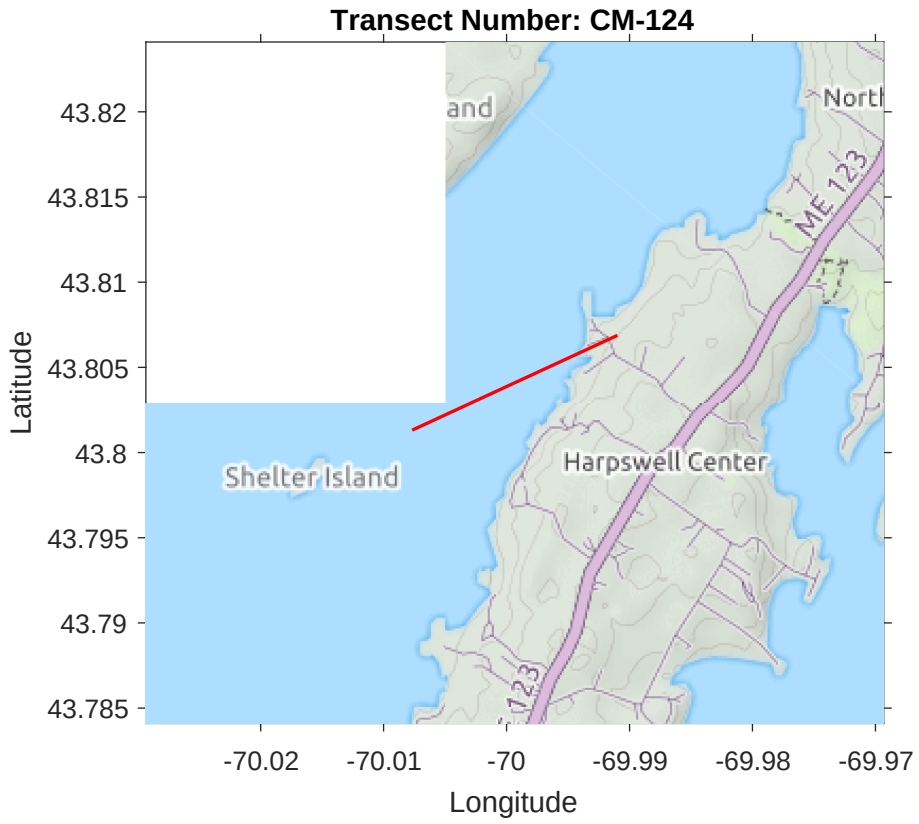
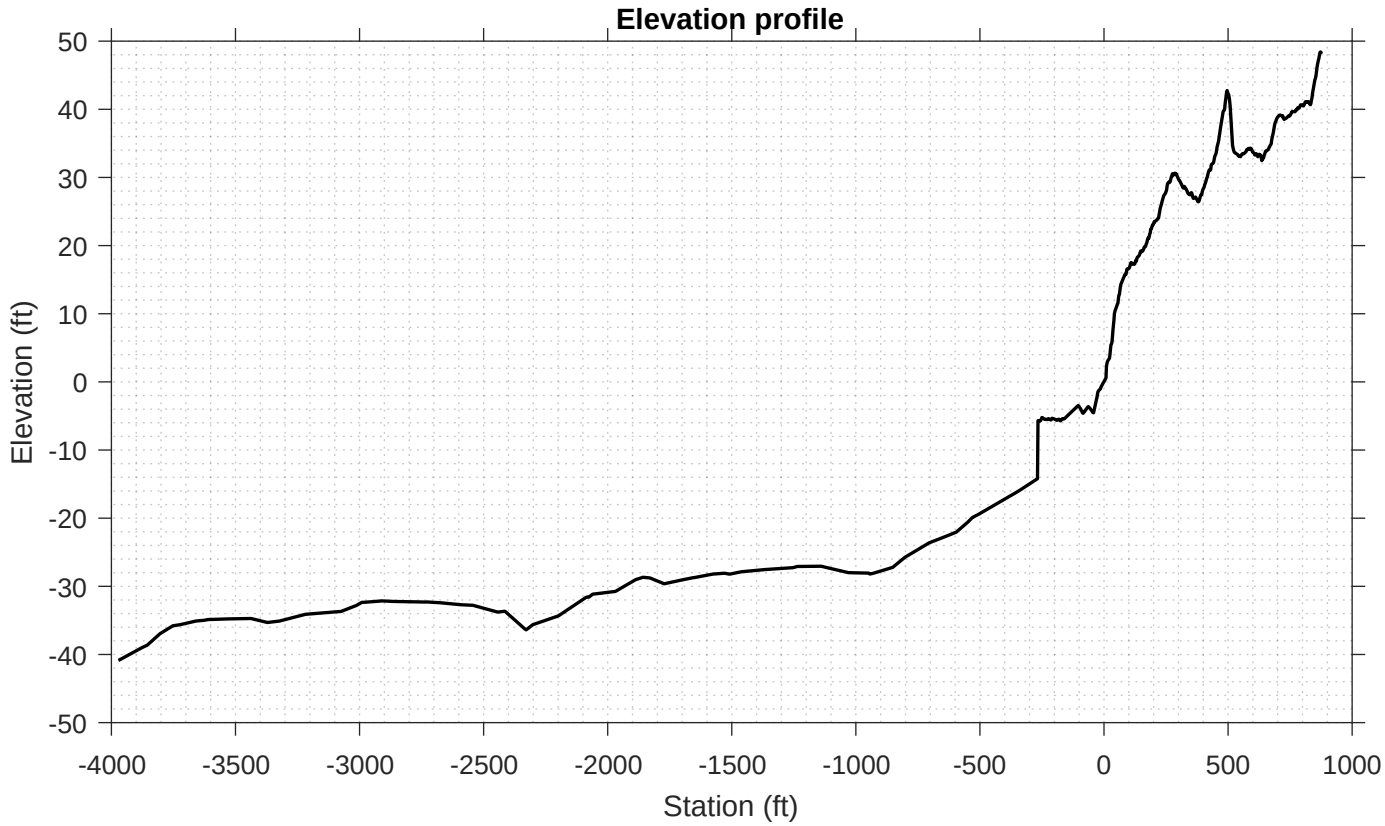

Transect Number: CM-124
Latitude
43.82
43.815
43.81
43.805
43.8
43.795
43.79
43.785
Shelter Island
Harpswell Center
ME 123
-70.02
-70.01
-70
-69.99
-69.98
-69.97
Longitude


Elevation profile
Elevation (ft)
50
40
30
20
10
0
-10
-20
-30
-40
-50
-4000
-3500
-3000
-2500
-2000
-1500
-1000
-500
0
500
1000
Station (ft)

DATA LOG FOR TRANSECT ID: CM-124

PART 1: USER INPUT

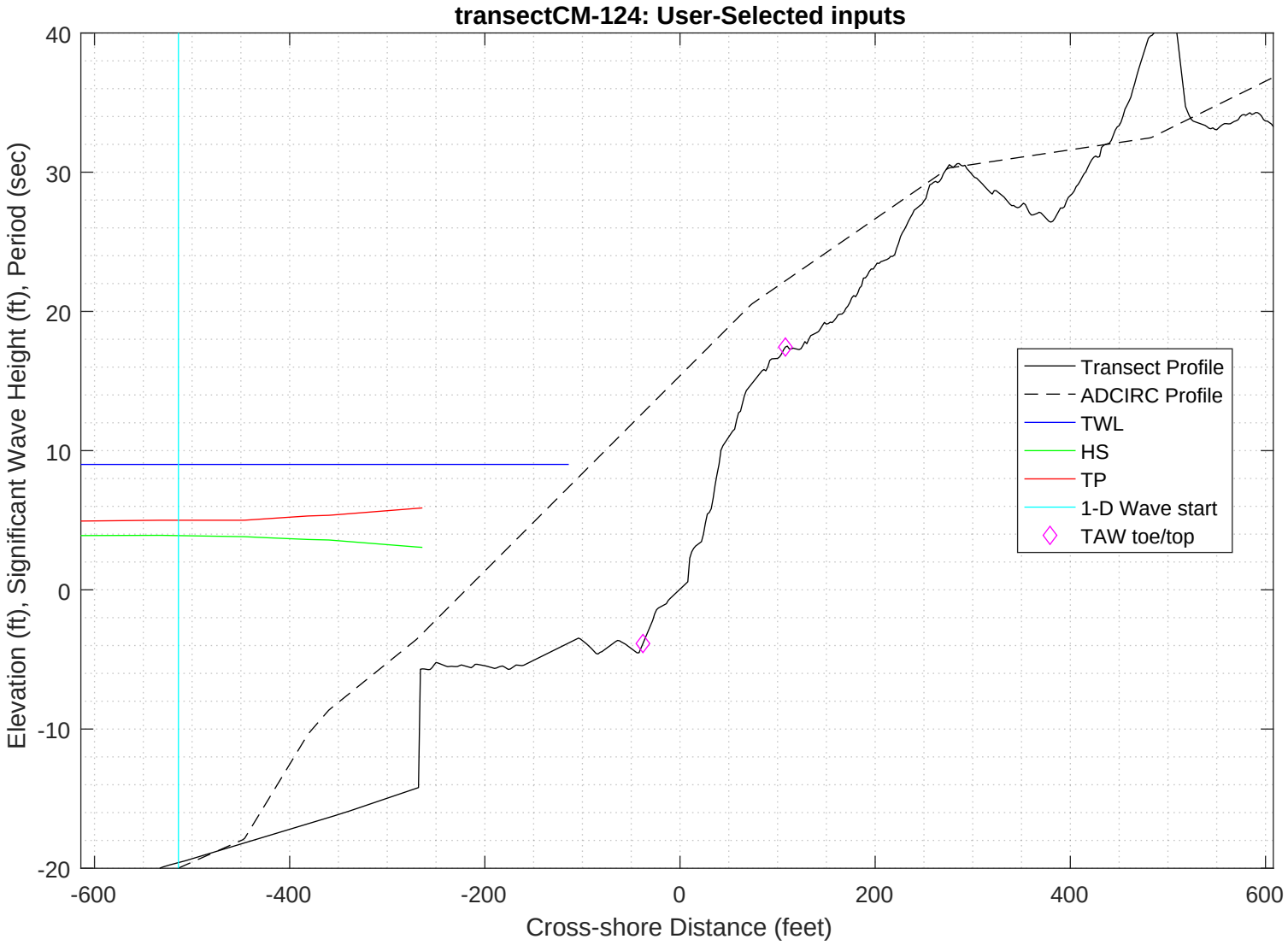
SWAN 1-D / WHAFIS input

station: -514 ft
LON: -69.9958 deg E
LAT: 43.8053 deg N
Bottom ELEV: -19.5933 ft-NAVD88
TWL: 9.0068 ft-NAVD88
HS: 3.8946 ft
TP: 5 sec
Wave Direction bin: 0 deg CCW from East (90 deg sector)
Transect Direction: 18.4405 deg CCW from East

TAW/RUNUP input

toe sta: -38 ft
toe elev: -3.8582 ft-NAVD88
top sta: 108 ft
top elev: 17.441 ft-NAVD88
Wave and water level conditions at toe to be calculated in SWAN 1-D

PART 1 COMPLETE


transectCM-124: User-Selected inputs
Elevation (ft), Significant Wave Height (ft), Period (sec)
Cross-shore Distance (feet)
40
30
20
10
0
-10
-20
-600
-400
-200
0
200
400
600
Transect Profile
ADCIRC Profile
TWL
HS
TP
1-D Wave start
TAW toe/top

_____
PART 2: SWAN 1-D

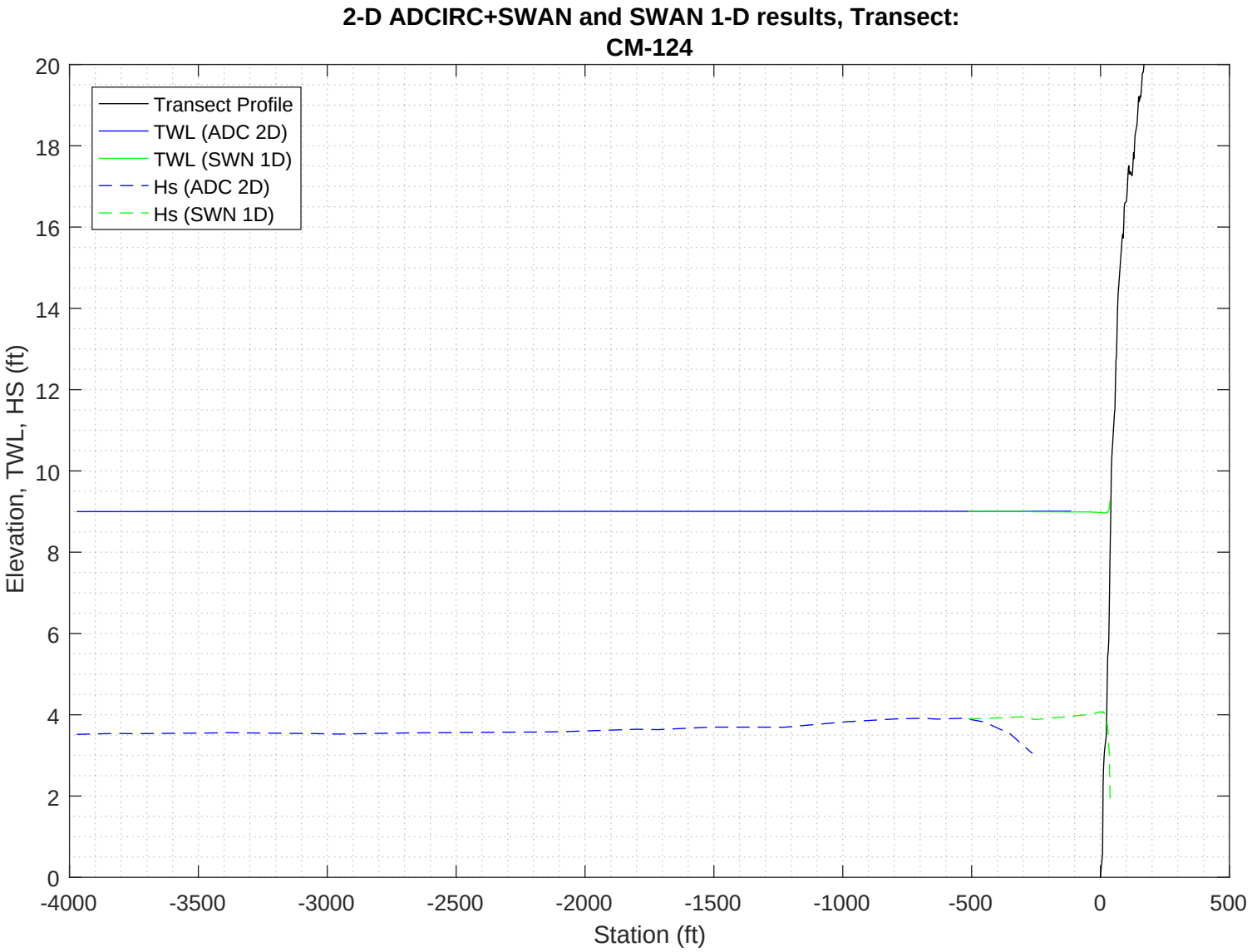
swan input grid name: 2_swan/gridfiles/CM-124zmeters_xmeters.grd
swan file name: 2_swan/swanfiles/CM-124.swn
swan output name: 2_swan/swanfiles/CM-124.dat

Boundary Conditions:
    TWL- 2.7453 meters
    HS- 1.1871 meters
    PER- 5 seconds

Batch File: 2_swan/swanfiles/runswan.dat

SWAN maximum additional wave setup: 0.27738 feet
SWAN output at toe:
    SETUP- -0.01648 feet
    HS-   4.0078 feet
    PER-   5.0362 seconds

PART 2 COMPLETE_____


2-D ADCIRC+SWAN and SWAN 1-D results, Transect:
CM-124
Transect Profile
TWL (ADC 2D)
TWL (SWN 1D)
Hs (ADC 2D)
Hs (SWN 1D)
Elevation, TWL, HS (ft)
Station (ft)
20
18
16
14
12
10
8
6
4
2
0
-4000
-3500
-3000
-2500
-2000
-1500
-1000
-500
0
500

1

Execution started at 20200220.141918

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      168       0.   168     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      168   0      1       1
!READinp BOTtom [fac]  'fname1'  [idla]  [nhedf]  [FREe|FORmat[form]|UNFormatted]
 READ    BOTTOM   -1. '../gridfiles/CM-124zmeters_xmeters.grd'    1      0       FREE
!-------------------------------------------------------------------------
! -- WIND [vel] [dir]
WIND      25.1  0
! -- BOUnd SHAPespec
BOUND SHAPE JONSWAP 3.3  PEAK DSPR POWER
! -- BOUndspec
! BOU SIDE W CCW CON FILE 'swanspec.txt' 1
BOUN SIDE W CCW CONSTANT PAR   1.1871     5     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] [edm1pm] [cdrag] [umin] [cfpm]
!-- GEN2 [cf10] [cf20] [cf30] [cf40] [cf50] [cf60] [edm1pm] [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' [xp1] [yp1] <[int]   [xp]   [yp] >
 CURVE 'curve' 0     0      168  168    0
!TABLe 'sname' < HEADer|NOHEADer|INDexed > 'fname' <output parameters> (output time)
 Table 'curve'   HEADER 'CM-124.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             169 MYC              1
                     : MCGRD           170
                     : 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 EDMLPM  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  13.02 % 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   0.60 % 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  14.80 % 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  99.41 % 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            Yp            Hsig          TPsmoo        RTpeak        Tm_10         Dir           Dspr          Depth         Setup
%      [m]           [m]            [m]           [sec]         [sec]         [sec]         [degr]        [degr]        [m]           [m]
%
           0.            0.       1.18867        5.0188        5.1860        4.5145        0.000        31.5162        8.7200       0.000000
           1.            0.       1.18874        5.0188        5.1860        4.5132        0.000        31.4884        8.7000      -0.000009
           2.            0.       1.18882        5.0188        5.1860        4.5119        0.000        31.4608        8.6800      -0.000018
           3.            0.       1.18890        5.0188        5.1860        4.5107        0.000        31.4331        8.6600      -0.000027
           4.            0.       1.18898        5.0187        5.1860        4.5094        0.000        31.4056        8.6400      -0.000036
           5.            0.       1.18907        5.0187        5.1860        4.5081        0.000        31.3783        8.6200      -0.000045
           6.            0.       1.18912        5.0187        5.1860        4.5068        0.000        31.3465        8.5999      -0.000054
           7.            0.       1.18909        5.0188        5.1860        4.5055        0.000        31.3136        8.5699      -0.000066
           8.            0.       1.18917        5.0188        5.1860        4.5042        0.000        31.2846        8.5499      -0.000075
           9.            0.       1.18926        5.0188        5.1860        4.5029        0.000        31.2573        8.5299      -0.000084
          10.            0.       1.18935        5.0188        5.1860        4.5016        0.000        31.2311        8.5099      -0.000094
          11.            0.       1.18945        5.0188        5.1860        4.5003        0.000        31.2055        8.4899      -0.000103
          12.            0.       1.18956        5.0188        5.1860        4.4990        0.000        31.1814        8.4699      -0.000112
          13.            0.       1.18968        5.0188        5.1860        4.4977        0.000        31.1586        8.4499      -0.000122
          14.            0.       1.18980        5.0189        5.1860        4.4963        0.000        31.1357        8.4299      -0.000131
          15.            0.       1.18992        5.0189        5.1860        4.4948        0.000        31.1081        8.4099      -0.000141
          16.            0.       1.19002        5.0189        5.1860        4.4928        0.000        31.0790        8.3798      -0.000154
          17.            0.       1.19025        5.0189        5.1860        4.4907        0.000        31.0536        8.3598      -0.000164
          18.            0.       1.19055        5.0188        5.1860        4.4883        0.000        31.0285        8.3398      -0.000174
          19.            0.       1.19086        5.0188        5.1860        4.4858        0.001        31.0037        8.3198      -0.000184
          20.            0.       1.19117        5.0188        5.1860        4.4834        0.001        30.9794        8.2998      -0.000194
          21.            0.       1.19150        5.0188        5.1860        4.4808        0.002        30.9559        8.2798      -0.000204
          22.            0.       1.19183        5.0188        5.1860        4.4782        0.003        30.9322        8.2598      -0.000215
          23.            0.       1.19215        5.0188        5.1860        4.4757        0.005        30.9090        8.2398      -0.000225
          24.            0.       1.19241        5.0188        5.1860        4.4733        0.007        30.8827        8.2198      -0.000236
          25.            0.       1.19261        5.0188        5.1860        4.4709        0.009        30.8566        8.1897      -0.000250
          26.            0.       1.19291        5.0188        5.1860        4.4684        0.011        30.8343        8.1697      -0.000260
          27.            0.       1.19321        5.0189        5.1860        4.4660        0.012        30.8131        8.1497      -0.000271
          28.            0.       1.19351        5.0189        5.1860        4.4637        0.014        30.7925        8.1297      -0.000282
          29.            0.       1.19381        5.0189        5.1860        4.4614        0.016        30.7722        8.1097      -0.000293
          30.            0.       1.19409        5.0189        5.1860        4.4591        0.017        30.7520        8.0897      -0.000304
          31.            0.       1.19437        5.0189        5.1860        4.4570        0.018        30.7317        8.0697      -0.000315
          32.            0.       1.19463        5.0189        5.1860        4.4547        0.020        30.7084        8.0497      -0.000326
          33.            0.       1.19483        5.0190        5.1860        4.4523        0.023        30.6844        8.0197      -0.000341
          34.            0.       1.19513        5.0190        5.1860        4.4500        0.026        30.6639        7.9996      -0.000352
          35.            0.       1.19543        5.0190        5.1860        4.4477        0.027        30.6439        7.9796      -0.000364
          36.            0.       1.19574        5.0191        5.1860        4.4454        0.027        30.6242        7.9596      -0.000375
          37.            0.       1.19604        5.0191        5.1860        4.4432        0.028        30.6048        7.9396      -0.000387
          38.            0.       1.19635        5.0191        5.1860        4.4409        0.029        30.5855        7.9196      -0.000399
          39.            0.       1.19666        5.0191        5.1860        4.4386        0.031        30.5655        7.8996      -0.000411
          40.            0.       1.19697        5.0192        5.1860        4.4364        0.033        30.5455        7.8796      -0.000423
          41.            0.       1.19725        5.0192        5.1860        4.4341        0.036        30.5219        7.8596      -0.000435
          42.            0.       1.19743        5.0193        5.1860        4.4320        0.038        30.4962        7.8295      -0.000450
          43.            0.       1.19770        5.0193        5.1860        4.4299        0.037        30.4743        7.8095      -0.000463
          44.            0.       1.19800        5.0193        5.1860        4.4277        0.038        30.4550        7.7895      -0.000475
          45.            0.       1.19832        5.0193        5.1860        4.4254        0.039        30.4363        7.7695      -0.000487
          46.            0.       1.19864        5.0194        5.1860        4.4232        0.040        30.4180        7.7495      -0.000499
          47.            0.       1.19896        5.0194        5.1860        4.4209        0.041        30.4002        7.7295      -0.000512
          48.            0.       1.19930        5.0194        5.1860        4.4185        0.042        30.3829        7.7095      -0.000524
          49.            0.       1.19960        5.0195        5.1860        4.4163        0.044        30.3608        7.6895      -0.000537
          50.            0.       1.19982        5.0195        5.1860        4.4140        0.046        30.3370        7.6594      -0.000554
          51.            0.       1.20015        5.0196        5.1860        4.4117        0.049        30.3164        7.6394      -0.000567
          52.            0.       1.20047        5.0196        5.1860        4.4095        0.052        30.2971        7.6194      -0.000580
          53.            0.       1.20075        5.0196        5.1860        4.4074        0.053        30.2731        7.5994      -0.000593
          54.            0.       1.20095        5.0197        5.1860        4.4053        0.054        30.2474        7.5694      -0.000610
          55.            0.       1.20125        5.0198        5.1860        4.4032        0.055        30.2253        7.5494      -0.000624
          56.            0.       1.20153        5.0198        5.1860        4.4011        0.056        30.2004        7.5294      -0.000637
          57.            0.       1.20175        5.0199        5.1860        4.3990        0.058        30.1748        7.4993      -0.000655
          58.            0.       1.20205        5.0199        5.1860        4.3969        0.059        30.1528        7.4793      -0.000669
          59.            0.       1.20232        5.0200        5.1860        4.3949        0.059        30.1279        7.4593      -0.000682
```

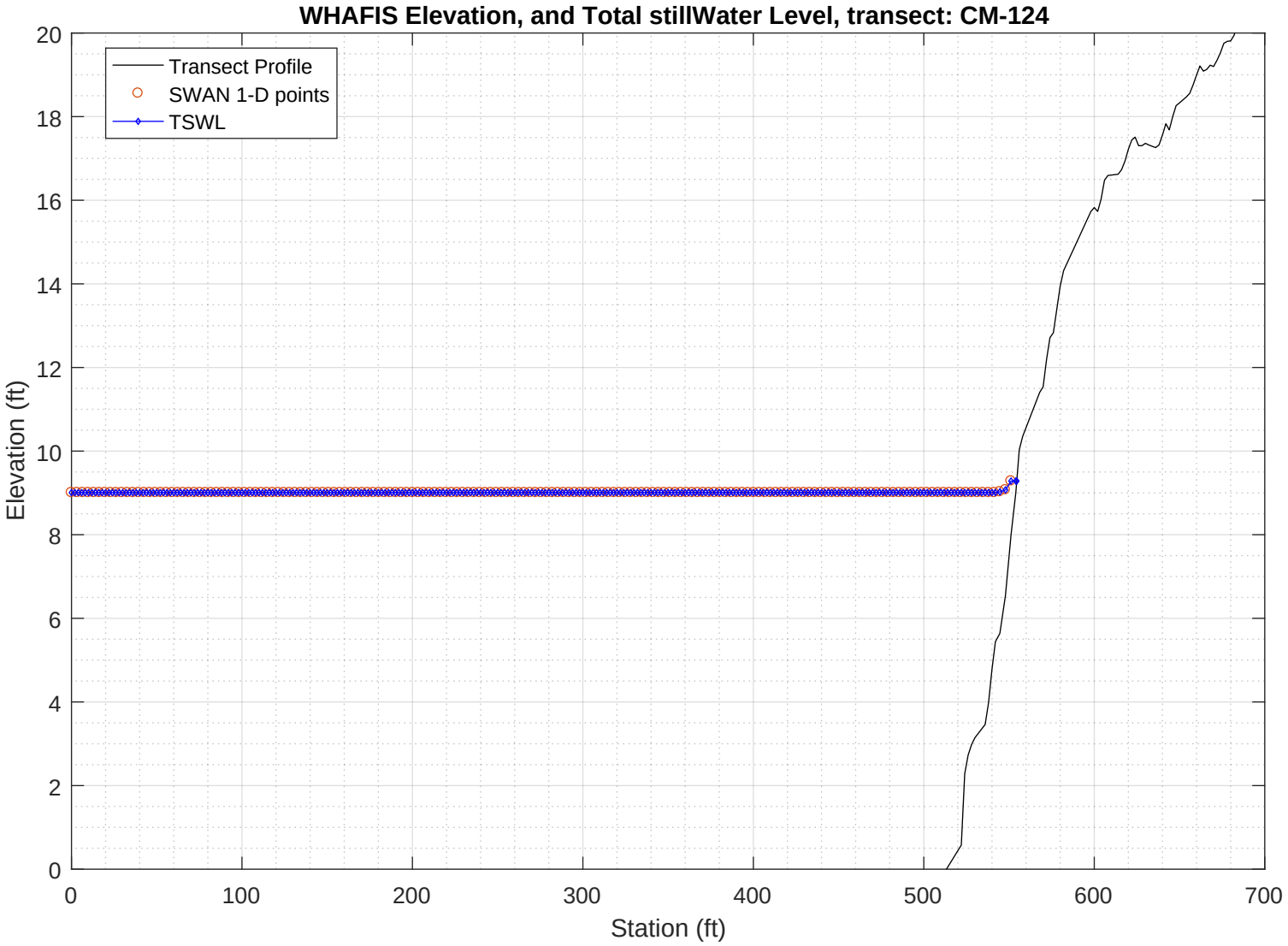
60.	0.	1.20251	5.0200	5.1860	4.3930	0.060	30.1022	7.4293	-0.000701
61.	0.	1.20276	5.0201	5.1860	4.3910	0.060	30.0761	7.4093	-0.000715
62.	0.	1.20295	5.0202	5.1860	4.3891	0.061	30.0499	7.3793	-0.000733
63.	0.	1.20323	5.0202	5.1860	4.3872	0.062	30.0280	7.3593	-0.000747
64.	0.	1.20349	5.0203	5.1860	4.3853	0.063	30.0039	7.3392	-0.000761
65.	0.	1.20369	5.0203	5.1860	4.3833	0.063	29.9804	7.3092	-0.000780
66.	0.	1.20396	5.0204	5.1860	4.3813	0.064	29.9578	7.2892	-0.000794
67.	0.	1.20419	5.0205	5.1860	4.3793	0.067	29.9348	7.2592	-0.000814
68.	0.	1.20449	5.0205	5.1860	4.3773	0.069	29.9153	7.2392	-0.000828
69.	0.	1.20477	5.0206	5.1860	4.3754	0.072	29.8932	7.2192	-0.000843
70.	0.	1.20498	5.0207	5.1860	4.3735	0.074	29.8697	7.1891	-0.000863
71.	0.	1.20529	5.0207	5.1860	4.3715	0.075	29.8491	7.1691	-0.000878
72.	0.	1.20559	5.0208	5.1860	4.3696	0.076	29.8256	7.1491	-0.000893
73.	0.	1.20580	5.0209	5.1860	4.3678	0.077	29.8006	7.1191	-0.000914
74.	0.	1.20584	5.0209	5.1860	4.3657	0.077	29.7431	7.0991	-0.000929
75.	0.	1.19764	5.0213	5.1860	4.3586	0.078	28.4574	6.9890	-0.001015
76.	0.	1.18704	5.0348	5.1860	4.3900	0.080	26.8164	4.4767	-0.003342
77.	0.	1.18450	5.0347	5.1860	4.3860	0.081	26.3041	4.4766	-0.003359
78.	0.	1.18377	5.0348	5.1860	4.3832	0.081	26.1308	4.4866	-0.003350
79.	0.	1.18379	5.0349	5.1860	4.3820	0.082	26.0192	4.4566	-0.003409
80.	0.	1.18437	5.0354	5.1860	4.3823	0.084	25.9228	4.3764	-0.003557
81.	0.	1.18495	5.0356	5.1860	4.3814	0.086	25.8961	4.3464	-0.003620
82.	0.	1.18547	5.0354	5.1860	4.3792	0.086	25.9402	4.3664	-0.003591
83.	0.	1.18603	5.0352	5.1860	4.3768	0.086	26.0069	4.3965	-0.003546
84.	0.	1.18658	5.0350	5.1860	4.3748	0.086	26.0544	4.4165	-0.003518
85.	0.	1.18718	5.0350	5.1860	4.3732	0.087	26.0781	4.4165	-0.003526
86.	0.	1.18772	5.0350	5.1860	4.3718	0.087	26.0935	4.4165	-0.003534
87.	0.	1.18818	5.0350	5.1860	4.3702	0.087	26.0930	4.4165	-0.003542
88.	0.	1.18877	5.0350	5.1860	4.3693	0.087	26.0859	4.3964	-0.003586
89.	0.	1.18936	5.0350	5.1860	4.3678	0.088	26.1086	4.3964	-0.003594
90.	0.	1.18992	5.0349	5.1860	4.3658	0.089	26.1592	4.4164	-0.003566
91.	0.	1.19035	5.0347	5.1860	4.3638	0.090	26.1841	4.4365	-0.003540
92.	0.	1.19085	5.0348	5.1860	4.3628	0.090	26.1608	4.4164	-0.003583
93.	0.	1.19149	5.0350	5.1860	4.3623	0.091	26.1341	4.3763	-0.003662
94.	0.	1.19206	5.0350	5.1860	4.3608	0.093	26.1527	4.3763	-0.003670
95.	0.	1.19257	5.0348	5.1860	4.3587	0.094	26.1942	4.3964	-0.003642
96.	0.	1.19321	5.0347	5.1860	4.3570	0.096	26.2421	4.4064	-0.003632
97.	0.	1.19383	5.0346	5.1860	4.3550	0.097	26.3020	4.4264	-0.003604
98.	0.	1.19443	5.0344	5.1860	4.3530	0.099	26.3566	4.4464	-0.003577
99.	0.	1.19493	5.0343	5.1860	4.3512	0.100	26.3765	4.4564	-0.003568
100.	0.	1.19549	5.0344	5.1860	4.3502	0.101	26.3636	4.4364	-0.003611
101.	0.	1.19615	5.0345	5.1860	4.3492	0.101	26.3664	4.4163	-0.003654
102.	0.	1.19687	5.0344	5.1860	4.3472	0.103	26.4380	4.4364	-0.003627
103.	0.	1.19726	5.0340	5.1860	4.3442	0.105	26.4891	4.4865	-0.003550
104.	0.	1.19780	5.0342	5.1860	4.3434	0.107	26.4577	4.4564	-0.003609
105.	0.	1.19839	5.0345	5.1860	4.3432	0.109	26.4069	4.4063	-0.003705
106.	0.	1.19896	5.0346	5.1860	4.3421	0.111	26.3913	4.3863	-0.003750
107.	0.	1.19938	5.0345	5.1860	4.3402	0.114	26.3951	4.3963	-0.003741
108.	0.	1.19986	5.0345	5.1860	4.3388	0.117	26.3769	4.3862	-0.003768
109.	0.	1.20037	5.0347	5.1860	4.3379	0.120	26.3312	4.3562	-0.003831
110.	0.	1.20091	5.0349	5.1860	4.3374	0.124	26.2764	4.3161	-0.003915
111.	0.	1.20136	5.0351	5.1860	4.3365	0.127	26.2190	4.2860	-0.003981
112.	0.	1.20192	5.0353	5.1860	4.3360	0.129	26.1600	4.2459	-0.004068
113.	0.	1.20241	5.0354	5.1860	4.3351	0.130	26.1010	4.2159	-0.004137
114.	0.	1.20302	5.0357	5.1860	4.3345	0.132	26.0407	4.1758	-0.004228
115.	0.	1.20354	5.0358	5.1860	4.3336	0.132	25.9816	4.1457	-0.004300
116.	0.	1.20418	5.0360	5.1860	4.3330	0.132	25.9216	4.1056	-0.004394
117.	0.	1.20472	5.0362	5.1860	4.3321	0.132	25.8623	4.0755	-0.004469
118.	0.	1.20538	5.0364	5.1860	4.3316	0.132	25.8013	4.0354	-0.004567
119.	0.	1.20595	5.0366	5.1860	4.3307	0.132	25.7410	4.0054	-0.004645
120.	0.	1.20665	5.0368	5.1860	4.3302	0.132	25.6828	3.9653	-0.004747
121.	0.	1.20729	5.0370	5.1860	4.3292	0.133	25.6336	3.9352	-0.004827
122.	0.	1.20794	5.0371	5.1860	4.3282	0.134	25.5803	3.9051	-0.004909
123.	0.	1.20874	5.0374	5.1860	4.3274	0.135	25.5248	3.8650	-0.005016
124.	0.	1.20940	5.0375	5.1860	4.3263	0.137	25.4692	3.8349	-0.005101
125.	0.	1.21053	5.0377	5.1860	4.3256	0.140	25.4642	3.7948	-0.005212
126.	0.	1.21086	5.0374	5.1860	4.3216	0.142	25.5704	3.8449	-0.005091

127.	0.	1.21142	5.0370	5.1860	4.3179	0.145	25.7191	3.8950	-0.004973
128.	0.	1.21207	5.0366	5.1860	4.3142	0.148	25.9018	3.9552	-0.004836
129.	0.	1.21276	5.0361	5.1860	4.3103	0.151	26.1056	4.0253	-0.004681
130.	0.	1.21344	5.0356	5.1860	4.3067	0.153	26.2957	4.0955	-0.004534
131.	0.	1.21379	5.0353	5.1860	4.3035	0.156	26.3735	4.1456	-0.004436
132.	0.	1.21447	5.0355	5.1860	4.3035	0.156	26.3367	4.1055	-0.004529
133.	0.	1.21504	5.0358	5.1860	4.3036	0.157	26.2581	4.0554	-0.004646
134.	0.	1.21559	5.0361	5.1860	4.3037	0.157	26.1653	4.0052	-0.004768
135.	0.	1.21615	5.0364	5.1860	4.3038	0.157	26.0684	3.9551	-0.004894
136.	0.	1.21677	5.0367	5.1860	4.3038	0.157	25.9705	3.9050	-0.005025
137.	0.	1.21765	5.0370	5.1860	4.3039	0.158	25.9145	3.8548	-0.005157
138.	0.	1.21820	5.0369	5.1860	4.3017	0.158	25.9543	3.8649	-0.005140
139.	0.	1.21866	5.0366	5.1860	4.2986	0.159	26.0547	3.9050	-0.005049
140.	0.	1.21934	5.0363	5.1860	4.2958	0.160	26.1932	3.9450	-0.004959
141.	0.	1.21992	5.0358	5.1860	4.2924	0.161	26.3550	4.0052	-0.004826
142.	0.	1.22061	5.0355	5.1860	4.2896	0.162	26.5100	4.0553	-0.004720
143.	0.	1.22099	5.0351	5.1860	4.2867	0.162	26.6037	4.1054	-0.004618
144.	0.	1.22093	5.0352	5.1860	4.2855	0.161	26.4988	4.0954	-0.004650
145.	0.	1.22158	5.0362	5.1860	4.2895	0.161	26.1924	3.9350	-0.005023
146.	0.	1.22240	5.0373	5.1860	4.2939	0.160	25.8109	3.7645	-0.005466
147.	0.	1.22368	5.0384	5.1860	4.2982	0.158	25.4160	3.5940	-0.005961
148.	0.	1.22515	5.0394	5.1860	4.3014	0.157	24.9760	3.4335	-0.006484
149.	0.	1.22873	5.0408	5.1860	4.3054	0.155	24.5590	3.2227	-0.007256
150.	0.	1.23077	5.0414	5.1860	4.3012	0.154	24.3079	3.1324	-0.007618
151.	0.	1.23207	5.0418	5.1860	4.2930	0.154	24.1525	3.0922	-0.007775
152.	0.	1.23337	5.0421	5.1860	4.2838	0.154	23.9946	3.0521	-0.007930
153.	0.	1.23571	5.0427	5.1860	4.2753	0.154	23.7956	2.9717	-0.008267
154.	0.	1.23777	5.0433	5.1860	4.2642	0.153	23.5911	2.9014	-0.008559
155.	0.	1.23963	5.0440	5.1860	4.2513	0.150	23.3786	2.8312	-0.008844
156.	0.	1.24065	5.0448	5.1860	4.2381	0.144	23.1762	2.7609	-0.009092
157.	0.	1.24026	5.0456	5.1860	4.2243	0.134	22.9816	2.7008	-0.009233
158.	0.	1.23901	5.0465	5.1860	4.2109	0.116	22.7843	2.6306	-0.009374
159.	0.	1.23393	5.0477	5.1860	4.1964	0.102	22.0681	2.5706	-0.009426
160.	0.	1.24359	5.0537	5.1860	4.1917	0.065	20.7863	1.9768	-0.013238
161.	0.	1.23345	5.0558	5.1860	4.1148	0.164	19.9336	1.8170	-0.013028
162.	0.	1.21757	5.0573	5.1860	4.0294	0.362	19.3520	1.7485	-0.011524
163.	0.	1.19566	5.0591	5.1860	3.9561	0.569	18.8089	1.7006	-0.009410
164.	0.	1.17662	5.0613	5.1860	3.9008	0.912	17.8559	1.5110	-0.009006
165.	0.	1.13567	5.0680	5.1860	3.8379	1.141	16.5806	1.1421	-0.007936
166.	0.	1.03877	5.0738	5.1860	3.7375	1.341	15.5934	1.0357	0.005651
167.	0.	0.92540	5.0816	5.1860	3.7118	1.320	13.8430	0.7699	0.019913
168.	0.	0.58220	5.1111	5.1860	3.8116	356.998	14.5757	0.3945	0.084546

PART 3: WHAFIS

WHAFIS input: CM-124.dat
WHAFIS output: CM-124.out

PART 3 COMPLETE


WHAFIS Elevation, and Total stillWater Level, transect: CM-124
Transect Profile
SWAN 1-D points
TSWL
Elevation (ft)
Station (ft)
0
2
4
6
8
10
12
14
16
18
20
0
100
200
300
400
500
600
700

WAVE HEIGHT COMPUTATIONS FOR FLOOD INSURANCE STUDIES (WHAFIS VERSION 4.0G, 08_2007)
Executed on: Thu Feb 20 14:57:35 2020
Input file: C:\FEMA-TransectAnalysis\LOMR-TransectAnalysis-Harpswell\3_whafis\whafis4\CM-124.dat
Output file: C:\FEMA-TransectAnalysis\LOMR-TransectAnalysis-Harpswell\3_whafis\whafis4\CM-124.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	-19.593	1.000	1.000	9.007	6.231	5.000	56.140	0.019	0.000
OF	2.000	-19.556	0.000	9.007	0.000	0.000	0.000	0.000	0.019	0.000
OF	4.000	-19.518	0.000	9.007	0.000	0.000	0.000	0.000	0.019	0.000
OF	6.000	-19.481	0.000	9.007	0.000	0.000	0.000	0.000	0.019	0.000
OF	8.000	-19.441	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	10.000	-19.399	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	12.000	-19.357	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	14.000	-19.314	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	16.000	-19.272	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	18.000	-19.230	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	20.000	-19.188	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	22.000	-19.145	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	24.000	-19.103	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	26.000	-19.061	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	28.000	-19.018	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	30.000	-18.976	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	32.000	-18.934	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	34.000	-18.891	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	36.000	-18.849	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	38.000	-18.807	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	40.000	-18.764	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	42.000	-18.722	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	44.000	-18.680	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	46.000	-18.638	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	48.000	-18.595	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	50.000	-18.553	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	52.000	-18.511	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	54.000	-18.468	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	56.000	-18.426	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	58.000	-18.384	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	60.000	-18.341	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	62.000	-18.299	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	64.000	-18.257	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	66.000	-18.214	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	68.000	-18.172	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	70.000	-18.130	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	72.000	-18.087	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	74.000	-18.045	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	76.000	-18.003	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	78.000	-17.961	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	80.000	-17.918	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	82.000	-17.876	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	84.000	-17.834	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	86.000	-17.791	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	88.000	-17.749	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	90.000	-17.707	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	92.000	-17.664	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	94.000	-17.622	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	96.000	-17.580	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	98.000	-17.537	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	100.000	-17.495	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	102.000	-17.453	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	104.000	-17.411	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	106.000	-17.368	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	108.000	-17.326	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	110.000	-17.284	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	112.000	-17.241	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	114.000	-17.199	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	116.000	-17.157	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	118.000	-17.114	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	120.000	-17.072	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	122.000	-17.030	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	124.000	-16.987	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	126.000	-16.945	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	128.000	-16.903	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	130.000	-16.861	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	132.000	-16.818	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	134.000	-16.776	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	136.000	-16.734	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	138.000	-16.691	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	140.000	-16.649	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	142.000	-16.607	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	144.000	-16.564	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	146.000	-16.522	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	148.000	-16.480	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	150.000	-16.437	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	152.000	-16.395	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	154.000	-16.353	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	156.000	-16.310	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	158.000	-16.268	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
OF	160.000	-16.225	0.000	9.007	0.000	0.000	0.000	0.000	0.022	0.000
OF	162.000	-16.181	0.000	9.007	0.000	0.000	0.000	0.000	0.022	0.000
OF	164.000	-16.137	0.000	9.007	0.000	0.000	0.000	0.000	0.022	0.000
OF	166.000	-16.093	0.000	9.007	0.000	0.000	0.000	0.000	0.022	0.000
OF	168.000	-16.048	0.000	9.007	0.000	0.000	0.000	0.000	0.022	0.000
OF	170.000	-16.004	0.000	9.007	0.000	0.000	0.000	0.000	0.022	0.000
OF	172.000	-15.960	0.000	9.007	0.000	0.000	0.000	0.000	0.022	0.000
OF	174.000	-15.915	0.000	9.007	0.000	0.000	0.000	0.000	0.023	0.000
OF	176.000	-15.870	0.000	9.007	0.000	0.000	0.000	0.000	0.023	0.000
OF	178.000	-15.823	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
OF	180.000	-15.775	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
OF	182.000	-15.727	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
OF	184.000	-15.680	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000

OF	186.000	-15.632	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
OF	188.000	-15.585	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
OF	190.000	-15.537	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
OF	192.000	-15.490	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
OF	194.000	-15.442	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
OF	196.000	-15.394	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
OF	198.000	-15.347	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
OF	200.000	-15.299	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	202.000	-15.252	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	204.000	-15.204	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	206.000	-15.156	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	208.000	-15.109	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	210.000	-15.061	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	212.000	-15.014	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	214.000	-14.966	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	216.000	-14.919	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	218.000	-14.871	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	220.000	-14.823	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	222.000	-14.776	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	224.000	-14.728	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	226.000	-14.681	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	228.000	-14.633	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	230.000	-14.586	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	232.000	-14.538	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	234.000	-14.490	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	236.000	-14.443	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	238.000	-14.395	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	240.000	-14.348	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	242.000	-14.300	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	244.000	-14.252	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
OF	246.000	-14.205	0.000	9.008	0.000	0.000	0.000	0.000	2.138	0.000
OF	248.000	-5.700	0.000	9.008	0.000	0.000	0.000	0.000	2.132	0.000
OF	250.000	-5.678	0.000	9.008	0.000	0.000	0.000	0.000	0.004	0.000
OF	252.000	-5.685	0.000	9.008	0.000	0.000	0.000	0.000	-0.007	0.000
OF	254.000	-5.708	0.000	9.008	0.000	0.000	0.000	0.000	-0.012	0.000
OF	256.000	-5.732	0.000	9.008	0.000	0.000	0.000	0.000	-0.003	0.000
OF	258.000	-5.719	0.000	9.008	0.000	0.000	0.000	0.000	0.036	0.000
OF	260.000	-5.586	0.000	9.008	0.000	0.000	0.000	0.000	0.082	0.000
OF	262.000	-5.389	0.000	9.008	0.000	0.000	0.000	0.000	0.092	0.000
OF	264.000	-5.218	0.000	9.008	0.000	0.000	0.000	0.000	0.033	0.000
OF	266.000	-5.255	0.000	9.008	0.000	0.000	0.000	0.000	-0.023	0.000
OF	268.000	-5.310	0.000	9.008	0.000	0.000	0.000	0.000	-0.027	0.000
OF	270.000	-5.365	0.000	9.008	0.000	0.000	0.000	0.000	-0.027	0.000
OF	272.000	-5.420	0.000	9.008	0.000	0.000	0.000	0.000	-0.028	0.000
OF	274.000	-5.476	0.000	9.009	0.000	0.000	0.000	0.000	-0.024	0.000
OF	276.000	-5.518	0.000	9.009	0.000	0.000	0.000	0.000	-0.007	0.000
OF	278.000	-5.503	0.000	9.009	0.000	0.000	0.000	0.000	0.007	0.000
OF	280.000	-5.490	0.000	9.009	0.000	0.000	0.000	0.000	-0.001	0.000
OF	282.000	-5.506	0.000	9.009	0.000	0.000	0.000	0.000	-0.006	0.000
OF	284.000	-5.516	0.000	9.009	0.000	0.000	0.000	0.000	0.000	0.000
OF	286.000	-5.507	0.000	9.009	0.000	0.000	0.000	0.000	0.017	0.000
OF	288.000	-5.446	0.000	9.009	0.000	0.000	0.000	0.000	0.028	0.000
OF	290.000	-5.394	0.000	9.009	0.000	0.000	0.000	0.000	0.003	0.000
OF	292.000	-5.435	0.000	9.009	0.000	0.000	0.000	0.000	-0.020	0.000
OF	294.000	-5.475	0.000	9.009	0.000	0.000	0.000	0.000	-0.020	0.000
OF	296.000	-5.515	0.000	9.009	0.000	0.000	0.000	0.000	-0.020	0.000
OF	298.000	-5.555	0.000	9.009	0.000	0.000	0.000	0.000	-0.020	0.000
OF	300.000	-5.595	0.000	9.009	0.000	0.000	0.000	0.000	0.014	0.000
OF	302.000	-5.499	0.000	9.009	0.000	0.000	0.000	0.000	0.060	0.000
OF	304.000	-5.353	0.000	9.009	0.000	0.000	0.000	0.000	0.038	0.000
OF	306.000	-5.347	0.000	9.009	0.000	0.000	0.000	0.000	-0.005	0.000
OF	308.000	-5.374	0.000	9.009	0.000	0.000	0.000	0.000	-0.013	0.000
OF	310.000	-5.400	0.000	9.009	0.000	0.000	0.000	0.000	-0.013	0.000
OF	312.000	-5.427	0.000	9.009	0.000	0.000	0.000	0.000	-0.013	0.000
OF	314.000	-5.453	0.000	9.009	0.000	0.000	0.000	0.000	-0.015	0.000
OF	316.000	-5.485	0.000	9.009	0.000	0.000	0.000	0.000	-0.018	0.000
OF	318.000	-5.525	0.000	9.009	0.000	0.000	0.000	0.000	-0.020	0.000
OF	320.000	-5.565	0.000	9.009	0.000	0.000	0.000	0.000	-0.020	0.000
OF	322.000	-5.604	0.000	9.009	0.000	0.000	0.000	0.000	-0.020	0.000
OF	324.000	-5.644	0.000	9.009	0.000	0.000	0.000	0.000	-0.002	0.000
OF	326.000	-5.613	0.000	9.009	0.000	0.000	0.000	0.000	0.024	0.000
OF	328.000	-5.548	0.000	9.009	0.000	0.000	0.000	0.000	0.028	0.000
OF	330.000	-5.502	0.000	9.009	0.000	0.000	0.000	0.000	0.019	0.000
OF	332.000	-5.470	0.000	9.009	0.000	0.000	0.000	0.000	-0.009	0.000
OF	334.000	-5.537	0.000	9.009	0.000	0.000	0.000	0.000	-0.039	0.000
OF	336.000	-5.625	0.000	9.009	0.000	0.000	0.000	0.000	-0.044	0.000
OF	338.000	-5.713	0.000	9.009	0.000	0.000	0.000	0.000	-0.016	0.000
OF	340.000	-5.689	0.000	9.009	0.000	0.000	0.000	0.000	0.030	0.000
OF	342.000	-5.594	0.000	9.009	0.000	0.000	0.000	0.000	0.048	0.000
OF	344.000	-5.497	0.000	9.009	0.000	0.000	0.000	0.000	0.048	0.000
OF	346.000	-5.401	0.000	9.009	0.000	0.000	0.000	0.000	0.021	0.000
OF	348.000	-5.412	0.000	9.009	0.000	0.000	0.000	0.000	-0.007	0.000
OF	350.000	-5.428	0.000	9.009	0.000	0.000	0.000	0.000	-0.008	0.000
OF	352.000	-5.444	0.000	9.009	0.000	0.000	0.000	0.000	0.004	0.000
OF	354.000	-5.410	0.000	9.009	0.000	0.000	0.000	0.000	0.026	0.000
OF	356.000	-5.341	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	358.000	-5.271	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	360.000	-5.202	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	362.000	-5.133	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	364.000	-5.063	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	366.000	-4.994	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	368.000	-4.924	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	370.000	-4.855	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	372.000	-4.786	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	374.000	-4.716	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	376.000	-4.647	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	378.000	-4.577	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	380.000	-4.508	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	382.000	-4.439	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	384.000	-4.369	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	386.000	-4.300	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	388.000	-4.230	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000

OF	390.000	-4.161	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	392.000	-4.092	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	394.000	-4.022	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	396.000	-3.953	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	398.000	-3.883	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	400.000	-3.814	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	402.000	-3.745	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	404.000	-3.675	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	406.000	-3.606	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	408.000	-3.536	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
OF	410.000	-3.467	0.000	9.009	0.000	0.000	0.000	0.000	0.001	0.000
OF	412.000	-3.533	0.000	9.009	0.000	0.000	0.000	0.000	-0.044	0.000
OF	414.000	-3.644	0.000	9.009	0.000	0.000	0.000	0.000	-0.056	0.000
OF	416.000	-3.756	0.000	9.009	0.000	0.000	0.000	0.000	-0.056	0.000
OF	418.000	-3.867	0.000	9.009	0.000	0.000	0.000	0.000	-0.060	0.000
OF	420.000	-3.997	0.000	9.009	0.000	0.000	0.000	0.000	-0.065	0.000
OF	422.000	-4.128	0.000	9.009	0.000	0.000	0.000	0.000	-0.068	0.000
OF	424.000	-4.267	0.000	9.009	0.000	0.000	0.000	0.000	-0.073	0.000
OF	426.000	-4.419	0.000	9.009	0.000	0.000	0.000	0.000	-0.076	0.000
OF	428.000	-4.571	0.000	9.009	0.000	0.000	0.000	0.000	-0.047	0.000
OF	430.000	-4.609	0.000	9.009	0.000	0.000	0.000	0.000	0.019	0.000
OF	432.000	-4.494	0.000	9.009	0.000	0.000	0.000	0.000	0.042	0.000
OF	434.000	-4.439	0.000	9.009	0.000	0.000	0.000	0.000	0.039	0.000
OF	436.000	-4.336	0.000	9.009	0.000	0.000	0.000	0.000	0.052	0.000
OF	438.000	-4.233	0.000	9.009	0.000	0.000	0.000	0.000	0.052	0.000
OF	440.000	-4.130	0.000	9.009	0.000	0.000	0.000	0.000	0.052	0.000
OF	442.000	-4.027	0.000	9.009	0.000	0.000	0.000	0.000	0.052	0.000
OF	444.000	-3.924	0.000	9.009	0.000	0.000	0.000	0.000	0.052	0.000
OF	446.000	-3.820	0.000	9.009	0.000	0.000	0.000	0.000	0.052	0.000
OF	448.000	-3.717	0.000	9.009	0.000	0.000	0.000	0.000	0.046	0.000
OF	450.000	-3.636	0.000	9.009	0.000	0.000	0.000	0.000	0.014	0.000
OF	452.000	-3.659	0.000	9.009	0.000	0.000	0.000	0.000	-0.027	0.000
OF	454.000	-3.746	0.000	9.009	0.000	0.000	0.000	0.000	-0.041	0.000
OF	456.000	-3.821	0.000	9.009	0.000	0.000	0.000	0.000	-0.038	0.000
OF	458.000	-3.899	0.000	9.009	0.000	0.000	0.000	0.000	-0.046	0.000
OF	460.000	-4.004	0.000	9.009	0.000	0.000	0.000	0.000	-0.052	0.000
OF	462.000	-4.108	0.000	9.009	0.000	0.000	0.000	0.000	-0.052	0.000
OF	464.000	-4.213	0.000	9.009	0.000	0.000	0.000	0.000	-0.052	0.000
OF	466.000	-4.317	0.000	9.009	0.000	0.000	0.000	0.000	-0.052	0.000
OF	468.000	-4.422	0.000	9.009	0.000	0.000	0.000	0.000	-0.052	0.000
OF	470.000	-4.526	0.000	9.009	0.000	0.000	0.000	0.000	-0.025	0.000
OF	472.000	-4.522	0.000	9.009	0.000	0.000	0.000	0.000	0.084	0.000
OF	474.000	-4.190	0.000	9.009	0.000	0.000	0.000	0.000	0.166	0.000
OF	476.000	-3.858	0.000	9.009	0.000	0.000	0.000	0.000	0.166	0.000
OF	478.000	-3.526	0.000	9.009	0.000	0.000	0.000	0.000	0.166	0.000
OF	480.000	-3.194	0.000	9.009	0.000	0.000	0.000	0.000	0.166	0.000
OF	482.000	-2.862	0.000	9.009	0.000	0.000	0.000	0.000	0.166	0.000
OF	484.000	-2.530	0.000	9.009	0.000	0.000	0.000	0.000	0.166	0.000
OF	486.000	-2.198	0.000	9.009	0.000	0.000	0.000	0.000	0.199	0.000
OF	488.000	-1.735	0.000	9.009	0.000	0.000	0.000	0.000	0.193	0.000
OF	490.000	-1.428	0.000	9.009	0.000	0.000	0.000	0.000	0.109	0.000
OF	492.000	-1.298	0.000	9.009	0.000	0.000	0.000	0.000	0.051	0.000
OF	494.000	-1.223	0.000	9.009	0.000	0.000	0.000	0.000	0.038	0.000
OF	496.000	-1.148	0.000	9.009	0.000	0.000	0.000	0.000	0.038	0.000
OF	498.000	-1.073	0.000	9.009	0.000	0.000	0.000	0.000	0.038	0.000
OF	500.000	-0.997	0.000	9.009	0.000	0.000	0.000	0.000	0.079	0.000
OF	502.000	-0.757	0.000	9.009	0.000	0.000	0.000	0.000	0.096	0.000
OF	504.000	-0.613	0.000	9.009	0.000	0.000	0.000	0.000	0.069	0.000
OF	506.000	-0.481	0.000	9.009	0.000	0.000	0.000	0.000	0.066	0.000
OF	508.000	-0.349	0.000	9.009	0.000	0.000	0.000	0.000	0.066	0.000
OF	510.000	-0.216	0.000	9.009	0.000	0.000	0.000	0.000	0.066	0.000
OF	512.000	-0.084	0.000	9.009	0.000	0.000	0.000	0.000	0.066	0.000
IF	514.000	0.048	0.000	9.009	0.000	0.000	0.000	0.000	0.066	0.000
IF	516.000	0.180	0.000	9.009	0.000	0.000	0.000	0.000	0.066	0.000
IF	518.000	0.313	0.000	9.009	0.000	0.000	0.000	0.000	0.066	0.000
IF	520.000	0.445	0.000	9.009	0.000	0.000	0.000	0.000	0.066	0.000
IF	522.000	0.577	0.000	9.009	0.000	0.000	0.000	0.000	0.459	0.000
IF	524.000	2.281	0.000	9.009	0.000	0.000	0.000	0.000	0.538	0.000
IF	526.000	2.729	0.000	9.009	0.000	0.000	0.000	0.000	0.174	0.000
IF	528.000	2.978	0.000	9.009	0.000	0.000	0.000	0.000	0.104	0.000
IF	530.000	3.145	0.000	9.009	0.000	0.000	0.000	0.000	0.068	0.000
IF	532.000	3.251	0.000	9.009	0.000	0.000	0.000	0.000	0.053	0.000
IF	534.000	3.356	0.000	9.009	0.000	0.000	0.000	0.000	0.053	0.000
IF	536.000	3.462	0.000	9.009	0.000	0.000	0.000	0.000	0.158	0.000
IF	538.000	3.989	0.000	9.009	0.000	0.000	0.000	0.000	0.331	0.000
IF	540.000	4.784	0.000	9.009	0.000	0.000	0.000	0.000	0.363	0.000
IF	542.000	5.441	0.000	9.009	0.000	0.000	0.000	0.000	0.186	0.000
IF	544.600	5.640	0.000	9.025	0.000	0.000	0.000	0.000	0.187	0.000
IF	547.900	6.547	0.000	9.072	0.000	0.000	0.000	0.000	0.357	0.000
IF	551.200	7.999	0.000	9.284	0.000	0.000	0.000	0.000	0.405	0.000
IF	554.000	9.014	0.000	9.284	0.000	0.000	0.000	0.000	0.389	0.000
IF	554.500	9.284	0.000	9.284	0.000	0.000	0.000	0.000	0.539	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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	END STATION	END ELEVATION	FETCH LENGTH	SURGE ELEV 10-YEAR	SURGE ELEV 100-YEAR	INITIAL WAVE HEIGHT	INITIAL W. PERIOD		BOTTOM SLOPE	AVERAGE A-ZONES
IE	0.000	-19.593	1.000	1.000	9.007	6.231	5.000	56.140	0.019	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2.000	-19.556	0.000	9.007	0.000	0.000	0.000	0.000	0.019	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	4.000	-19.518	0.000	9.007	0.000	0.000	0.000	0.000	0.019	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	6.000	-19.481	0.000	9.007	0.000	0.000	0.000	0.000	0.019	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	8.000	-19.441	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	10.000	-19.399	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	12.000	-19.357	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	14.000	-19.314	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	16.000	-19.272	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	18.000	-19.230	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	20.000	-19.188	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	22.000	-19.145	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	24.000	-19.103	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	26.000	-19.061	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	28.000	-19.018	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	30.000	-18.976	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	32.000	-18.934	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	34.000	-18.891	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	36.000	-18.849	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	38.000	-18.807	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	40.000	-18.764	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	42.000	-18.722	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	44.000	-18.680	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	46.000	-18.638	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	48.000	-18.595	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	50.000	-18.553	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	52.000	-18.511	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	54.000	-18.468	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	56.000	-18.426	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	58.000	-18.384	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	60.000	-18.341	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	62.000	-18.299	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	64.000	-18.257	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	66.000	-18.214	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	68.000	-18.172	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	70.000	-18.130	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	72.000	-18.087	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	74.000	-18.045	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	76.000	-18.003	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	78.000	-17.961	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	80.000	-17.918	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	82.000	-17.876	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	84.000	-17.834	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	86.000	-17.791	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	88.000	-17.749	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	90.000	-17.707	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	92.000	-17.664	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	94.000	-17.622	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	96.000	-17.580	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	98.000	-17.537	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	100.000	-17.495	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	102.000	-17.453	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	104.000	-17.411	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	106.000	-17.368	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	108.000	-17.326	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	110.000	-17.284	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	112.000	-17.241	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	114.000	-17.199	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	116.000	-17.157	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	118.000	-17.114	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	120.000	-17.072	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	122.000	-17.030	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	124.000	-16.987	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	126.000	-16.945	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	128.000	-16.903	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	130.000	-16.861	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	132.000	-16.818	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	134.000	-16.776	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	136.000	-16.734	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	138.000	-16.691	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	140.000	-16.649	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	142.000	-16.607	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	144.000	-16.564	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	146.000	-16.522	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	148.000	-16.480	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	150.000	-16.437	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	152.000	-16.395	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	154.000	-16.353	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	156.000	-16.310	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	158.000	-16.268	0.000	9.007	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	160.000	-16.225	0.000	9.007	0.000	0.000	0.000	0.000	0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	162.000	-16.181	0.000	9.007	0.000	0.000	0.000	0.000	0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	164.000	-16.137	0.000	9.007	0.000	0.000	0.000	0.000	0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	166.000	-16.093	0.000	9.007	0.000	0.000	0.000	0.000	0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	168.000	-16.048	0.000	9.007	0.000	0.000	0.000	0.000	0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	170.000	-16.004	0.000	9.007	0.000	0.000	0.000	0.000	0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	172.000	-15.960	0.000	9.007	0.000	0.000	0.000	0.000	0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	174.000	-15.915	0.000	9.007	0.000	0.000	0.000	0.000	0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	176.000	-15.870	0.000	9.007	0.000	0.000	0.000	0.000	0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	178.000	-15.823	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	180.000	-15.775	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	182.000	-15.727	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	184.000	-15.680	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	186.000	-15.632	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	188.000	-15.585	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	190.000	-15.537	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	192.000	-15.490	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	194.000	-15.442	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	196.000	-15.394	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	198.000	-15.347	0.000	9.007	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	200.000	-15.299	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	202.000	-15.252	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	204.000	-15.204	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	206.000	-15.156	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	208.000	-15.109	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	210.000	-15.061	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	212.000	-15.014	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	214.000	-14.966	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	216.000	-14.919	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	218.000	-14.871	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	220.000	-14.823	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	222.000	-14.776	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	224.000	-14.728	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	226.000	-14.681	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	228.000	-14.633	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	230.000	-14.586	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	232.000	-14.538	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	234.000	-14.490	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	236.000	-14.443	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	238.000	-14.395	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	240.000	-14.348	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	242.000	-14.300	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	244.000	-14.252	0.000	9.008	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	246.000	-14.205	0.000	9.008	0.000	0.000	0.000	0.000	2.138	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	248.000	-5.700	0.000	9.008	0.000	0.000	0.000	0.000	2.132	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	250.000	-5.678	0.000	9.008	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	252.000	-5.685	0.000	9.008	0.000	0.000	0.000	0.000	-0.007	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	254.000	-5.708	0.000	9.008	0.000	0.000	0.000	0.000	-0.012	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	256.000	-5.732	0.000	9.008	0.000	0.000	0.000	0.000	-0.003	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	258.000	-5.719	0.000	9.008	0.000	0.000	0.000	0.000	0.036	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	260.000	-5.586	0.000	9.008	0.000	0.000	0.000	0.000	0.082	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	262.000	-5.389	0.000	9.008	0.000	0.000	0.000	0.000	0.092	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	264.000	-5.218	0.000	9.008	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	266.000	-5.255	0.000	9.008	0.000	0.000	0.000	0.000	-0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	268.000	-5.310	0.000	9.008	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	270.000	-5.365	0.000	9.008	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	272.000	-5.420	0.000	9.008	0.000	0.000	0.000	0.000	-0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	274.000	-5.476	0.000	9.009	0.000	0.000	0.000	0.000	-0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	276.000	-5.518	0.000	9.009	0.000	0.000	0.000	0.000	-0.007	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	278.000	-5.503	0.000	9.009	0.000	0.000	0.000	0.000	0.007	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	280.000	-5.490	0.000	9.009	0.000	0.000	0.000	0.000	-0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	282.000	-5.506	0.000	9.009	0.000	0.000	0.000	0.000	-0.006	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	284.000	-5.516	0.000	9.009	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	286.000	-5.507	0.000	9.009	0.000	0.000	0.000	0.000	0.017	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	288.000	-5.446	0.000	9.009	0.000	0.000	0.000	0.000	0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	290.000	-5.394	0.000	9.009	0.000	0.000	0.000	0.000	0.003	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	292.000	-5.435	0.000	9.009	0.000	0.000	0.000	0.000	-0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	294.000	-5.475	0.000	9.009	0.000	0.000	0.000	0.000	-0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	296.000	-5.515	0.000	9.009	0.000	0.000	0.000	0.000	-0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	298.000	-5.555	0.000	9.009	0.000	0.000	0.000	0.000	-0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	300.000	-5.595	0.000	9.009	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	302.000	-5.499	0.000	9.009	0.000	0.000	0.000	0.000	0.060	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	304.000	-5.353	0.000	9.009	0.000	0.000	0.000	0.000	0.038	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	306.000	-5.347	0.000	9.009	0.000	0.000	0.000	0.000	-0.005	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	308.000	-5.374	0.000	9.009	0.000	0.000	0.000	0.000	-0.013	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	310.000	-5.400	0.000	9.009	0.000	0.000	0.000	0.000	-0.013	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	312.000	-5.427	0.000	9.009	0.000	0.000	0.000	0.000	-0.013	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	314.000	-5.453	0.000	9.009	0.000	0.000	0.000	0.000	-0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	316.000	-5.485	0.000	9.009	0.000	0.000	0.000	0.000	-0.018	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	318.000	-5.525	0.000	9.009	0.000	0.000	0.000	0.000	-0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	320.000	-5.565	0.000	9.009	0.000	0.000	0.000	0.000	-0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	322.000	-5.604	0.000	9.009	0.000	0.000	0.000	0.000	-0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	324.000	-5.644	0.000	9.009	0.000	0.000	0.000	0.000	-0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	326.000	-5.613	0.000	9.009	0.000	0.000	0.000	0.000	0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	328.000	-5.548	0.000	9.009	0.000	0.000	0.000	0.000	0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	330.000	-5.502	0.000	9.009	0.000	0.000	0.000	0.000	0.019	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	332.000	-5.470	0.000	9.009	0.000	0.000	0.000	0.000	-0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	334.000	-5.537	0.000	9.009	0.000	0.000	0.000	0.000	-0.039	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	336.000	-5.625	0.000	9.009	0.000	0.000	0.000	0.000	-0.044	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	338.000	-5.713	0.000	9.009	0.000	0.000	0.000	0.000	-0.016	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	340.000	-5.689	0.000	9.009	0.000	0.000	0.000	0.000	0.030	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	342.000	-5.594	0.000	9.009	0.000	0.000	0.000	0.000	0.048	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	344.000	-5.497	0.000	9.009	0.000	0.000	0.000	0.000	0.048	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	346.000	-5.401	0.000	9.009	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	348.000	-5.412	0.000	9.009	0.000	0.000	0.000	0.000	-0.007	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	350.000	-5.428	0.000	9.009	0.000	0.000	0.000	0.000	-0.008	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	352.000	-5.444	0.000	9.009	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	354.000	-5.410	0.000	9.009	0.000	0.000	0.000	0.000	0.026	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	356.000	-5.341	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	358.000	-5.271	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	360.000	-5.202	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	362.000	-5.133	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	364.000	-5.063	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	366.000	-4.994	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	368.000	-4.924	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	370.000	-4.855	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	372.000	-4.786	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	374.000	-4.716	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	376.000	-4.647	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	378.000	-4.577	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	380.000	-4.508	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	382.000	-4.439	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	384.000	-4.369	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	386.000	-4.300	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	388.000	-4.230	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	390.000	-4.161	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	392.000	-4.092	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	394.000	-4.022	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	396.000	-3.953	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	398.000	-3.883	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	400.000	-3.814	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	402.000	-3.745	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	404.000	-3.675	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	406.000	-3.606	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	408.000	-3.536	0.000	9.009	0.000	0.000	0.000	0.000	0.035	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	410.000	-3.467	0.000	9.009	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	412.000	-3.533	0.000	9.009	0.000	0.000	0.000	0.000	-0.044	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	414.000	-3.644	0.000	9.009	0.000	0.000	0.000	0.000	-0.056	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	416.000	-3.756	0.000	9.009	0.000	0.000	0.000	0.000	-0.056	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	418.000	-3.867	0.000	9.009	0.000	0.000	0.000	0.000	-0.060	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	420.000	-3.997	0.000	9.009	0.000	0.000	0.000	0.000	-0.065	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	422.000	-4.128	0.000	9.009	0.000	0.000	0.000	0.000	-0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	424.000	-4.267	0.000	9.009	0.000	0.000	0.000	0.000	-0.073	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	426.000	-4.419	0.000	9.009	0.000	0.000	0.000	0.000	-0.076	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	428.000	-4.571	0.000	9.009	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	430.000	-4.609	0.000	9.009	0.000	0.000	0.000	0.000	0.019	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	432.000	-4.494	0.000	9.009	0.000	0.000	0.000	0.000	0.042	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	434.000	-4.439	0.000	9.009	0.000	0.000	0.000	0.000	0.039	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	436.000	-4.336	0.000	9.009	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	438.000	-4.233	0.000	9.009	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	440.000	-4.130	0.000	9.009	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	442.000	-4.027	0.000	9.009	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	444.000	-3.924	0.000	9.009	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	446.000	-3.820	0.000	9.009	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	448.000	-3.717	0.000	9.009	0.000	0.000	0.000	0.000	0.046	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	450.000	-3.636	0.000	9.009	0.000	0.000	0.000	0.000	0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	452.000	-3.659	0.000	9.009	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	454.000	-3.746	0.000	9.009	0.000	0.000	0.000	0.000	-0.041	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	456.000	-3.821	0.000	9.009	0.000	0.000	0.000	0.000	-0.038	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	458.000	-3.899	0.000	9.009	0.000	0.000	0.000	0.000	-0.046	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	460.000	-4.004	0.000	9.009	0.000	0.000	0.000	0.000	-0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	462.000	-4.108	0.000	9.009	0.000	0.000	0.000	0.000	-0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	464.000	-4.213	0.000	9.009	0.000	0.000	0.000	0.000	-0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	466.000	-4.317	0.000	9.009	0.000	0.000	0.000	0.000	-0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	468.000	-4.422	0.000	9.009	0.000	0.000	0.000	0.000	-0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	470.000	-4.526	0.000	9.009	0.000	0.000	0.000	0.000	-0.025	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	472.000	-4.522	0.000	9.009	0.000	0.000	0.000	0.000	0.084	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	474.000	-4.190	0.000	9.009	0.000	0.000	0.000	0.000	0.166	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	476.000	-3.858	0.000	9.009	0.000	0.000	0.000	0.000	0.166	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	478.000	-3.526	0.000	9.009	0.000	0.000	0.000	0.000	0.166	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	480.000	-3.194	0.000	9.009	0.000	0.000	0.000	0.000	0.166	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	482.000	-2.862	0.000	9.009	0.000	0.000	0.000	0.000	0.166	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	484.000	-2.530	0.000	9.009	0.000	0.000	0.000	0.000	0.166	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	486.000	-2.198	0.000	9.009	0.000	0.000	0.000	0.000	0.199	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	488.000	-1.735	0.000	9.009	0.000	0.000	0.000	0.000	0.193	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	490.000	-1.428	0.000	9.009	0.000	0.000	0.000	0.000	0.109	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	492.000	-1.298	0.000	9.009	0.000	0.000	0.000	0.000	0.051	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	494.000	-1.223	0.000	9.009	0.000	0.000	0.000	0.000	0.038	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	496.000	-1.148	0.000	9.009	0.000	0.000	0.000	0.000	0.038	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	498.000	-1.073	0.000	9.009	0.000	0.000	0.000	0.000	0.038	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	500.000	-0.997	0.000	9.009	0.000	0.000	0.000	0.000	0.079	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	502.000	-0.757	0.000	9.009	0.000	0.000	0.000	0.000	0.096	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	504.000	-0.613	0.000	9.009	0.000	0.000	0.000	0.000	0.069	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	506.000	-0.481	0.000	9.009	0.000	0.000	0.000	0.000	0.066	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	508.000	-0.349	0.000	9.009	0.000	0.000	0.000	0.000	0.066	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	510.000	-0.216	0.000	9.009	0.000	0.000	0.000	0.000	0.066	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	512.000	-0.084	0.000	9.009	0.000	0.000	0.000	0.000	0.066	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	514.000	0.048	0.000	9.009	0.000	0.000	0.000	0.000	0.066	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	516.000	0.180	0.000	9.009	0.000	0.000	0.000	0.000	0.066	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	518.000	0.313	0.000	9.009	0.000	0.000	0.000	0.000	0.066	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	520.000	0.445	0.000	9.009	0.000	0.000	0.000	0.000	0.066	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	522.000	0.577	0.000	9.009	0.000	0.000	0.000	0.000	0.459	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	524.000	2.281	0.000	9.009	0.000	0.000	0.000	0.000	0.538	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	526.000	2.729	0.000	9.009	0.000	0.000	0.000	0.000	0.174	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	528.000	2.978	0.000	9.009	0.000	0.000	0.000	0.000	0.104	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	530.000	3.145	0.000	9.009	0.000	0.000	0.000	0.000	0.068	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	532.000	3.251	0.000	9.009	0.000	0.000	0.000	0.000	0.053	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	534.000	3.356	0.000	9.009	0.000	0.000	0.000	0.000	0.053	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	536.000	3.462	0.000	9.009	0.000	0.000	0.000	0.000	0.158	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	538.000	3.989	0.000	9.009	0.000	0.000	0.000	0.000	0.331	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	540.000	4.784	0.000	9.009	0.000	0.000	0.000	0.000	0.363	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	542.000	5.441	0.000	9.009	0.000	0.000	0.000	0.000	0.186	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	544.600	5.640	0.000	9.025	0.000	0.000	0.000	0.000	0.187	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	547.900	6.547	0.000	9.072	0.000	0.000	0.000	0.000	0.357	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	551.200	7.999	0.000	9.284	0.000	0.000	0.000	0.000	0.405	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	554.000	9.014	0.000	9.284	0.000	0.000	0.000	0.000	0.389	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	554.500	9.284	0.000	9.284	0.000	0.000	0.000	0.000	0.539	0.000

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

NOTE:
SURGE ELEVATION INCLUDES CONTRIBUTIONS FROM ASTRONOMICAL AND STORM TIDES.

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

	LOCATION	CONTROLLING WAVE HEIGHT	SPECTRAL PEAK WAVE PERIOD	WAVE CREST ELEVATION
IE	0.00	6.23	5.00	13.37
OF	2.00	6.23	5.00	13.37
OF	4.00	6.23	5.00	13.37
OF	6.00	6.23	5.00	13.37
OF	8.00	6.23	5.00	13.37
OF	10.00	6.23	5.00	13.37
OF	12.00	6.23	5.00	13.37
OF	14.00	6.23	5.00	13.37
OF	16.00	6.23	5.00	13.37
OF	18.00	6.23	5.00	13.37
OF	20.00	6.23	5.00	13.37
OF	22.00	6.23	5.00	13.37
OF	24.00	6.23	5.00	13.37
OF	26.00	6.23	5.00	13.37
OF	28.00	6.23	5.00	13.37
OF	30.00	6.23	5.00	13.37
OF	32.00	6.23	5.00	13.37
OF	34.00	6.23	5.00	13.37
OF	36.00	6.23	5.00	13.36
OF	38.00	6.23	5.00	13.36
OF	40.00	6.22	5.00	13.36
OF	42.00	6.22	5.00	13.36
OF	44.00	6.22	5.00	13.36
OF	46.00	6.22	5.00	13.36
OF	48.00	6.22	5.00	13.36
OF	50.00	6.22	5.00	13.36
OF	52.00	6.22	5.00	13.36
OF	54.00	6.22	5.00	13.36
OF	56.00	6.22	5.00	13.36
OF	58.00	6.22	5.00	13.36
OF	60.00	6.22	5.00	13.36
OF	62.00	6.22	5.00	13.36
OF	64.00	6.22	5.00	13.36
OF	66.00	6.22	5.00	13.36
OF	68.00	6.22	5.00	13.36
OF	70.00	6.22	5.00	13.36
OF	72.00	6.22	5.00	13.36
OF	74.00	6.22	5.00	13.36
OF	76.00	6.22	5.00	13.36
OF	78.00	6.22	5.00	13.36
OF	80.00	6.22	5.00	13.36
OF	82.00	6.22	5.00	13.36
OF	84.00	6.22	5.00	13.36
OF	86.00	6.22	5.00	13.36
OF	88.00	6.22	5.00	13.36
OF	90.00	6.22	5.00	13.36
OF	92.00	6.22	5.00	13.36
OF	94.00	6.22	5.00	13.36
OF	96.00	6.22	5.00	13.36
OF	98.00	6.22	5.00	13.36
OF	100.00	6.22	5.00	13.36
OF	102.00	6.22	5.00	13.36
OF	104.00	6.22	5.00	13.36
OF	106.00	6.22	5.00	13.36
OF	108.00	6.22	5.00	13.36
OF	110.00	6.22	5.00	13.36
OF	112.00	6.22	5.00	13.36
OF	114.00	6.22	5.00	13.36
OF	116.00	6.22	5.00	13.36
OF	118.00	6.22	5.00	13.36
OF	120.00	6.22	5.00	13.36
OF	122.00	6.21	5.00	13.36
OF	124.00	6.21	5.00	13.36
OF	126.00	6.21	5.00	13.36
OF	128.00	6.21	5.00	13.36
OF	130.00	6.21	5.00	13.36
OF	132.00	6.21	5.00	13.36
OF	134.00	6.21	5.00	13.36
OF	136.00	6.21	5.00	13.36
OF	138.00	6.21	5.00	13.36
OF	140.00	6.21	5.00	13.36
OF	142.00	6.21	5.00	13.36
OF	144.00	6.21	5.00	13.36
OF	146.00	6.21	5.01	13.36
OF	148.00	6.21	5.01	13.36
OF	150.00	6.21	5.01	13.36
OF	152.00	6.21	5.01	13.36
OF	154.00	6.21	5.01	13.36
OF	156.00	6.21	5.01	13.36
OF	158.00	6.21	5.01	13.36
OF	160.00	6.21	5.01	13.36
OF	162.00	6.21	5.01	13.36
OF	164.00	6.21	5.01	13.36
OF	166.00	6.21	5.01	13.36
OF	168.00	6.21	5.01	13.36
OF	170.00	6.21	5.01	13.36
OF	172.00	6.21	5.01	13.35
OF	174.00	6.21	5.01	13.35
OF	176.00	6.21	5.01	13.35
OF	178.00	6.21	5.01	13.35
OF	180.00	6.21	5.01	13.35
OF	182.00	6.21	5.01	13.35
OF	184.00	6.21	5.01	13.35
OF	186.00	6.21	5.01	13.35
OF	188.00	6.21	5.01	13.35
OF	190.00	6.21	5.01	13.35
OF	192.00	6.21	5.01	13.35

OF	194.00	6.21	5.01	13.35
OF	196.00	6.21	5.01	13.35
OF	198.00	6.21	5.01	13.35
OF	200.00	6.21	5.01	13.35
OF	202.00	6.21	5.01	13.35
OF	204.00	6.21	5.01	13.35
OF	206.00	6.21	5.01	13.35
OF	208.00	6.21	5.01	13.35
OF	210.00	6.21	5.01	13.35
OF	212.00	6.21	5.01	13.35
OF	214.00	6.21	5.01	13.35
OF	216.00	6.21	5.01	13.35
OF	218.00	6.21	5.01	13.35
OF	220.00	6.21	5.01	13.35
OF	222.00	6.21	5.01	13.35
OF	224.00	6.21	5.01	13.35
OF	226.00	6.21	5.01	13.35
OF	228.00	6.21	5.01	13.35
OF	230.00	6.21	5.01	13.35
OF	232.00	6.21	5.01	13.35
OF	234.00	6.21	5.01	13.35
OF	236.00	6.21	5.01	13.35
OF	238.00	6.21	5.01	13.35
OF	240.00	6.21	5.01	13.35
OF	242.00	6.21	5.01	13.36
OF	244.00	6.21	5.01	13.36
OF	246.00	6.21	5.01	13.36
OF	248.00	6.34	5.01	13.45
OF	250.00	6.34	5.01	13.45
OF	252.00	6.34	5.01	13.45
OF	254.00	6.34	5.01	13.45
OF	256.00	6.34	5.01	13.45
OF	258.00	6.34	5.01	13.45
OF	260.00	6.35	5.01	13.45
OF	262.00	6.36	5.01	13.46
OF	264.00	6.37	5.01	13.47
OF	266.00	6.37	5.01	13.46
OF	268.00	6.36	5.01	13.46
OF	270.00	6.36	5.01	13.46
OF	272.00	6.36	5.01	13.46
OF	274.00	6.35	5.01	13.46
OF	276.00	6.35	5.01	13.46
OF	278.00	6.35	5.01	13.46
OF	280.00	6.36	5.01	13.46
OF	282.00	6.35	5.01	13.46
OF	284.00	6.35	5.01	13.46
OF	286.00	6.35	5.01	13.46
OF	288.00	6.36	5.01	13.46
OF	290.00	6.36	5.01	13.46
OF	292.00	6.36	5.01	13.46
OF	294.00	6.36	5.01	13.46
OF	296.00	6.36	5.01	13.46
OF	298.00	6.35	5.01	13.46
OF	300.00	6.35	5.01	13.46
OF	302.00	6.36	5.01	13.46
OF	304.00	6.37	5.01	13.46
OF	306.00	6.37	5.01	13.47
OF	308.00	6.36	5.01	13.46
OF	310.00	6.36	5.01	13.46
OF	312.00	6.36	5.01	13.46
OF	314.00	6.36	5.01	13.46
OF	316.00	6.36	5.01	13.46
OF	318.00	6.36	5.01	13.46
OF	320.00	6.36	5.01	13.46
OF	322.00	6.35	5.01	13.46
OF	324.00	6.35	5.01	13.46
OF	326.00	6.35	5.01	13.46
OF	328.00	6.36	5.01	13.46
OF	330.00	6.36	5.01	13.46
OF	332.00	6.36	5.01	13.46
OF	334.00	6.36	5.01	13.46
OF	336.00	6.36	5.01	13.46
OF	338.00	6.35	5.01	13.45
OF	340.00	6.35	5.01	13.46
OF	342.00	6.36	5.01	13.46
OF	344.00	6.36	5.01	13.46
OF	346.00	6.37	5.01	13.47
OF	348.00	6.37	5.01	13.47
OF	350.00	6.37	5.01	13.47
OF	352.00	6.37	5.01	13.47
OF	354.00	6.37	5.01	13.47
OF	356.00	6.37	5.01	13.47
OF	358.00	6.38	5.01	13.47
OF	360.00	6.38	5.01	13.48
OF	362.00	6.38	5.01	13.48
OF	364.00	6.39	5.01	13.48
OF	366.00	6.39	5.01	13.48
OF	368.00	6.40	5.01	13.49
OF	370.00	6.40	5.01	13.49
OF	372.00	6.41	5.01	13.49
OF	374.00	6.41	5.01	13.50
OF	376.00	6.41	5.01	13.50
OF	378.00	6.42	5.01	13.50
OF	380.00	6.42	5.01	13.51
OF	382.00	6.43	5.01	13.51
OF	384.00	6.43	5.01	13.51
OF	386.00	6.44	5.01	13.52
OF	388.00	6.44	5.01	13.52
OF	390.00	6.45	5.01	13.52
OF	392.00	6.45	5.01	13.53
OF	394.00	6.46	5.01	13.53
OF	396.00	6.46	5.01	13.53

OF	398.00	6.47	5.01	13.54
OF	400.00	6.47	5.01	13.54
OF	402.00	6.48	5.01	13.54
OF	404.00	6.48	5.01	13.55
OF	406.00	6.49	5.01	13.55
OF	408.00	6.49	5.01	13.56
OF	410.00	6.50	5.01	13.56
OF	412.00	6.50	5.01	13.56
OF	414.00	6.49	5.01	13.55
OF	416.00	6.48	5.01	13.54
OF	418.00	6.47	5.01	13.54
OF	420.00	6.46	5.01	13.53
OF	422.00	6.45	5.01	13.53
OF	424.00	6.44	5.01	13.52
OF	426.00	6.43	5.01	13.51
OF	428.00	6.42	5.01	13.51
OF	430.00	6.42	5.01	13.50
OF	432.00	6.43	5.01	13.51
OF	434.00	6.43	5.01	13.51
OF	436.00	6.44	5.01	13.52
OF	438.00	6.45	5.01	13.52
OF	440.00	6.45	5.01	13.53
OF	442.00	6.46	5.01	13.53
OF	444.00	6.47	5.01	13.54
OF	446.00	6.48	5.01	13.54
OF	448.00	6.48	5.01	13.55
OF	450.00	6.49	5.01	13.55
OF	452.00	6.49	5.01	13.55
OF	454.00	6.48	5.01	13.55
OF	456.00	6.48	5.01	13.54
OF	458.00	6.47	5.01	13.54
OF	460.00	6.47	5.01	13.53
OF	462.00	6.46	5.02	13.53
OF	464.00	6.45	5.02	13.52
OF	466.00	6.44	5.02	13.52
OF	468.00	6.44	5.02	13.52
OF	470.00	6.43	5.02	13.51
OF	472.00	6.43	5.02	13.51
OF	474.00	6.45	5.02	13.53
OF	476.00	6.48	5.02	13.54
OF	478.00	6.50	5.02	13.56
OF	480.00	6.53	5.02	13.58
OF	482.00	6.56	5.02	13.60
OF	484.00	6.59	5.02	13.62
OF	486.00	6.62	5.02	13.64
OF	488.00	6.54	5.02	13.59
OF	490.00	6.49	5.02	13.55
OF	492.00	6.47	5.02	13.54
OF	494.00	6.46	5.02	13.53
OF	496.00	6.44	5.02	13.52
OF	498.00	6.43	5.02	13.51
OF	500.00	6.42	5.02	13.50
OF	502.00	6.38	5.02	13.47
OF	504.00	6.37	5.02	13.47
OF	506.00	6.38	5.02	13.48
OF	508.00	6.40	5.02	13.49
OF	510.00	6.41	5.02	13.50
OF	512.00	6.36	5.02	13.46
IF	514.00	6.27	5.02	13.40
IF	516.00	6.19	5.02	13.34
IF	518.00	6.11	5.02	13.28
IF	520.00	6.03	5.02	13.23
IF	522.00	5.94	5.02	13.17
IF	524.00	4.84	5.02	12.40
IF	526.00	4.54	5.02	12.19
IF	528.00	4.38	5.02	12.07
IF	530.00	4.26	5.02	11.99
IF	532.00	4.19	5.02	11.94
IF	534.00	4.12	5.02	11.89
IF	536.00	4.05	5.02	11.84
IF	538.00	3.69	5.02	11.59
IF	540.00	3.13	5.02	11.20
IF	542.00	2.67	5.02	10.88
IF	544.60	2.53	5.02	10.80
IF	547.90	1.91	5.02	10.41
IF	551.20	0.99	5.02	9.97
IF	554.00	0.21	5.02	9.43
IF	554.50	0.01	5.02	9.29

PART3 LOCATION OF AREAS ABOVE 100-YEAR SURGE

NO AREAS ABOVE 100-YEAR SURGE IN THIS TRANSECT

PART4 LOCATION OF SURGE CHANGES

STATION	10-YEAR SURGE	100-YEAR SURGE
200.00	1.00	9.01
274.00	1.00	9.01
544.60	1.00	9.02
547.90	1.00	9.07
551.20	1.00	9.28

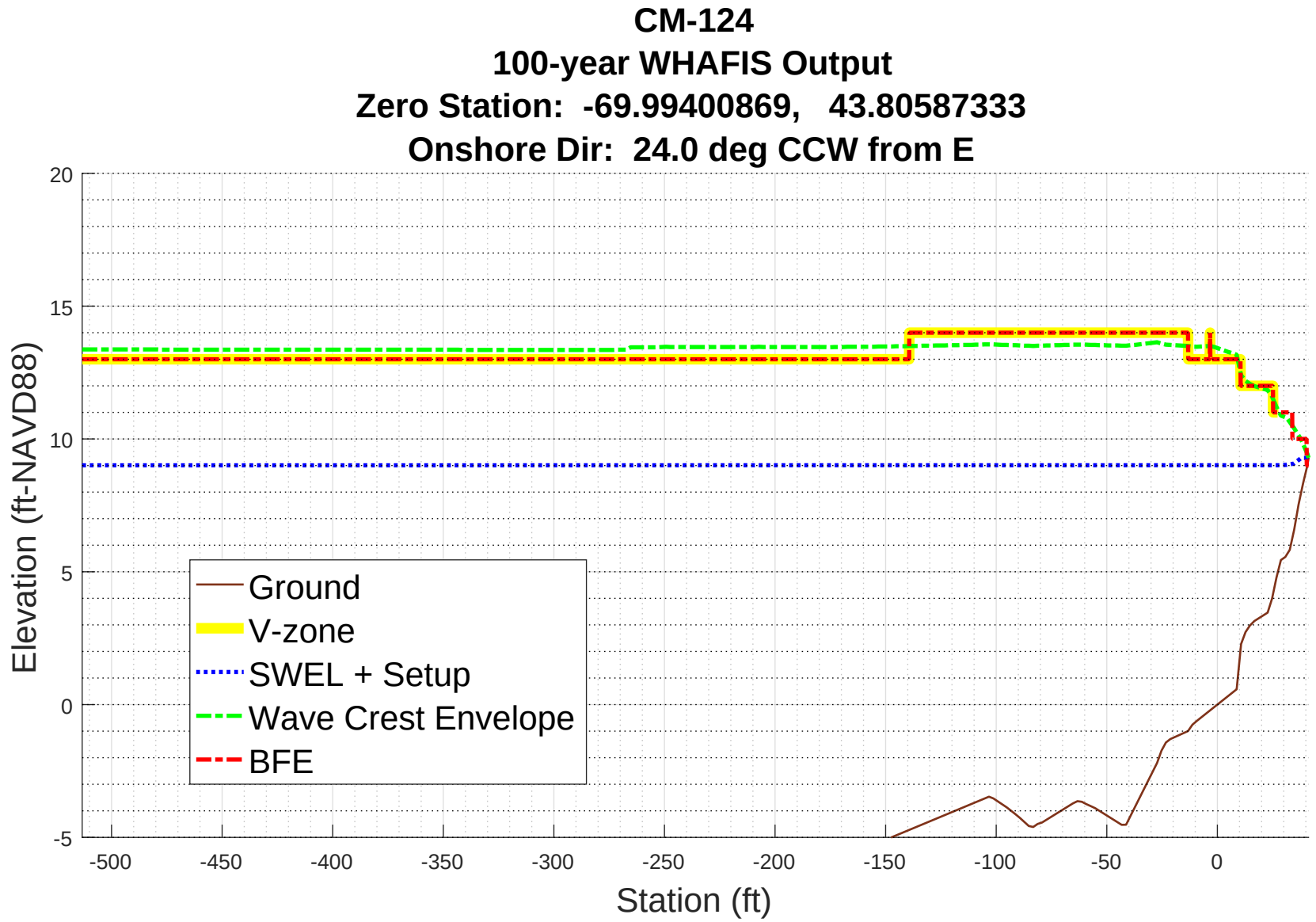
PART5 LOCATION OF V ZONES

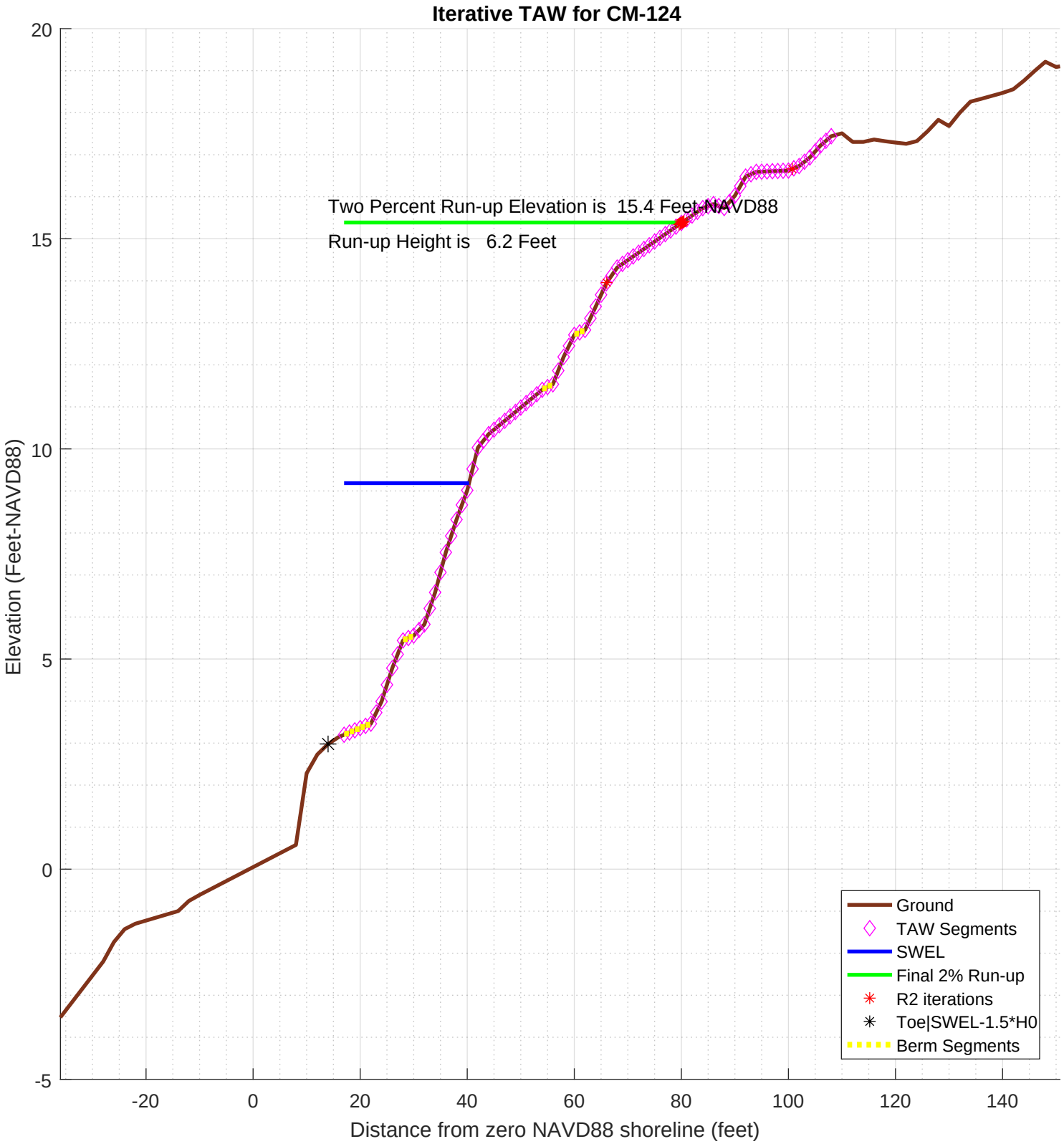
STATION OF GUTTER	LOCATION OF ZONE
540.57	WINDWARD

PART6 NUMBERED A ZONES AND V ZONES

STATION OF GUTTER	ELEVATION	ZONE DESIGNATION	FHF
0.00	13.37		
		V22 EL=13	120
198.00	13.35		
		V22 EL=13	120
200.00	13.35		
		V22 EL=13	120
272.00	13.46		
		V22 EL=13	120
274.00	13.46		
		V22 EL=13	120

```
                                376.61          13.50
                                                          V22  EL=14     120
                                500.18          13.50
                                                          V22  EL=13     120
                                523.73          12.50
                                                          V22  EL=12     120
                                538.46          11.50
                                                          V22  EL=11     120
                                540.57          11.11
                                                          A19  EL=11      95
                                542.00          10.88
                                                          A19  EL=11      95
                                544.60          10.80
                                                          A19  EL=11      95
                                547.13          10.50
                                                          A19  EL=10      95
                                547.90          10.41
                                                          A19  EL=10      95
                                551.20           9.97
                                                          A19  EL=10      95
                                553.64           9.50
                                                          A19  EL= 9      95
                                554.50           9.29
                                     ZONE TERMINATED AT END OF TRANSECT
                                     PART 7   POSTSCRIPT NOTES
                           PS#  1   START(419903.7913,4850728.3748)
                           PS#  2   END(420109.1804,4850819.9463)
-1.000000e+00
```


CM-124
100-year WHAFIS Output
Zero Station: -69.99400869, 43.80587333
Onshore Dir: 24.0 deg CCW from E
Elevation (ft-NAVD88)
Station (ft)
20
15
10
5
0
-5
-500
-450
-400
-350
-300
-250
-200
-150
-100
-50
0
Ground
V-zone
SWEL + Setup
Wave Crest Envelope
BFE


Iterative TAW for CM-124
Two Percent Run-up Elevation is 15.4 Feet-NAVD88
Run-up Height is 6.2 Feet
Elevation (Feet-NAVD88)
Distance from zero NAVD88 shoreline (feet)
20
15
10
5
0
-5
-20
0
20
40
60
80
100
120
140
Ground
TAW Segments
SWEL
Final 2% Run-up
R2 iterations
Toe|SWEL-1.5*H0
Berm Segments

```
diary on         % begin recording

% FEMA appeal for The Town of Harpswell, Cumberland county, Maine
% TRANSECT ID: CM-124
% 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-124sta_ele_include.csv';   % file with station, elevation, include
                                    % third colunm is 0 for excluded points
imgname='logfiles/CM-124-runup';
SWEL=9.0068;  % 100-yr still water level including wave setup.
H0=4.0078;    % significant wave height at toe of structure
Tp=5.0362;    % peak period, 1/fma,
T0=Tp/1.1;

gamma_berm=0.93753;   % this may get changed automatically below
gamma_rough=0.8;
gamma_beta=1;
gamma_perm=1;

setupAtToe=-0.01648;
maxSetup=0.27738;   % only used in case of berm/shallow foreshore weighted average

plotTitle='Iterative TAW for CM-124'

plotTitle =

Iterative TAW for CM-124



% END CONFIG
%------------------------------

SWEL=SWEL+setupAtToe

SWEL =

                   8.99032

SWEL_fore=SWEL+maxSetup

SWEL_fore =

                    9.2677



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

L0 =

          107.256019656912


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

Ztoe =

                    2.97862


% 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 =

                   15.00202


% 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 =

          14.0074162679426


top_sta =

          75.7719774011299

% 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 =

          75.7719774011299

toe_sta

toe_sta =

          14.0074162679426




% 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 78.5 ft landward of toe of slope


ans =

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


ans =

-!!-       setup is adjusted to 0.18 feet


ans =

-!!-       SWEL is adjusted to 9.19 feet


k =

     1
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
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    51
    52
    53
    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('!!! - - Iribaren number: %6.2f is outside the valid range (0.5-10), TAW NOT VALID - - !!!\n', Irb*gam
   TAW_VALID=0;
else
   sprintf('!!! - - Iribaren number: %6.2f is in the valid range (0.5-10), TAW RECOMMENDED - - !!!\n', Irb*gamma_
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 ber
   % do the foreshore calculation
   fore_H0=0.78*(SWEL_fore-min(Berm_Heights))
   % get upper slope
   fore_toe_sta=-999;
   fore_toe_dep=-999;
   for kk=length(dep)-1:-1:1
      ddep=dep(kk+1)-dep(kk);
      dsta=sta(kk+1)-sta(kk);
      s=ddep/dsta;
      if s < 1/15
         break
      end
      fore_toe_sta=sta(kk);
      fore_toe_dep=dep(kk);
      upper_slope=(Z2-fore_toe_dep)/(top_sta-fore_toe_sta)
   end
   fore_Irb=upper_slope/(sqrt(fore_H0/L0));
   fore_gamma=gamma_perm*gamma_beta*gamma_rough;
   if (fore_Irb < 1.8)
      fore_R2=fore_gamma*fore_H0*1.77*fore_Irb;
   else
      fore_R2=fore_gamma*fore_H0*(4.3-(1.6/sqrt(fore_Irb)));
   end
   if berm_width >= L0
      R2_new=fore_R2
      disp ('berm is wider than one wavelength, use full shallow foreshore solution');
   else
      w2=(berm_width-0.25*L0)/(0.75*L0)
      w1=1-w2
      R2_new=w2*fore_R2 + w1*R2_new
   end
end % end berm width check
% convergence criterion
R2del=abs(R2-R2_new)
R2_all(iter)=R2_new;
% get the new top station (for plot purposes)
Z2=R2_new+SWEL
top_sta=-999;
for kk=1:length(sta)-1
   if ((Z2 > dep(kk)) & (Z2 <= dep(kk+1)))    % here is the intersection of z2 with profile
      top_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Z2)
      break;
   end
```

```
    end
    if top_sta==-999
       dy=Z2-dep(end);
       top_sta=sta(end)+dy/S(end);
    end
    topStaAll(iter)=top_sta;
end
ans =
!----------------- STARTING ITERATION 1 -----------------!
Ztoe =
                    2.97862
toe_sta =
           14.0074162679426
top_sta =
           75.7719774011299
Z2 =
                   15.00202
H0 =
                     4.0078
Tp =
                     5.0362
T0 =
           4.57836363636364
R2 =
                    12.0234
Z2 =
           21.2084110080735
top_sta =
           142.187032741139
Lslope =
           128.179616473196
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 1
dh =
           5.96068600807348
rdh_sum =
          0.846413480300901
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 2
dh =
           5.90793600807348
rdh_sum =
           1.68529921251834
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 3
dh =
           5.85518600807348
rdh_sum =
           2.51651234959337
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 4
dh =
           5.80243600807348
rdh_sum =
           3.33991132389942
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 5
dh =
           5.74968600807348
rdh_sum =
           4.15535790775132
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 12
dh =
           3.71458600807348
rdh_sum =
           4.59802330632674
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 13
dh =
           3.65633600807348
rdh_sum =
           5.02936483654619
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 38
dh =
          -2.25383899192652
rdh_sum =
           5.11359008446356
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 39
dh =
          -2.31933899192652
rdh_sum =
           5.20262911248105
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 44
dh =
          -3.55743899192652
rdh_sum =
```

```
          5.40352056658974
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 45
dh =
         -3.61553899192652
rdh_sum =
          5.61052875058848
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 68
dh =
         -6.56881399192652
rdh_sum =
           6.1830553769251
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 69
dh =
         -6.61666399192652
rdh_sum =
           6.7617614132431
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 70
dh =
         -6.61711399192652
rdh_sum =
           7.3405255062519
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 71
dh =
         -6.57016399192652
rdh_sum =
           7.91322663326668
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 76
dh =
         -7.32236399192652
rdh_sum =
           8.58113002076043
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 77
dh =
         -7.37871399192652
rdh_sum =
           9.2559492991577
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 78
dh =
         -7.40946399192652
rdh_sum =
           9.93452666767695
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 79
dh =
         -7.41461399192652
rdh_sum =
           10.6137323194366
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 80
dh =
         -7.41976399192652
rdh_sum =
           11.2935659299397
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 81
dh =
         -7.42491399192652
rdh_sum =
           11.9740271735523
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 82
dh =
         -7.43006399192652
rdh_sum =
           12.655115723504
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 83
dh =
         -7.43521399192652
rdh_sum =
           13.3368312518885
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 84
dh =
         -7.46481399192652
rdh_sum =
           14.0221439691922
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 85
dh =
         -7.51886399192652
rdh_sum =
```

```
          14.7139964487974
ans =
!------- End Berm Factor Calculation, Iter: 1 ---------!
berm_width =
    25
rB =
          0.195038811067341
rdh_mean =
          0.588559857951894
gamma_berm =
           0.91975320386956
slope =
          0.176680158651386
Irb =
          0.913998742198735
gamma_berm =
           0.91975320386956
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                        0.8
gamma =
          0.735802563095648
ans =
!!! - - Iribaren number:   0.84 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.7 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          4.77074497685901
R2del =
          7.25265502314099
Z2 =
          13.9557559849325
top_sta =
          66.0577090979284
ans =
!----------------- STARTING ITERATION 2 -----------------!
Ztoe =
                    2.97862
toe_sta =
          14.0074162679426
top_sta =
          66.0577090979284
Z2 =
          13.9557559849325
H0 =
                     4.0078
Tp =
                     5.0362
T0 =
          4.57836363636364
R2 =
          4.77074497685901
Z2 =
          13.9557559849325
top_sta =
          66.0577090979284
Lslope =
          52.0502928299858
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 1
dh =
          5.96068600807348
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 2
dh =
          5.90793600807348
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 3
dh =
          5.85518600807348
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 4
dh =
          5.80243600807348
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 5
dh =
          5.74968600807348
rdh_sum =
```

```
     5
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 12
dh =
         3.71458600807348
rdh_sum =
         5.44266539857542
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 13
dh =
         3.65633600807348
rdh_sum =
         5.87400692879487
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 38
dh =
        -2.25383899192652
rdh_sum =
         6.33075224587892
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 39
dh =
        -2.31933899192652
rdh_sum =
         6.80901652877687
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 44
dh =
        -3.55743899192652
rdh_sum =
         7.65773609552121
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 45
dh =
        -3.61553899192652
rdh_sum =
         8.51990634851971
ans =
!------- End Berm Factor Calculation, Iter: 2 ---------!
berm_width =
    11
rB =
         0.211334065610923
rdh_mean =
         0.774536940774519
gamma_berm =
         0.952351975048803
slope =
         0.267407008042439
Irb =
         1.38334531093653
gamma_berm =
         0.952351975048803
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                      0.8
gamma =
         0.761881580039042
ans =
!!! - - Iribaren number:   1.32 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:3.7 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
         7.47648357251724
R2del =
         2.70573859565823
Z2 =
         16.6614945805907
top_sta =
         100.715903433686
ans =
!----------------- STARTING ITERATION 3 -----------------!
Ztoe =
                   2.97862
toe_sta =
         14.0074162679426
top_sta =
         100.715903433686
Z2 =
         16.6614945805907
H0 =
                    4.0078
Tp =
                    5.0362
T0 =
         4.57836363636364
R2 =
```

```
          7.47648357251724
Z2 =
          16.6614945805907
top_sta =
          100.715903433686
Lslope =
          86.7084871657431
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 1
dh =
          5.96068600807348
rdh_sum =
         0.846413480300901
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 2
dh =
          5.90793600807348
rdh_sum =
          1.68529921251834
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 3
dh =
          5.85518600807348
rdh_sum =
          2.51651234959337
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 4
dh =
          5.80243600807348
rdh_sum =
          3.33991132389942
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 5
dh =
          5.74968600807348
rdh_sum =
          4.15535790775132
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 12
dh =
          3.71458600807348
rdh_sum =
          4.59802330632674
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 13
dh =
          3.65633600807348
rdh_sum =
          5.02936483654619
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 38
dh =
         -2.25383899192652
rdh_sum =
          5.23732663156932
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 39
dh =
         -2.31933899192652
rdh_sum =
          5.45656775096638
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 44
dh =
         -3.55743899192652
rdh_sum =
           5.9186172970621
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 45
dh =
         -3.61553899192652
rdh_sum =
          6.39284843086715
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 68
dh =
         -6.56881399192652
rdh_sum =
          7.35692028387383
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 69
dh =
         -6.61666399192652
rdh_sum =
          8.32464010409872
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 70
dh =
         -6.61711399192652
rdh_sum =
```

```
           9.2923933360374
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 71
dh =
         -6.57016399192652
rdh_sum =
           10.256570688621
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 76
dh =
         -7.32236399192652
rdh_sum =
           11.2555224897684
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 77
dh =
         -7.37871399192652
rdh_sum =
           12.2551005535862
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 78
dh =
         -7.40946399192652
rdh_sum =
           13.2549022635925
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 79
dh =
         -7.41461399192652
rdh_sum =
              14.2547332729
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 80
dh =
         -7.41976399192652
rdh_sum =
           15.2545912408303
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 81
dh =
         -7.42491399192652
rdh_sum =
           16.2544738265789
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 82
dh =
         -7.43006399192652
rdh_sum =
           17.254378689226
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 83
dh =
         -7.43521399192652
rdh_sum =
           18.2543034877474
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 84
dh =
         -7.46481399192652
rdh_sum =
           19.2542974701407
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 85
dh =
         -7.51886399192652
rdh_sum =
           20.2542182138319
ans =
!------- End Berm Factor Calculation, Iter: 3 ---------!
berm_width =
    25
rB =
         0.288322410148992
rdh_mean =
         0.810168728553277
gamma_berm =
         0.945267390294833
slope =
         0.221734079201129
Irb =
           1.14707090507153
gamma_berm =
         0.945267390294833
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.8
gamma =
```

```
         0.756213912235867
ans =
!!! - - Iribaren number:   1.08 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:4.5 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          6.15338706735624
R2del =
          1.32309650516099
Z2 =
          15.3383980754297
top_sta =
          79.5739895528782
ans =
!----------------- STARTING ITERATION 4 -----------------!
Ztoe =
                    2.97862
toe_sta =
          14.0074162679426
top_sta =
          79.5739895528782
Z2 =
          15.3383980754297
H0 =
                     4.0078
Tp =
                     5.0362
T0 =
          4.57836363636364
R2 =
          6.15338706735624
Z2 =
          15.3383980754297
top_sta =
          79.5739895528782
Lslope =
          65.5665732849356
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 1
dh =
          5.96068600807348
rdh_sum =
         0.846413480300901
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 2
dh =
          5.90793600807348
rdh_sum =
          1.68529921251834
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 3
dh =
          5.85518600807348
rdh_sum =
          2.51651234959337
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 4
dh =
          5.80243600807348
rdh_sum =
          3.33991132389942
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 5
dh =
          5.74968600807348
rdh_sum =
          4.15535790775132
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 12
dh =
          3.71458600807348
rdh_sum =
          4.59802330632674
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 13
dh =
          3.65633600807348
rdh_sum =
          5.02936483654619
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 38
dh =
         -2.25383899192652
rdh_sum =
          5.32543585118557
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 39
dh =
         -2.31933899192652
rdh_sum =
```

```
          5.63688451650779
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 44
dh =
         -3.55743899192652
rdh_sum =
          6.25837685704887
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 45
dh =
         -3.61553899192652
rdh_sum =
          6.89420052285582
ans =
!------- End Berm Factor Calculation, Iter: 4 ---------!
berm_width =
    11
rB =
         0.167768413825697
rdh_mean =
         0.626745502077802
gamma_berm =
         0.937379684930286
slope =
         0.226508232629699
Irb =
          1.17176847305021
gamma_berm =
         0.937379684930286
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.8
gamma =
         0.749903747944229
ans =
!!! - - Iribaren number:   1.10 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:4.4 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
           6.2334235927585
R2del =
        0.0800365254022593
Z2 =
          15.418434600832
top_sta =
         80.4786274825549
ans =
!----------------- STARTING ITERATION 5 -----------------!
Ztoe =
                   2.97862
toe_sta =
         14.0074162679426
top_sta =
         80.4786274825549
Z2 =
          15.418434600832
H0 =
                    4.0078
Tp =
                    5.0362
T0 =
         4.57836363636364
R2 =
           6.2334235927585
Z2 =
          15.418434600832
top_sta =
         80.4786274825549
Lslope =
         66.4712112146123
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 1
dh =
         5.96068600807348
rdh_sum =
         0.846413480300901
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 2
dh =
         5.90793600807348
rdh_sum =
         1.68529921251834
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 3
dh =
         5.85518600807348
rdh_sum =
```

```
          2.51651234959337
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 4
dh =
          5.80243600807348
rdh_sum =
          3.33991132389942
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 5
dh =
          5.74968600807348
rdh_sum =
          4.15535790775132
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 12
dh =
          3.71458600807348
rdh_sum =
          4.59802330632674
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 13
dh =
          3.65633600807348
rdh_sum =
          5.02936483654619
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 38
dh =
         -2.25383899192652
rdh_sum =
          5.31871335178303
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 39
dh =
         -2.31933899192652
rdh_sum =
          5.62314327343593
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 44
dh =
         -3.55743899192652
rdh_sum =
          6.23329290303733
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 45
dh =
         -3.61553899192652
rdh_sum =
          6.85767452013856
ans =
!------- End Berm Factor Calculation, Iter: 5 ---------!
berm_width =
    11
rB =
         0.165485174694423
rdh_mean =
         0.623424956376232
gamma_berm =
         0.937682413120361
slope =
         0.224257129571295
Irb =
          1.16012310562669
gamma_berm =
         0.937682413120361
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                      0.8
gamma =
         0.750145930496289
ans =
!!! - - Iribaren number:   1.09 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:4.5 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          6.17346714806519
R2del =
         0.059956444693313
Z2 =
          15.3584781561387
top_sta =
           79.800883120211
ans =
!----------------- STARTING ITERATION 6 -----------------!
Ztoe =
                   2.97862
toe_sta =
```

```
          14.0074162679426
top_sta =
           79.800883120211
Z2 =
          15.3584781561387
H0 =
                    4.0078
Tp =
                    5.0362
T0 =
          4.57836363636364
R2 =
          6.17346714806519
Z2 =
          15.3584781561387
top_sta =
           79.800883120211
Lslope =
          65.7934668522684
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 1
dh =
          5.96068600807348
rdh_sum =
         0.846413480300901
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 2
dh =
          5.90793600807348
rdh_sum =
          1.68529921251834
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 3
dh =
          5.85518600807348
rdh_sum =
          2.51651234959337
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 4
dh =
          5.80243600807348
rdh_sum =
          3.33991132389942
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 5
dh =
          5.74968600807348
rdh_sum =
          4.15535790775132
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 12
dh =
          3.71458600807348
rdh_sum =
          4.59802330632674
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 13
dh =
          3.65633600807348
rdh_sum =
          5.02936483654619
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 38
dh =
         -2.25383899192652
rdh_sum =
          5.32372861885355
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 39
dh =
         -2.31933899192652
rdh_sum =
          5.63339508814312
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 44
dh =
         -3.55743899192652
rdh_sum =
          6.25202006380348
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 45
dh =
         -3.61553899192652
rdh_sum =
           6.8849521571759
ans =
!------- End Berm Factor Calculation, Iter: 6 ---------!
berm_width =
    11
rB =
```

```
         0.167189852218902
rdh_mean =
         0.625904741561446
gamma_berm =
         0.937455069025866
slope =
         0.225936756101173
Irb =
          1.16881212055282
gamma_berm =
         0.937455069025866
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.8
gamma =
         0.749964055220693
ans =
!!! - - Iribaren number:   1.10 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:4.4 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          6.21819679533891
R2del =
        0.0447296472737149
Z2 =
          15.4032078034124
top_sta =
           80.306476013707
ans =
!----------------- STARTING ITERATION 7 -----------------!
Ztoe =
                    2.97862
toe_sta =
          14.0074162679426
top_sta =
           80.306476013707
Z2 =
          15.4032078034124
H0 =
                     4.0078
Tp =
                     5.0362
T0 =
          4.57836363636364
R2 =
          6.21819679533891
Z2 =
          15.4032078034124
top_sta =
           80.306476013707
Lslope =
          66.2990597457644
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 1
dh =
          5.96068600807348
rdh_sum =
         0.846413480300901
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 2
dh =
          5.90793600807348
rdh_sum =
          1.68529921251834
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 3
dh =
          5.85518600807348
rdh_sum =
          2.51651234959337
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 4
dh =
          5.80243600807348
rdh_sum =
          3.33991132389942
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 5
dh =
          5.74968600807348
rdh_sum =
          4.15535790775132
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 12
dh =
          3.71458600807348
rdh_sum =
```

```
          4.59802330632674
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 13
dh =
          3.65633600807348
rdh_sum =
          5.02936483654619
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 38
dh =
         -2.25383899192652
rdh_sum =
          5.31997549536028
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 39
dh =
         -2.31933899192652
rdh_sum =
          5.62572339697241
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 44
dh =
         -3.55743899192652
rdh_sum =
          6.23801322884716
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 45
dh =
         -3.61553899192652
rdh_sum =
          6.86455451957334
ans =
!------- End Berm Factor Calculation, Iter: 7 ---------!
berm_width =
    11
rB =
          0.165914871827466
rdh_mean =
          0.624050410870303
gamma_berm =
          0.937624372105958
slope =
          0.224679910662749
Irb =
           1.16231022945975
gamma_berm =
          0.937624372105958
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                        0.8
gamma =
          0.750099497684766
ans =
!!! - - Iribaren number:   1.09 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:4.5 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          6.18472283833895
R2del =
         0.0334739569999538
Z2 =
          15.3697338464124
top_sta =
          79.9280660611574
ans =
!----------------- STARTING ITERATION 8 -----------------!
Ztoe =
                    2.97862
toe_sta =
          14.0074162679426
top_sta =
          79.9280660611574
Z2 =
          15.3697338464124
H0 =
                     4.0078
Tp =
                     5.0362
T0 =
          4.57836363636364
R2 =
          6.18472283833895
Z2 =
          15.3697338464124
top_sta =
          79.9280660611574
Lslope =
```

```
          65.9206497932148
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 1
dh =
          5.96068600807348
rdh_sum =
         0.846413480300901
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 2
dh =
          5.90793600807348
rdh_sum =
          1.68529921251834
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 3
dh =
          5.85518600807348
rdh_sum =
          2.51651234959337
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 4
dh =
          5.80243600807348
rdh_sum =
          3.33991132389942
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 5
dh =
          5.74968600807348
rdh_sum =
          4.15535790775132
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 12
dh =
          3.71458600807348
rdh_sum =
          4.59802330632674
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 13
dh =
          3.65633600807348
rdh_sum =
          5.02936483654619
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 38
dh =
         -2.25383899192652
rdh_sum =
          5.32277774503648
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 39
dh =
         -2.31933899192652
rdh_sum =
          5.63145150826817
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 44
dh =
         -3.55743899192652
rdh_sum =
          6.24847554977824
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 45
dh =
         -3.61553899192652
rdh_sum =
          6.87979292493756
ans =
!------- End Berm Factor Calculation, Iter: 8 ---------!
berm_width =
    11
rB =
         0.166867287177928
rdh_mean =
         0.625435720448869
gamma_berm =
         0.937497474797548
slope =
         0.225618485816664
Irb =
          1.16716565021942
gamma_berm =
         0.937497474797548
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.8
gamma =
```

```
         0.749997979838038
ans =
!!! - - Iribaren number:   1.09 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:4.4 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          6.20971829316299
R2del =
         0.024995454824043
Z2 =
          15.3947293012365
top_sta =
          80.2106195730523
ans =
!----------------- STARTING ITERATION 9 -----------------!
Ztoe =
                    2.97862
toe_sta =
          14.0074162679426
top_sta =
          80.2106195730523
Z2 =
          15.3947293012365
H0 =
                     4.0078
Tp =
                     5.0362
T0 =
          4.57836363636364
R2 =
          6.20971829316299
Z2 =
          15.3947293012365
top_sta =
          80.2106195730523
Lslope =
          66.2032033051097
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 1
dh =
          5.96068600807348
rdh_sum =
         0.846413480300901
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 2
dh =
          5.90793600807348
rdh_sum =
          1.68529921251834
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 3
dh =
          5.85518600807348
rdh_sum =
          2.51651234959337
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 4
dh =
          5.80243600807348
rdh_sum =
          3.33991132389942
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 5
dh =
          5.74968600807348
rdh_sum =
          4.15535790775132
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 12
dh =
          3.71458600807348
rdh_sum =
          4.59802330632674
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 13
dh =
          3.65633600807348
rdh_sum =
          5.02936483654619
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 38
dh =
         -2.25383899192652
rdh_sum =
          5.32068166453571
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 39
dh =
         -2.31933899192652
rdh_sum =
```

```
           5.6271669321714
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 44
dh =
          -3.55743899192652
rdh_sum =
           6.24065206866503
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 45
dh =
          -3.61553899192652
rdh_sum =
           6.86839939276392
ans =
!------- End Berm Factor Calculation, Iter: 9 ---------!
berm_width =
    11
rB =
          0.166155102031913
rdh_mean =
           0.62439994479672
gamma_berm =
          0.937592134504507
slope =
          0.224916464224228
Irb =
           1.16353396425433
gamma_berm =
          0.937592134504507
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                        0.8
gamma =
          0.750073707603605
ans =
!!! - - Iribaren number:   1.09 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:4.4 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
           6.19102153664942
R2del =
         0.0186967565135712
Z2 =
           15.3760325447229
top_sta =
           79.9992377934792
ans =
!----------------- STARTING ITERATION 10 -----------------!
Ztoe =
                    2.97862
toe_sta =
           14.0074162679426
top_sta =
           79.9992377934792
Z2 =
           15.3760325447229
H0 =
                     4.0078
Tp =
                     5.0362
T0 =
           4.57836363636364
R2 =
           6.19102153664942
Z2 =
           15.3760325447229
top_sta =
           79.9992377934792
Lslope =
           65.9918215255366
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 1
dh =
           5.96068600807348
rdh_sum =
          0.846413480300901
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 2
dh =
           5.90793600807348
rdh_sum =
           1.68529921251834
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 3
dh =
           5.85518600807348
rdh_sum =
```

```
          2.51651234959337
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 4
dh =
          5.80243600807348
rdh_sum =
          3.33991132389942
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 5
dh =
          5.74968600807348
rdh_sum =
          4.15535790775132
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 12
dh =
          3.71458600807348
rdh_sum =
          4.59802330632674
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 13
dh =
          3.65633600807348
rdh_sum =
          5.02936483654619
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 38
dh =
         -2.25383899192652
rdh_sum =
          5.32224753464781
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 39
dh =
         -2.31933899192652
rdh_sum =
          5.63036773692922
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 44
dh =
         -3.55743899192652
rdh_sum =
          6.24649788064329
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 45
dh =
         -3.61553899192652
rdh_sum =
          6.87691357840472
ans =
!------- End Berm Factor Calculation, Iter: 10 ---------!
berm_width =
    11
rB =
         0.166687321939483
rdh_mean =
         0.625173961673156
gamma_berm =
         0.937521251478112
slope =
         0.225441023788709
Irb =
          1.16624760672445
gamma_berm =
         0.937521251478112
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                      0.8
gamma =
         0.75001700118249
ans =
!!! - - Iribaren number:   1.09 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:4.4 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          6.20499135561615
R2del =
        0.0139698189667223
Z2 =
          15.3900023636896
top_sta =
          80.1571776561857
ans =
!----------------- STARTING ITERATION 11 -----------------!
Ztoe =
                  2.97862
toe_sta =
```

```
          14.0074162679426
top_sta =
          80.1571776561857
Z2 =
          15.3900023636896
H0 =
                    4.0078
Tp =
                    5.0362
T0 =
          4.57836363636364
R2 =
          6.20499135561615
Z2 =
          15.3900023636896
top_sta =
          80.1571776561857
Lslope =
          66.1497613882431
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 1
dh =
          5.96068600807348
rdh_sum =
         0.846413480300901
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 2
dh =
          5.90793600807348
rdh_sum =
          1.68529921251834
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 3
dh =
          5.85518600807348
rdh_sum =
          2.51651234959337
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 4
dh =
          5.80243600807348
rdh_sum =
          3.33991132389942
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 5
dh =
          5.74968600807348
rdh_sum =
          4.15535790775132
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 12
dh =
          3.71458600807348
rdh_sum =
          4.59802330632674
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 13
dh =
          3.65633600807348
rdh_sum =
          5.02936483654619
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 38
dh =
         -2.25383899192652
rdh_sum =
          5.32107642585591
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 39
dh =
         -2.31933899192652
rdh_sum =
          5.62797388076203
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 44
dh =
         -3.55743899192652
rdh_sum =
          6.24212654504153
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 45
dh =
         -3.61553899192652
rdh_sum =
          6.87054734274568
ans =
!------- End Berm Factor Calculation, Iter: 11 ---------!
berm_width =
    11
rB =
```

```
         0.166289337544837
rdh_mean =
          0.62459521297688
gamma_berm =
         0.937574186654765
slope =
          0.22504870467736
Irb =
          1.16421806828024
gamma_berm =
         0.937574186654765
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.8
gamma =
         0.750059349323812
ans =
!!! - - Iribaren number:   1.09 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:4.4 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          6.19454298901956
R2del =
        0.0104483665965871
Z2 =
           15.379553997093
top_sta =
          80.0390502780445
ans =
!----------------- STARTING ITERATION 12 -----------------!
Ztoe =
                    2.97862
toe_sta =
          14.0074162679426
top_sta =
          80.0390502780445
Z2 =
           15.379553997093
H0 =
                     4.0078
Tp =
                     5.0362
T0 =
          4.57836363636364
R2 =
          6.19454298901956
Z2 =
           15.379553997093
top_sta =
          80.0390502780445
Lslope =
          66.0316340101019
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 1
dh =
          5.96068600807348
rdh_sum =
         0.846413480300901
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 2
dh =
          5.90793600807348
rdh_sum =
          1.68529921251834
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 3
dh =
          5.85518600807348
rdh_sum =
          2.51651234959337
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 4
dh =
          5.80243600807348
rdh_sum =
          3.33991132389942
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 5
dh =
          5.74968600807348
rdh_sum =
          4.15535790775132
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 12
dh =
          3.71458600807348
rdh_sum =
```

```
          4.59802330632674
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 13
dh =
          3.65633600807348
rdh_sum =
          5.02936483654619
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 38
dh =
         -2.25383899192652
rdh_sum =
          5.32195169871213
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 39
dh =
         -2.31933899192652
rdh_sum =
          5.62976302869064
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 44
dh =
         -3.55743899192652
rdh_sum =
           6.2453940367829
ans =
Berm Factor Calculation: Iteration 12, Profile Segment: 45
dh =
         -3.61553899192652
rdh_sum =
          6.87530622910836
ans =
!------- End Berm Factor Calculation, Iter: 12 ---------!
berm_width =
    11
rB =
          0.16658682107302
rdh_mean =
         0.625027839009851
gamma_berm =
          0.93753457970977
slope =
         0.225341918701099
Irb =
          1.16573491799861
gamma_berm =
          0.93753457970977
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                        0.8
gamma =
         0.750027663767816
ans =
!!! - - Iribaren number:   1.09 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:4.4 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          6.20235178223583
R2del =
       0.00780879321627204
Z2 =
          15.3873627903093
top_sta =
          80.1273351080759
% final 2% runup elevation
Z2=R2_new+SWEL
Z2 =
          15.3873627903093
diary off
-1.000000e+00
-1.000000e+00
```

_____
PART 5: RUNUP2

for transect: CM-124

Station locations shifted by: -0.73 feet from their
original location to set the shoreline to
elevation 0 for RUNUP2 input

_____RUNUP2 INPUT CONVERSIONS_____
for transect: CM-124

Incident significant wave height: 3.89 feet

Peak wave period: 5.00 seconds

Mean wave height: 2.44 feet

Local Depth below SWEL: 28.60 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 Jersy

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

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

Depth, D = 28.60
Period, T = 4.25
Waveheight, H = 2.44
Deep water wavelength, L0 (ft)
L0 = g*T*T/twopi
L0 = 32.17*4.25*4.25/6.28 = 92.49
Deep water wave celerity, C0 (ft/s)
C0 = L0/T
C0 = 92.49/4.25 = 21.76
Angular frequency, sigma (rad/s)
sigma = twopi/T
sigma = 6.28/4.25 = 1.48
Hunts (1979) approximation for Celerity C1H (ft/s) at Depth D (ft)
y = sigma.*sigma.*D./g
y = 1.48*1.48*28.60/32.17 = 1.94
C1H = sqrt(g.*D./(y+1./(1 + 0.6522.*y + 0.4622.*y.^2 + 0.0864.*y.^4 +0.0675.*y.^5)))
C1H = 21.02
Shoaling Coefficient KsH
KsH = sqrt(C0/C1H)
KsH = sqrt(21.76/21.02) = 1.02
Deepwater Wave Height H0_H (ft)
H0_H = H/KsH
H0_H = 2.44/1.02 = 2.40

Deepwater mean wave height: 2.40 feet

_____END RUNUP2 CONVERSIONS_____

_____RUNUP2 RESULTS_____
for transect: CM-124

RUNUP2 SWEL:
9.00
9.00
9.00
9.00

9.00
9.00
9.00
9.00
9.00

RUNUP2 deepwater mean wave heights:
2.28
2.28
2.28
2.40
2.40
2.40
2.52
2.52
2.52

RUNUP2 mean wave periods:
4.04
4.25
4.46
4.04
4.25
4.46
4.04
4.25
4.46

RUNUP2 runup above SWEL:
2.77
2.95
3.11
2.82
2.99
3.14
2.86
3.03
3.19

RUNUP2 Mean runup height above SWEL: 2.98 feet

RUNUP2 2-percent runup height above SWEL: 6.57 feet

RUNUP2 2-percent runup elevation: 15.57 feet-NAVD88

RUNUP2 Messages:
No Messages

_____END RUNUP2 RESULTS_____

_____ACES BEACH RUNUP_____

Incident significant wave height: 3.89 feet

Significant wave height deshoaled using Hunt equation

Deepwater significant wave height: 3.35 feet

Peak wave period: 5.00 seconds

Average beach Slope: 1:16.80 (H:V)

ACES RUNUP CALCULATED USING 'Aces_Beach_Runup.m'

ACES Beach 2-percent runup height above SWEL: 3.07 feet

ACES Beach 2-percent runup elevation: 12.07 feet-NAVD88

ACES BEACH RUNUP is valid

______________END ACES BEACH RESULTS_____________________

PART 5 COMPLETE____

```
  FEMA                                                  sjh            job 2
  RUNUP2 transect: CM-124                                                 1
10.0
  -19.59 -513.3 0.8
  -16.23 -353.3 0.8
  -14.21 -267.3 0.8
  -5.70 -265.3 0.8
  -5.22 -249.3 0.8
  -5.20 -153.3 0.8
  -3.47 -103.3 0.8
  -3.47 -35.3  0.8
  -1.43 -23.3  0.8
  0.58  8.7    0.8
  2.28  10.7   0.8
  3.46  22.7   0.8
  5.44  28.7   0.8
  5.82  32.7   0.8
  10.35 44.7   0.8
  11.54 56.7   0.8
  14.31 68.7   0.8
  16.48 92.7   0.8
  16.62 100.7  0.8
1 17.44 108.7  0.8
 9.0   2.28  4.04
 9.0   2.28  4.25
 9.0   2.28  4.46
 9.0   2.40  4.04
 9.0   2.40  4.25
 9.0   2.40  4.46
 9.0   2.52  4.04
 9.0   2.52  4.25
 9.0   2.52  4.46
```

****

CROSS SECTION PROFILE

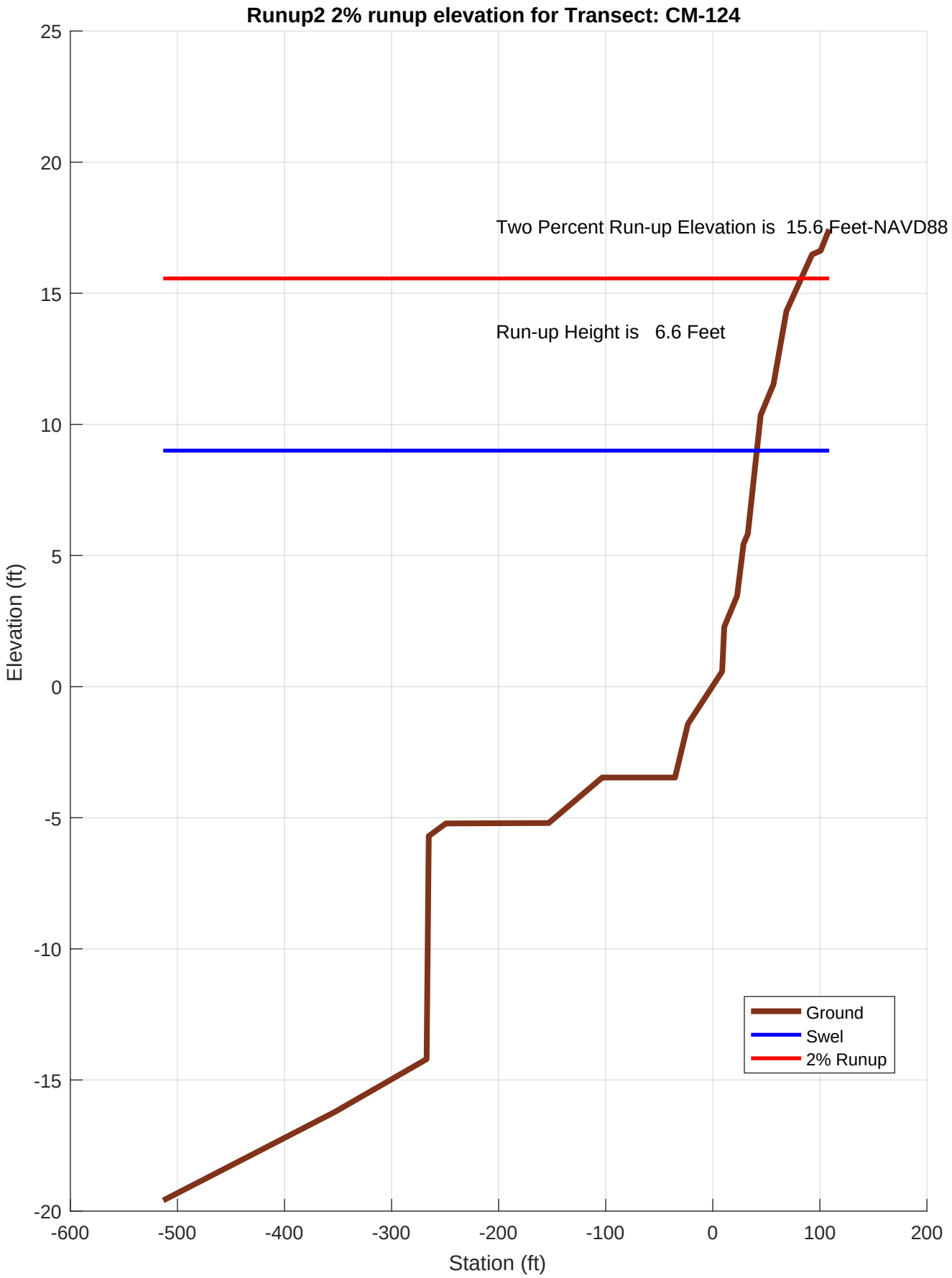
	LENGTH	ELEV.	SLOPE	ROUGHNESS
1	-513.0	-19.5		
			.00	.80
2	-353.0	-16.2		
			43.00	.80
3	-267.0	-14.2		
			.20	.80
4	-265.3	-5.7		
			33.33	.80
5	-249.3	-5.2		
			FLAT	.80
6	-153.3	-5.2		
			28.90	.80
7	-103.3	-3.5		
			FLAT	.80
8	-35.3	-3.5		
			5.88	.80
9	-23.3	-1.4		
			15.92	.80
10	8.7	.6		
			1.18	.80
11	10.7	2.3		
			10.17	.80
12	22.7	3.5		
			3.03	.80
13	28.7	5.4		
			10.53	.80
14	32.7	5.8		
			2.65	.80
15	44.7	10.4		
			10.08	.80
16	56.7	11.6		
			4.33	.80
17	68.7	14.3		
			11.06	.80
18	92.7	16.5		
			57.14	.80
19	100.7	16.6		
			9.76	.80
20	108.7	17.5		

LAST SLOPE 10.00 LAST ROUGHNESS .80

****

OUTPUT TABLE

INPUT PARAMETERS			RUNUP RESULTS			
WATER LEVEL ABOVE DATUM (FT.)	DEEP WATER WAVE HEIGHT (FT.)	WAVE PERIOD (SEC.)	BREAKING SLOPE NUMBER	RUNUP SLOPE NUMBER	RUNUP ABOVE WATER LEVEL (FT.)	BREAKER DEPTH (FT.)
9.00	2.28	4.04	11	16	2.77	2.90
9.00	2.28	4.25	11	16	2.95	2.90
9.00	2.28	4.46	11	16	3.11	2.93
9.00	2.40	4.04	11	16	2.82	3.05
9.00	2.40	4.25	11	16	2.99	3.05
9.00	2.40	4.46	11	16	3.14	3.07
9.00	2.52	4.04	11	16	2.86	3.20
9.00	2.52	4.25	11	16	3.03	3.20
9.00	2.52	4.46	11	16	3.19	3.20


Runup2 2% runup elevation for Transect: CM-124
Two Percent Run-up Elevation is 15.6 Feet-NAVD88
Run-up Height is 6.6 Feet
Ground
Swel
2% Runup
Elevation (ft)
Station (ft)
25
20
15
10
5
0
-5
-10
-15
-20
-600
-500
-400
-300
-200
-100
0
100
200