576.000	-4.307	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	578.000	-4.306	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	580.000	-4.304	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	582.000	-4.303	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	584.000	-4.301	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	586.000	-4.300	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	588.000	-4.298	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	590.000	-4.297	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	592.000	-4.295	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
OF	594.000	-4.294	0.000	8.877	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE

	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	596.000	-4.292	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	598.000	-4.291	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	600.000	-4.289	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	602.000	-4.287	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	604.000	-4.286	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	606.000	-4.285	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	608.000	-4.283	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	610.000	-4.281	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	612.000	-4.280	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	614.000	-4.278	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	616.000	-4.277	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	618.000	-4.275	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	620.000	-4.274	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	622.000	-4.272	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	624.000	-4.271	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	626.000	-4.269	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	628.000	-4.268	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	630.000	-4.266	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	632.000	-4.265	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	634.000	-4.263	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	636.000	-4.262	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	638.000	-4.260	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	640.000	-4.259	0.000	8.877	0.000	0.000	0.000	0.000	0.000	-0.020	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	642.000	-4.339	0.000	8.877	0.000	0.000	0.000	0.000	0.000	-0.040	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	644.000	-4.420	0.000	8.877	0.000	0.000	0.000	0.000	0.000	-0.030	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	646.000	-4.458	0.000	8.877	0.000	0.000	0.000	0.000	0.000	-0.031	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	648.000	-4.545	0.000	8.877	0.000	0.000	0.000	0.000	0.000	-0.040	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	650.000	-4.617	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	652.000	-4.537	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.040	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	654.000	-4.459	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.019	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	656.000	-4.459	0.000	8.877	0.000	0.000	0.000	0.000	0.000	-0.008	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	658.000	-4.491	0.000	8.877	0.000	0.000	0.000	0.000	0.000	-0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	660.000	-4.464	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.042	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	662.000	-4.321	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.050	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE

	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	664.000	-4.262	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	666.000	-4.230	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.014	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	668.000	-4.205	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.003	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	670.000	-4.217	0.000	8.877	0.000	0.000	0.000	0.000	0.000	-0.011	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	672.000	-4.249	0.000	8.877	0.000	0.000	0.000	0.000	0.000	-0.005	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	674.000	-4.236	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.021	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	676.000	-4.166	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	678.000	-4.027	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.048	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	680.000	-3.974	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.009	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	682.000	-3.993	0.000	8.877	0.000	0.000	0.000	0.000	0.000	-0.021	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	684.000	-4.057	0.000	8.877	0.000	0.000	0.000	0.000	0.000	-0.031	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	686.000	-4.115	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.021	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	688.000	-3.975	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.048	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	690.000	-3.922	0.000	8.877	0.000	0.000	0.000	0.000	0.000	-0.002	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	692.000	-3.981	0.000	8.877	0.000	0.000	0.000	0.000	0.000	-0.006	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	694.000	-3.946	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.041	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	696.000	-3.818	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.063	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	698.000	-3.695	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.025	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	700.000	-3.718	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.009	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	702.000	-3.661	0.000	8.877	0.000	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	704.000	-3.700	0.000	8.877	0.000	0.000	0.000	0.000	0.000	-0.012	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	706.000	-3.710	0.000	8.878	0.000	0.000	0.000	0.000	0.000	0.008	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	708.000	-3.668	0.000	8.878	0.000	0.000	0.000	0.000	0.000	0.036	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	710.000	-3.564	0.000	8.878	0.000	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	712.000	-3.461	0.000	8.878	0.000	0.000	0.000	0.000	0.000	0.041	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	714.000	-3.400	0.000	8.878	0.000	0.000	0.000	0.000	0.000	0.029	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	716.000	-3.344	0.000	8.878	0.000	0.000	0.000	0.000	0.000	0.010	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	718.000	-3.361	0.000	8.878	0.000	0.000	0.000	0.000	0.000	-0.037	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	720.000	-3.493	0.000	8.878	0.000	0.000	0.000	0.000	0.000	-0.061	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	722.000	-3.605	0.000	8.878	0.000	0.000	0.000	0.000	0.000	-0.072	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	724.000	-3.780	0.000	8.878	0.000	0.000	0.000	0.000	0.000	-0.097	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	726.000	-3.993	0.000	8.878	0.000	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
	728.000	-4.184	0.000	8.878	0.000	0.000	0.000	0.000	0.000	-0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
OF	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
	730.000	-4.199	0.000	8.878	0.000	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
OF	732.000	-4.176	0.000	8.878	0.000	0.000	0.000	0.000	0.020	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	734.000	-4.119	0.000	8.879	0.000	0.000	0.000	0.000	0.018	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	736.000	-4.106	0.000	8.879	0.000	0.000	0.000	0.000	0.022	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	738.000	-4.032	0.000	8.879	0.000	0.000	0.000	0.000	0.050	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	740.000	-3.907	0.000	8.879	0.000	0.000	0.000	0.000	0.079	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	742.000	-3.716	0.000	8.879	0.000	0.000	0.000	0.000	0.090	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	744.000	-3.546	0.000	8.880	0.000	0.000	0.000	0.000	0.042	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	746.000	-3.549	0.000	8.880	0.000	0.000	0.000	0.000	0.009	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	748.000	-3.511	0.000	8.880	0.000	0.000	0.000	0.000	0.041	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	750.000	-3.385	0.000	8.880	0.000	0.000	0.000	0.000	0.069	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	752.000	-3.235	0.000	8.880	0.000	0.000	0.000	0.000	0.070	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	754.000	-3.106	0.000	8.881	0.000	0.000	0.000	0.000	0.067	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	756.000	-2.968	0.000	8.881	0.000	0.000	0.000	0.000	0.062	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	758.000	-2.858	0.000	8.881	0.000	0.000	0.000	0.000	0.051	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	760.000	-2.766	0.000	8.881	0.000	0.000	0.000	0.000	0.057	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	762.000	-2.630	0.000	8.881	0.000	0.000	0.000	0.000	0.086	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	764.000	-2.420	0.000	8.882	0.000	0.000	0.000	0.000	0.109	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	766.000	-2.194	0.000	8.882	0.000	0.000	0.000	0.000	0.093	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	768.000	-2.046	0.000	8.882	0.000	0.000	0.000	0.000	0.055	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	770.000	-1.975	0.000	8.882	0.000	0.000	0.000	0.000	0.040	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	772.000	-1.885	0.000	8.882	0.000	0.000	0.000	0.000	0.044	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	774.000	-1.799	0.000	8.883	0.000	0.000	0.000	0.000	0.095	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	776.000	-1.504	0.000	8.883	0.000	0.000	0.000	0.000	0.146	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	778.000	-1.214	0.000	8.883	0.000	0.000	0.000	0.000	0.120	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	780.000	-1.026	0.000	8.883	0.000	0.000	0.000	0.000	0.095	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	782.000	-0.835	0.000	8.883	0.000	0.000	0.000	0.000	0.121	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	784.000	-0.540	0.000	8.884	0.000	0.000	0.000	0.000	0.153	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
OF	786.000	-0.224	0.000	8.884	0.000	0.000	0.000	0.000	0.139	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
IF	788.000	0.016	0.000	8.884	0.000	0.000	0.000	0.000	0.119	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
IF	790.000	0.251	0.000	8.884	0.000	0.000	0.000	0.000	0.097	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
IF	792.000	0.403	0.000	8.884	0.000	0.000	0.000	0.000	0.090	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
IF	794.000	0.611	0.000	8.885	0.000	0.000	0.000	0.000	0.119	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
IF	796.000	0.879	0.000	8.885	0.000	0.000	0.000	0.000	0.116	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	
IF	798.000	1.076	0.000	8.885	0.000	0.000	0.000	0.000	0.079	0.000	
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE	

IF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	800.000	1.194	0.000	8.885	0.000	0.000	0.000	0.000	0.059	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
IF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	802.000	1.312	0.000	8.885	0.000	0.000	0.000	0.000	0.075	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
IF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	804.000	1.495	0.000	8.886	0.000	0.000	0.000	0.000	0.089	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
IF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	806.000	1.669	0.000	8.886	0.000	0.000	0.000	0.000	0.102	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
IF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	808.000	1.903	0.000	8.886	0.000	0.000	0.000	0.000	0.131	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
IF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	810.000	2.193	0.000	8.886	0.000	0.000	0.000	0.000	0.138	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
IF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	812.000	2.454	0.000	8.887	0.000	0.000	0.000	0.000	0.126	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
IF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	814.000	2.699	0.000	8.887	0.000	0.000	0.000	0.000	0.130	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
IF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	816.900	3.089	0.000	8.875	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
IF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	820.200	3.466	0.000	8.888	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
IF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	823.500	3.727	0.000	8.907	0.000	0.000	0.000	0.000	0.092	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
IF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	826.800	4.070	0.000	8.925	0.000	0.000	0.000	0.000	0.111	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
IF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	830.100	4.459	0.000	8.947	0.000	0.000	0.000	0.000	0.149	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
IF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	833.300	5.040	0.000	8.979	0.000	0.000	0.000	0.000	0.119	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
IF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	836.600	5.233	0.000	9.020	0.000	0.000	0.000	0.000	0.081	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
IF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	839.900	5.577	0.000	9.059	0.000	0.000	0.000	0.000	0.119	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
IF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	843.200	6.018	0.000	9.097	0.000	0.000	0.000	0.000	0.213	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
IF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	846.500	6.980	0.000	9.132	0.000	0.000	0.000	0.000	0.405	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
IF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	849.700	8.653	0.000	9.510	0.000	0.000	0.000	0.000	0.575	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
IF	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
	850.900	9.510	0.000	9.510	0.000	0.000	0.000	0.000	0.715	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	SPECTRAL PEAK	WAVE CREST		
		WAVE HEIGHT	WAVE PERIOD	ELEVATION		
IE	0.00	8.11	7.95	14.55		
OF	2.00	8.11	7.95	14.55		
OF	4.00	8.11	7.95	14.55		
OF	6.00	8.11	7.95	14.55		
OF	8.00	8.11	7.95	14.55		
OF	10.00	8.12	7.95	14.55		
OF	12.00	8.12	7.95	14.56		
OF	14.00	8.12	7.95	14.56		
OF	16.00	8.12	7.95	14.56		
OF	18.00	8.12	7.95	14.56		
OF	20.00	8.12	7.95	14.56		
OF	22.00	8.12	7.95	14.56		
OF	24.00	8.13	7.95	14.56		
OF	26.00	8.13	7.95	14.56		
OF	28.00	8.13	7.95	14.56		
OF	30.00	8.13	7.95	14.57		
OF	32.00	8.13	7.95	14.57		
OF	34.00	8.13	7.95	14.57		
OF	36.00	8.13	7.95	14.57		
OF	38.00	8.14	7.95	14.57		
OF	40.00	8.14	7.95	14.57		
OF	42.00	8.14	7.95	14.57		
OF	44.00	8.14	7.95	14.57		
OF	46.00	8.14	7.95	14.57		
OF	48.00	8.14	7.95	14.58		
OF	50.00	8.15	7.95	14.58		
OF	52.00	8.15	7.95	14.58		
OF	54.00	8.15	7.95	14.58		
OF	56.00	8.15	7.95	14.58		
OF	58.00	8.15	7.95	14.58		
OF	60.00	8.15	7.95	14.58		
OF	62.00	8.15	7.95	14.58		
OF	64.00	8.16	7.95	14.58		
OF	66.00	8.16	7.95	14.59		
OF	68.00	8.16	7.95	14.59		

OF	70.00	8.16	7.95	14.59
OF	72.00	8.16	7.95	14.59
OF	74.00	8.16	7.95	14.59
OF	76.00	8.17	7.95	14.59
OF	78.00	8.17	7.95	14.59
OF	80.00	8.17	7.95	14.60
OF	82.00	8.18	7.95	14.60
OF	84.00	8.18	7.95	14.60
OF	86.00	8.18	7.95	14.60
OF	88.00	8.18	7.95	14.60
OF	90.00	8.19	7.95	14.61
OF	92.00	8.19	7.95	14.61
OF	94.00	8.19	7.95	14.61
OF	96.00	8.20	7.95	14.61
OF	98.00	8.20	7.95	14.61
OF	100.00	8.20	7.95	14.62
OF	102.00	8.20	7.95	14.62
OF	104.00	8.21	7.95	14.62
OF	106.00	8.21	7.95	14.62
OF	108.00	8.21	7.95	14.62
OF	110.00	8.22	7.95	14.63
OF	112.00	8.22	7.95	14.63
OF	114.00	8.22	7.95	14.63
OF	116.00	8.22	7.95	14.63
OF	118.00	8.23	7.95	14.63
OF	120.00	8.23	7.95	14.64
OF	122.00	8.23	7.95	14.64
OF	124.00	8.24	7.95	14.64
OF	126.00	8.24	7.95	14.64
OF	128.00	8.24	7.95	14.65
OF	130.00	8.25	7.95	14.65
OF	132.00	8.25	7.95	14.65
OF	134.00	8.25	7.95	14.65
OF	136.00	8.25	7.95	14.65
OF	138.00	8.26	7.95	14.66
OF	140.00	8.26	7.95	14.66
OF	142.00	8.26	7.95	14.66
OF	144.00	8.27	7.95	14.66
OF	146.00	8.27	7.95	14.66
OF	148.00	8.27	7.95	14.66
OF	150.00	8.27	7.95	14.67
OF	152.00	8.28	7.95	14.67
OF	154.00	8.28	7.95	14.67
OF	156.00	8.28	7.95	14.67
OF	158.00	8.28	7.95	14.67
OF	160.00	8.29	7.95	14.68
OF	162.00	8.29	7.95	14.68
OF	164.00	8.29	7.95	14.68
OF	166.00	8.29	7.95	14.68
OF	168.00	8.30	7.95	14.68
OF	170.00	8.30	7.95	14.69
OF	172.00	8.30	7.95	14.69
OF	174.00	8.31	7.95	14.69
OF	176.00	8.31	7.95	14.69
OF	178.00	8.31	7.95	14.69
OF	180.00	8.31	7.95	14.70
OF	182.00	8.32	7.95	14.70
OF	184.00	8.32	7.95	14.70
OF	186.00	8.32	7.95	14.70
OF	188.00	8.32	7.95	14.70
OF	190.00	8.33	7.95	14.70
OF	192.00	8.33	7.95	14.71
OF	194.00	8.33	7.95	14.71
OF	196.00	8.34	7.95	14.71
OF	198.00	8.34	7.95	14.71
OF	200.00	8.34	7.95	14.71
OF	202.00	8.34	7.95	14.72
OF	204.00	8.35	7.95	14.72
OF	206.00	8.35	7.95	14.72
OF	208.00	8.35	7.95	14.72
OF	210.00	8.36	7.95	14.72
OF	212.00	8.36	7.95	14.73
OF	214.00	8.36	7.95	14.73
OF	216.00	8.36	7.95	14.73
OF	218.00	8.37	7.95	14.73
OF	220.00	8.37	7.95	14.73
OF	222.00	8.37	7.95	14.74
OF	224.00	8.38	7.95	14.74
OF	226.00	8.38	7.95	14.74
OF	228.00	8.38	7.95	14.74
OF	230.00	8.38	7.95	14.74
OF	232.00	8.39	7.95	14.75
OF	234.00	8.39	7.95	14.75
OF	236.00	8.39	7.95	14.75
OF	238.00	8.40	7.95	14.75
OF	240.00	8.40	7.95	14.76
OF	242.00	8.40	7.95	14.76
OF	244.00	8.41	7.95	14.76
OF	246.00	8.41	7.95	14.76
OF	248.00	8.41	7.95	14.76
OF	250.00	8.41	7.95	14.77
OF	252.00	8.42	7.95	14.77
OF	254.00	8.42	7.95	14.77
OF	256.00	8.42	7.95	14.77
OF	258.00	8.43	7.95	14.77
OF	260.00	8.43	7.95	14.78
OF	262.00	8.43	7.95	14.78
OF	264.00	8.44	7.95	14.78
OF	266.00	8.44	7.95	14.78
OF	268.00	8.44	7.95	14.79
OF	270.00	8.45	7.95	14.79
OF	272.00	8.45	7.95	14.79

OF	274.00	8.45	7.95	14.79
OF	276.00	8.46	7.95	14.80
OF	278.00	8.46	7.95	14.80
OF	280.00	8.47	7.95	14.80
OF	282.00	8.47	7.95	14.80
OF	284.00	8.47	7.95	14.81
OF	286.00	8.48	7.95	14.81
OF	288.00	8.48	7.95	14.81
OF	290.00	8.48	7.95	14.82
OF	292.00	8.49	7.95	14.82
OF	294.00	8.49	7.95	14.82
OF	296.00	8.50	7.95	14.82
OF	298.00	8.50	7.95	14.83
OF	300.00	8.51	7.95	14.83
OF	302.00	8.51	7.95	14.83
OF	304.00	8.51	7.95	14.84
OF	306.00	8.52	7.95	14.84
OF	308.00	8.52	7.95	14.84
OF	310.00	8.53	7.95	14.85
OF	312.00	8.53	7.95	14.85
OF	314.00	8.54	7.95	14.85
OF	316.00	8.54	7.95	14.86
OF	318.00	8.55	7.95	14.86
OF	320.00	8.55	7.95	14.86
OF	322.00	8.56	7.95	14.87
OF	324.00	8.56	7.95	14.87
OF	326.00	8.57	7.95	14.87
OF	328.00	8.57	7.95	14.88
OF	330.00	8.58	7.95	14.88
OF	332.00	8.58	7.95	14.88
OF	334.00	8.59	7.95	14.89
OF	336.00	8.59	7.95	14.89
OF	338.00	8.60	7.95	14.90
OF	340.00	8.60	7.95	14.90
OF	342.00	8.61	7.95	14.90
OF	344.00	8.61	7.95	14.91
OF	346.00	8.62	7.95	14.91
OF	348.00	8.62	7.95	14.91
OF	350.00	8.63	7.95	14.92
OF	352.00	8.64	7.95	14.92
OF	354.00	8.64	7.95	14.93
OF	356.00	8.65	7.95	14.93
OF	358.00	8.65	7.95	14.93
OF	360.00	8.90	7.95	15.11
OF	362.00	8.90	7.95	15.11
OF	364.00	8.90	7.95	15.11
OF	366.00	8.90	7.95	15.11
OF	368.00	8.90	7.95	15.11
OF	370.00	8.90	7.95	15.11
OF	372.00	8.90	7.95	15.11
OF	374.00	8.90	7.95	15.11
OF	376.00	8.91	7.95	15.11
OF	378.00	8.91	7.95	15.11
OF	380.00	8.91	7.95	15.11
OF	382.00	8.91	7.95	15.12
OF	384.00	8.91	7.95	15.12
OF	386.00	8.92	7.95	15.12
OF	388.00	8.92	7.95	15.12
OF	390.00	8.92	7.95	15.12
OF	392.00	8.92	7.95	15.12
OF	394.00	8.93	7.95	15.13
OF	396.00	8.93	7.95	15.13
OF	398.00	8.93	7.95	15.13
OF	400.00	8.93	7.95	15.13
OF	402.00	8.94	7.95	15.13
OF	404.00	8.94	7.95	15.13
OF	406.00	8.94	7.95	15.14
OF	408.00	8.94	7.95	15.14
OF	410.00	8.95	7.95	15.14
OF	412.00	8.95	7.95	15.14
OF	414.00	8.95	7.95	15.14
OF	416.00	8.95	7.95	15.14
OF	418.00	8.95	7.95	15.15
OF	420.00	8.96	7.95	15.15
OF	422.00	8.96	7.95	15.15
OF	424.00	8.96	7.95	15.15
OF	426.00	8.96	7.95	15.15
OF	428.00	8.97	7.95	15.15
OF	430.00	8.97	7.95	15.16
OF	432.00	8.97	7.95	15.16
OF	434.00	8.97	7.95	15.16
OF	436.00	8.98	7.95	15.16
OF	438.00	8.98	7.95	15.16
OF	440.00	8.98	7.95	15.16
OF	442.00	8.98	7.95	15.17
OF	444.00	8.99	7.95	15.17
OF	446.00	8.99	7.95	15.17
OF	448.00	8.99	7.95	15.17
OF	450.00	8.99	7.95	15.17
OF	452.00	9.00	7.95	15.17
OF	454.00	9.00	7.95	15.18
OF	456.00	9.00	7.95	15.18
OF	458.00	9.01	7.95	15.18
OF	460.00	9.01	7.95	15.19
OF	462.00	9.02	7.95	15.19
OF	464.00	9.02	7.95	15.19
OF	466.00	9.03	7.95	15.20
OF	468.00	9.03	7.95	15.20
OF	470.00	9.04	7.95	15.20
OF	472.00	9.04	7.95	15.21
OF	474.00	9.05	7.95	15.21
OF	476.00	9.05	7.95	15.21

OF	478.00	9.05	7.95	15.22
OF	480.00	9.06	7.95	15.22
OF	482.00	9.06	7.95	15.22
OF	484.00	9.07	7.95	15.22
OF	486.00	9.07	7.95	15.23
OF	488.00	9.08	7.95	15.23
OF	490.00	9.08	7.95	15.23
OF	492.00	9.09	7.95	15.24
OF	494.00	9.09	7.95	15.24
OF	496.00	9.10	7.95	15.24
OF	498.00	9.10	7.95	15.25
OF	500.00	9.10	7.95	15.25
OF	502.00	9.11	7.95	15.25
OF	504.00	9.11	7.95	15.26
OF	506.00	9.12	7.95	15.26
OF	508.00	9.12	7.95	15.26
OF	510.00	9.13	7.95	15.27
OF	512.00	9.13	7.95	15.27
OF	514.00	9.13	7.95	15.27
OF	516.00	9.13	7.95	15.27
OF	518.00	9.13	7.95	15.27
OF	520.00	9.13	7.95	15.27
OF	522.00	9.13	7.95	15.26
OF	524.00	9.13	7.95	15.27
OF	526.00	9.13	7.95	15.27
OF	528.00	9.14	7.95	15.27
OF	530.00	9.15	7.95	15.28
OF	532.00	9.15	7.95	15.28
OF	534.00	9.16	7.95	15.29
OF	536.00	9.16	7.95	15.29
OF	538.00	9.16	7.95	15.29
OF	540.00	9.16	7.95	15.29
OF	542.00	9.16	7.95	15.29
OF	544.00	9.17	7.95	15.29
OF	546.00	9.17	7.95	15.29
OF	548.00	9.17	7.95	15.30
OF	550.00	9.17	7.95	15.30
OF	552.00	9.17	7.95	15.30
OF	554.00	9.17	7.95	15.30
OF	556.00	9.18	7.95	15.30
OF	558.00	9.18	7.95	15.30
OF	560.00	9.18	7.95	15.30
OF	562.00	9.18	7.95	15.30
OF	564.00	9.18	7.95	15.31
OF	566.00	9.18	7.95	15.31
OF	568.00	9.19	7.95	15.31
OF	570.00	9.19	7.95	15.31
OF	572.00	9.19	7.95	15.31
OF	574.00	9.19	7.95	15.31
OF	576.00	9.19	7.95	15.31
OF	578.00	9.19	7.95	15.31
OF	580.00	9.20	7.95	15.31
OF	582.00	9.20	7.95	15.32
OF	584.00	9.20	7.95	15.32
OF	586.00	9.20	7.95	15.32
OF	588.00	9.20	7.95	15.32
OF	590.00	9.21	7.95	15.32
OF	592.00	9.21	7.95	15.32
OF	594.00	9.21	7.95	15.32
OF	596.00	9.21	7.95	15.32
OF	598.00	9.21	7.95	15.33
OF	600.00	9.21	7.95	15.33
OF	602.00	9.21	7.95	15.33
OF	604.00	9.22	7.95	15.33
OF	606.00	9.22	7.95	15.33
OF	608.00	9.22	7.95	15.33
OF	610.00	9.22	7.95	15.33
OF	612.00	9.22	7.95	15.33
OF	614.00	9.22	7.95	15.33
OF	616.00	9.23	7.95	15.34
OF	618.00	9.23	7.95	15.34
OF	620.00	9.23	7.95	15.34
OF	622.00	9.23	7.95	15.34
OF	624.00	9.23	7.95	15.34
OF	626.00	9.24	7.95	15.34
OF	628.00	9.24	7.95	15.34
OF	630.00	9.24	7.95	15.34
OF	632.00	9.24	7.95	15.35
OF	634.00	9.24	7.95	15.35
OF	636.00	9.24	7.95	15.35
OF	638.00	9.25	7.95	15.35
OF	640.00	9.25	7.95	15.35
OF	642.00	9.26	7.95	15.36
OF	644.00	9.28	7.95	15.38
OF	646.00	9.29	7.95	15.38
OF	648.00	9.31	7.95	15.39
OF	650.00	9.33	7.95	15.41
OF	652.00	9.31	7.95	15.40
OF	654.00	9.30	7.95	15.39
OF	656.00	9.30	7.95	15.39
OF	658.00	9.31	7.95	15.39
OF	660.00	9.31	7.95	15.39
OF	662.00	9.28	7.95	15.37
OF	664.00	9.27	7.95	15.37
OF	666.00	9.27	7.95	15.36
OF	668.00	9.27	7.95	15.37
OF	670.00	9.27	7.95	15.36
OF	672.00	9.27	7.95	15.37
OF	674.00	9.27	7.95	15.37
OF	676.00	9.28	7.95	15.37
OF	678.00	9.30	7.95	15.39
OF	680.00	9.31	7.95	15.39

OF	682.00	9.30	7.95	15.39
OF	684.00	9.30	7.95	15.38
OF	686.00	9.29	7.95	15.38
OF	688.00	9.31	7.95	15.39
OF	690.00	9.31	7.95	15.40
OF	692.00	9.31	7.95	15.39
OF	694.00	9.31	7.95	15.39
OF	696.00	9.32	7.95	15.40
OF	698.00	9.24	7.95	15.34
OF	700.00	9.23	7.95	15.34
OF	702.00	9.21	7.95	15.33
OF	704.00	9.21	7.95	15.32
OF	706.00	9.20	7.95	15.32
OF	708.00	9.21	7.95	15.33
OF	710.00	9.15	7.95	15.28
OF	712.00	9.07	7.95	15.23
OF	714.00	9.03	7.95	15.20
OF	716.00	8.99	7.95	15.17
OF	718.00	8.99	7.95	15.17
OF	720.00	8.97	7.95	15.16
OF	722.00	8.95	7.95	15.15
OF	724.00	8.95	7.95	15.14
OF	726.00	9.00	7.95	15.18
OF	728.00	9.04	7.95	15.20
OF	730.00	9.04	7.95	15.21
OF	732.00	9.04	7.95	15.20
OF	734.00	9.03	7.95	15.20
OF	736.00	9.03	7.95	15.20
OF	738.00	9.02	7.95	15.19
OF	740.00	8.99	7.95	15.17
OF	742.00	8.97	7.95	15.16
OF	744.00	8.99	7.95	15.18
OF	746.00	8.99	7.95	15.17
OF	748.00	9.00	7.95	15.18
OF	750.00	9.02	7.95	15.19
OF	752.00	8.92	7.95	15.12
OF	754.00	8.83	7.95	15.06
OF	756.00	8.73	7.95	15.00
OF	758.00	8.66	7.95	14.94
OF	760.00	8.59	7.95	14.90
OF	762.00	8.50	7.95	14.83
OF	764.00	8.35	7.95	14.73
OF	766.00	8.19	7.95	14.62
OF	768.00	8.09	7.95	14.55
OF	770.00	8.04	7.95	14.51
OF	772.00	7.98	7.95	14.47
OF	774.00	7.92	7.95	14.43
OF	776.00	7.71	7.95	14.28
OF	778.00	7.50	7.95	14.14
OF	780.00	7.37	7.95	14.04
OF	782.00	7.24	7.95	13.95
OF	784.00	7.03	7.95	13.80
OF	786.00	6.80	7.95	13.65
IF	788.00	6.63	7.95	13.52
IF	790.00	6.46	7.95	13.41
IF	792.00	6.35	7.95	13.33
IF	794.00	6.20	7.95	13.23
IF	796.00	6.01	7.95	13.09
IF	798.00	5.87	7.95	12.99
IF	800.00	5.78	7.95	12.93
IF	802.00	5.70	7.95	12.87
IF	804.00	5.56	7.95	12.78
IF	806.00	5.44	7.95	12.69
IF	808.00	5.27	7.95	12.57
IF	810.00	5.06	7.95	12.42
IF	812.00	4.87	7.95	12.29
IF	814.00	4.69	7.95	12.17
IF	816.90	4.39	7.95	11.95
IF	820.20	4.12	7.95	11.77
IF	823.50	3.94	7.95	11.67
IF	826.80	3.70	7.95	11.51
IF	830.10	3.43	7.95	11.35
IF	833.30	3.01	7.95	11.09
IF	836.60	2.90	7.95	11.05
IF	839.90	2.67	7.95	10.93
IF	843.20	2.37	7.95	10.75
IF	846.50	1.66	7.95	10.29
IF	849.70	0.67	7.95	9.98
IF	850.90	0.01	7.95	9.52

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

STATION	10-YEAR SURGE	100-YEAR SURGE
44.00	1.00	8.88
152.00	1.00	8.88
334.00	1.00	8.88
706.00	1.00	8.88
734.00	1.00	8.88
744.00	1.00	8.88
754.00	1.00	8.88
764.00	1.00	8.88
774.00	1.00	8.88
784.00	1.00	8.88
794.00	1.00	8.89
804.00	1.00	8.89
812.00	1.00	8.89
816.90	1.00	8.88
820.20	1.00	8.89
823.50	1.00	8.91
826.80	1.00	8.93
830.10	1.00	8.95
833.30	1.00	8.98

836.60	1.00	9.02
839.90	1.00	9.06
843.20	1.00	9.10
846.50	1.00	9.13
849.70	1.00	9.51

PART5 LOCATION OF V ZONES		LOCATION OF ZONE		
STATION OF GUTTER				
833.72		WINDWARD		
PART6 NUMBERED A ZONES AND V ZONES				
STATION OF GUTTER	ELEVATION	ZONE DESIGNATION		FHF
0.00	14.55			
42.00	14.57	V22 EL=15		120
44.00	14.57	V22 EL=15		120
150.00	14.67	V22 EL=15		120
152.00	14.67	V22 EL=15		120
332.00	14.88	V22 EL=15		120
334.00	14.89	V22 EL=15		120
704.00	15.32	V22 EL=15		120
706.00	15.32	V22 EL=15		120
732.00	15.20	V22 EL=15		120
734.00	15.20	V22 EL=15		120
742.00	15.16	V22 EL=15		120
744.00	15.18	V22 EL=15		120
752.00	15.12	V22 EL=15		120
754.00	15.06	V22 EL=15		120
762.00	14.83	V22 EL=15		120
764.00	14.73	V22 EL=15		120
770.48	14.50	V22 EL=14		120
772.00	14.47	V22 EL=14		120
774.00	14.43	V22 EL=14		120
782.00	13.95	V22 EL=14		120
784.00	13.80	V22 EL=14		120
788.42	13.50	V22 EL=13		120
792.00	13.33	V22 EL=13		120
794.00	13.23	V22 EL=13		120
802.00	12.87	V22 EL=13		120
804.00	12.78	V22 EL=13		120
808.99	12.50	V22 EL=12		120
810.00	12.42	V22 EL=12		120
812.00	12.29	V22 EL=12		120
814.00	12.17	V22 EL=12		120
816.90	11.95	V22 EL=12		120
820.20	11.77	V22 EL=12		120
823.50	11.67	V22 EL=12		120
826.80	11.51	V22 EL=12		120
827.08	11.50	V22 EL=11		120
830.10	11.35	V22 EL=11		120
833.30	11.09	V22 EL=11		120
833.72	11.10	A19 EL=11		95
836.60	11.05	A19 EL=11		95
839.90	10.93	A19 EL=11		95
843.20	10.75	A19 EL=11		95
845.02	10.50	A19 EL=10		95
846.50	10.29	A19 EL=10		95
849.70	9.98	A19 EL=10		95
850.90	9.52			

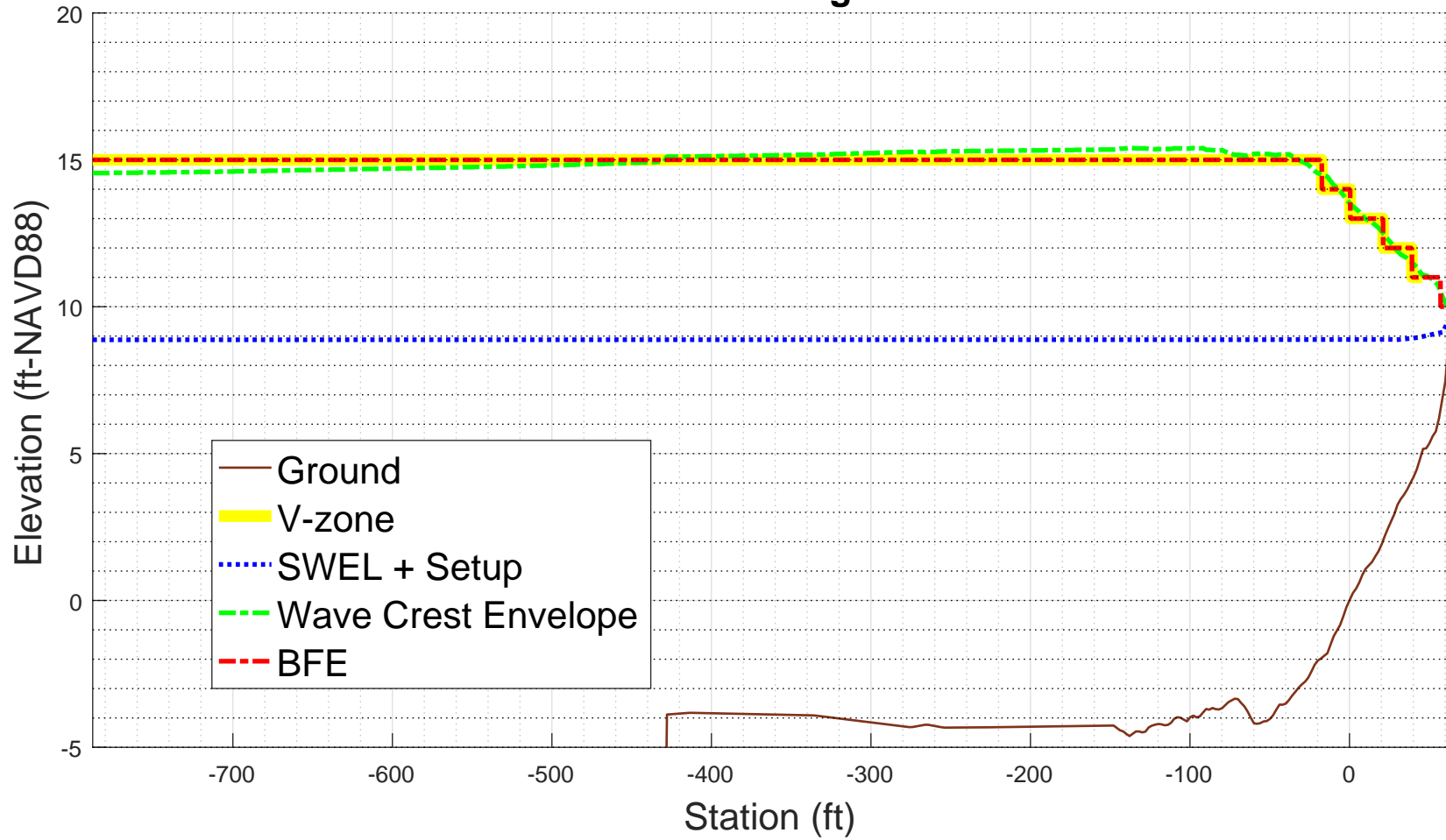
ZONE TERMINATED AT END OF TRANSECT

PART 7 POSTSCRIPT NOTES

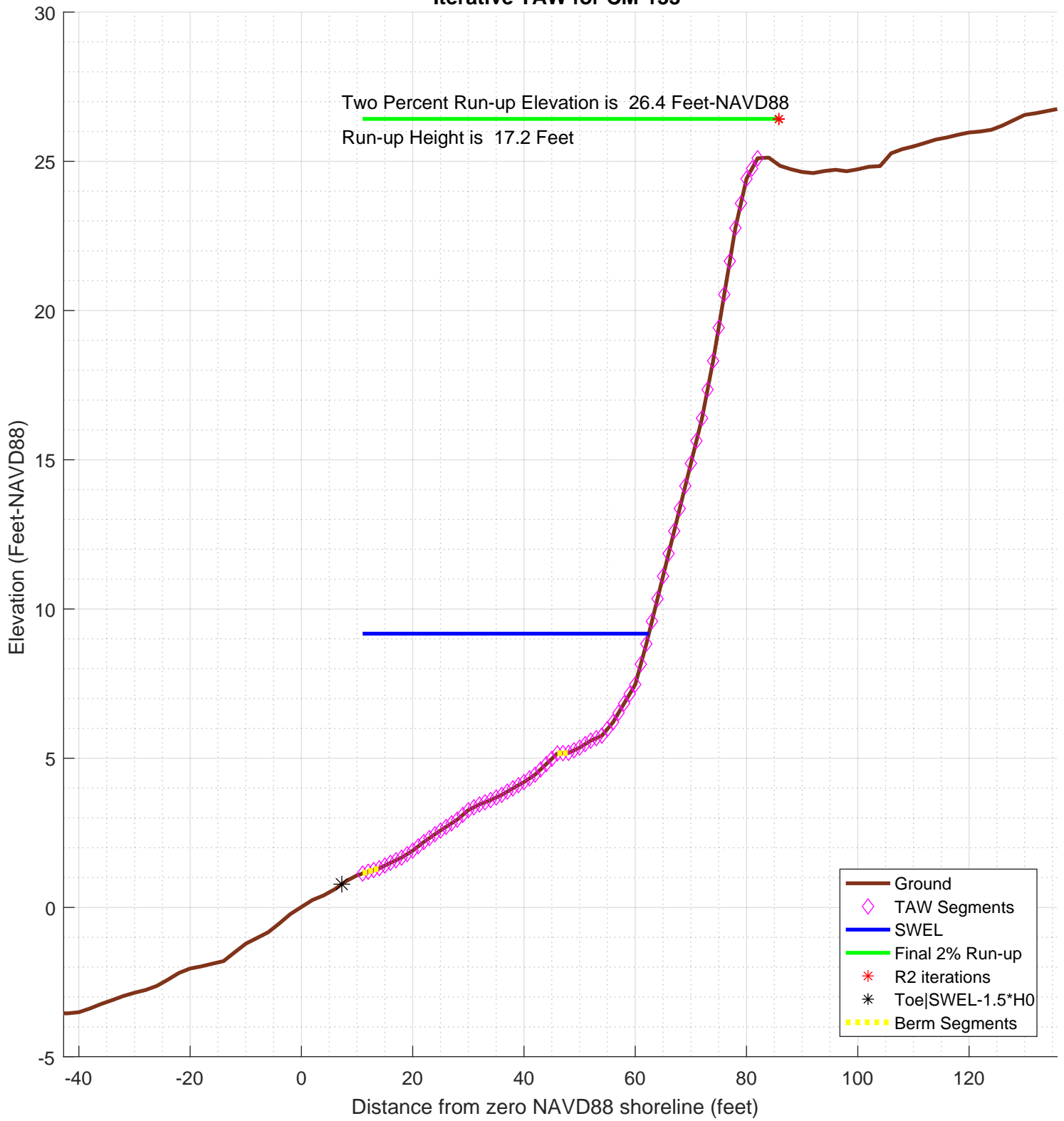
PS# 1 START(420980.7324,4848542.1717)
PS# 2 END(421005.6784,4848812.8271)

-1.000000e+00

CM-133
100-year WHAFIS Output
Zero Station: -69.98182745, 43.78787403
Onshore Dir: 84.7 deg CCW from E



Iterative TAW for CM-133




```

diary on          % begin recording

% FEMA appeal for The Town of Harpswell, Cumberland county, Maine
% TRANSECT ID: CM-133
% 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-133sta_ele_include.csv'; % file with station, elevation, include
                                         % third column is 0 for excluded points
imgname='logfiles/CM-133-runup';
SWEL=8.8742; % 100-yr still water level including wave setup.
H0=5.3885; % significant wave height at toe of structure
Tp=7.957; % peak period, 1/fma,
T0=Tp/1.1;

gamma_berm=0.97614; % this may get changed automatically below
gamma_rough=1;
gamma_beta=1;
gamma_perm=1;

setupAtToe=-0.011821;
maxSetup=0.63595; % only used in case of berm/shallow foreshore weighted average

plotTitle='Iterative TAW for CM-133'

plotTitle =

Iterative TAW for CM-133

% END CONFIG
%-----

SWEL=SWEL+setupAtToe

SWEL =

8.862379

SWEL_fore=SWEL+maxSetup

SWEL_fore =

9.498329

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

L0 =

267.740737115654

% 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 =

    0.7796290000000002

% 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 =

    16.945129

% 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 =

    7.25831657355681

top_sta =

    72.5770132030357

% 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

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

top_sta =

    72.5770132030357

toe_sta

toe_sta =

    7.25831657355681

% 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 106.9 ft landward of toe of slope

ans =

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

ans =

-!!!-      setup is adjusted to 0.30 feet

ans =

-!!!-      SWEL is adjusted to 9.17 feet

k =

1
2
3
4
5
6
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54
55

```

```

% 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('!!! - - Iribarren number: %6.2f is outside the valid range (0.5-10), TAW NOT VALID - - !!!\n', Irb*gamma_berm)
        TAW_VALID=0;
    else
        sprintf('!!! - - Iribarren 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
        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

```

```

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 =
    0.779629000000002
toe_sta =
    7.25831657355681
top_sta =
    72.5770132030357
Z2 =
    16.945129
H0 =
    5.3885
Tp =
    7.957
T0 =
    7.23363636363636
R2 =
    16.1655
Z2 =
    25.3385393291962
top_sta =
    82.680816986195
Lslope =
    75.4225004126382
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 1
dh =
    8.00806432919624
rdh_sum =
    0.845772093619118
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 2
dh =
    7.94908932919624
rdh_sum =
    1.68528431013154
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 3
dh =
    7.89018932919624
rdh_sum =
    2.51844445866523
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 36
dh =
    4.00816432919624
rdh_sum =
    2.82263918920194
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 37
dh =
    3.99901432919624
rdh_sum =
    3.12560748251423
ans =
!----- End Berm Factor Calculation, Iter: 1 -----!
berm_width =
    5
rB =
    0.0662932145267644
rdh_mean =
    0.625121496502846
gamma_berm =
    0.975148098946191
slope =
    0.348736698999527
Irb =
    2.45822106627126
gamma_berm =
    0.975148098946191
gamma_perm =
    1
gamma_beta =
    1
gamma_rough =
    1
gamma =
    0.975148098946191
ans =
!!! - - Iribaren number: 2.40 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:2.9 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =

```

```

R2del = 17.2324563960187
Z2 = 1.06695639601867
26.4054957252149
ans =
!----- STARTING ITERATION 2 -----!
Ztoe = 0.779629000000002
toe_sta = 7.25831657355681
top_sta = 85.7792819085666
Z2 = 26.4054957252149
H0 = 5.3885
Tp = 7.957
T0 = 7.23363636363636
R2 = 17.2324563960187
Z2 = 26.4054957252149
top_sta = 85.7792819085666
Lslope = 78.5209653350098
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 1
dh = 8.00806432919624
rdh_sum = 0.845772093619118
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 2
dh = 7.94908932919624
rdh_sum = 1.68528431013154
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 3
dh = 7.89018932919624
rdh_sum = 2.51844445866523
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 36
dh = 4.00816432919624
rdh_sum = 2.82263918920194
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 37
dh = 3.99901432919624
rdh_sum = 3.12560748251423
ans =
!----- End Berm Factor Calculation, Iter: 2 -----!
berm_width = 5
rB = 0.063677260954033
rdh_mean = 0.625121496502846
gamma_berm = 0.976128763706754
slope = 0.348551826114451
Irb = 2.45691790998751
gamma_berm = 0.976128763706754
gamma_perm = 1
gamma_beta = 1
gamma_rough = 1
gamma = 0.976128763706754
ans =
!!! - - Iribaren number: 2.40 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:2.9 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new = 17.2483630200161
R2del =

```

```

0.0159066239974024
Z2 =
26.4214023492123
ans =
!----- STARTING ITERATION 3 -----!
Ztoe =
0.779629000000002
toe_sta =
7.25831657355681
top_sta =
85.8254750957233
Z2 =
26.4214023492123
H0 =
5.3885
Tp =
7.957
T0 =
7.23363636363636
R2 =
17.2483630200161
Z2 =
26.4214023492123
top_sta =
85.8254750957233
Lslope =
78.5671585221665
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 1
dh =
8.00806432919624
rdh_sum =
0.845772093619118
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 2
dh =
7.94908932919624
rdh_sum =
1.68528431013154
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 3
dh =
7.89018932919624
rdh_sum =
2.51844445866523
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 36
dh =
4.00816432919624
rdh_sum =
2.82263918920194
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 37
dh =
3.99901432919624
rdh_sum =
3.12560748251423
ans =
!----- End Berm Factor Calculation, Iter: 3 -----!
berm_width =
5
rB =
0.0636398222113293
rdh_mean =
0.625121496502846
gamma_berm =
0.976142798686592
slope =
0.348549187766797
Irb =
2.4568993124559
gamma_berm =
0.976142798686592
gamma_perm =
1
gamma_beta =
1
gamma_rough =
1
gamma =
0.976142798686592
ans =
!!! - - Iribaren number: 2.40 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:2.9 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
17.2485906996177
R2del =
0.000227679601586317
Z2 =

```



```
                26.4216300288139
% final 2% runup elevation
Z2=R2_new+SWEL
Z2 =
                26.4216300288139
diary off
-1.000000e+00
-1.000000e+00
-1.000000e+00
```

PART 5: RUNUP2

for transect: CM-133

Station locations shifted by: -0.13 feet from their
original location to set the shoreline to
elevation 0 for RUNUP2 input

RUNUP2 INPUT CONVERSIONS

for transect: CM-133

Incident significant wave height: 5.07 feet

Peak wave period: 7.95 seconds

Mean wave height: 3.17 feet

Local Depth below SWEL: 28.81 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, $D = 28.81$

Period, $T = 6.76$

Waveheight, $H = 3.17$

Deep water wavelength, L_0 (ft)

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

$L_0 = 32.17 \cdot 6.76^2 / 6.28 = 233.90$

Deep water wave celerity, C_0 (ft/s)

$C_0 = L_0 / T$

$C_0 = 233.90 / 6.76 = 34.61$

Angular frequency, σ (rad/s)

$\sigma = 2\pi / T$

$\sigma = 6.28 / 6.76 = 0.93$

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

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

$y = 0.93 \cdot 0.93 \cdot 28.81 / 32.17 = 0.77$

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

$C_{1H} = 26.50$

Shoaling Coefficient K_{sH}

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

$K_{sH} = \sqrt{34.61 / 26.50} = 1.14$

Deepwater Wave Height H_{0_H} (ft)

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

$H_{0_H} = 3.17 / 1.14 = 2.78$

Deepwater mean wave height: 2.78 feet

END RUNUP2 CONVERSIONS

RUNUP2 RESULTS

for transect: CM-133

RUNUP2 SWEL:

8.87

RUNUP2 deepwater mean wave heights:

-9999.00

RUNUP2 mean wave periods:
-9999.00

RUNUP2 runup above SWEL:
-9999.00

RUNUP2 Mean runup height above SWEL: -9999.00 feet

RUNUP2 2-percent runup height above SWEL: -9999.00 feet

RUNUP2 2-percent runup elevation: -9999.00 feet-NAVD88

RUNUP2 Messages:
RUNUP2 Failed

_____END RUNUP2 RESULTS_____

_____ACES BEACH RUNUP_____

Incident significant wave height: 5.07 feet

Significant wave height deshoaled using Hunt equation

Deepwater significant wave height: 3.89 feet

Peak wave period: 7.95 seconds

Average beach Slope: 1:19.31 (H:V)

ACES RUNUP CALCULATED USING 'Aces_Beach_Runup.m'

ACES Beach 2-percent runup height above SWEL: 4.25 feet

ACES Beach 2-percent runup elevation: 13.12 feet-NAVD88

ACES BEACH RUNUP is valid

_____END ACES BEACH RESULTS_____

PART 5 COMPLETE_____

FEMA
RUNUP2 transect: CM-133

sjh

job 2
1

2.00
-19.94 -787.9 1.0
-19.03 -713.9 1.0
-17.60 -653.9 1.0
-15.13 -527.9 1.0
-14.30 -491.9 1.0
-12.54 -429.9 1.0
-3.88 -427.9 1.0
-3.83 -413.9 1.0
-3.83 -93.9 1.0
-3.34 -71.9 1.0
-3.34 -37.9 1.0
-1.80 -13.9 1.0
-0.22 -1.9 1.0
1.67 18.1 1.0
3.26 30.1 1.0
5.76 54.1 1.0
7.47 60.1 1.0
16.39 72.1 1.0
22.77 78.1 1.0
1 25.10 82.1 1.0
8.9 2.64 6.42
8.9 2.64 6.76
8.9 2.64 7.10
8.9 2.78 6.42
8.9 2.78 6.76
8.9 2.78 7.10
8.9 2.91 6.42
8.9 2.91 6.76
8.9 2.91 7.10

CLIENT- FEMA
PROJECT-RUNUP2 transect: CM-133

** WAVE RUNUP-VERSION 2.0 **

ENGINEERED BY sjh

JOB job 2
RUN 1 PAGE 1

CROSS SECTION PROFILE

	LENGTH	ELEV.	SLOPE	ROUGHNESS
1	-787.0	-19.9		
2	-713.0	-19.0	.00	1.00
3	-653.0	-17.6	42.86	1.00
4	-527.0	-15.1	50.40	1.00
5	-491.0	-14.3	45.00	1.00
6	-429.0	-12.5	34.44	1.00
7	-427.9	-3.9	.13	1.00
8	-413.9	-3.8	280.00	1.00
9	-93.9	-3.8	FLAT	1.00
10	-71.9	-3.3	44.90	1.00
11	-37.9	-3.3	FLAT	1.00
12	-13.9	-1.8	15.58	1.00
13	-1.9	-.2	7.59	1.00
14	18.1	1.7	10.58	1.00
15	30.1	3.3	7.55	1.00
16	54.1	5.8	9.60	1.00
17	60.1	7.5	3.51	1.00
18	72.1	16.4	1.35	1.00
19	78.1	22.8	.94	1.00
20	82.1	25.1	1.72	1.00
	LAST SLOPE	2.00	LAST ROUGHNESS	1.00

CLIENT- FEMA
PROJECT-RUNUP2 transect: CM-133

** WAVE RUNUP-VERSION 2.0 **

ENGINEERED BY sjh

JOB job 2
RUN 1 PAGE 2

OUTPUT TABLE

INPUT PARAMETERS

WATER LEVEL ABOVE DATUM (FT.)	DEEP WATER WAVE HEIGHT (FT.)	WAVE PERIOD (SEC.)
-------------------------------------	------------------------------------	-----------------------

RUNUP RESULTS

BREAKING SLOPE NUMBER	RUNUP SLOPE NUMBER	RUNUP ABOVE WATER LEVEL (FT.)	BREAKER DEPTH (FT.)
--------------------------	-----------------------	-------------------------------------	---------------------------

Runup2 error, see log sheet

