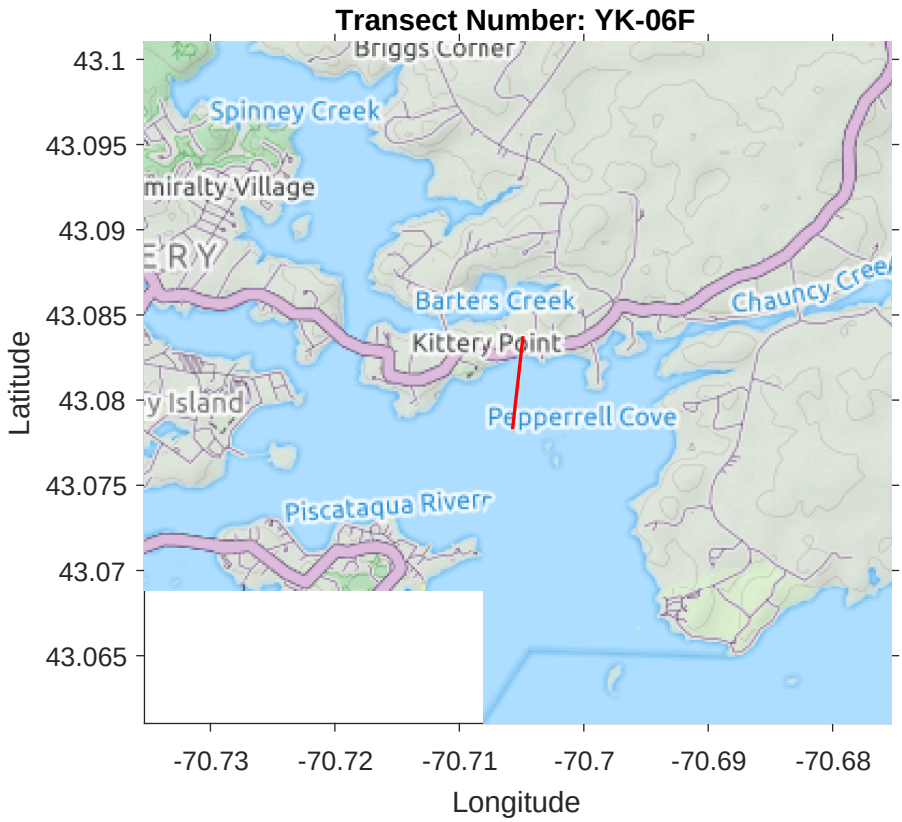
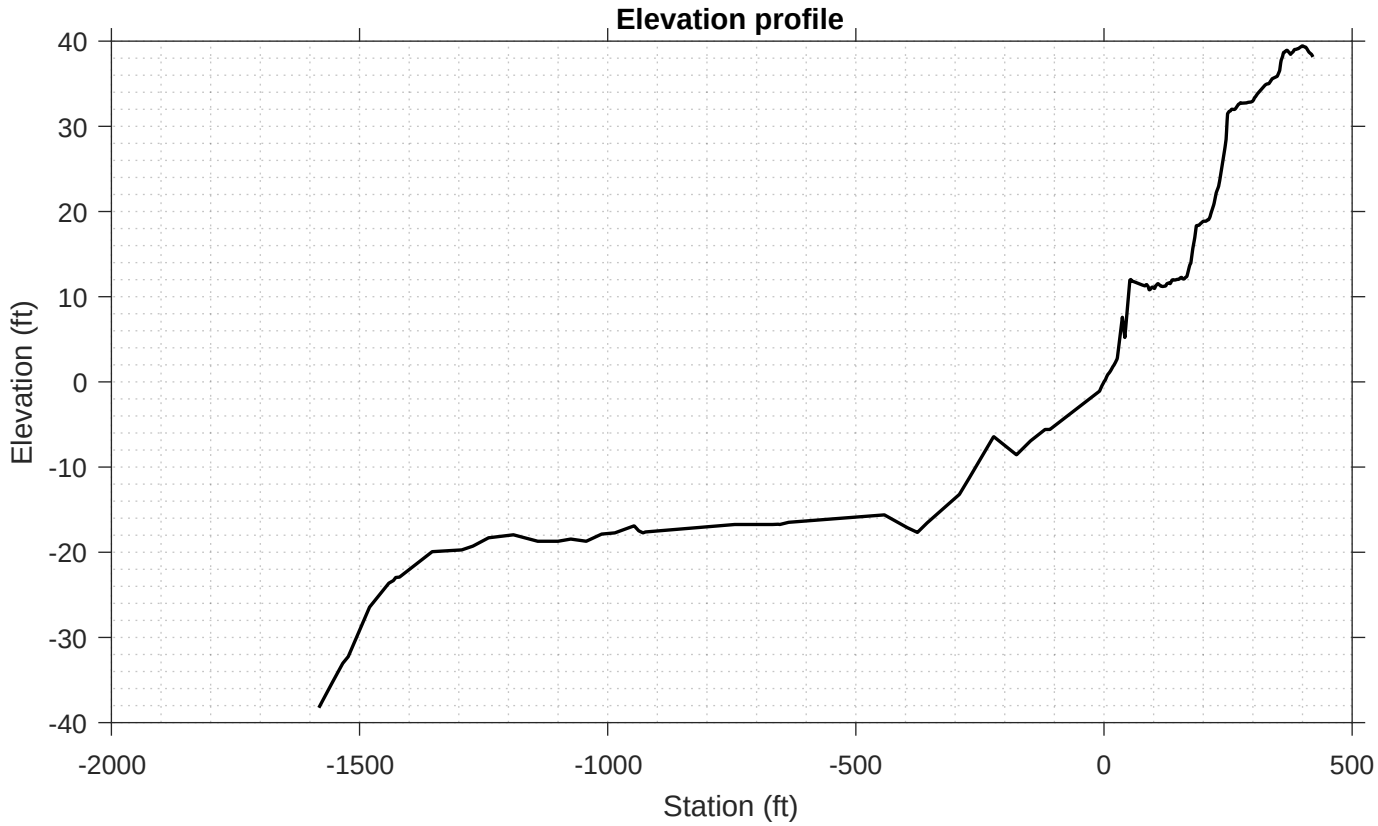

Transect Number: YK-06F
Briggs Corner
Spinney Creek
miralty Village
Barters Creek
Chauncy Creek
Kittery Point
Pepperrell Cove
Piscataqua River
43.1
43.095
43.09
43.085
43.08
43.075
43.07
43.065
Latitude
-70.73
-70.72
-70.71
-70.7
-70.69
-70.68
Longitude


Elevation profile
40
30
20
10
0
-10
-20
-30
-40
Elevation (ft)
-2000
-1500
-1000
-500
0
500
Station (ft)

DATA LOG FOR TRANSECT ID: YK-06F

PART 1: USER INPUT

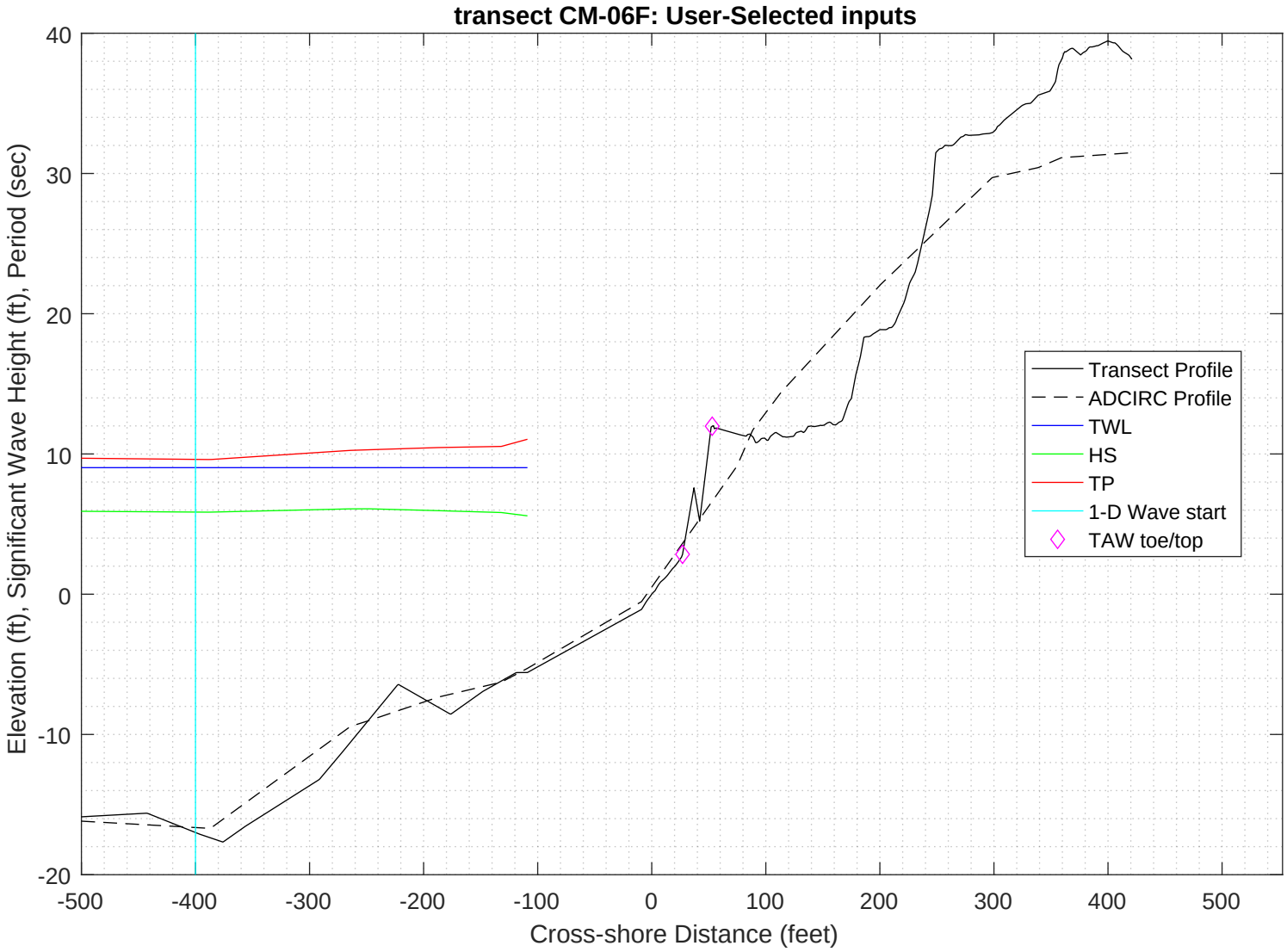
SWAN 1-D / WHAFIS input

station: -400 ft
LON: -70.7052 deg E
LAT: 43.0815 deg N
Bottom ELEV: -16.992 ft-NAVD88
TWL: 9.0235 ft-NAVD88
HS: 5.8565 ft
TP: 9.6134 sec
Wave Direction bin: 90 deg CCW from East (90 deg sector)
Transect Direction: 81.199 deg CCW from East

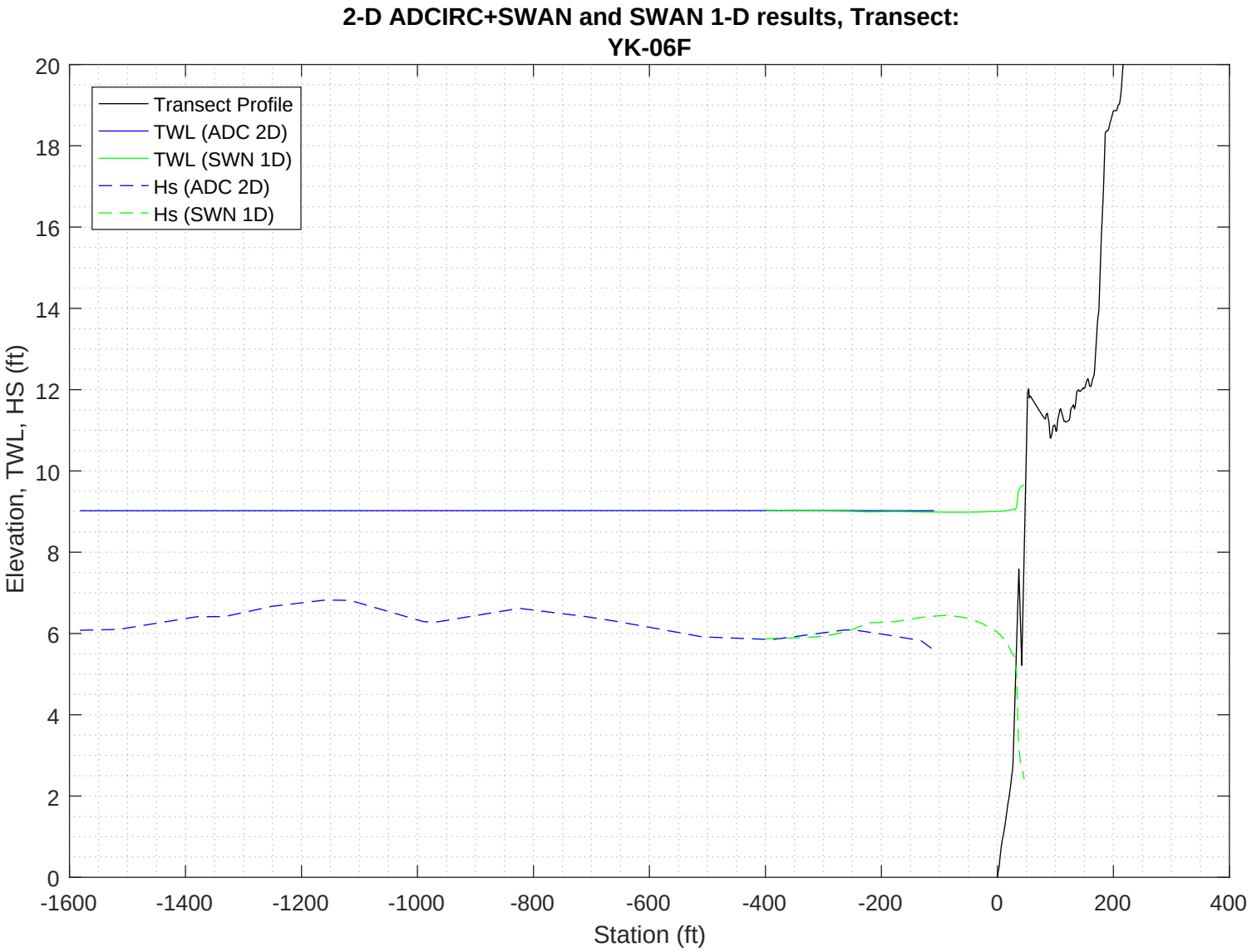
TAW/RUNUP input

toe sta: 27 ft
toe elev: 2.8452 ft-NAVD88
top sta: 53 ft
top elev: 11.9795 ft-NAVD88
Wave and water level conditions at toe to be calculated in SWAN 1-D

PART 1 COMPLETE


transect CM-06F: User-Selected inputs
Elevation (ft), Significant Wave Height (ft), Period (sec)
Cross-shore Distance (feet)
40
30
20
10
0
-10
-20
-500
-400
-300
-200
-100
0
100
200
300
400
500
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/YK-06Fzmeters_xmeters.grd
swan file name:       2_swan/swanfiles/YK-06F.swn
swan output name:     2_swan/swanfiles/YK-06F.dat

Boundary Conditions:
    TWL- 2.7504 meters
    HS-  1.7851 meters
    PER- 9.6134 seconds

Batch File: 2_swan/swanfiles/runswan.dat

SWAN maximum additional wave setup: 0.62428 feet
SWAN output at toe:
    SETUP- 0.02834 feet
    HS-    5.4882 feet
    PER-   9.7138 seconds

PART 2 COMPLETE_____________________________________________
```


2-D ADCIRC+SWAN and SWAN 1-D results, Transect:
YK-06F
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
-1600
-1400
-1200
-1000
-800
-600
-400
-200
0
200
400

1

Execution started at 20200206.151503

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      136       0.   136     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      136   0      1       1
!READinp BOTtom [fac]  'fname1'  [idla]  [nhedf]  [FREe|FORmat[form]|UNFormatted]
 READ    BOTTOM   -1. '../gridfiles/YK-06Fzmeters_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   1.7851     9.6134     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      136  136    0
!TABLe 'sname' < HEADer|NOHEADer|INDexed > 'fname' <output parameters> (output time)
 Table 'curve'   HEADER 'YK-06F.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             137 MYC              1
                      : MCGRD           138
                      : 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  36.50 % 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   0.73 % 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  35.77 % 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  81.76 % 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  99.28 % of wet grid points ( 99.50 % required)

iteration    7; sweep 1
iteration    7; sweep 2
iteration    7; sweep 3
iteration    7; sweep 4
accuracy OK in 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.	1.78725	9.6412	10.0005	8.6858	0.000	31.6913	7.9297	-0.000270
1.	0.	1.78860	9.6413	10.0005	8.6781	0.000	31.8460	7.9598	-0.000232
2.	0.	1.78977	9.6414	10.0005	8.6705	0.000	31.9802	7.9898	-0.000192
3.	0.	1.79085	9.6415	10.0005	8.6631	0.000	32.1061	8.0198	-0.000152
4.	0.	1.79169	9.6415	10.0005	8.6557	0.000	32.2092	8.0499	-0.000111
5.	0.	1.79272	9.6416	10.0005	8.6488	0.000	32.3047	8.0699	-0.000085
6.	0.	1.79357	9.6417	10.0005	8.6417	0.000	32.4102	8.1000	-0.000044
7.	0.	1.79351	9.6417	10.0005	8.6345	0.000	32.4275	8.1300	0.000000
8.	0.	1.79377	9.6419	10.0005	8.6289	0.000	32.3260	8.1000	-0.000040
9.	0.	1.79394	9.6422	10.0005	8.6238	0.000	32.1375	8.0399	-0.000121
10.	0.	1.79404	9.6425	10.0005	8.6186	0.000	31.9360	7.9798	-0.000204
11.	0.	1.79390	9.6428	10.0005	8.6128	0.000	31.7336	7.9297	-0.000274
12.	0.	1.79400	9.6431	10.0005	8.6072	0.000	31.5223	7.8696	-0.000360
13.	0.	1.79429	9.6435	10.0005	8.6015	0.000	31.3233	7.8096	-0.000449
14.	0.	1.79453	9.6438	10.0005	8.5953	0.000	31.1433	7.7595	-0.000525
15.	0.	1.79491	9.6442	10.0005	8.5890	0.000	30.9787	7.7094	-0.000602
16.	0.	1.79529	9.6445	10.0005	8.5824	0.000	30.8348	7.6593	-0.000674
17.	0.	1.79600	9.6449	10.0005	8.5759	0.000	30.6933	7.5992	-0.000765
18.	0.	1.79660	9.6453	10.0005	8.5688	0.000	30.5606	7.5492	-0.000842
19.	0.	1.79729	9.6457	10.0005	8.5615	0.000	30.4303	7.4991	-0.000921
20.	0.	1.79805	9.6461	10.0005	8.5540	0.000	30.3009	7.4490	-0.001002
21.	0.	1.79889	9.6466	10.0005	8.5462	0.000	30.1718	7.3989	-0.001086
22.	0.	1.79979	9.6470	10.0005	8.5382	0.000	30.0441	7.3488	-0.001172
23.	0.	1.80066	9.6475	10.0005	8.5299	0.000	29.9077	7.2987	-0.001259
24.	0.	1.80188	9.6480	10.0005	8.5217	0.000	29.7683	7.2386	-0.001368
25.	0.	1.80295	9.6484	10.0005	8.5128	0.000	29.6368	7.1885	-0.001461
26.	0.	1.80411	9.6489	10.0005	8.5036	0.000	29.5091	7.1384	-0.001556
27.	0.	1.80535	9.6495	10.0005	8.4941	0.000	29.3824	7.0883	-0.001653
28.	0.	1.80665	9.6500	10.0005	8.4844	0.000	29.2559	7.0382	-0.001754
29.	0.	1.80802	9.6505	10.0005	8.4744	0.000	29.1296	6.9881	-0.001856
30.	0.	1.80937	9.6511	10.0005	8.4641	0.000	28.9953	6.9380	-0.001961
31.	0.	1.81113	9.6517	10.0005	8.4536	0.000	28.8576	6.8779	-0.002090
32.	0.	1.81272	9.6523	10.0005	8.4422	0.000	28.7276	6.8278	-0.002201
33.	0.	1.81409	9.6529	10.0005	8.4304	0.000	28.5665	6.7777	-0.002315
34.	0.	1.81649	9.6536	10.0005	8.4198	0.000	28.3589	6.6875	-0.002524
35.	0.	1.81930	9.6545	10.0005	8.4085	0.000	28.1514	6.5872	-0.002759
36.	0.	1.82187	9.6554	10.0005	8.3959	360.000	27.9409	6.4970	-0.002980
37.	0.	1.82491	9.6563	10.0005	8.3826	360.000	27.7215	6.3968	-0.003234
38.	0.	1.82822	9.6573	10.0005	8.3682	360.000	27.5058	6.2965	-0.003501
39.	0.	1.83134	9.6583	10.0005	8.3522	360.000	27.2908	6.2062	-0.003750
40.	0.	1.83502	9.6594	10.0005	8.3354	360.000	27.0669	6.1060	-0.004040
41.	0.	1.83891	9.6606	10.0005	8.3174	360.000	26.8404	6.0057	-0.004343
42.	0.	1.84301	9.6618	10.0005	8.2981	360.000	26.6123	5.9053	-0.004660
43.	0.	1.84733	9.6631	10.0005	8.2776	360.000	26.3825	5.8050	-0.004993
44.	0.	1.85187	9.6644	10.0005	8.2558	0.000	26.1538	5.7047	-0.005340
45.	0.	1.85665	9.6658	10.0005	8.2328	0.000	25.9239	5.6043	-0.005705
46.	0.	1.86166	9.6672	10.0005	8.2085	0.001	25.6932	5.5039	-0.006087
47.	0.	1.86696	9.6687	10.0005	8.1829	0.001	25.4698	5.4035	-0.006488
48.	0.	1.87203	9.6703	10.0005	8.1554	0.002	25.2497	5.3131	-0.006867
49.	0.	1.87775	9.6719	10.0005	8.1272	0.002	25.0232	5.2127	-0.007306
50.	0.	1.88368	9.6736	10.0005	8.0976	0.003	24.8048	5.1122	-0.007762
51.	0.	1.88972	9.6754	10.0005	8.0671	0.002	24.5959	5.0118	-0.008232
52.	0.	1.89568	9.6773	10.0005	8.0362	0.001	24.3917	4.9113	-0.008710
53.	0.	1.90179	9.6792	10.0005	8.0040	359.999	24.1883	4.8108	-0.009210
54.	0.	1.90864	9.6812	10.0005	7.9711	359.995	24.0786	4.7103	-0.009718
55.	0.	1.90928	9.6827	10.0005	7.9295	359.992	24.1195	4.7405	-0.009519
56.	0.	1.90988	9.6839	10.0005	7.8900	359.991	24.2278	4.7807	-0.009271
57.	0.	1.91030	9.6850	10.0005	7.8521	359.990	24.3739	4.8310	-0.008980

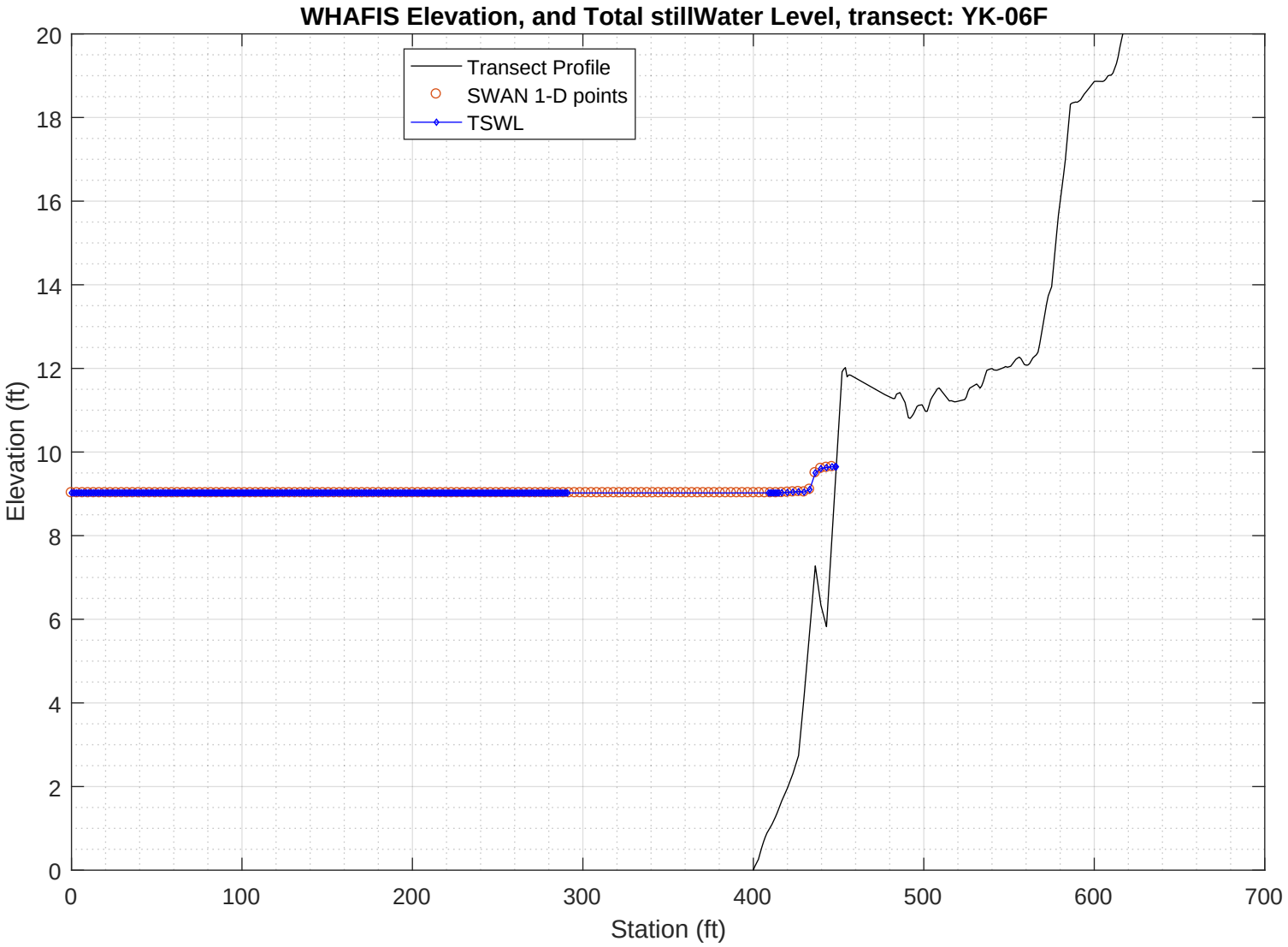
58.	0.	1.91076	9.6859	10.0005	7.8169	359.990	24.5233	4.8813	-0.008700
59.	0.	1.91174	9.6867	10.0005	7.7850	359.990	24.6754	4.9215	-0.008480
60.	0.	1.91231	9.6873	10.0005	7.7546	359.990	24.8417	4.9718	-0.008219
61.	0.	1.91282	9.6879	10.0005	7.7263	359.991	25.0015	5.0220	-0.007968
62.	0.	1.91379	9.6884	10.0005	7.7006	359.992	25.1592	5.0622	-0.007770
63.	0.	1.91436	9.6888	10.0005	7.6757	359.992	25.3286	5.1125	-0.007534
64.	0.	1.91487	9.6891	10.0005	7.6523	359.993	25.4883	5.1627	-0.007304
65.	0.	1.91581	9.6894	10.0005	7.6310	359.994	25.6443	5.2029	-0.007124
66.	0.	1.91638	9.6896	10.0005	7.6100	359.995	25.8106	5.2531	-0.006907
67.	0.	1.91688	9.6897	10.0005	7.5901	359.997	25.9668	5.3033	-0.006695
68.	0.	1.91688	9.6899	10.0005	7.5717	359.998	26.0131	5.3435	-0.006530
69.	0.	1.91931	9.6903	10.0005	7.5600	0.000	25.9461	5.3033	-0.006697
70.	0.	1.92153	9.6908	10.0005	7.5495	0.003	25.8183	5.2531	-0.006905
71.	0.	1.92396	9.6913	10.0005	7.5396	0.006	25.6622	5.1928	-0.007160
72.	0.	1.92632	9.6919	10.0005	7.5295	0.008	25.4999	5.1326	-0.007419
73.	0.	1.92871	9.6924	10.0005	7.5190	0.009	25.3381	5.0723	-0.007683
74.	0.	1.93126	9.6930	10.0005	7.5081	0.011	25.1878	5.0120	-0.007954
75.	0.	1.93342	9.6935	10.0005	7.4960	0.013	25.0470	4.9618	-0.008181
76.	0.	1.93600	9.6941	10.0005	7.4845	0.015	24.9021	4.9015	-0.008460
77.	0.	1.93876	9.6947	10.0005	7.4726	0.016	24.7725	4.8413	-0.008744
78.	0.	1.94057	9.6953	10.0005	7.4589	0.016	24.6591	4.8011	-0.008925
79.	0.	1.94294	9.6959	10.0005	7.4458	0.016	24.5485	4.7508	-0.009162
80.	0.	1.94483	9.6965	10.0005	7.4317	0.016	24.4385	4.7107	-0.009349
81.	0.	1.94710	9.6971	10.0005	7.4184	0.016	24.3182	4.6604	-0.009591
82.	0.	1.94936	9.6977	10.0005	7.4050	0.016	24.2018	4.6102	-0.009835
83.	0.	1.95119	9.6983	10.0005	7.3896	0.012	24.0865	4.5700	-0.010021
84.	0.	1.95365	9.6989	10.0005	7.3739	0.010	23.9697	4.5197	-0.010266
85.	0.	1.95557	9.6995	10.0005	7.3570	0.009	23.8607	4.4796	-0.010449
86.	0.	1.95770	9.7001	10.0005	7.3400	0.007	23.7873	4.4394	-0.010625
87.	0.	1.95789	9.7005	10.0005	7.3193	0.005	23.7622	4.4395	-0.010544
88.	0.	1.95806	9.7008	10.0005	7.2995	0.003	23.7434	4.4395	-0.010460
89.	0.	1.95824	9.7012	10.0005	7.2819	359.999	23.6850	4.4296	-0.010437
90.	0.	1.96028	9.7017	10.0005	7.2681	359.996	23.5841	4.3793	-0.010667
91.	0.	1.96135	9.7022	10.0005	7.2541	359.996	23.4709	4.3392	-0.010823
92.	0.	1.96273	9.7027	10.0005	7.2412	359.999	23.3513	4.2890	-0.011036
93.	0.	1.96300	9.7032	10.0005	7.2289	359.999	23.2309	4.2488	-0.011164
94.	0.	1.96376	9.7037	10.0005	7.2168	359.990	23.1063	4.1986	-0.011353
95.	0.	1.96355	9.7042	10.0005	7.2044	359.983	22.9831	4.1585	-0.011455
96.	0.	1.96337	9.7047	10.0005	7.1945	359.980	22.8580	4.1084	-0.011607
97.	0.	1.96227	9.7052	10.0005	7.1837	359.976	22.7332	4.0683	-0.011667
98.	0.	1.96143	9.7057	10.0005	7.1742	359.972	22.6056	4.0182	-0.011784
99.	0.	1.95953	9.7062	10.0005	7.1641	359.966	22.4763	3.9782	-0.011799
100.	0.	1.95790	9.7067	10.0005	7.1553	359.961	22.3519	3.9281	-0.011870
101.	0.	1.95524	9.7072	10.0005	7.1457	359.957	22.2266	3.8882	-0.011835
102.	0.	1.95406	9.7077	10.0005	7.1312	359.953	22.1002	3.8381	-0.011894
103.	0.	1.95158	9.7082	10.0005	7.1167	359.937	21.9761	3.7982	-0.011831
104.	0.	1.94937	9.7087	10.0005	7.1031	359.916	21.8494	3.7482	-0.011827
105.	0.	1.94611	9.7092	10.0005	7.0881	359.891	21.7213	3.7083	-0.011703
106.	0.	1.94303	9.7097	10.0005	7.0743	359.866	21.5935	3.6584	-0.011634
107.	0.	1.93881	9.7101	10.0005	7.0591	359.842	21.4665	3.6186	-0.011436
108.	0.	1.93481	9.7106	10.0005	7.0449	359.818	21.3371	3.5687	-0.011293
109.	0.	1.92972	9.7111	10.0005	7.0288	359.792	21.2092	3.5290	-0.011016
110.	0.	1.92543	9.7116	10.0005	7.0107	359.778	21.0815	3.4792	-0.010815
111.	0.	1.92016	9.7121	10.0005	6.9899	359.769	20.9548	3.4395	-0.010476
112.	0.	1.91516	9.7126	10.0005	6.9695	359.763	20.8268	3.3898	-0.010195
113.	0.	1.90892	9.7131	10.0005	6.9473	359.761	20.6994	3.3502	-0.009760
114.	0.	1.90271	9.7137	10.0005	6.9267	359.766	20.5697	3.3006	-0.009377
115.	0.	1.89493	9.7142	10.0005	6.9057	359.773	20.4425	3.2612	-0.008821
116.	0.	1.88723	9.7147	10.0005	6.8862	359.784	20.3121	3.2117	-0.008318
117.	0.	1.87836	9.7151	10.0005	6.8641	359.799	20.1789	3.1723	-0.007654
118.	0.	1.87080	9.7156	10.0005	6.8367	359.827	20.0404	3.1229	-0.007079
119.	0.	1.86081	9.7159	10.0005	6.8117	359.867	19.8474	3.0837	-0.006317
120.	0.	1.85523	9.7164	10.0005	6.7987	359.917	19.5537	2.9636	-0.006437
121.	0.	1.84722	9.7168	10.0005	6.7836	359.971	19.2285	2.8437	-0.006348
122.	0.	1.83564	9.7170	10.0005	6.7653	0.020	18.9146	2.7342	-0.005841

123.	0.	1.82156	9.7170	10.0005	6.7331	0.056	18.5689	2.6451	-0.004871
124.	0.	1.81038	9.7167	10.0005	6.7034	0.118	18.2033	2.5055	-0.004505
125.	0.	1.79109	9.7159	10.0005	6.6587	0.190	17.8867	2.4272	-0.002758
126.	0.	1.77147	9.7143	10.0005	6.6024	0.309	17.5730	2.3492	-0.000802
127.	0.	1.75047	9.7120	10.0005	6.5548	0.446	17.2418	2.2511	0.001121
128.	0.	1.72751	9.7121	10.0005	6.5012	0.622	16.8883	2.1534	0.003383
129.	0.	1.70118	9.7127	10.0005	6.4440	0.821	16.4958	2.0561	0.006116
130.	0.	1.67280	9.7138	10.0005	6.3942	1.037	15.7256	1.9286	0.008638
131.	0.	1.65448	9.7181	10.0005	6.4189	0.991	14.3953	1.4859	0.005927
132.	0.	1.52269	9.7371	10.0005	6.5500	0.479	13.2018	1.0347	0.024728
133.	0.	1.00588	9.8396	10.0005	7.1545	356.309	13.1604	0.6757	0.145696
134.	0.	0.86287	9.8832	10.0005	6.1039	351.754	10.1899	0.9973	0.177317
135.	0.	0.81134	9.8540	10.0005	5.9005	352.004	9.0225	1.1648	0.184795
136.	0.	0.73784	9.8526	10.0005	6.6920	351.816	9.6627	0.5003	0.190280

PART 3: WHAFIS

WHAFIS input: YK-06F.dat
WHAFIS output: YK-06F.out

PART 3 COMPLETE


WHAFIS Elevation, and Total stillWater Level, transect: YK-06F
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 6 16:14:34 2020
Input file: C:\Users\shayward\Desktop\Kittery\T2\3_whafis\whafis4\YK-06F.dat
Output file: C:\Users\shayward\Desktop\Kittery\T2\3_whafis\whafis4\YK-06F.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	-16.992	1.000	1.000	9.024	9.370	9.613	56.140	-0.032	0.000
OF	1.000	-17.024	0.000	9.024	0.000	0.000	0.000	0.000	-0.032	0.000
OF	2.000	-17.056	0.000	9.024	0.000	0.000	0.000	0.000	-0.032	0.000
OF	3.000	-17.089	0.000	9.024	0.000	0.000	0.000	0.000	-0.032	0.000
OF	4.000	-17.120	0.000	9.024	0.000	0.000	0.000	0.000	-0.030	0.000
OF	5.000	-17.148	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
OF	6.000	-17.175	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
OF	7.000	-17.203	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
OF	8.000	-17.230	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
OF	9.000	-17.258	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
OF	10.000	-17.285	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
OF	11.000	-17.313	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
OF	12.000	-17.340	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
OF	13.000	-17.368	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
OF	14.000	-17.395	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
OF	15.000	-17.423	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
OF	16.000	-17.450	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
OF	17.000	-17.478	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
OF	18.000	-17.505	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
OF	19.000	-17.533	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
OF	20.000	-17.560	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
OF	21.000	-17.588	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
OF	22.000	-17.615	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
OF	23.000	-17.643	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
OF	24.000	-17.670	0.000	9.024	0.000	0.000	0.000	0.000	0.011	0.000
OF	25.000	-17.621	0.000	9.024	0.000	0.000	0.000	0.000	0.053	0.000
OF	26.000	-17.564	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
OF	27.000	-17.506	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
OF	28.000	-17.449	0.000	9.024	0.000	0.000	0.000	0.000	0.057	0.000
OF	29.000	-17.392	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
OF	30.000	-17.334	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
OF	31.000	-17.277	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
OF	32.000	-17.219	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
OF	33.000	-17.162	0.000	9.024	0.000	0.000	0.000	0.000	0.057	0.000
OF	34.000	-17.105	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
OF	35.000	-17.047	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
OF	36.000	-16.990	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
OF	37.000	-16.932	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
OF	38.000	-16.875	0.000	9.024	0.000	0.000	0.000	0.000	0.057	0.000
OF	39.000	-16.818	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
OF	40.000	-16.760	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
OF	41.000	-16.703	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
OF	42.000	-16.645	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
OF	43.000	-16.588	0.000	9.024	0.000	0.000	0.000	0.000	0.056	0.000
OF	44.000	-16.533	0.000	9.024	0.000	0.000	0.000	0.000	0.054	0.000
OF	45.000	-16.481	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	46.000	-16.430	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	47.000	-16.378	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	48.000	-16.327	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	49.000	-16.275	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	50.000	-16.224	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	51.000	-16.172	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	52.000	-16.121	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	53.000	-16.069	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	54.000	-16.018	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	55.000	-15.966	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	56.000	-15.915	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	57.000	-15.863	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	58.000	-15.812	0.000	9.024	0.000	0.000	0.000	0.000	0.051	0.000
OF	59.000	-15.761	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	60.000	-15.709	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	61.000	-15.658	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	62.000	-15.606	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	63.000	-15.555	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	64.000	-15.503	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	65.000	-15.452	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	66.000	-15.400	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	67.000	-15.349	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	68.000	-15.297	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	69.000	-15.246	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	70.000	-15.194	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	71.000	-15.143	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	72.000	-15.091	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	73.000	-15.040	0.000	9.024	0.000	0.000	0.000	0.000	0.051	0.000
OF	74.000	-14.989	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	75.000	-14.937	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	76.000	-14.886	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	77.000	-14.834	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	78.000	-14.783	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	79.000	-14.731	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	80.000	-14.680	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	81.000	-14.628	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	82.000	-14.577	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	83.000	-14.525	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	84.000	-14.474	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	85.000	-14.422	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	86.000	-14.371	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	87.000	-14.319	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	88.000	-14.268	0.000	9.024	0.000	0.000	0.000	0.000	0.051	0.000
OF	89.000	-14.217	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	90.000	-14.165	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	91.000	-14.114	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	92.000	-14.062	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	93.000	-14.011	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	94.000	-13.959	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	95.000	-13.908	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	96.000	-13.856	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	97.000	-13.805	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	98.000	-13.753	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	99.000	-13.702	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	100.000	-13.650	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000

OF	101.000	-13.599	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	102.000	-13.547	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	103.000	-13.496	0.000	9.024	0.000	0.000	0.000	0.000	0.051	0.000
OF	104.000	-13.445	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	105.000	-13.393	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	106.000	-13.342	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	107.000	-13.290	0.000	9.024	0.000	0.000	0.000	0.000	0.052	0.000
OF	108.000	-13.239	0.000	9.024	0.000	0.000	0.000	0.000	0.062	0.000
OF	109.000	-13.167	0.000	9.024	0.000	0.000	0.000	0.000	0.084	0.000
OF	110.000	-13.071	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
OF	111.000	-12.974	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
OF	112.000	-12.877	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
OF	113.000	-12.780	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
OF	114.000	-12.684	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
OF	115.000	-12.587	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
OF	116.000	-12.490	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
OF	117.000	-12.393	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
OF	118.000	-12.297	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
OF	119.000	-12.200	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
OF	120.000	-12.103	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
OF	121.000	-12.007	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
OF	122.000	-11.910	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
OF	123.000	-11.813	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
OF	124.000	-11.716	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
OF	125.000	-11.620	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
OF	126.000	-11.523	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
OF	127.000	-11.426	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
OF	128.000	-11.329	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
OF	129.000	-11.232	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
OF	130.000	-11.134	0.000	9.024	0.000	0.000	0.000	0.000	0.098	0.000
OF	131.000	-11.035	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	132.000	-10.936	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	133.000	-10.837	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	134.000	-10.738	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	135.000	-10.639	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	136.000	-10.540	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	137.000	-10.441	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	138.000	-10.342	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	139.000	-10.243	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	140.000	-10.144	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	141.000	-10.045	0.000	9.024	0.000	0.000	0.000	0.000	0.098	0.000
OF	142.000	-9.947	0.000	9.024	0.000	0.000	0.000	0.000	0.098	0.000
OF	143.000	-9.848	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	144.000	-9.749	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	145.000	-9.650	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	146.000	-9.551	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	147.000	-9.452	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	148.000	-9.353	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	149.000	-9.254	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	150.000	-9.156	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	151.000	-9.057	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	152.000	-8.958	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	153.000	-8.859	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	154.000	-8.760	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	155.000	-8.661	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	156.000	-8.562	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	157.000	-8.463	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
OF	158.000	-8.364	0.000	9.023	0.000	0.000	0.000	0.000	0.099	0.000
OF	159.000	-8.265	0.000	9.023	0.000	0.000	0.000	0.000	0.099	0.000
OF	160.000	-8.166	0.000	9.023	0.000	0.000	0.000	0.000	0.099	0.000
OF	161.000	-8.067	0.000	9.023	0.000	0.000	0.000	0.000	0.099	0.000
OF	162.000	-7.968	0.000	9.023	0.000	0.000	0.000	0.000	0.099	0.000
OF	163.000	-7.870	0.000	9.023	0.000	0.000	0.000	0.000	0.099	0.000
OF	164.000	-7.771	0.000	9.023	0.000	0.000	0.000	0.000	0.099	0.000
OF	165.000	-7.672	0.000	9.023	0.000	0.000	0.000	0.000	0.099	0.000
OF	166.000	-7.573	0.000	9.023	0.000	0.000	0.000	0.000	0.099	0.000
OF	167.000	-7.474	0.000	9.023	0.000	0.000	0.000	0.000	0.099	0.000
OF	168.000	-7.375	0.000	9.023	0.000	0.000	0.000	0.000	0.099	0.000
OF	169.000	-7.276	0.000	9.023	0.000	0.000	0.000	0.000	0.099	0.000
OF	170.000	-7.177	0.000	9.023	0.000	0.000	0.000	0.000	0.099	0.000
OF	171.000	-7.078	0.000	9.023	0.000	0.000	0.000	0.000	0.099	0.000
OF	172.000	-6.979	0.000	9.023	0.000	0.000	0.000	0.000	0.099	0.000
OF	173.000	-6.880	0.000	9.023	0.000	0.000	0.000	0.000	0.099	0.000
OF	174.000	-6.781	0.000	9.023	0.000	0.000	0.000	0.000	0.099	0.000
OF	175.000	-6.682	0.000	9.023	0.000	0.000	0.000	0.000	0.099	0.000
OF	176.000	-6.583	0.000	9.023	0.000	0.000	0.000	0.000	0.099	0.000
OF	177.000	-6.485	0.000	9.023	0.000	0.000	0.000	0.000	0.073	0.000
OF	178.000	-6.437	0.000	9.023	0.000	0.000	0.000	0.000	0.001	0.000
OF	179.000	-6.483	0.000	9.023	0.000	0.000	0.000	0.000	-0.047	0.000
OF	180.000	-6.530	0.000	9.023	0.000	0.000	0.000	0.000	-0.047	0.000
OF	181.000	-6.576	0.000	9.023	0.000	0.000	0.000	0.000	-0.047	0.000
OF	182.000	-6.623	0.000	9.023	0.000	0.000	0.000	0.000	-0.047	0.000
OF	183.000	-6.669	0.000	9.023	0.000	0.000	0.000	0.000	-0.047	0.000
OF	184.000	-6.716	0.000	9.023	0.000	0.000	0.000	0.000	-0.047	0.000
OF	185.000	-6.763	0.000	9.023	0.000	0.000	0.000	0.000	-0.047	0.000
OF	186.000	-6.809	0.000	9.023	0.000	0.000	0.000	0.000	-0.047	0.000
OF	187.000	-6.856	0.000	9.023	0.000	0.000	0.000	0.000	-0.047	0.000
OF	188.000	-6.902	0.000	9.023	0.000	0.000	0.000	0.000	-0.047	0.000
OF	189.000	-6.949	0.000	9.023	0.000	0.000	0.000	0.000	-0.047	0.000
OF	190.000	-6.995	0.000	9.023	0.000	0.000	0.000	0.000	-0.047	0.000
OF	191.000	-7.042	0.000	9.023	0.000	0.000	0.000	0.000	-0.047	0.000
OF	192.000	-7.089	0.000	9.023	0.000	0.000	0.000	0.000	-0.047	0.000
OF	193.000	-7.135	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	194.000	-7.182	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	195.000	-7.228	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	196.000	-7.275	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	197.000	-7.321	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	198.000	-7.368	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	199.000	-7.414	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	200.000	-7.461	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	201.000	-7.508	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	202.000	-7.554	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	203.000	-7.601	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	204.000	-7.647	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	205.000	-7.694	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	206.000	-7.740	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	207.000	-7.787	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	208.000	-7.833	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	209.000	-7.880	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	210.000	-7.926	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000

OF	211.000	-7.973	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	212.000	-8.020	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	213.000	-8.066	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	214.000	-8.113	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	215.000	-8.159	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	216.000	-8.206	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	217.000	-8.252	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	218.000	-8.299	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	219.000	-8.345	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	220.000	-8.392	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	221.000	-8.439	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	222.000	-8.485	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
OF	223.000	-8.532	0.000	9.022	0.000	0.000	0.000	0.000	-0.030	0.000
OF	224.000	-8.545	0.000	9.022	0.000	0.000	0.000	0.000	0.022	0.000
OF	225.000	-8.488	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	226.000	-8.430	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	227.000	-8.372	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	228.000	-8.314	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	229.000	-8.257	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	230.000	-8.199	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	231.000	-8.141	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	232.000	-8.083	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	233.000	-8.025	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	234.000	-7.968	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	235.000	-7.910	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	236.000	-7.852	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	237.000	-7.794	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	238.000	-7.736	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	239.000	-7.678	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	240.000	-7.621	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	241.000	-7.563	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	242.000	-7.505	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	243.000	-7.447	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	244.000	-7.389	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	245.000	-7.332	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	246.000	-7.274	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	247.000	-7.216	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	248.000	-7.158	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	249.000	-7.100	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	250.000	-7.043	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
OF	251.000	-6.985	0.000	9.021	0.000	0.000	0.000	0.000	0.057	0.000
OF	252.000	-6.928	0.000	9.021	0.000	0.000	0.000	0.000	0.051	0.000
OF	253.000	-6.882	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	254.000	-6.836	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	255.000	-6.790	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	256.000	-6.745	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	257.000	-6.699	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	258.000	-6.653	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	259.000	-6.607	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	260.000	-6.561	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	261.000	-6.515	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	262.000	-6.470	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	263.000	-6.424	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	264.000	-6.378	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	265.000	-6.332	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	266.000	-6.286	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	267.000	-6.240	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	268.000	-6.194	0.000	9.020	0.000	0.000	0.000	0.000	0.046	0.000
OF	269.000	-6.149	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	270.000	-6.103	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	271.000	-6.057	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	272.000	-6.011	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	273.000	-5.965	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	274.000	-5.920	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	275.000	-5.874	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	276.000	-5.828	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	277.000	-5.782	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	278.000	-5.736	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	279.000	-5.690	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	280.000	-5.645	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
OF	281.000	-5.599	0.000	9.021	0.000	0.000	0.000	0.000	0.028	0.000
OF	282.000	-5.588	0.000	9.021	0.000	0.000	0.000	0.000	0.005	0.000
OF	283.000	-5.588	0.000	9.022	0.000	0.000	0.000	0.000	0.001	0.000
OF	284.000	-5.587	0.000	9.022	0.000	0.000	0.000	0.000	0.001	0.000
OF	285.000	-5.587	0.000	9.022	0.000	0.000	0.000	0.000	0.001	0.000
OF	286.000	-5.586	0.000	9.022	0.000	0.000	0.000	0.000	0.001	0.000
OF	287.000	-5.586	0.000	9.022	0.000	0.000	0.000	0.000	0.001	0.000
OF	288.000	-5.585	0.000	9.022	0.000	0.000	0.000	0.000	0.001	0.000
OF	289.000	-5.584	0.000	9.022	0.000	0.000	0.000	0.000	0.001	0.000
OF	290.000	-5.584	0.000	9.022	0.000	0.000	0.000	0.000	0.001	0.000
OF	291.000	-5.583	0.000	9.022	0.000	0.000	0.000	0.000	0.055	0.000
IF	409.000	0.960	0.000	9.022	0.000	0.000	0.000	0.000	0.056	0.000
IF	410.000	1.029	0.000	9.022	0.000	0.000	0.000	0.000	0.071	0.000
IF	411.000	1.102	0.000	9.022	0.000	0.000	0.000	0.000	0.080	0.000
IF	412.000	1.189	0.000	9.022	0.000	0.000	0.000	0.000	0.087	0.000
IF	413.000	1.276	0.000	9.022	0.000	0.000	0.000	0.000	0.092	0.000
IF	414.000	1.373	0.000	9.022	0.000	0.000	0.000	0.000	0.102	0.000
IF	415.000	1.480	0.000	9.022	0.000	0.000	0.000	0.000	0.105	0.000
IF	416.700	1.657	0.000	9.027	0.000	0.000	0.000	0.000	0.098	0.000
IF	419.900	1.959	0.000	9.035	0.000	0.000	0.000	0.000	0.101	0.000
IF	423.200	2.310	0.000	9.044	0.000	0.000	0.000	0.000	0.118	0.000
IF	426.500	2.740	0.000	9.052	0.000	0.000	0.000	0.000	0.281	0.000
IF	429.800	4.167	0.000	9.043	0.000	0.000	0.000	0.000	0.452	0.000
IF	433.100	5.722	0.000	9.105	0.000	0.000	0.000	0.000	0.471	0.000
IF	436.400	7.277	0.000	9.502	0.000	0.000	0.000	0.000	0.095	0.000
IF	439.600	6.338	0.000	9.605	0.000	0.000	0.000	0.000	-0.224	0.000
IF	442.900	5.823	0.000	9.630	0.000	0.000	0.000	0.000	0.254	0.000
IF	446.200	8.011	0.000	9.648	0.000	0.000	0.000	0.000	0.665	0.000
IF	448.000	9.215	0.000	9.648	0.000	0.000	0.000	0.000	0.682	0.000
IF	448.600	9.648	0.000	9.648	0.000	0.000	0.000	0.000	0.721	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	-16.992	1.000	1.000	9.024	9.370	9.613	56.140	-0.032	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	1.000	-17.024	0.000	9.024	0.000	0.000	0.000	0.000	-0.032	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES

OF	2.000	-17.056	0.000	9.024	0.000	0.000	0.000	0.000	-0.032	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	3.000	-17.089	0.000	9.024	0.000	0.000	0.000	0.000	-0.032	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	4.000	-17.120	0.000	9.024	0.000	0.000	0.000	0.000	-0.030	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	5.000	-17.148	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	6.000	-17.175	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	7.000	-17.203	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	8.000	-17.230	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	9.000	-17.258	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	10.000	-17.285	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	11.000	-17.313	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	12.000	-17.340	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	13.000	-17.368	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	14.000	-17.395	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	15.000	-17.423	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	16.000	-17.450	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	17.000	-17.478	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	18.000	-17.505	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	19.000	-17.533	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	20.000	-17.560	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	21.000	-17.588	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	22.000	-17.615	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	23.000	-17.643	0.000	9.024	0.000	0.000	0.000	0.000	-0.027	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	24.000	-17.670	0.000	9.024	0.000	0.000	0.000	0.000	0.011	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	25.000	-17.621	0.000	9.024	0.000	0.000	0.000	0.000	0.053	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	26.000	-17.564	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	27.000	-17.506	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	28.000	-17.449	0.000	9.024	0.000	0.000	0.000	0.000	0.057	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	29.000	-17.392	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	30.000	-17.334	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	31.000	-17.277	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	32.000	-17.219	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	33.000	-17.162	0.000	9.024	0.000	0.000	0.000	0.000	0.057	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	34.000	-17.105	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	35.000	-17.047	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	36.000	-16.990	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	37.000	-16.932	0.000	9.024	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	38.000	-16.875	0.000	9.024	0.000	0.000	0.000	0.000	0.057	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE

	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	39.000	-16.818	0.000	9.024	0.000	0.000	0.000	0.000		0.058	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	40.000	-16.760	0.000	9.024	0.000	0.000	0.000	0.000		0.058	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	41.000	-16.703	0.000	9.024	0.000	0.000	0.000	0.000		0.058	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	42.000	-16.645	0.000	9.024	0.000	0.000	0.000	0.000		0.058	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	43.000	-16.588	0.000	9.024	0.000	0.000	0.000	0.000		0.056	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	44.000	-16.533	0.000	9.024	0.000	0.000	0.000	0.000		0.054	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	45.000	-16.481	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	46.000	-16.430	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	47.000	-16.378	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	48.000	-16.327	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	49.000	-16.275	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	50.000	-16.224	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	51.000	-16.172	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	52.000	-16.121	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	53.000	-16.069	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	54.000	-16.018	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	55.000	-15.966	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	56.000	-15.915	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	57.000	-15.863	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	58.000	-15.812	0.000	9.024	0.000	0.000	0.000	0.000		0.051	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	59.000	-15.761	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	60.000	-15.709	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	61.000	-15.658	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	62.000	-15.606	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	63.000	-15.555	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	64.000	-15.503	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	65.000	-15.452	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	66.000	-15.400	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	67.000	-15.349	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	68.000	-15.297	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	69.000	-15.246	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	70.000	-15.194	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	71.000	-15.143	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	72.000	-15.091	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	73.000	-15.040	0.000	9.024	0.000	0.000	0.000	0.000		0.051	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	74.000	-14.989	0.000	9.024	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	75.000	-14.937	0.000	9.024	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	76.000	-14.886	0.000	9.024	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	77.000	-14.834	0.000	9.024	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	78.000	-14.783	0.000	9.024	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	79.000	-14.731	0.000	9.024	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	80.000	-14.680	0.000	9.024	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	81.000	-14.628	0.000	9.024	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	82.000	-14.577	0.000	9.024	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	83.000	-14.525	0.000	9.024	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	84.000	-14.474	0.000	9.024	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	85.000	-14.422	0.000	9.024	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	86.000	-14.371	0.000	9.024	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	87.000	-14.319	0.000	9.024	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	88.000	-14.268	0.000	9.024	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	89.000	-14.217	0.000	9.024	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	90.000	-14.165	0.000	9.024	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	91.000	-14.114	0.000	9.024	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	92.000	-14.062	0.000	9.024	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	93.000	-14.011	0.000	9.024	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	94.000	-13.959	0.000	9.024	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	95.000	-13.908	0.000	9.024	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	96.000	-13.856	0.000	9.024	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	97.000	-13.805	0.000	9.024	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	98.000	-13.753	0.000	9.024	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	99.000	-13.702	0.000	9.024	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	100.000	-13.650	0.000	9.024	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	101.000	-13.599	0.000	9.024	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	102.000	-13.547	0.000	9.024	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	103.000	-13.496	0.000	9.024	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	104.000	-13.445	0.000	9.024	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	105.000	-13.393	0.000	9.024	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	106.000	-13.342	0.000	9.024	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	107.000	-13.290	0.000	9.024	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	108.000	-13.239	0.000	9.024	0.000	0.000	0.000	0.000	0.062	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	109.000	-13.167	0.000	9.024	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	110.000	-13.071	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	111.000	-12.974	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES

OF	112.000	-12.877	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	113.000	-12.780	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	114.000	-12.684	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	115.000	-12.587	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	116.000	-12.490	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	117.000	-12.393	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	118.000	-12.297	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	119.000	-12.200	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	120.000	-12.103	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	121.000	-12.007	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	122.000	-11.910	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	123.000	-11.813	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	124.000	-11.716	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	125.000	-11.620	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	126.000	-11.523	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	127.000	-11.426	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	128.000	-11.329	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	129.000	-11.232	0.000	9.024	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	130.000	-11.134	0.000	9.024	0.000	0.000	0.000	0.000	0.098	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	131.000	-11.035	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	132.000	-10.936	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	133.000	-10.837	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	134.000	-10.738	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	135.000	-10.639	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	136.000	-10.540	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	137.000	-10.441	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	138.000	-10.342	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	139.000	-10.243	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	140.000	-10.144	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	141.000	-10.045	0.000	9.024	0.000	0.000	0.000	0.000	0.098	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	142.000	-9.947	0.000	9.024	0.000	0.000	0.000	0.000	0.098	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	143.000	-9.848	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	144.000	-9.749	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	145.000	-9.650	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	146.000	-9.551	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	147.000	-9.452	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	148.000	-9.353	0.000	9.024	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE

	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	149.000	-9.254	0.000	9.024	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	150.000	-9.156	0.000	9.024	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	151.000	-9.057	0.000	9.024	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	152.000	-8.958	0.000	9.024	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	153.000	-8.859	0.000	9.024	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	154.000	-8.760	0.000	9.024	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	155.000	-8.661	0.000	9.024	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	156.000	-8.562	0.000	9.024	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	157.000	-8.463	0.000	9.024	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	158.000	-8.364	0.000	9.023	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	159.000	-8.265	0.000	9.023	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	160.000	-8.166	0.000	9.023	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	161.000	-8.067	0.000	9.023	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	162.000	-7.968	0.000	9.023	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	163.000	-7.870	0.000	9.023	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	164.000	-7.771	0.000	9.023	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	165.000	-7.672	0.000	9.023	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	166.000	-7.573	0.000	9.023	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	167.000	-7.474	0.000	9.023	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	168.000	-7.375	0.000	9.023	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	169.000	-7.276	0.000	9.023	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	170.000	-7.177	0.000	9.023	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	171.000	-7.078	0.000	9.023	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	172.000	-6.979	0.000	9.023	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	173.000	-6.880	0.000	9.023	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	174.000	-6.781	0.000	9.023	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	175.000	-6.682	0.000	9.023	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	176.000	-6.583	0.000	9.023	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	177.000	-6.485	0.000	9.023	0.000	0.000	0.000	0.000		0.073	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	178.000	-6.437	0.000	9.023	0.000	0.000	0.000	0.000		0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	179.000	-6.483	0.000	9.023	0.000	0.000	0.000	0.000		-0.047	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	180.000	-6.530	0.000	9.023	0.000	0.000	0.000	0.000		-0.047	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	181.000	-6.576	0.000	9.023	0.000	0.000	0.000	0.000		-0.047	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	182.000	-6.623	0.000	9.023	0.000	0.000	0.000	0.000		-0.047	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	183.000	-6.669	0.000	9.023	0.000	0.000	0.000	0.000		-0.047	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	184.000	-6.716	0.000	9.023	0.000	0.000	0.000	0.000		-0.047	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	185.000	-6.763	0.000	9.023	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	186.000	-6.809	0.000	9.023	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	187.000	-6.856	0.000	9.023	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	188.000	-6.902	0.000	9.023	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	189.000	-6.949	0.000	9.023	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	190.000	-6.995	0.000	9.023	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	191.000	-7.042	0.000	9.023	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	192.000	-7.089	0.000	9.023	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	193.000	-7.135	0.000	9.022	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	194.000	-7.182	0.000	9.022	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	195.000	-7.228	0.000	9.022	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	196.000	-7.275	0.000	9.022	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	197.000	-7.321	0.000	9.022	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	198.000	-7.368	0.000	9.022	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	199.000	-7.414	0.000	9.022	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	200.000	-7.461	0.000	9.022	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	201.000	-7.508	0.000	9.022	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	202.000	-7.554	0.000	9.022	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	203.000	-7.601	0.000	9.022	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	204.000	-7.647	0.000	9.022	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	205.000	-7.694	0.000	9.022	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	206.000	-7.740	0.000	9.022	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	207.000	-7.787	0.000	9.022	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	208.000	-7.833	0.000	9.022	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	209.000	-7.880	0.000	9.022	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	210.000	-7.926	0.000	9.022	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	211.000	-7.973	0.000	9.022	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	212.000	-8.020	0.000	9.022	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	213.000	-8.066	0.000	9.022	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	214.000	-8.113	0.000	9.022	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	215.000	-8.159	0.000	9.022	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	216.000	-8.206	0.000	9.022	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	217.000	-8.252	0.000	9.022	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	218.000	-8.299	0.000	9.022	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	219.000	-8.345	0.000	9.022	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	220.000	-8.392	0.000	9.022	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	221.000	-8.439	0.000	9.022	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	222.000	-8.485	0.000	9.022	0.000	0.000	0.000	0.000	-0.047	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	223.000	-8.532	0.000	9.022	0.000	0.000	0.000	0.000	-0.030	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	224.000	-8.545	0.000	9.022	0.000	0.000	0.000	0.000	0.022	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	225.000	-8.488	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	226.000	-8.430	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	227.000	-8.372	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	228.000	-8.314	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	229.000	-8.257	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	230.000	-8.199	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	231.000	-8.141	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	232.000	-8.083	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	233.000	-8.025	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	234.000	-7.968	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	235.000	-7.910	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	236.000	-7.852	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	237.000	-7.794	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	238.000	-7.736	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	239.000	-7.678	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	240.000	-7.621	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	241.000	-7.563	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	242.000	-7.505	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	243.000	-7.447	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	244.000	-7.389	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	245.000	-7.332	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	246.000	-7.274	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	247.000	-7.216	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	248.000	-7.158	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	249.000	-7.100	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	250.000	-7.043	0.000	9.021	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	251.000	-6.985	0.000	9.021	0.000	0.000	0.000	0.000	0.057	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	252.000	-6.928	0.000	9.021	0.000	0.000	0.000	0.000	0.051	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	253.000	-6.882	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	254.000	-6.836	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	255.000	-6.790	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	256.000	-6.745	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	257.000	-6.699	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	258.000	-6.653	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE

	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	259.000	-6.607	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	260.000	-6.561	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	261.000	-6.515	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	262.000	-6.470	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	263.000	-6.424	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	264.000	-6.378	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	265.000	-6.332	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	266.000	-6.286	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	267.000	-6.240	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	268.000	-6.194	0.000	9.020	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	269.000	-6.149	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	270.000	-6.103	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	271.000	-6.057	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	272.000	-6.011	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	273.000	-5.965	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	274.000	-5.920	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	275.000	-5.874	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	276.000	-5.828	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	277.000	-5.782	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	278.000	-5.736	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	279.000	-5.690	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	280.000	-5.645	0.000	9.021	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	281.000	-5.599	0.000	9.021	0.000	0.000	0.000	0.000	0.028	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	282.000	-5.588	0.000	9.021	0.000	0.000	0.000	0.000	0.005	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	283.000	-5.588	0.000	9.022	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	284.000	-5.587	0.000	9.022	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	285.000	-5.587	0.000	9.022	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	286.000	-5.586	0.000	9.022	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	287.000	-5.586	0.000	9.022	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	288.000	-5.585	0.000	9.022	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	289.000	-5.584	0.000	9.022	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	290.000	-5.584	0.000	9.022	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	291.000	-5.583	0.000	9.022	0.000	0.000	0.000	0.000	0.055	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	409.000	0.960	0.000	9.022	0.000	0.000	0.000	0.000	0.056	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	410.000	1.029	0.000	9.022	0.000	0.000	0.000	0.000	0.071	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	411.000	1.102	0.000	9.022	0.000	0.000	0.000	0.000	0.080	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	412.000	1.189	0.000	9.022	0.000	0.000	0.000	0.000	0.087	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	413.000	1.276	0.000	9.022	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
IF	414.000	1.373	0.000	9.022	0.000	0.000	0.000	0.000	0.102	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	415.000	1.480	0.000	9.022	0.000	0.000	0.000	0.000	0.105	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	416.700	1.657	0.000	9.027	0.000	0.000	0.000	0.000	0.098	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	419.900	1.959	0.000	9.035	0.000	0.000	0.000	0.000	0.101	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	423.200	2.310	0.000	9.044	0.000	0.000	0.000	0.000	0.118	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	426.500	2.740	0.000	9.052	0.000	0.000	0.000	0.000	0.281	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	429.800	4.167	0.000	9.043	0.000	0.000	0.000	0.000	0.452	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	433.100	5.722	0.000	9.105	0.000	0.000	0.000	0.000	0.471	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	436.400	7.277	0.000	9.502	0.000	0.000	0.000	0.000	0.095	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	439.600	6.338	0.000	9.605	0.000	0.000	0.000	0.000	-0.224	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	442.900	5.823	0.000	9.630	0.000	0.000	0.000	0.000	0.254	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	446.200	8.011	0.000	9.648	0.000	0.000	0.000	0.000	0.665	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	448.000	9.215	0.000	9.648	0.000	0.000	0.000	0.000	0.682	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	448.600	9.648	0.000	9.648	0.000	0.000	0.000	0.000	0.721	0.000

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

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

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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	9.37	9.61	15.58
OF	1.00	9.37	9.61	15.58
OF	2.00	9.36	9.61	15.58
OF	3.00	9.36	9.61	15.58
OF	4.00	9.36	9.61	15.58
OF	5.00	9.36	9.61	15.57
OF	6.00	9.35	9.61	15.57
OF	7.00	9.35	9.61	15.57
OF	8.00	9.35	9.61	15.57
OF	9.00	9.35	9.61	15.57
OF	10.00	9.34	9.61	15.57
OF	11.00	9.34	9.61	15.56
OF	12.00	9.34	9.61	15.56
OF	13.00	9.34	9.61	15.56
OF	14.00	9.34	9.61	15.56
OF	15.00	9.33	9.61	15.56
OF	16.00	9.33	9.61	15.56
OF	17.00	9.33	9.61	15.55
OF	18.00	9.33	9.61	15.55
OF	19.00	9.32	9.61	15.55
OF	20.00	9.32	9.61	15.55
OF	21.00	9.32	9.61	15.55
OF	22.00	9.32	9.61	15.55
OF	23.00	9.31	9.61	15.54
OF	24.00	9.31	9.61	15.54
OF	25.00	9.32	9.61	15.55
OF	26.00	9.32	9.61	15.55
OF	27.00	9.33	9.61	15.55
OF	28.00	9.33	9.61	15.56
OF	29.00	9.34	9.61	15.56
OF	30.00	9.34	9.61	15.56
OF	31.00	9.35	9.61	15.57
OF	32.00	9.35	9.61	15.57
OF	33.00	9.36	9.61	15.57
OF	34.00	9.36	9.61	15.58
OF	35.00	9.37	9.61	15.58
OF	36.00	9.37	9.61	15.59
OF	37.00	9.38	9.61	15.59
OF	38.00	9.39	9.61	15.59
OF	39.00	9.39	9.61	15.60
OF	40.00	9.40	9.61	15.60
OF	41.00	9.40	9.61	15.60
OF	42.00	9.41	9.61	15.61
OF	43.00	9.41	9.61	15.61
OF	44.00	9.42	9.61	15.62
OF	45.00	9.42	9.61	15.62
OF	46.00	9.43	9.61	15.62
OF	47.00	9.43	9.61	15.63
OF	48.00	9.44	9.61	15.63
OF	49.00	9.44	9.61	15.63
OF	50.00	9.45	9.61	15.64
OF	51.00	9.45	9.61	15.64
OF	52.00	9.46	9.61	15.64
OF	53.00	9.46	9.61	15.65
OF	54.00	9.47	9.61	15.65
OF	55.00	9.47	9.61	15.66
OF	56.00	9.48	9.61	15.66

OF	57.00	9.48	9.61	15.66
OF	58.00	9.49	9.61	15.67
OF	59.00	9.49	9.61	15.67
OF	60.00	9.50	9.61	15.67
OF	61.00	9.51	9.61	15.68
OF	62.00	9.51	9.61	15.68
OF	63.00	9.52	9.61	15.68
OF	64.00	9.52	9.61	15.69
OF	65.00	9.53	9.61	15.69
OF	66.00	9.53	9.61	15.70
OF	67.00	9.54	9.61	15.70
OF	68.00	9.54	9.61	15.70
OF	69.00	9.55	9.61	15.71
OF	70.00	9.55	9.61	15.71
OF	71.00	9.56	9.61	15.72
OF	72.00	9.56	9.61	15.72
OF	73.00	9.57	9.61	15.72
OF	74.00	9.58	9.61	15.73
OF	75.00	9.58	9.61	15.73
OF	76.00	9.59	9.61	15.73
OF	77.00	9.59	9.61	15.74
OF	78.00	9.60	9.61	15.74
OF	79.00	9.60	9.61	15.75
OF	80.00	9.61	9.61	15.75
OF	81.00	9.62	9.61	15.75
OF	82.00	9.62	9.61	15.76
OF	83.00	9.63	9.61	15.76
OF	84.00	9.63	9.61	15.77
OF	85.00	9.64	9.61	15.77
OF	86.00	9.64	9.61	15.77
OF	87.00	9.65	9.61	15.78
OF	88.00	9.66	9.61	15.78
OF	89.00	9.66	9.61	15.79
OF	90.00	9.67	9.61	15.79
OF	91.00	9.67	9.61	15.80
OF	92.00	9.68	9.61	15.80
OF	93.00	9.68	9.61	15.80
OF	94.00	9.69	9.61	15.81
OF	95.00	9.70	9.61	15.81
OF	96.00	9.70	9.61	15.82
OF	97.00	9.71	9.61	15.82
OF	98.00	9.72	9.61	15.82
OF	99.00	9.72	9.61	15.83
OF	100.00	9.73	9.61	15.83
OF	101.00	9.73	9.61	15.84
OF	102.00	9.74	9.61	15.84
OF	103.00	9.75	9.61	15.85
OF	104.00	9.75	9.61	15.85
OF	105.00	9.76	9.61	15.85
OF	106.00	9.76	9.61	15.86
OF	107.00	9.77	9.61	15.86
OF	108.00	9.78	9.61	15.87
OF	109.00	9.79	9.61	15.87
OF	110.00	9.80	9.61	15.88
OF	111.00	9.81	9.61	15.89
OF	112.00	9.82	9.61	15.90
OF	113.00	9.83	9.61	15.91
OF	114.00	9.85	9.61	15.92
OF	115.00	9.86	9.61	15.93
OF	116.00	9.87	9.61	15.93
OF	117.00	9.88	9.61	15.94
OF	118.00	9.90	9.61	15.95
OF	119.00	9.91	9.61	15.96
OF	120.00	9.92	9.61	15.97
OF	121.00	9.94	9.61	15.98
OF	122.00	9.95	9.61	15.99
OF	123.00	9.96	9.61	16.00
OF	124.00	9.98	9.61	16.01
OF	125.00	9.99	9.61	16.02
OF	126.00	10.00	9.61	16.03
OF	127.00	10.02	9.61	16.04
OF	128.00	10.03	9.61	16.04
OF	129.00	10.04	9.61	16.05
OF	130.00	10.06	9.61	16.06
OF	131.00	10.07	9.61	16.07
OF	132.00	10.09	9.61	16.08
OF	133.00	10.10	9.61	16.09
OF	134.00	10.12	9.61	16.11
OF	135.00	10.13	9.61	16.12
OF	136.00	10.15	9.61	16.13
OF	137.00	10.16	9.61	16.14
OF	138.00	10.18	9.61	16.15
OF	139.00	10.19	9.61	16.16
OF	140.00	10.21	9.61	16.17
OF	141.00	10.22	9.61	16.18
OF	142.00	10.24	9.61	16.19
OF	143.00	10.26	9.61	16.20
OF	144.00	10.27	9.61	16.21
OF	145.00	10.29	9.61	16.23
OF	146.00	10.30	9.61	16.24
OF	147.00	10.32	9.61	16.25
OF	148.00	10.34	9.61	16.26
OF	149.00	10.35	9.61	16.27
OF	150.00	10.37	9.61	16.28
OF	151.00	10.39	9.61	16.30
OF	152.00	10.41	9.61	16.31
OF	153.00	10.42	9.61	16.32
OF	154.00	10.44	9.61	16.33
OF	155.00	10.46	9.61	16.35
OF	156.00	10.48	9.61	16.36
OF	157.00	10.47	9.61	16.35
OF	158.00	10.45	9.61	16.34
OF	159.00	10.44	9.61	16.33
OF	160.00	10.43	9.61	16.32
OF	161.00	10.42	9.61	16.32
OF	162.00	10.41	9.61	16.31
OF	163.00	10.40	9.61	16.30
OF	164.00	10.38	9.61	16.29
OF	165.00	10.37	9.61	16.28
OF	166.00	10.36	9.61	16.27

OF	167.00	10.35	9.61	16.27
OF	168.00	10.33	9.61	16.26
OF	169.00	10.32	9.61	16.25
OF	170.00	10.31	9.61	16.24
OF	171.00	10.29	9.61	16.23
OF	172.00	10.28	9.61	16.22
OF	173.00	10.27	9.61	16.21
OF	174.00	10.25	9.61	16.20
OF	175.00	10.24	9.61	16.19
OF	176.00	10.23	9.61	16.18
OF	177.00	10.21	9.61	16.17
OF	178.00	10.21	9.61	16.17
OF	179.00	10.22	9.61	16.17
OF	180.00	10.23	9.61	16.18
OF	181.00	10.24	9.61	16.19
OF	182.00	10.25	9.61	16.19
OF	183.00	10.26	9.61	16.20
OF	184.00	10.26	9.61	16.21
OF	185.00	10.27	9.61	16.22
OF	186.00	10.28	9.61	16.22
OF	187.00	10.29	9.61	16.23
OF	188.00	10.30	9.61	16.24
OF	189.00	10.31	9.61	16.24
OF	190.00	10.32	9.61	16.25
OF	191.00	10.33	9.61	16.25
OF	192.00	10.34	9.61	16.26
OF	193.00	10.35	9.61	16.27
OF	194.00	10.36	9.61	16.27
OF	195.00	10.37	9.61	16.28
OF	196.00	10.38	9.61	16.29
OF	197.00	10.39	9.61	16.29
OF	198.00	10.40	9.61	16.30
OF	199.00	10.41	9.61	16.31
OF	200.00	10.41	9.61	16.31
OF	201.00	10.42	9.61	16.32
OF	202.00	10.43	9.61	16.32
OF	203.00	10.44	9.61	16.33
OF	204.00	10.45	9.61	16.34
OF	205.00	10.46	9.61	16.34
OF	206.00	10.47	9.61	16.35
OF	207.00	10.48	9.61	16.36
OF	208.00	10.49	9.61	16.36
OF	209.00	10.50	9.61	16.37
OF	210.00	10.50	9.61	16.38
OF	211.00	10.51	9.61	16.38
OF	212.00	10.52	9.61	16.39
OF	213.00	10.53	9.61	16.39
OF	214.00	10.54	9.61	16.40
OF	215.00	10.55	9.61	16.41
OF	216.00	10.56	9.61	16.41
OF	217.00	10.57	9.61	16.42
OF	218.00	10.58	9.61	16.42
OF	219.00	10.58	9.61	16.43
OF	220.00	10.59	9.61	16.44
OF	221.00	10.60	9.61	16.44
OF	222.00	10.61	9.61	16.45
OF	223.00	10.62	9.61	16.45
OF	224.00	10.62	9.61	16.46
OF	225.00	10.62	9.61	16.45
OF	226.00	10.61	9.61	16.45
OF	227.00	10.60	9.61	16.44
OF	228.00	10.60	9.61	16.44
OF	229.00	10.59	9.61	16.44
OF	230.00	10.59	9.61	16.43
OF	231.00	10.58	9.61	16.43
OF	232.00	10.57	9.61	16.42
OF	233.00	10.57	9.61	16.42
OF	234.00	10.56	9.61	16.41
OF	235.00	10.55	9.61	16.41
OF	236.00	10.55	9.61	16.40
OF	237.00	10.54	9.61	16.40
OF	238.00	10.54	9.61	16.40
OF	239.00	10.53	9.61	16.39
OF	240.00	10.52	9.61	16.39
OF	241.00	10.52	9.61	16.38
OF	242.00	10.51	9.61	16.38
OF	243.00	10.50	9.61	16.37
OF	244.00	10.49	9.61	16.37
OF	245.00	10.49	9.61	16.36
OF	246.00	10.48	9.61	16.36
OF	247.00	10.47	9.61	16.35
OF	248.00	10.47	9.61	16.35
OF	249.00	10.46	9.61	16.34
OF	250.00	10.45	9.61	16.34
OF	251.00	10.45	9.61	16.33
OF	252.00	10.44	9.61	16.33
OF	253.00	10.43	9.61	16.32
OF	254.00	10.43	9.61	16.32
OF	255.00	10.42	9.61	16.32
OF	256.00	10.42	9.61	16.31
OF	257.00	10.41	9.61	16.31
OF	258.00	10.41	9.61	16.31
OF	259.00	10.40	9.61	16.30
OF	260.00	10.39	9.61	16.30
OF	261.00	10.39	9.61	16.29
OF	262.00	10.38	9.61	16.29
OF	263.00	10.38	9.61	16.29
OF	264.00	10.37	9.61	16.28
OF	265.00	10.37	9.61	16.28
OF	266.00	10.36	9.61	16.27
OF	267.00	10.35	9.61	16.27
OF	268.00	10.35	9.61	16.26
OF	269.00	10.34	9.61	16.26
OF	270.00	10.34	9.61	16.26
OF	271.00	10.33	9.61	16.25
OF	272.00	10.32	9.61	16.25
OF	273.00	10.32	9.61	16.24
OF	274.00	10.31	9.61	16.24
OF	275.00	10.31	9.61	16.24
OF	276.00	10.30	9.61	16.23

OF	277.00	10.29	9.61	16.23
OF	278.00	10.29	9.61	16.22
OF	279.00	10.28	9.61	16.22
OF	280.00	10.27	9.61	16.21
OF	281.00	10.27	9.61	16.21
OF	282.00	10.27	9.61	16.21
OF	283.00	10.27	9.61	16.21
OF	284.00	10.27	9.61	16.21
OF	285.00	10.27	9.61	16.21
OF	286.00	10.28	9.61	16.22
OF	287.00	10.28	9.61	16.22
OF	288.00	10.28	9.61	16.22
OF	289.00	10.28	9.61	16.22
OF	290.00	10.29	9.61	16.22
OF	291.00	10.29	9.61	16.22
	391.30	6.85	9.61	13.82
IF	409.00	6.12	9.61	13.31
IF	410.00	6.07	9.61	13.27
IF	411.00	6.02	9.61	13.24
IF	412.00	5.95	9.61	13.19
IF	413.00	5.89	9.61	13.14
IF	414.00	5.82	9.61	13.09
IF	415.00	5.74	9.61	13.04
IF	416.70	5.61	9.61	12.95
IF	419.90	5.39	9.61	12.81
IF	423.20	5.14	9.61	12.64
IF	426.50	4.82	9.61	12.43
IF	429.80	3.74	9.61	11.66
IF	433.10	2.61	9.61	10.93
IF	436.40	1.72	9.61	10.71
IF	439.60	1.90	9.61	10.94
IF	442.90	1.95	9.61	11.00
IF	446.20	1.27	9.61	10.54
IF	448.00	0.34	9.61	9.88
IF	448.60	0.01	9.61	9.65

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
158.00	1.00	9.02
193.00	1.00	9.02
225.00	1.00	9.02
268.00	1.00	9.02
269.00	1.00	9.02
283.00	1.00	9.02
416.70	1.00	9.03
419.90	1.00	9.03
423.20	1.00	9.04
426.50	1.00	9.05
429.80	1.00	9.04
433.10	1.00	9.10
436.40	1.00	9.50
439.60	1.00	9.60
442.90	1.00	9.63
446.20	1.00	9.65

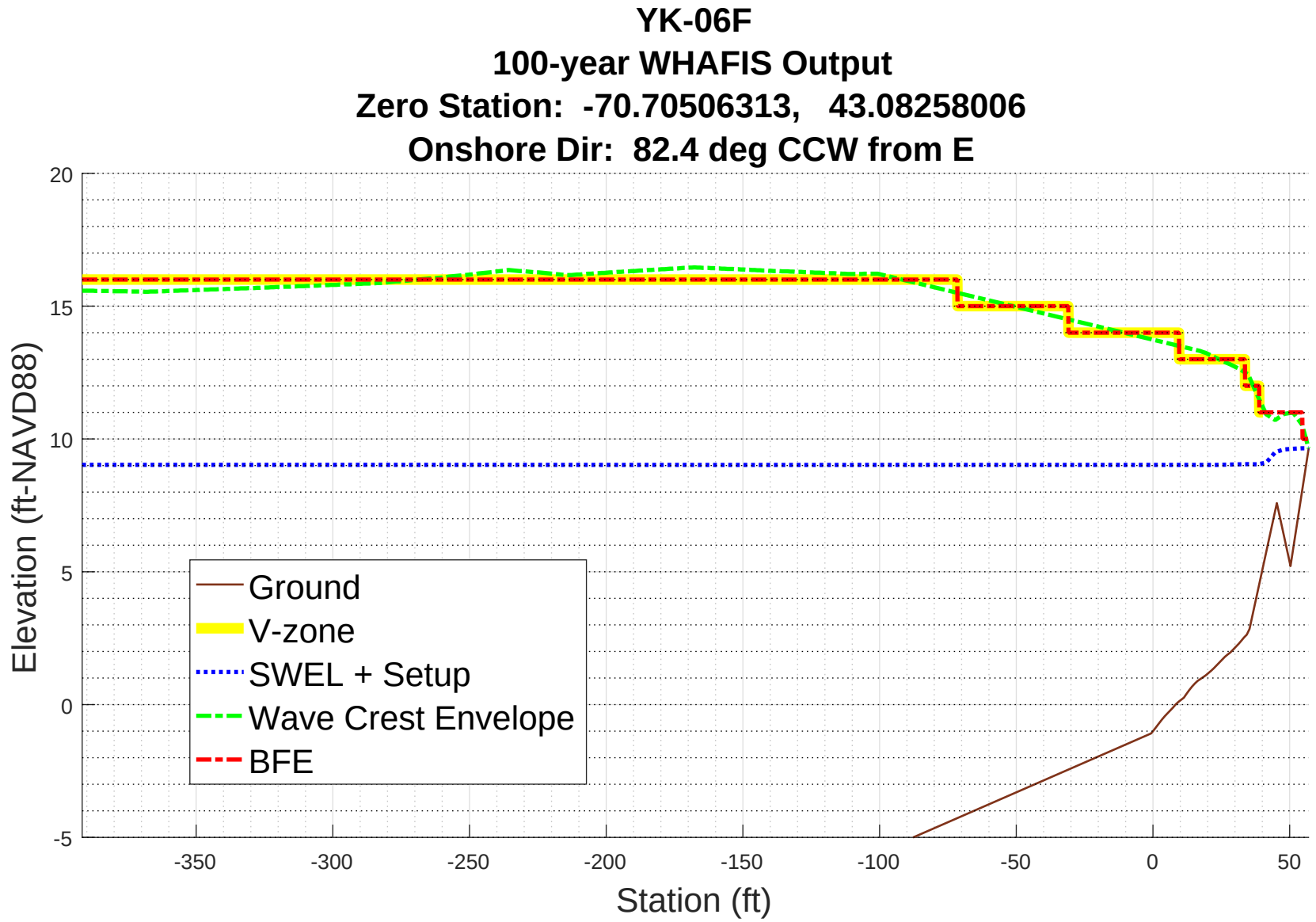
PART5 LOCATION OF V ZONES

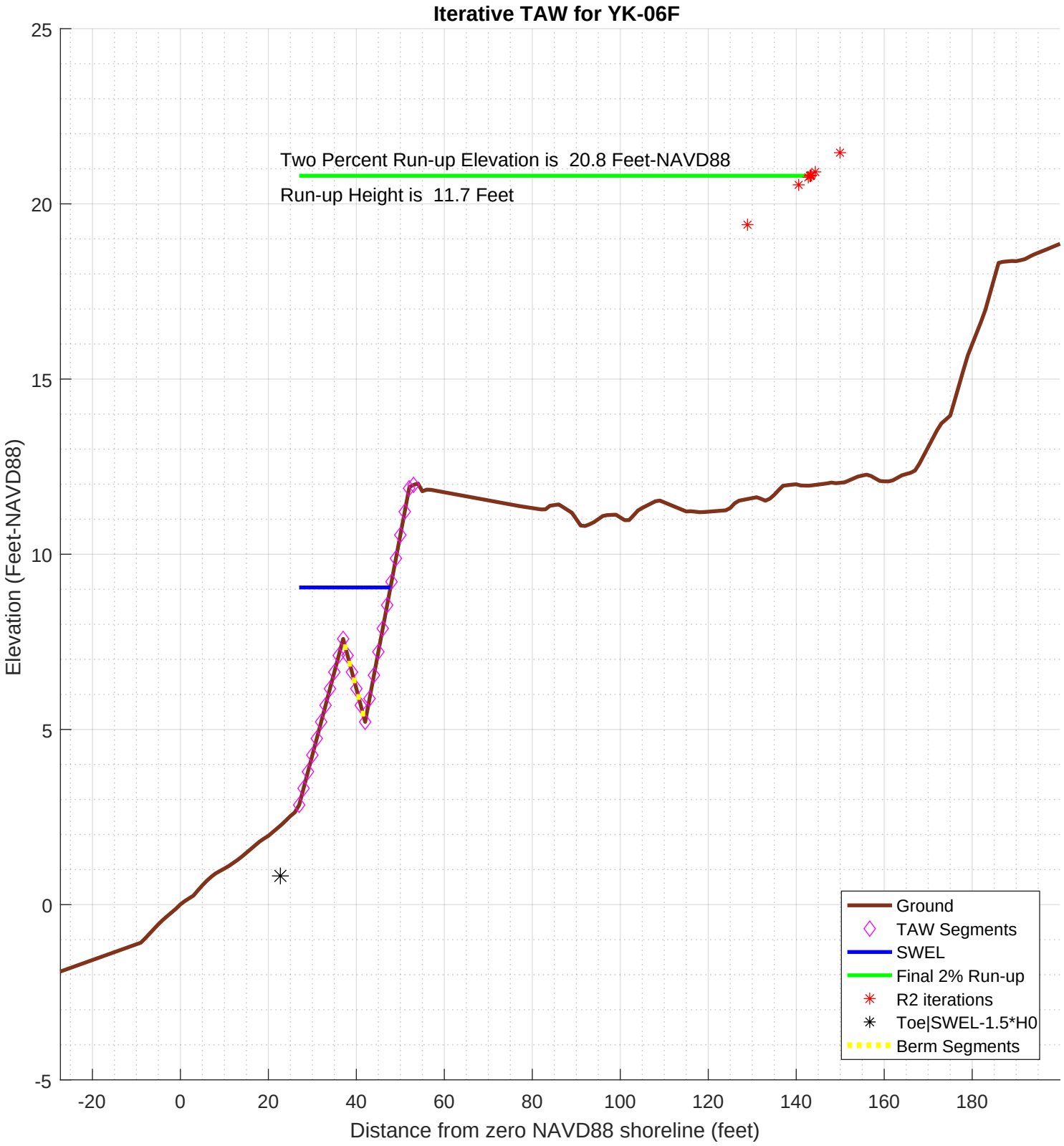
STATION OF GUTTER	LOCATION OF ZONE
431.96	WINDWARD

PART6 NUMBERED A ZONES AND V ZONES

STATION OF GUTTER	ELEVATION	ZONE DESIGNATION		FHF
0.00	15.58			
		V22	EL=16	120
157.00	16.35			
		V22	EL=16	120
158.00	16.34			
		V22	EL=16	120
192.00	16.26			
		V22	EL=16	120
193.00	16.27			
		V22	EL=16	120
224.00	16.46			
		V22	EL=16	120
225.00	16.45			
		V22	EL=16	120
267.00	16.27			
		V22	EL=16	120
268.00	16.26			
		V22	EL=16	120
269.00	16.26			
		V22	EL=16	120
282.00	16.21			
		V22	EL=16	120
283.00	16.21			
		V22	EL=16	120
321.12	15.50			
		V22	EL=15	120
362.77	14.50			
		V22	EL=14	120
402.31	13.50			
		V22	EL=13	120
415.00	13.04			
		V22	EL=13	120
416.70	12.95			
		V22	EL=13	120
419.90	12.81			
		V22	EL=13	120
423.20	12.64			
		V22	EL=13	120
425.37	12.50			
		V22	EL=12	120
426.50	12.43			
		V22	EL=12	120
429.80	11.66			
		V23	EL=12	130
430.53	11.50			
		V23	EL=11	130
431.96	11.17			
		A20	EL=11	100
433.10	10.93			
		A20	EL=11	100

```
                                436.40          10.71
                                                                A20  EL=11     100
                                439.60          10.94
                                                                A20  EL=11     100
                                442.90          11.00
                                                                A20  EL=11     100
                                446.20          10.54
                                                                A20  EL=11     100
                                446.30          10.50
                                                                A20  EL=10     100
                                448.60           9.65
                                     ZONE TERMINATED AT END OF TRANSECT
                                     PART 7   POSTSCRIPT NOTES
                           PS#  1   START(361192.0982,4771277.7202)
                           PS#  2   END(361217.8661,4771469.8232)
-1.000000e+00
```


YK-06F
100-year WHAFIS Output
Zero Station: -70.70506313, 43.08258006
Onshore Dir: 82.4 deg CCW from E
Elevation (ft-NAVD88)
Station (ft)
20
15
10
5
0
-5
-350
-300
-250
-200
-150
-100
-50
0
50
Ground
V-zone
SWEL + Setup
Wave Crest Envelope
BFE


Iterative TAW for YK-06F
Two Percent Run-up Elevation is 20.8 Feet-NAVD88
Run-up Height is 11.7 Feet
Elevation (Feet-NAVD88)
Distance from zero NAVD88 shoreline (feet)
25
20
15
10
5
0
-5
-20
0
20
40
60
80
100
120
140
160
180
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: YK-06F
% calculation by SJH, Ransom Consulting, Inc. 06-Feb-2020
% 100-year wave runup using TAW methodology
% including berm and weighted average with foreshore if necessary
%
% chk nld 20181015
%
% 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/YK-06Fsta_ele_include.csv';   % file with station, elevation, include
                                    % third colunm is 0 for excluded points
imgname='logfiles/YK-06F-runup';
SWEL=9.0235;  % 100-yr still water level including wave setup.
H0=5.4882;    % significant wave height at toe of structure
Tp=9.7138;    % peak period, 1/fma,
T0=Tp/1.1;

gamma_berm=0.96835;   % this may get changed automatically below
gamma_rough=0.85;
gamma_beta=1;
gamma_perm=1;

setupAtToe=0.02834;
maxSetup=0.62428;   % only used in case of berm/shallow foreshore weighted average

plotTitle='Iterative TAW for YK-06F'

plotTitle =

Iterative TAW for YK-06F



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

SWEL=SWEL+setupAtToe

SWEL =

                   9.05184

SWEL_fore=SWEL+maxSetup

SWEL_fore =

                   9.67612



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

L0 =

           399.019438762892


% 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 =
```

```
                  0.81954


% 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 =

                 17.28414


% 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
% 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

toe_sta =

           22.726185201595

if top_sta==-999
   dy=Z2-dep(end);
   top_sta=sta(end)+dy/S(end)
end

top_sta =

          107.239672801636


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

top_sta =

          107.239672801636

toe_sta

toe_sta =

           22.726185201595



% 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',de
   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 =

-!!- The User has selected a starting point that is 2.03 feet above the elevation of SWEL-1.5H0


ans =

-!!- This may be reasonable for some cases.  However the user may want to consider:


ans =

-!!-   1) Selecting a starting point that is at or below 0.82 feet elevation, or


ans =

-!!-   2) Reducing the incident wave height to a depth limited condition.




% now iterate converge on a runup elevation
tol=0.001;  % 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*
   TAW_VALID=0;
else
   sprintf('!!! - - Iribaren number: %6.2f is in the valid range (0.5-10), TAW RECOMMENDED - - !!!\n', Irb*gam
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', islop
   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
   % 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 =

                   0.81954


toe_sta =

            22.726185201595


top_sta =

           107.239672801636


Z2 =

                  17.28414


H0 =

                     5.4882


Tp =

                     9.7138


T0 =

           8.83072727272727


R2 =

                   16.4646


Z2 =

                   25.51644


top_sta =

           191.414519427404


Lslope =

           168.688334225809


ans =

Berm Factor Calculation: Iteration 1, Profile Segment: 11


dh =

                   1.70393


rdh_sum =
```

```
        0.0582905121957862

ans =

Berm Factor Calculation: Iteration 1, Profile Segment: 12

dh =

                   2.17791

rdh_sum =

         0.152325771265479

ans =

Berm Factor Calculation: Iteration 1, Profile Segment: 13

dh =

                   2.65189

rdh_sum =

         0.289565477260354

ans =

Berm Factor Calculation: Iteration 1, Profile Segment: 14

dh =

                   3.12587

rdh_sum =

         0.476675438096609

ans =

Berm Factor Calculation: Iteration 1, Profile Segment: 15

dh =

                   3.59985

rdh_sum =

         0.719405083726818

ans =

!------- End Berm Factor Calculation, Iter: 1 ---------!

berm_width =

     5

rB =

        0.0296404610487583

rdh_mean =

         0.143881016745364

gamma_berm =

         0.974624238623738

slope =

         0.150877581574815

Irb =
```

```
          1.28649107041569

gamma_berm =
         0.974624238623738

gamma_perm =
     1

gamma_beta =
     1

gamma_rough =
                     0.85

gamma =
         0.828430602830178

ans =
!!! - - Iribaren number:   1.25 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!


ans =
!!! - - slope: 1:6.6 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!


R2_new =
          10.3529974157404

R2del =
          6.11160258425958

Z2 =
          19.4048374157404

ans =
!----------------- STARTING ITERATION 2 -----------------!

Ztoe =
                  0.81954

toe_sta =
           22.726185201595

top_sta =
          128.923695457469

Z2 =
          19.4048374157404

H0 =
                   5.4882

Tp =
                   9.7138

T0 =
          8.83072727272727

R2 =
```

```
          10.3529974157404

Z2 =

          19.4048374157404

top_sta =

          128.923695457469

Lslope =

          106.197510255874

ans =

Berm Factor Calculation: Iteration 2, Profile Segment: 11

dh =

                   1.70393

rdh_sum =

        0.0582905121957862

ans =

Berm Factor Calculation: Iteration 2, Profile Segment: 12

dh =

                   2.17791

rdh_sum =

         0.152325771265479

ans =

Berm Factor Calculation: Iteration 2, Profile Segment: 13

dh =

                   2.65189

rdh_sum =

         0.289565477260354

ans =

Berm Factor Calculation: Iteration 2, Profile Segment: 14

dh =

                   3.12587

rdh_sum =

         0.476675438096609

ans =

Berm Factor Calculation: Iteration 2, Profile Segment: 15

dh =

                   3.59985

rdh_sum =

         0.719405083726818

ans =
```

```
!------- End Berm Factor Calculation, Iter: 2 ---------!

berm_width =
     5

rB =
        0.0470820830728792

rdh_mean =
         0.143881016745364

gamma_berm =
         0.959692134910136

slope =
         0.183653702237814

Irb =
          1.56596391267428

gamma_berm =
         0.959692134910136

gamma_perm =
     1

gamma_beta =
     1

gamma_rough =
                     0.85

gamma =
         0.815738314673616

ans =
!!! - - Iribaren number:   1.50 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!


ans =
!!! - - slope: 1:5.4 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!


R2_new =
          12.4089720609493

R2del =
           2.0559746452089

Z2 =
          21.4608120609493

ans =
!----------------- STARTING ITERATION 3 -----------------!

Ztoe =
                  0.81954

toe_sta =
```

```
           22.726185201595

top_sta =
          149.945931093552

Z2 =
          21.4608120609493

H0 =
                    5.4882

Tp =
                    9.7138

T0 =
          8.83072727272727

R2 =
          12.4089720609493

Z2 =
          21.4608120609493

top_sta =
          149.945931093552

Lslope =
          127.219745891957

ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 11

dh =
                  1.70393

rdh_sum =
        0.0582905121957862

ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 12

dh =
                  2.17791

rdh_sum =
         0.152325771265479

ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 13

dh =
                  2.65189

rdh_sum =
         0.289565477260354

ans =
```

```
Berm Factor Calculation: Iteration 3, Profile Segment: 14

dh =
                   3.12587

rdh_sum =
         0.476675438096609

ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 15

dh =
                   3.59985

rdh_sum =
         0.719405083726818

ans =
!------- End Berm Factor Calculation, Iter: 3 ---------!

berm_width =
     5

rB =
         0.039302075043023

rdh_mean =
         0.143881016745364

gamma_berm =
          0.96635274747437

slope =
         0.168886556835066

Irb =
          1.44004858119911

gamma_berm =
          0.96635274747437

gamma_perm =
     1

gamma_beta =
     1

gamma_rough =
                     0.85

gamma =
         0.821399835353214

ans =
!!! - - Iribaren number:   1.39 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!


ans =
```

```
!!! - - slope: 1:5.9 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!

R2_new =
          11.4903947996176

R2del =
         0.918577261331743

Z2 =
          20.5422347996176

ans =
!----------------- STARTING ITERATION 4 -----------------!

Ztoe =
                   0.81954

toe_sta =
           22.726185201595

top_sta =
          140.553525558462

Z2 =
          20.5422347996176

H0 =
                    5.4882

Tp =
                    9.7138

T0 =
          8.83072727272727

R2 =
          11.4903947996176

Z2 =
          20.5422347996176

top_sta =
          140.553525558462

Lslope =
          117.827340356867

ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 11

dh =
                   1.70393

rdh_sum =
        0.0582905121957862

ans =
```

```
Berm Factor Calculation: Iteration 4, Profile Segment: 12

dh =
                   2.17791

rdh_sum =
         0.152325771265479

ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 13

dh =
                   2.65189

rdh_sum =
         0.289565477260354

ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 14

dh =
                   3.12587

rdh_sum =
         0.476675438096609

ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 15

dh =
                   3.59985

rdh_sum =
         0.719405083726818

ans =
!------- End Berm Factor Calculation, Iter: 4 ---------!

berm_width =
     5

rB =
        0.0424349729430906

rdh_mean =
         0.143881016745364

gamma_berm =
         0.963670614109523

slope =
         0.174804216223086

Irb =
          1.49050681283954

gamma_berm =
         0.963670614109523
```

```
gamma_perm =
     1

gamma_beta =
     1

gamma_rough =
                     0.85

gamma =
         0.819120021993095

ans =
!!! - - Iribaren number:   1.44 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 =
          11.8600003798249

R2del =
         0.369605580207363

Z2 =
          20.9118403798249

ans =
!----------------- STARTING ITERATION 5 -----------------!

Ztoe =
                   0.81954

toe_sta =
           22.726185201595

top_sta =
          144.332723720092

Z2 =
          20.9118403798249

H0 =
                    5.4882

Tp =
                    9.7138

T0 =
          8.83072727272727

R2 =
          11.8600003798249

Z2 =
```

```
          20.9118403798249

top_sta =

          144.332723720092

Lslope =

          121.606538518497

ans =

Berm Factor Calculation: Iteration 5, Profile Segment: 11

dh =

                   1.70393

rdh_sum =

        0.0582905121957862

ans =

Berm Factor Calculation: Iteration 5, Profile Segment: 12

dh =

                   2.17791

rdh_sum =

         0.152325771265479

ans =

Berm Factor Calculation: Iteration 5, Profile Segment: 13

dh =

                   2.65189

rdh_sum =

         0.289565477260354

ans =

Berm Factor Calculation: Iteration 5, Profile Segment: 14

dh =

                   3.12587

rdh_sum =

         0.476675438096609

ans =

Berm Factor Calculation: Iteration 5, Profile Segment: 15

dh =

                   3.59985

rdh_sum =

         0.719405083726818

ans =

!------- End Berm Factor Calculation, Iter: 5 ---------!

berm_width =

     5
```

```
rB =
         0.041116210204762

rdh_mean =
         0.143881016745364

gamma_berm =
         0.964799631924215

slope =
          0.17230852261889

Irb =
          1.46922672932561

gamma_berm =
         0.964799631924215

gamma_perm =
     1

gamma_beta =
     1

gamma_rough =
                     0.85

gamma =
         0.820079687135583

ans =
!!! - - Iribaren number:   1.42 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!


ans =
!!! - - slope: 1:5.8 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!


R2_new =
          11.7043707848237

R2del =
         0.155629595001265

Z2 =
          20.7562107848237

ans =
!----------------- STARTING ITERATION 6 -----------------!

Ztoe =
                   0.81954

toe_sta =
           22.726185201595

top_sta =
```

```
          142.741419067727

Z2 =

          20.7562107848237

H0 =

                    5.4882

Tp =

                    9.7138

T0 =

          8.83072727272727

R2 =

          11.7043707848237

Z2 =

          20.7562107848237

top_sta =

          142.741419067727

Lslope =

          120.015233866132

ans =

Berm Factor Calculation: Iteration 6, Profile Segment: 11

dh =

                  1.70393

rdh_sum =

        0.0582905121957862

ans =

Berm Factor Calculation: Iteration 6, Profile Segment: 12

dh =

                  2.17791

rdh_sum =

         0.152325771265479

ans =

Berm Factor Calculation: Iteration 6, Profile Segment: 13

dh =

                  2.65189

rdh_sum =

         0.289565477260354

ans =

Berm Factor Calculation: Iteration 6, Profile Segment: 14

dh =

                  3.12587
```

```
rdh_sum =
         0.476675438096609

ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 15

dh =
                   3.59985

rdh_sum =
         0.719405083726818

ans =
!------- End Berm Factor Calculation, Iter: 6 ---------!

berm_width =
     5

rB =
        0.0416613778012308

rdh_mean =
         0.143881016745364

gamma_berm =
         0.964332903595823

slope =
         0.173339392658439

Irb =
          1.47801667072575

gamma_berm =
         0.964332903595823

gamma_perm =
     1

gamma_beta =
     1

gamma_rough =
                      0.85

gamma =
          0.81968296805645

ans =
!!! - - Iribaren number:   1.43 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!


ans =
!!! - - slope: 1:5.8 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!


R2_new =
```

```
          11.7686985703862

R2del =

        0.0643277855624831

Z2 =

          20.8205385703862

ans =

!----------------- STARTING ITERATION 7 -----------------!

Ztoe =

                  0.81954

toe_sta =

           22.726185201595

top_sta =

          143.399167386362

Z2 =

          20.8205385703862

H0 =

                   5.4882

Tp =

                   9.7138

T0 =

          8.83072727272727

R2 =

          11.7686985703862

Z2 =

          20.8205385703862

top_sta =

          143.399167386362

Lslope =

          120.672982184767

ans =

Berm Factor Calculation: Iteration 7, Profile Segment: 11

dh =

                  1.70393

rdh_sum =

        0.0582905121957862

ans =

Berm Factor Calculation: Iteration 7, Profile Segment: 12

dh =

                  2.17791
```

```
rdh_sum =
         0.152325771265479

ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 13

dh =
                   2.65189

rdh_sum =
         0.289565477260354

ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 14

dh =
                   3.12587

rdh_sum =
         0.476675438096609

ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 15

dh =
                   3.59985

rdh_sum =
         0.719405083726818

ans =
!------- End Berm Factor Calculation, Iter: 7 ---------!

berm_width =
     5

rB =
        0.0414342954775437

rdh_mean =
         0.143881016745364

gamma_berm =
         0.964527313083893

slope =
         0.172909854942947

Irb =
          1.47435412238942

gamma_berm =
         0.964527313083893

gamma_perm =
     1
```

```
gamma_beta =
     1

gamma_rough =
                     0.85

gamma =
         0.819848216121309

ans =
!!! - - Iribaren number:   1.42 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!


ans =
!!! - - slope: 1:5.8 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!


R2_new =
          11.7419022420415

R2del =
         0.026796328344652

Z2 =
          20.7937422420415

ans =
!----------------- STARTING ITERATION 8 -----------------!

Ztoe =
                  0.81954

toe_sta =
           22.726185201595

top_sta =
          143.125176298993

Z2 =
          20.7937422420415

H0 =
                    5.4882

Tp =
                    9.7138

T0 =
          8.83072727272727

R2 =
          11.7419022420415

Z2 =
          20.7937422420415

top_sta =
          143.125176298993
```

```
Lslope =
          120.398991097398

ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 11

dh =
                   1.70393

rdh_sum =
        0.0582905121957862

ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 12

dh =
                   2.17791

rdh_sum =
         0.152325771265479

ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 13

dh =
                   2.65189

rdh_sum =
         0.289565477260354

ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 14

dh =
                   3.12587

rdh_sum =
         0.476675438096609

ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 15

dh =
                   3.59985

rdh_sum =
         0.719405083726818

ans =
!------- End Berm Factor Calculation, Iter: 8 ---------!

berm_width =
     5

rB =
        0.0415285871951799
```

```
rdh_mean =
         0.143881016745364

gamma_berm =
         0.964446588154461

slope =
          0.17308818779172

Irb =
          1.47587471686816

gamma_berm =
         0.964446588154461

gamma_perm =
     1

gamma_beta =
     1

gamma_rough =
                     0.85

gamma =
         0.819779599931292

ans =
!!! - - Iribaren number:   1.42 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!


ans =
!!! - - slope: 1:5.8 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!


R2_new =
          11.7530286694215

R2del =
        0.0111264273799865

Z2 =
          20.8048686694215

ans =
!----------------- STARTING ITERATION 9 -----------------!

Ztoe =
                  0.81954

toe_sta =
           22.726185201595

top_sta =
          143.238943450118

Z2 =
          20.8048686694215
```

```
H0 =
                    5.4882

Tp =
                    9.7138

T0 =
          8.83072727272727

R2 =
          11.7530286694215

Z2 =
          20.8048686694215

top_sta =
          143.238943450118

Lslope =
          120.512758248523

ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 11

dh =
                   1.70393

rdh_sum =
        0.0582905121957862

ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 12

dh =
                   2.17791

rdh_sum =
         0.152325771265479

ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 13

dh =
                   2.65189

rdh_sum =
         0.289565477260354

ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 14

dh =
                   3.12587

rdh_sum =
         0.476675438096609
```

```
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 15

dh =
                  3.59985

rdh_sum =
         0.719405083726818

ans =
!------- End Berm Factor Calculation, Iter: 9 ---------!

berm_width =
     5

rB =
        0.0414893831380818

rdh_mean =
         0.143881016745364

gamma_berm =
         0.964480151491963

slope =
         0.173014037344892

Irb =
          1.47524245668268

gamma_berm =
         0.964480151491963

gamma_perm =
     1

gamma_beta =
     1

gamma_rough =
                     0.85

gamma =
         0.819808128768169

ans =
!!! - - Iribaren number:   1.42 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!


ans =
!!! - - slope: 1:5.8 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!

R2_new =
           11.748402545563

R2del =
       0.00462612385846839
```

```
Z2 =
           20.800242545563

ans =
!----------------- STARTING ITERATION 10 -----------------!

Ztoe =
                   0.81954

toe_sta =
           22.726185201595

top_sta =
          143.191641570175

Z2 =
           20.800242545563

H0 =
                    5.4882

Tp =
                    9.7138

T0 =
          8.83072727272727

R2 =
           11.748402545563

Z2 =
           20.800242545563

top_sta =
          143.191641570175

Lslope =
           120.46545636858

ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 11

dh =
                   1.70393

rdh_sum =
        0.0582905121957862

ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 12

dh =
                   2.17791

rdh_sum =
         0.152325771265479
```

```
ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 13

dh =
                   2.65189

rdh_sum =
         0.289565477260354

ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 14

dh =
                   3.12587

rdh_sum =
         0.476675438096609

ans =
Berm Factor Calculation: Iteration 10, Profile Segment: 15

dh =
                   3.59985

rdh_sum =
         0.719405083726818

ans =
!------- End Berm Factor Calculation, Iter: 10 ---------!

berm_width =
     5

rB =
        0.0415056743295925

rdh_mean =
         0.143881016745364

gamma_berm =
         0.964466204293651

slope =
         0.173044849723559

Irb =
          1.47550518524447

gamma_berm =
         0.964466204293651

gamma_perm =
     1

gamma_beta =
     1
```

```
gamma_rough =
                      0.85

gamma =
         0.819796273649604

ans =
!!! - - Iribaren number:   1.42 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!


ans =
!!! - - slope: 1:5.8 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!


R2_new =
          11.7503249174496

R2del =
       0.00192237188656819

Z2 =
          20.8021649174496

ans =
!----------------- STARTING ITERATION 11 -----------------!

Ztoe =
                  0.81954

toe_sta =
           22.726185201595

top_sta =
          143.211297724434

Z2 =
          20.8021649174496

H0 =
                    5.4882

Tp =
                    9.7138

T0 =
          8.83072727272727

R2 =
          11.7503249174496

Z2 =
          20.8021649174496

top_sta =
          143.211297724434

Lslope =
          120.485112522839
```

```
ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 11

dh =
                   1.70393

rdh_sum =
        0.0582905121957862

ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 12

dh =
                   2.17791

rdh_sum =
         0.152325771265479

ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 13

dh =
                   2.65189

rdh_sum =
         0.289565477260354

ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 14

dh =
                   3.12587

rdh_sum =
         0.476675438096609

ans =
Berm Factor Calculation: Iteration 11, Profile Segment: 15

dh =
                   3.59985

rdh_sum =
         0.719405083726818

ans =
!------- End Berm Factor Calculation, Iter: 11 ---------!

berm_width =
     5

rB =
        0.0414989030205056

rdh_mean =
         0.143881016745364
```

```
gamma_berm =

         0.964472001339902

slope =

         0.173032042666952

Irb =

          1.47539598304364

gamma_berm =

         0.964472001339902

gamma_perm =

     1

gamma_beta =

     1

gamma_rough =

                      0.85

gamma =

         0.819801201138917

ans =

!!! - - Iribaren number:   1.42 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!


ans =

!!! - - slope: 1:5.8 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!


R2_new =

          11.7495258969969

R2del =

      0.000799020452674881

Z2 =

          20.8013658969969

% final 2% runup elevation
Z2=R2_new+SWEL

Z2 =

          20.8013658969969

diary off
```

PART 5: RUNUP2

for transect: YK-06F

Station locations shifted by: -0.06 feet from their
original location to set the shoreline to
elevation 0 for RUNUP2 input

RUNUP2 INPUT CONVERSIONS
for transect: YK-06F

Incident significant wave height: 5.86 feet

Peak wave period: 9.61 seconds

Mean wave height: 3.67 feet

Local Depth below SWEL: 26.02 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

Deep water wavelength, L0 (m)
L0 = g*T*T/twopi
L0 = 32.17*8.17*8.17/6.28 = 341.91
Deep water wave celerity, C0 (ft/s)
C0 = L0/T
C0 = 341.91/8.17 = 41.84
Angular frequency, sigma (rad/s)
sigma = twopi/T
sigma = 6.28/8.17 = 0.77
Hunts (1979) approximation for Celerity C1H (ft/s) at Depth D (ft)
y = sigma.*sigma.*D./g
y = 0.77*0.77*26.02/32.17 = 0.48
C1H = sqrt(g.*D./(y+1./(1 + 0.6522.*y + 0.4622.*y.^2 + 0.0864.*y.^4 +0.0675.*y.^5)))
C1H = 26.63
Shoaling Coefficient KsH
KsH = sqrt(C0/C1H)
KsH = sqrt(41.84/26.63) = 1.25
Deepwater Wave Height H0_H (ft)
H0_H = H/KsH
H0_H = 3.67/1.25 = 2.92

Deepwater mean wave height: 2.92 feet

END RUNUP2 CONVERSIONS

RUNUP2 RESULTS
for transect: YK-06F

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:
2.78

2.78
2.78
2.92
2.92
2.92
3.07
3.07
3.07

RUNUP2 mean wave periods:
7.76
8.17
8.58
7.76
8.17
8.58
7.76
8.17
8.58

RUNUP2 runup above SWEL:
11.91
12.38
12.76
12.11
12.57
13.00
12.35
12.80
13.30

RUNUP2 Mean runup height above SWEL: 12.58 feet

RUNUP2 2-percent runup height above SWEL: 27.67 feet

RUNUP2 2-percent runup elevation: 36.67 feet-NAVD88

RUNUP2 Messages:
Nonfatal Error, Check Output

_____END RUNUP2 RESULTS_____

_____ACES BEACH RUNUP_____

Incident significant wave height: 5.86 feet

Significant wave height deshoaled using Hunt equation

Deepwater significant wave height: 4.09 feet

Peak wave period: 9.61 seconds

Average beach Slope: 1:15.64 (H:V)

ACES RUNUP CALCULATED USING 'Aces_Beach_Runup.m'

ACES Beach 2-percent runup height above SWEL: 5.84 feet

ACES Beach 2-percent runup elevation: 14.84 feet-NAVD88

ACES BEACH RUNUP is valid

_____END ACES BEACH RESULTS_____

PART 5 COMPLETE_____

```
  FEMA                                                  sjh            job 2
  RUNUP2 transect: YK-06F                                                 1
31.0
  -16.99 -399.9 1.0
  -16.99 -363.9 1.0
  -16.53 -355.9 1.0
  -13.24 -291.9 1.0
  -11.23 -270.9 1.0
  -6.48 -222.9 1.0
  -6.44 -221.9 1.0
  -6.44 -137.9 1.0
  -5.60 -118.9 1.0
  -5.58 -108.9 1.0
  -1.09 -8.9   1.0
  0.89  8.1    1.0
  1.37  14.1   1.0
  2.63  26.1   1.0
  2.85  27.1   1.0
  7.58  37.1   1.0
  7.58  45.1   1.0
  7.88  46.1   1.0
  11.92 52.1   1.0
1 11.98 53.1   1.0
 9.0   2.78  7.76
 9.0   2.78  8.17
 9.0   2.78  8.58
 9.0   2.92  7.76
 9.0   2.92  8.17
 9.0   2.92  8.58
 9.0   3.07  7.76
 9.0   3.07  8.17
 9.0   3.07  8.58
```

****

CROSS SECTION PROFILE

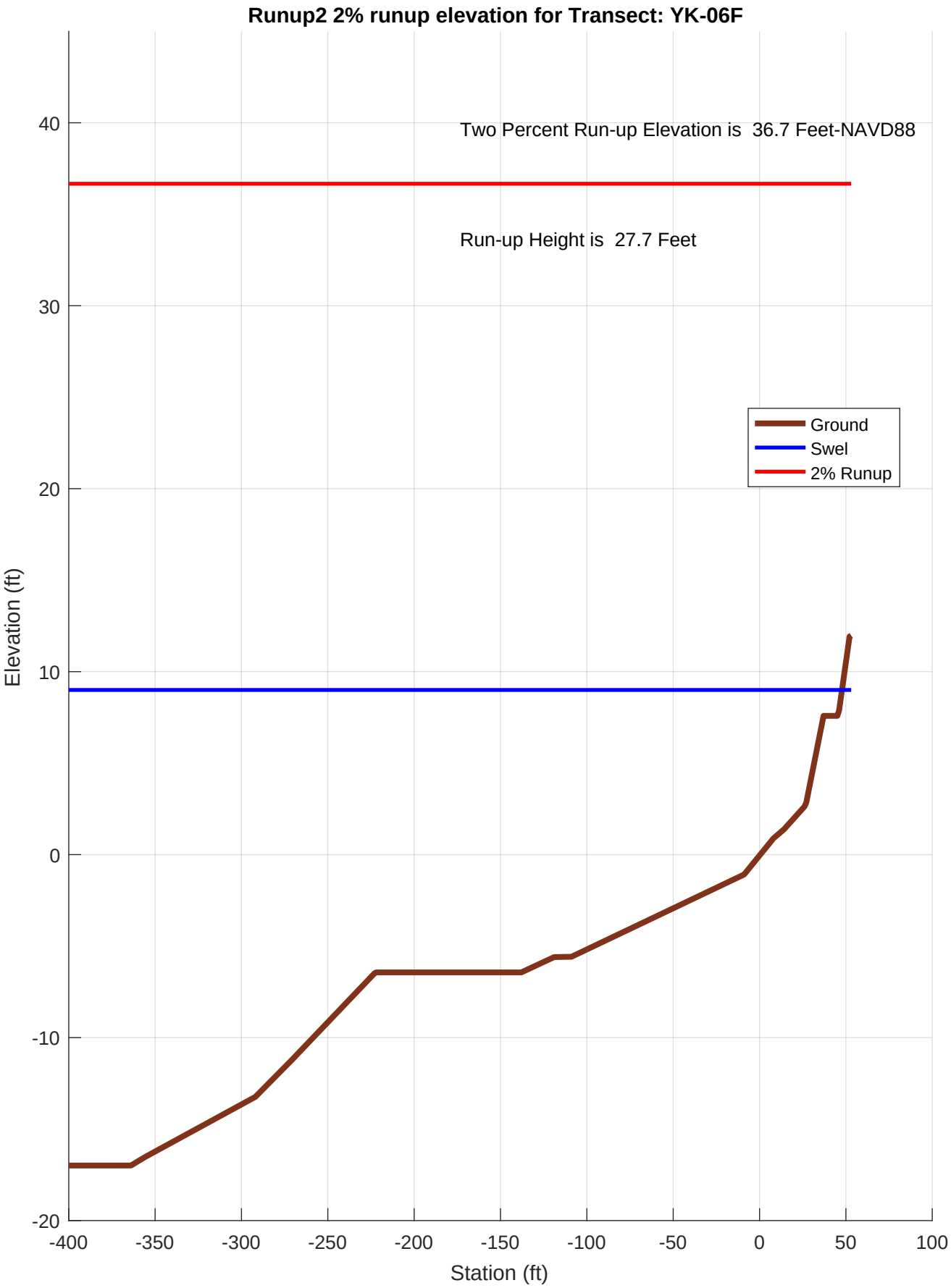
	LENGTH	ELEV.	SLOPE	ROUGHNESS
1	-399.0	-16.9		
			.00	1.00
2	-363.0	-16.9		
			20.00	1.00
3	-355.0	-16.5		
			19.39	1.00
4	-291.0	-13.2		
			10.50	1.00
5	-270.0	-11.2		
			9.98	1.00
6	-222.9	-6.5		
			25.00	1.00
7	-221.9	-6.4		
			FLAT	1.00
8	-137.9	-6.4		
			22.62	1.00
9	-118.9	-5.6		
			500.00	1.00
10	-108.9	-5.6		
			22.27	1.00
11	-8.9	-1.1		
			8.59	1.00
12	8.1	.9		
			12.50	1.00
13	14.1	1.4		
			9.52	1.00
14	26.1	2.6		
			4.55	1.00
15	27.1	2.9		
			2.11	1.00
16	37.1	7.6		
			FLAT	1.00
17	45.1	7.6		
			3.33	1.00
18	46.1	7.9		
			1.49	1.00
19	52.1	11.9		
			16.67	1.00
20	53.1	12.0		

LAST SLOPE 31.00 LAST ROUGHNESS 1.00

****

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	2.78	7.76	11	20	11.91 1.25 SOLUTION DOES NOT CONVERGE	5.03
9.00	2.78	8.17	11	20	12.38 1.28 SOLUTION DOES NOT CONVERGE	5.13
9.00	2.78	8.58	11	20	12.76 1.33 SOLUTION DOES NOT CONVERGE	5.23
9.00	2.92	7.76	11	20	12.11 1.28 SOLUTION DOES NOT CONVERGE	5.23
9.00	2.92	8.17	11	20	12.57 1.31 SOLUTION DOES NOT CONVERGE	5.34
9.00	2.92	8.58	11	20	13.00 1.34 SOLUTION DOES NOT CONVERGE	5.44
9.00	3.07	7.76	11	20	12.35 1.32 SOLUTION DOES NOT CONVERGE	5.45
9.00	3.07	8.17	11	20	12.80 1.35 SOLUTION DOES NOT CONVERGE	5.56
9.00	3.07	8.58	11	20	13.30 1.38 SOLUTION DOES NOT CONVERGE	5.66


Runup2 2% runup elevation for Transect: YK-06F
Two Percent Run-up Elevation is 36.7 Feet-NAVD88
Run-up Height is 27.7 Feet
Ground
Swel
2% Runup
Elevation (ft)
Station (ft)
40
30
20
10
0
-10
-20
-400
-350
-300
-250
-200
-150
-100
-50
0
50
100