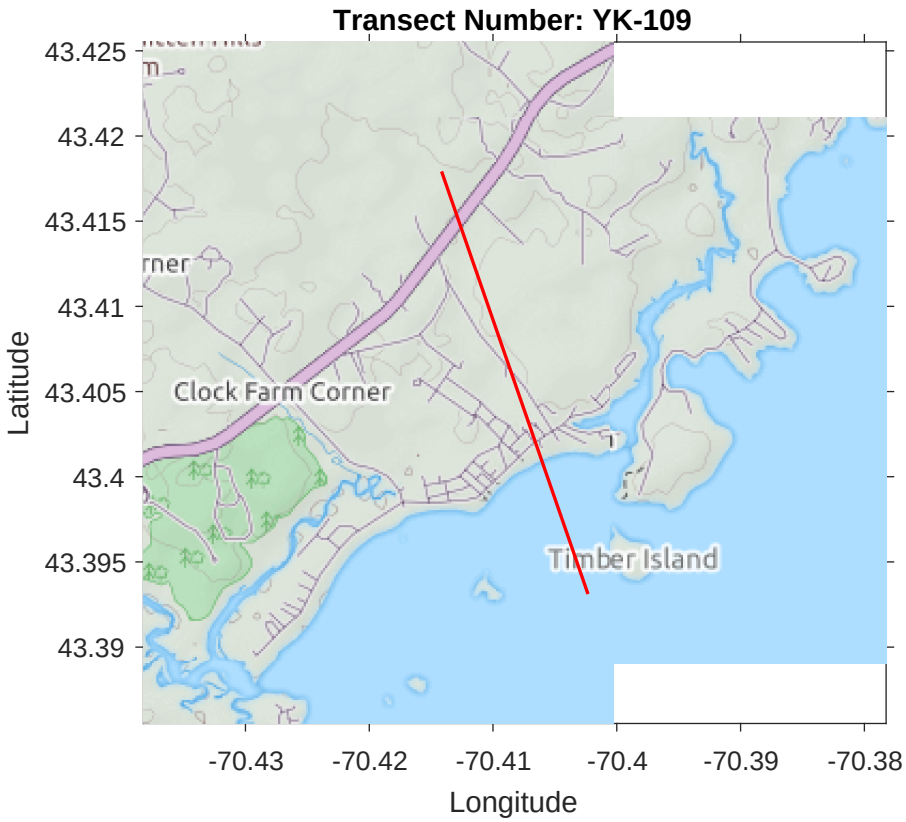
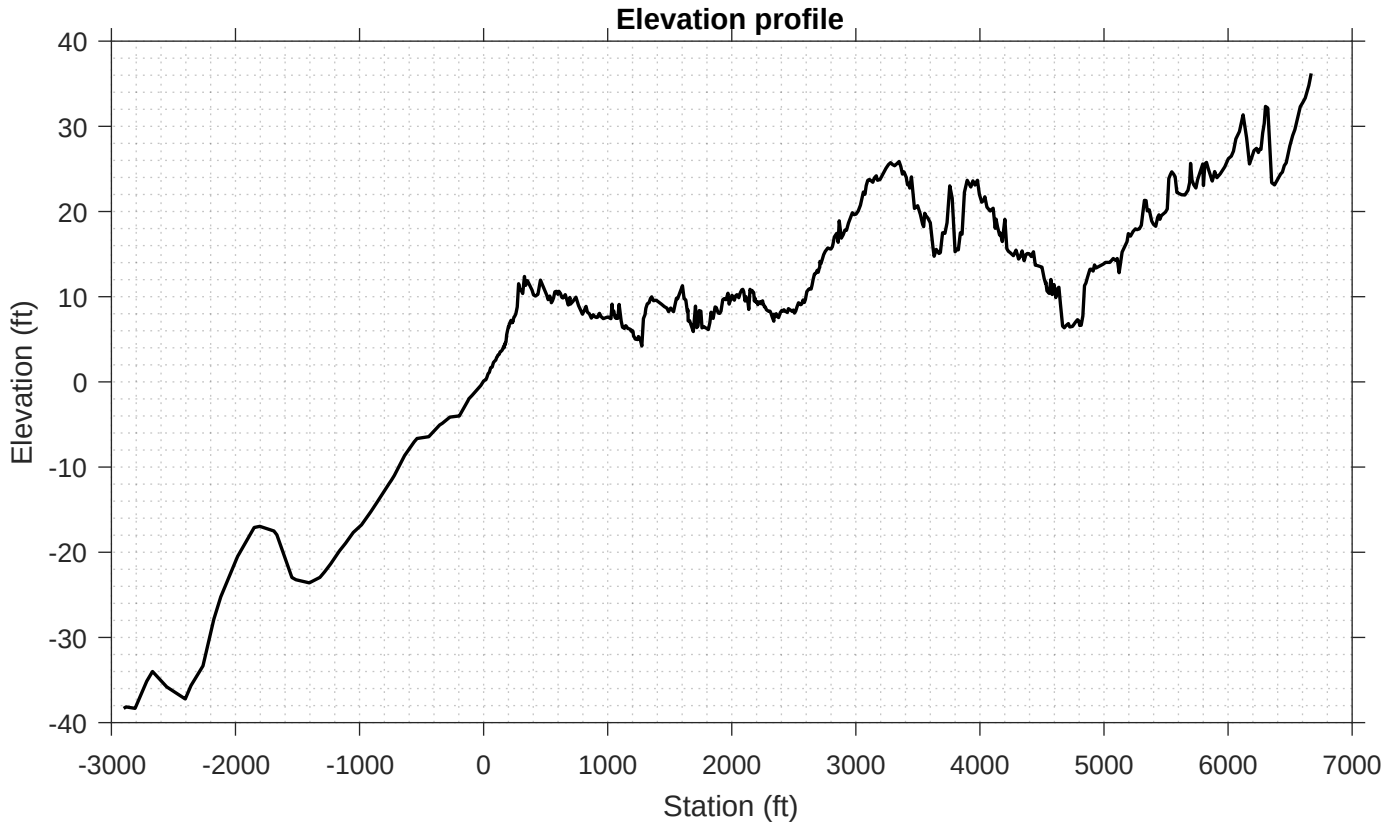

Transect Number: YK-109
43.425
43.42
43.415
43.41
43.405
43.4
43.395
43.39
Latitude
Clock Farm Corner
Timber Island
-70.43
-70.42
-70.41
-70.4
-70.39
-70.38
Longitude


Elevation profile
40
30
20
10
0
-10
-20
-30
-40
Elevation (ft)
-3000
-2000
-1000
0
1000
2000
3000
4000
5000
6000
7000
Station (ft)

DATA LOG FOR TRANSECT ID: YK-109

PART 1: USER INPUT

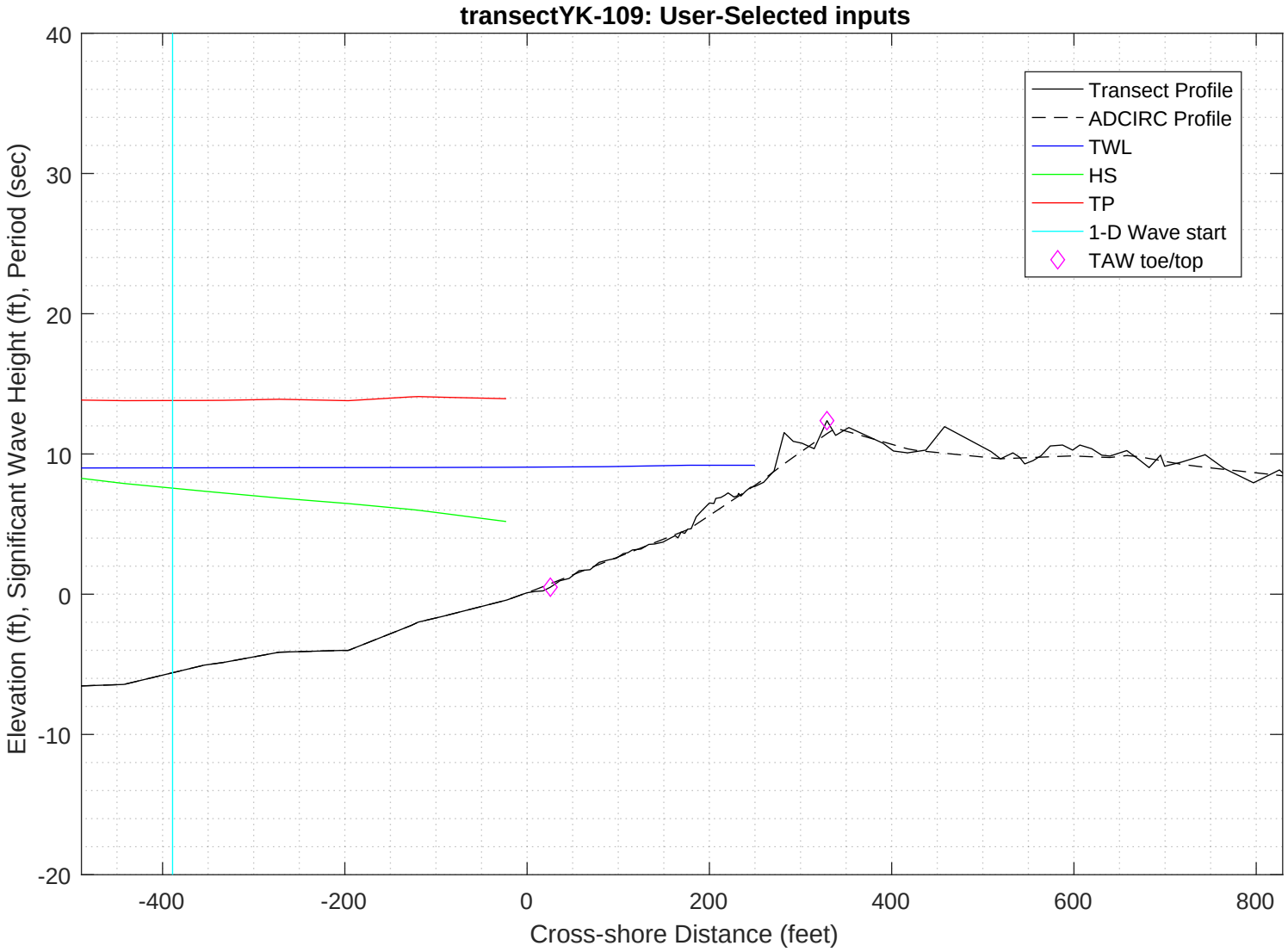
SWAN 1-D / WHAFIS input

station: -389 ft
LON: -70.4054 deg E
LAT: 43.3996 deg N
Bottom ELEV: -5.5998 ft-NAVD88
TWL: 9.0102 ft-NAVD88
HS: 7.5613 ft
TP: 13.8098 sec
Wave Direction bin: 135 deg CCW from East (90 deg sector)
Transect Direction: 115.4883 deg CCW from East

TAW/RUNUP input

toe sta: 25.5 ft
toe elev: 0.49869 ft-NAVD88
top sta: 329 ft
top elev: 12.3753 ft-NAVD88
Wave and water level conditions at toe to be calculated in SWAN 1-D

PART 1 COMPLETE


transectYK-109: User-Selected inputs
Transect Profile
ADCIRC Profile
TWL
HS
TP
1-D Wave start
TAW toe/top
Elevation (ft), Significant Wave Height (ft), Period (sec)
Cross-shore Distance (feet)
40
30
20
10
0
-10
-20
-400
-200
0
200
400
600
800

_____
PART 2: SWAN 1-D

swan input grid name: 2_swan/gridfiles/YK-109zmeters_xmeters.grd
swan file name: 2_swan/swanfiles/YK-109.swn
swan output name: 2_swan/swanfiles/YK-109.dat

Boundary Conditions:
    TWL- 2.7463 meters
    HS- 2.3047 meters
    PER- 13.8098 seconds

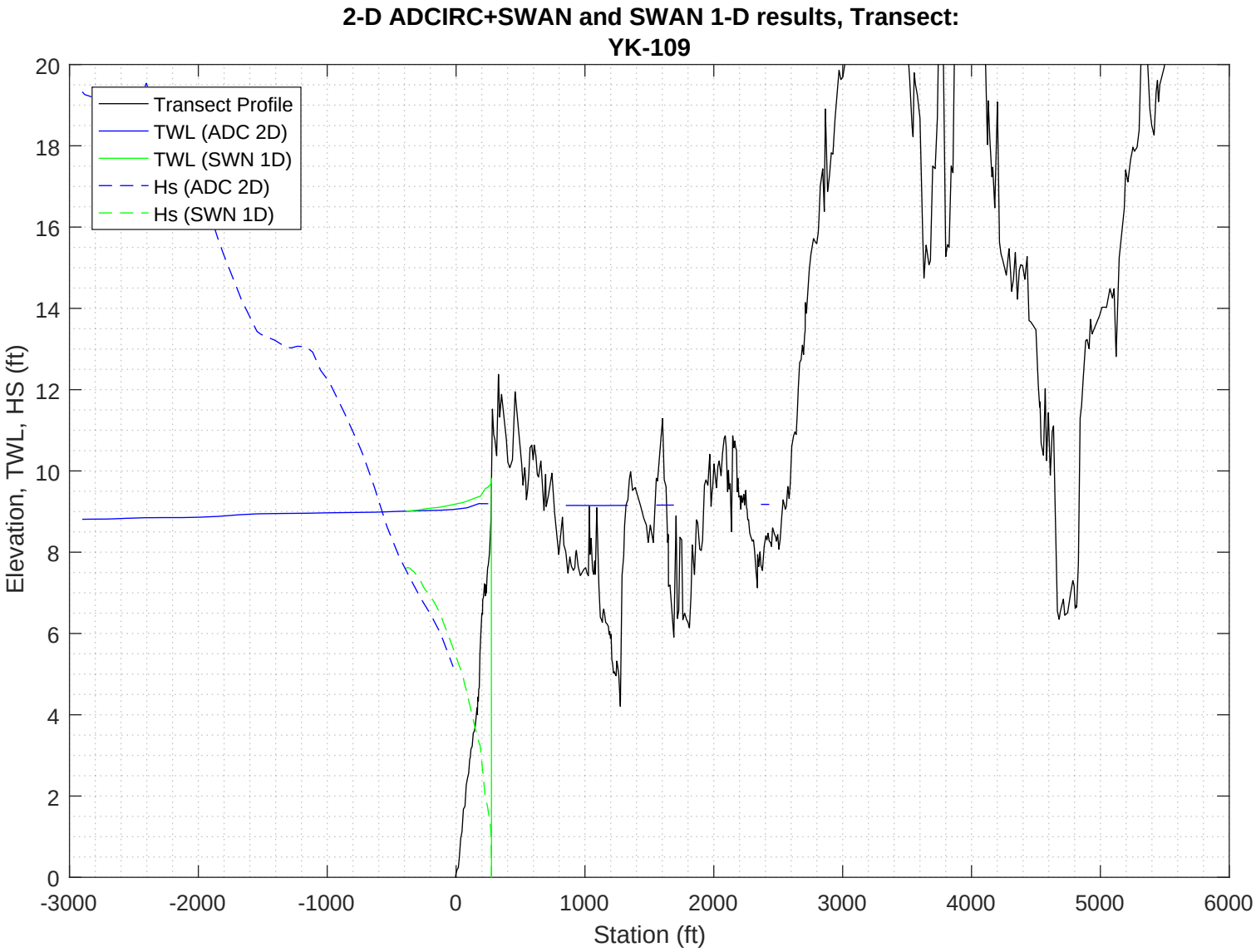
Batch File: 2_swan/swanfiles/runswan.dat

SWAN maximum additional wave setup: 0.8081 feet
SWAN output at toe:
    SETUP- 0.19397 feet
    HS-   5.2103 feet
    PER-   13.7882 seconds

PART 2 COMPLETE_____

SWAN maximum additional wave setup: 0.8081 feet
SWAN output at toe:
    SETUP- 0.19397 feet
    HS-   5.2103 feet
    PER-   13.7882 seconds

PART 2 COMPLETE_____


2-D ADCIRC+SWAN and SWAN 1-D results, Transect:
YK-109
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
-3000
-2000
-1000
0
1000
2000
3000
4000
5000
6000

1

```
                    Execution started at 20200401.174326


                    ---------------------------------------
                                    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      204       0.   204     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      204   0      1       1
 !READinp BOTtom [fac]  'fname1'  [idla]  [nhedf]  [FREe|FORmat[form]|UNFormatted]
  READ    BOTTOM   -1. '../gridfiles/YK-109zmeters_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   2.3047     13.8098     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      204  204    0
!TABLe 'sname' < HEADer|NOHEADer|INDexed > 'fname' <output parameters> (output time)
 Table 'curve'   HEADER 'YK-109.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             205 MYC              1
                     : MCGRD           206
                     : 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   6.90 % 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   0.50 % 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   9.86 % 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  28.58 % 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  97.05 % 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  99.02 % of wet grid points ( 99.50 % required)

iteration    8; sweep 1
iteration    8; sweep 2
iteration    8; sweep 3
iteration    8; sweep 4
accuracy OK in  99.02 % of wet grid points ( 99.50 % required)

iteration    9; sweep 1
iteration    9; sweep 2
iteration    9; sweep 3
iteration    9; sweep 4
accuracy OK in  99.51 % 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.       2.31612       13.7283       13.8874       12.4860         0.000       31.5057        4.4500      0.000000
          1.            0.       2.31849       13.7338       13.8874       12.2452         0.000       31.4036        4.4402      0.000177
          2.            0.       2.32117       13.7389       13.8874       12.0298         0.000       31.2962        4.4203      0.000266
          3.            0.       2.32189       13.7434       13.8874       11.8424         0.000       31.1846        4.4105      0.000465
          4.            0.       2.32307       13.7474       13.8874       11.6777         0.000       31.0782        4.3906      0.000581
          5.            0.       2.32254       13.7508       13.8874       11.5331         0.000       30.9791        4.3808      0.000813
          6.            0.       2.32220       13.7538       13.8874       11.4066         0.000       30.8611        4.3610      0.000963
          7.            0.       2.32151       13.7564       13.8874       11.2943         0.000       30.7592        4.3411      0.001124
          8.            0.       2.31935       13.7587       13.8874       11.1941         0.000       30.6602        4.3314      0.001395
          9.            0.       2.31785       13.7607       13.8874       11.1049         0.000       30.5609        4.3116      0.001573
         10.            0.       2.31495       13.7625       13.8874       11.0243         0.000       30.4615        4.3019      0.001862
         11.            0.       2.31277       13.7641       13.8874       10.9522         0.000       30.3613        4.2821      0.002057
         12.            0.       2.30978       13.7654       13.8874       10.8860         0.000       30.2952        4.2724      0.002355
         13.            0.       2.30571       13.7666       13.8874       10.8255         0.000       30.2410        4.2728      0.002755
         14.            0.       2.30345       13.7677       13.8874       10.7575         0.000       30.1798        4.2631      0.003060
         15.            0.       2.30123       13.7685       13.8874       10.6901         0.000       30.1154        4.2534      0.003373
         16.            0.       2.29884       13.7691       13.8874       10.6260         0.000       30.0491        4.2437      0.003693
         17.            0.       2.29621       13.7695       13.8874       10.5658         0.000       29.9813        4.2340      0.004020
         18.            0.       2.29333       13.7698       13.8874       10.5095         0.000       29.9124        4.2244      0.004352
         19.            0.       2.28998       13.7699       13.8874       10.4568         0.000       29.8258        4.2147      0.004693
         20.            0.       2.28731       13.7700       13.8874       10.4082         0.000       29.7324        4.1949      0.004940
         21.            0.       2.28360       13.7699       13.8874       10.3616         0.000       29.6536        4.1853      0.005296
         22.            0.       2.27974       13.7697       13.8874       10.3179         0.000       29.5799        4.1757      0.005659
         23.            0.       2.27523       13.7694       13.8874       10.2797       359.995       29.5132        4.1661      0.006053
         24.            0.       2.27050       13.7690       13.8874       10.2432       359.989       29.4282        4.1564      0.006444
         25.            0.       2.26666       13.7686       13.8874       10.2087       359.986       29.3357        4.1367      0.006730
         26.            0.       2.26197       13.7681       13.8874       10.1746       359.984       29.2571        4.1271      0.007119
         27.            0.       2.25727       13.7676       13.8874       10.1422       359.983       29.1829        4.1175      0.007508
         28.            0.       2.25252       13.7670       13.8874       10.1113       359.982       29.1102        4.1079      0.007896
         29.            0.       2.24885       13.7664       13.8874       10.0632       359.962       29.0366        4.0983      0.008340
         30.            0.       2.24649       13.7658       13.8874       10.0111       359.949       28.9565        4.0787      0.008690
         31.            0.       2.24384       13.7654       13.8874        9.9546       359.948       28.8880        4.0691      0.009122
         32.            0.       2.24043       13.7650       13.8874        9.9035       359.949       28.8297        4.0596      0.009586
         33.            0.       2.23316       13.7647       13.8874        9.8760       359.949       28.7930        4.0502      0.010222
         34.            0.       2.22486       13.7646       13.8874        9.8544       359.943       28.7295        4.0409      0.010879
         35.            0.       2.22043       13.7644       13.8874        9.8182       359.942       28.6633        4.0213      0.011294
         36.            0.       2.21345       13.7644       13.8874        9.7858       359.901       28.6174        4.0219      0.011949
         37.            0.       2.20752       13.7644       13.8874        9.7556       359.855       28.5746        4.0125      0.012487
         38.            0.       2.20092       13.7644       13.8874        9.7251       359.811       28.5494        4.0131      0.013114
         39.            0.       2.19434       13.7645       13.8874        9.6965       359.763       28.5268        4.0137      0.013729
         40.            0.       2.18786       13.7646       13.8874        9.6692       359.719       28.5062        4.0143      0.014329
         41.            0.       2.18127       13.7647       13.8874        9.6430       359.676       28.4695        4.0149      0.014915
         42.            0.       2.17550       13.7648       13.8874        9.6194       359.636       28.4271        4.0054      0.015393
         43.            0.       2.16907       13.7650       13.8874        9.5951       359.598       28.4000        4.0060      0.015962
         44.            0.       2.16391       13.7652       13.8874        9.5652       359.589       28.3762        4.0065      0.016467
         45.            0.       2.15952       13.7654       13.8874        9.5310       359.579       28.3546        4.0069      0.016948
         46.            0.       2.15569       13.7656       13.8874        9.4931       359.580       28.3349        4.0074      0.017418
         47.            0.       2.15176       13.7659       13.8874        9.4556       359.585       28.2997        4.0079      0.017882
         48.            0.       2.14849       13.7661       13.8874        9.4210       359.590       28.2587        3.9982      0.018249
         49.            0.       2.14440       13.7665       13.8874        9.3865       359.596       28.2321        3.9987      0.018712
         50.            0.       2.14024       13.7668       13.8874        9.3537       359.601       28.2102        3.9992      0.019172
         51.            0.       2.13601       13.7671       13.8874        9.3226       359.605       28.1899        3.9996      0.019626
         52.            0.       2.13155       13.7675       13.8874        9.2930       359.610       28.1544        4.0001      0.020076
         53.            0.       2.12773       13.7678       13.8874        9.2664       359.614       28.1138        3.9904      0.020430
         54.            0.       2.12315       13.7682       13.8874        9.2395       359.619       28.0880        3.9909      0.020877
         55.            0.       2.11846       13.7686       13.8874        9.2146       359.621       28.0687        3.9913      0.021325
         56.            0.       2.11361       13.7690       13.8874        9.1917       359.622       28.0526        3.9918      0.021772
         57.            0.       2.10871       13.7693       13.8874        9.1702       359.621       28.0374        3.9922      0.022215
         58.            0.       2.10363       13.7697       13.8874        9.1497       359.618       28.0073        3.9927      0.022651
         59.            0.       2.09916       13.7701       13.8874        9.1307       359.620       27.9415        3.9830      0.022983
```

60.	0.	2.09500	13.7705	13.8874	9.1136	359.622	27.8353	3.9632	0.023225
61.	0.	2.09117	13.7709	13.8874	9.0986	359.626	27.7009	3.9334	0.023383
62.	0.	2.08716	13.7714	13.8874	9.0840	359.629	27.5722	3.9036	0.023558
63.	0.	2.08222	13.7718	13.8874	9.0679	359.632	27.4517	3.8838	0.023843
64.	0.	2.07786	13.7722	13.8874	9.0541	359.636	27.3333	3.8540	0.024048
65.	0.	2.07252	13.7726	13.8874	9.0388	359.638	27.2167	3.8344	0.024363
66.	0.	2.06776	13.7731	13.8874	9.0258	359.641	27.0994	3.8046	0.024595
67.	0.	2.06203	13.7735	13.8874	9.0112	359.644	26.9827	3.7849	0.024939
68.	0.	2.05676	13.7740	13.8874	8.9989	359.647	26.8527	3.7552	0.025198
69.	0.	2.05153	13.7744	13.8874	8.9851	359.650	26.7309	3.7255	0.025475
70.	0.	2.04540	13.7749	13.8874	8.9690	359.653	26.6128	3.7059	0.025868
71.	0.	2.03988	13.7753	13.8874	8.9553	359.657	26.4945	3.6762	0.026175
72.	0.	2.03337	13.7757	13.8874	8.9398	359.660	26.3773	3.6566	0.026600
73.	0.	2.02754	13.7762	13.8874	8.9262	359.665	26.2585	3.6269	0.026932
74.	0.	2.02090	13.7766	13.8874	8.9099	359.673	26.1397	3.6074	0.027373
75.	0.	2.01484	13.7771	13.8874	8.8954	359.686	26.0081	3.5777	0.027720
76.	0.	2.00877	13.7775	13.8874	8.8803	359.704	25.8839	3.5481	0.028078
77.	0.	2.00179	13.7779	13.8874	8.8630	359.722	25.7621	3.5286	0.028555
78.	0.	1.99550	13.7784	13.8874	8.8478	359.745	25.6420	3.4989	0.028936
79.	0.	1.98820	13.7788	13.8874	8.8309	359.768	25.5232	3.4794	0.029441
80.	0.	1.98142	13.7792	13.8874	8.8164	359.793	25.3911	3.4499	0.029852
81.	0.	1.97434	13.7796	13.8874	8.8023	359.818	25.2544	3.4203	0.030283
82.	0.	1.96709	13.7800	13.8874	8.7885	359.843	25.1284	3.3907	0.030737
83.	0.	1.95892	13.7804	13.8874	8.7731	359.868	25.0192	3.3713	0.031322
84.	0.	1.95078	13.7808	13.8874	8.7582	359.894	24.9281	3.3519	0.031917
85.	0.	1.94179	13.7812	13.8874	8.7417	359.918	24.8442	3.3426	0.032628
86.	0.	1.93365	13.7815	13.8874	8.7280	359.943	24.7618	3.3232	0.033224
87.	0.	1.92464	13.7819	13.8874	8.7126	359.967	24.6812	3.3139	0.033935
88.	0.	1.91647	13.7822	13.8874	8.6999	359.992	24.6003	3.2945	0.034529
89.	0.	1.90746	13.7825	13.8874	8.6854	0.017	24.5205	3.2852	0.035235
90.	0.	1.89942	13.7828	13.8874	8.6729	0.045	24.4397	3.2658	0.035818
91.	0.	1.89065	13.7831	13.8874	8.6580	0.074	24.3583	3.2565	0.036505
92.	0.	1.88276	13.7833	13.8874	8.6449	0.107	24.2638	3.2371	0.037068
93.	0.	1.87496	13.7836	13.8874	8.6315	0.142	24.1763	3.2176	0.037632
94.	0.	1.86632	13.7839	13.8874	8.6161	0.176	24.0928	3.2083	0.038312
95.	0.	1.85849	13.7841	13.8874	8.6031	0.212	23.9973	3.1889	0.038873
96.	0.	1.85062	13.7843	13.8874	8.5905	0.248	23.9108	3.1694	0.039442
97.	0.	1.84185	13.7845	13.8874	8.5763	0.282	23.8292	3.1601	0.040132
98.	0.	1.83390	13.7848	13.8874	8.5643	0.319	23.7371	3.1407	0.040702
99.	0.	1.82592	13.7850	13.8874	8.5527	0.356	23.6543	3.1213	0.041280
100.	0.	1.81705	13.7851	13.8874	8.5395	0.392	23.5757	3.1120	0.041979
101.	0.	1.80897	13.7853	13.8874	8.5286	0.429	23.4858	3.0926	0.042558
102.	0.	1.80087	13.7855	13.8874	8.5182	0.466	23.4044	3.0731	0.043145
103.	0.	1.79185	13.7857	13.8874	8.5061	0.500	23.3268	3.0639	0.043853
104.	0.	1.78366	13.7858	13.8874	8.4963	0.536	23.2383	3.0444	0.044440
105.	0.	1.77544	13.7860	13.8874	8.4870	0.571	23.1581	3.0250	0.045036
106.	0.	1.76632	13.7861	13.8874	8.4759	0.605	23.0816	3.0158	0.045753
107.	0.	1.75811	13.7863	13.8874	8.4672	0.640	23.0057	2.9963	0.046348
108.	0.	1.74905	13.7864	13.8874	8.4562	0.674	22.9311	2.9871	0.047065
109.	0.	1.74084	13.7865	13.8874	8.4473	0.709	22.8446	2.9677	0.047658
110.	0.	1.73260	13.7867	13.8874	8.4386	0.744	22.7658	2.9483	0.048261
111.	0.	1.72350	13.7868	13.8874	8.4276	0.775	22.6908	2.9390	0.048986
112.	0.	1.71519	13.7869	13.8874	8.4188	0.807	22.5928	2.9196	0.049587
113.	0.	1.70757	13.7870	13.8874	8.4123	0.839	22.4859	2.8901	0.050080
114.	0.	1.69888	13.7871	13.8874	8.4040	0.869	22.3885	2.8707	0.050717
115.	0.	1.69003	13.7872	13.8874	8.3960	0.899	22.2824	2.8514	0.051362
116.	0.	1.68190	13.7873	13.8874	8.3905	0.930	22.1720	2.8219	0.051900
117.	0.	1.67268	13.7874	13.8874	8.3834	0.960	22.0733	2.8026	0.052585
118.	0.	1.66334	13.7875	13.8874	8.3768	0.991	21.9781	2.7833	0.053282
119.	0.	1.65400	13.7876	13.8874	8.3706	1.021	21.8960	2.7640	0.053988
120.	0.	1.64384	13.7877	13.8874	8.3626	1.049	21.8313	2.7548	0.054820
121.	0.	1.63383	13.7878	13.8874	8.3552	1.077	21.7726	2.7456	0.055638
122.	0.	1.62405	13.7879	13.8874	8.3482	1.105	21.7283	2.7364	0.056442
123.	0.	1.61361	13.7880	13.8874	8.3393	1.131	21.6904	2.7373	0.057345
124.	0.	1.60416	13.7880	13.8874	8.3329	1.157	21.6181	2.7281	0.058095
125.	0.	1.59630	13.7881	13.8874	8.3312	1.183	21.5083	2.6986	0.058598
126.	0.	1.58809	13.7882	13.8874	8.3296	1.209	21.3737	2.6691	0.059121

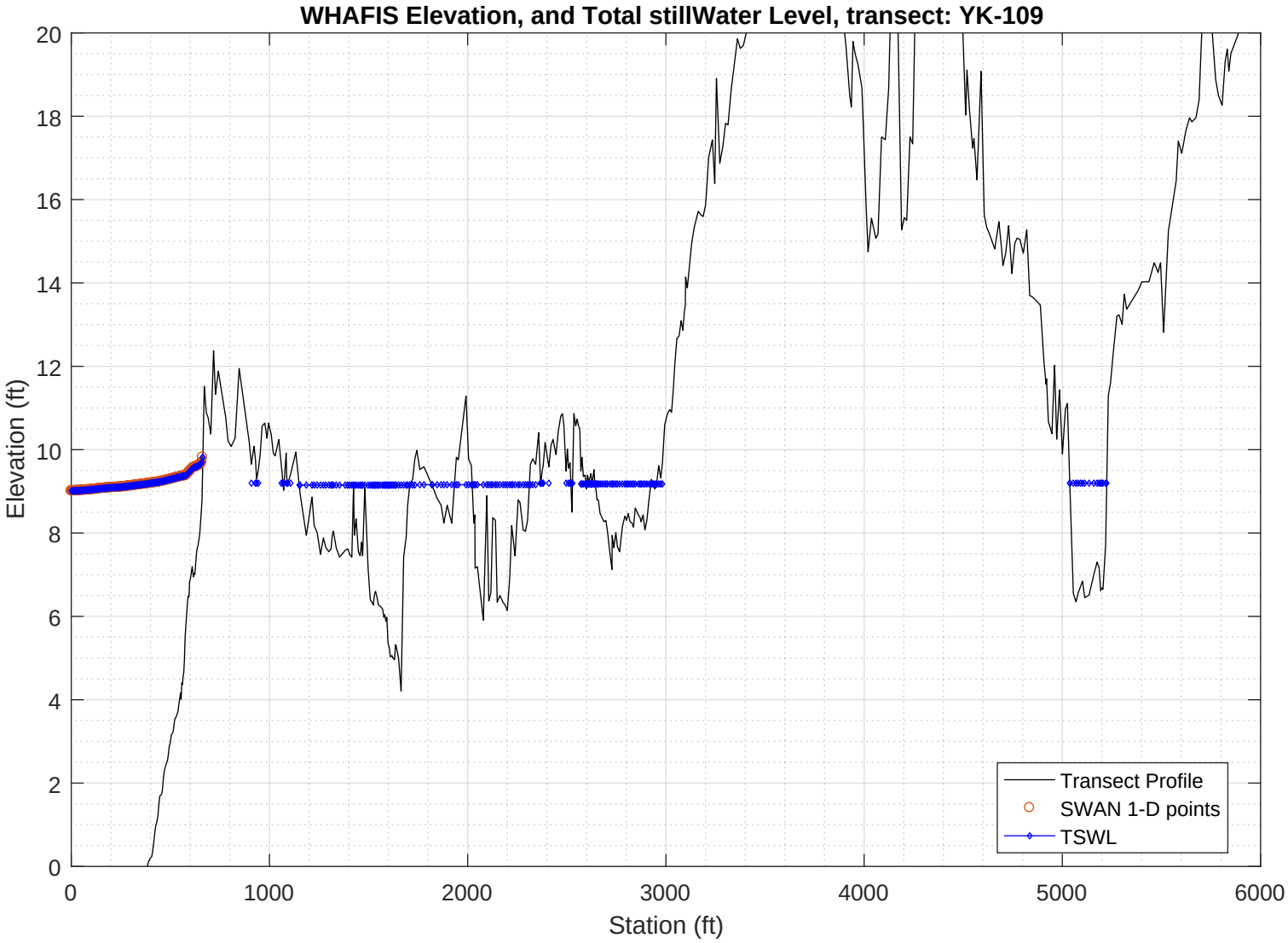
127.	0.	1.58028	13.7883	13.8874	8.3303	1.235	21.2044	2.6295	0.059549
128.	0.	1.57283	13.7884	13.8874	8.3332	1.263	21.0205	2.5799	0.059899
129.	0.	1.56389	13.7885	13.8874	8.3339	1.290	20.8559	2.5404	0.060447
130.	0.	1.55367	13.7886	13.8874	8.3328	1.318	20.7226	2.5112	0.061183
131.	0.	1.54239	13.7886	13.8874	8.3297	1.345	20.6133	2.4921	0.062079
132.	0.	1.53107	13.7887	13.8874	8.3267	1.372	20.4993	2.4730	0.062979
133.	0.	1.52043	13.7888	13.8874	8.3264	1.399	20.3454	2.4437	0.063750
134.	0.	1.51113	13.7889	13.8874	8.3310	1.428	20.1499	2.3943	0.064288
135.	0.	1.50099	13.7890	13.8874	8.3360	1.458	19.9389	2.3449	0.064907
136.	0.	1.49037	13.7891	13.8874	8.3409	1.492	19.7856	2.2956	0.065620
137.	0.	1.47475	13.7892	13.8874	8.3335	1.522	19.7085	2.2971	0.067115
138.	0.	1.46078	13.7893	13.8874	8.3289	1.552	19.6551	2.2884	0.068401
139.	0.	1.44626	13.7894	13.8874	8.3222	1.579	19.5870	2.2898	0.069768
140.	0.	1.43480	13.7895	13.8874	8.3233	1.603	19.4476	2.2607	0.070661
141.	0.	1.42480	13.7896	13.8874	8.3295	1.629	19.2583	2.2113	0.071305
142.	0.	1.41402	13.7897	13.8874	8.3358	1.657	19.0660	2.1620	0.072038
143.	0.	1.40166	13.7898	13.8874	8.3394	1.687	18.9091	2.1230	0.073014
144.	0.	1.38704	13.7899	13.8874	8.3379	1.716	18.7906	2.1043	0.074344
145.	0.	1.37265	13.7900	13.8874	8.3367	1.748	18.6982	2.0857	0.075666
146.	0.	1.35752	13.7901	13.8874	8.3332	1.778	18.6163	2.0771	0.077112
147.	0.	1.34383	13.7902	13.8874	8.3327	1.809	18.5371	2.0584	0.078363
148.	0.	1.32934	13.7903	13.8874	8.3298	1.836	18.4479	2.0497	0.079734
149.	0.	1.31703	13.7904	13.8874	8.3325	1.863	18.3151	2.0208	0.080774
150.	0.	1.30541	13.7905	13.8874	8.3378	1.891	18.1531	1.9817	0.081696
151.	0.	1.29339	13.7907	13.8874	8.3431	1.923	18.0184	1.9427	0.082689
152.	0.	1.27797	13.7908	13.8874	8.3407	1.950	17.8959	1.9342	0.084185
153.	0.	1.26582	13.7909	13.8874	8.3463	1.980	17.7472	1.8952	0.085197
154.	0.	1.25237	13.7910	13.8874	8.3493	2.015	17.6433	1.8664	0.086427
155.	0.	1.23594	13.7911	13.8874	8.3447	2.049	17.5852	1.8681	0.088122
156.	0.	1.22135	13.7913	13.8874	8.3429	2.081	17.5145	1.8596	0.089560
157.	0.	1.20812	13.7914	13.8874	8.3441	2.109	17.3989	1.8408	0.090790
158.	0.	1.19687	13.7915	13.8874	8.3510	2.135	17.2380	1.8017	0.091718
159.	0.	1.18521	13.7917	13.8874	8.3576	2.168	17.1014	1.7627	0.092720
160.	0.	1.17017	13.7918	13.8874	8.3561	2.204	17.0317	1.7542	0.094246
161.	0.	1.15468	13.7919	13.8874	8.3522	2.239	16.9721	1.7559	0.095851
162.	0.	1.14202	13.7921	13.8874	8.3540	2.273	16.8998	1.7371	0.097062
163.	0.	1.12854	13.7922	13.8874	8.3533	2.305	16.8254	1.7284	0.098396
164.	0.	1.11643	13.7923	13.8874	8.3556	2.335	16.7206	1.7095	0.099533
165.	0.	1.10532	13.7925	13.8874	8.3607	2.363	16.5763	1.6805	0.100518
166.	0.	1.09492	13.7927	13.8874	8.3685	2.392	16.4162	1.6414	0.101397
167.	0.	1.08285	13.7929	13.8874	8.3737	2.421	16.2648	1.6125	0.102512
168.	0.	1.07079	13.7930	13.8874	8.3790	2.469	16.2254	1.5837	0.103683
169.	0.	1.05137	13.7932	13.8874	8.3626	2.494	16.0875	1.6259	0.105863
170.	0.	1.04992	13.7934	13.8874	8.3942	2.527	15.8739	1.5055	0.105464
171.	0.	1.03098	13.7936	13.8874	8.3830	2.563	15.7352	1.5276	0.107606
172.	0.	1.02140	13.7939	13.8874	8.3989	2.584	15.5409	1.4684	0.108361
173.	0.	1.00718	13.7941	13.8874	8.4054	2.596	15.2837	1.4398	0.109765
174.	0.	0.99855	13.7944	13.8874	8.4278	2.584	14.8010	1.3502	0.110239
175.	0.	0.99496	13.7949	13.8874	8.4639	2.614	14.2460	1.1898	0.109786
176.	0.	0.97398	13.7954	13.8874	8.4741	2.646	13.7909	1.1122	0.112241
177.	0.	0.94776	13.7960	13.8874	8.4789	2.688	13.3770	1.0457	0.115691
178.	0.	0.91863	13.7966	13.8874	8.4818	2.739	12.9876	0.9798	0.119774
179.	0.	0.88562	13.7973	13.8874	8.4810	2.806	12.6722	0.9247	0.124721
180.	0.	0.84773	13.7980	13.8874	8.4721	2.894	12.4917	0.9007	0.130703
181.	0.	0.80838	13.7986	13.8874	8.4570	2.939	12.2203	0.9068	0.136818
182.	0.	0.78750	13.7993	13.8874	8.4718	3.000	11.8791	0.7996	0.139616
183.	0.	0.74780	13.7999	13.8874	8.4568	3.074	11.6682	0.7961	0.146145
184.	0.	0.71479	13.8005	13.8874	8.4512	3.133	11.4509	0.7713	0.151321
185.	0.	0.68505	13.8011	13.8874	8.4484	3.186	11.2284	0.7359	0.155931
186.	0.	0.65528	13.8016	13.8874	8.4370	3.305	11.2035	0.7106	0.160649
187.	0.	0.61829	13.8020	13.8874	8.4029	3.481	11.4523	0.7664	0.166442
188.	0.	0.59307	13.8023	13.8874	8.3785	3.596	11.5394	0.7999	0.169938
189.	0.	0.58004	13.8026	13.8874	8.3740	3.670	11.5161	0.7716	0.171553
190.	0.	0.56273	13.8029	13.8874	8.3591	3.702	11.3928	0.7838	0.173770
191.	0.	0.55515	13.8032	13.8874	8.3692	3.673	11.0849	0.7246	0.174550
192.	0.	0.54477	13.8036	13.8874	8.3785	3.636	10.7240	0.6658	0.175769
193.	0.	0.52964	13.8042	13.8874	8.3864	3.626	10.4058	0.6178	0.177807

194.	0.	0.50966	13.8048	13.8874	8.3868	3.652	10.1996	0.5907	0.180722
195.	0.	0.48735	13.8055	13.8874	8.3789	3.689	10.0381	0.5840	0.184016
196.	0.	0.46906	13.8063	13.8874	8.3827	3.707	9.8369	0.5566	0.186624
197.	0.	0.45115	13.8072	13.8874	8.4002	3.708	9.6157	0.5192	0.189208
198.	0.	0.43132	13.8084	13.8874	8.4277	3.657	9.3332	0.4822	0.192173
199.	0.	0.41290	13.8099	13.8874	8.4617	3.551	8.9480	0.4150	0.195037
200.	0.	0.37480	13.8107	13.8874	8.8204	3.077	8.7439	0.3518	0.201770
201.	0.	0.33169	13.8118	13.8874	9.1964	2.570	8.9370	0.2901	0.210132
202.	0.	0.17481	17.2475	17.2856	11.6726	1.066	11.3832	0.1063	0.246310
203.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000
204.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000

PART 3: WHAFIS

WHAFIS input: YK-109.dat
WHAFIS output: YK-109.out

PART 3 COMPLETE


WHAFIS Elevation, and Total stillWater Level, transect: YK-109
Elevation (ft)
Station (ft)
0
2
4
6
8
10
12
14
16
18
20
0
1000
2000
3000
4000
5000
6000
Transect Profile
SWAN 1-D points
TSWL

WAVE HEIGHT COMPUTATIONS FOR FLOOD INSURANCE STUDIES (WHAFIS VERSION 4.0G, 08_2007)
Executed on: Thu Apr 2 11:05:19 2020
Input file: C:\FEMA-TransectAnalysis\LOMR-TransectAnalysis-Kennebunkport\3_whafis\whafis4\YK-109.dat
Output file: C:\FEMA-TransectAnalysis\LOMR-TransectAnalysis-Kennebunkport\3_whafis\whafis4\YK-109.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	-5.600	1.000	1.000	9.010	12.098	13.810	56.140	0.015	0.000
OF	3.300	-5.549	0.000	9.011	0.000	0.000	0.000	0.000	0.015	0.000
OF	6.600	-5.497	0.000	9.011	0.000	0.000	0.000	0.000	0.016	0.000
OF	9.800	-5.446	0.000	9.012	0.000	0.000	0.000	0.000	0.016	0.000
OF	13.100	-5.395	0.000	9.012	0.000	0.000	0.000	0.000	0.015	0.000
OF	16.400	-5.344	0.000	9.013	0.000	0.000	0.000	0.000	0.015	0.000
OF	19.700	-5.293	0.000	9.013	0.000	0.000	0.000	0.000	0.015	0.000
OF	23.000	-5.241	0.000	9.014	0.000	0.000	0.000	0.000	0.016	0.000
OF	26.200	-5.190	0.000	9.015	0.000	0.000	0.000	0.000	0.016	0.000
OF	29.500	-5.139	0.000	9.015	0.000	0.000	0.000	0.000	0.015	0.000
OF	32.800	-5.088	0.000	9.016	0.000	0.000	0.000	0.000	0.014	0.000
OF	36.100	-5.044	0.000	9.017	0.000	0.000	0.000	0.000	0.011	0.000
OF	39.400	-5.015	0.000	9.018	0.000	0.000	0.000	0.000	0.009	0.000
OF	42.700	-4.985	0.000	9.019	0.000	0.000	0.000	0.000	0.009	0.000
OF	45.900	-4.956	0.000	9.020	0.000	0.000	0.000	0.000	0.009	0.000
OF	49.200	-4.926	0.000	9.021	0.000	0.000	0.000	0.000	0.009	0.000
OF	52.500	-4.897	0.000	9.022	0.000	0.000	0.000	0.000	0.009	0.000
OF	55.800	-4.866	0.000	9.023	0.000	0.000	0.000	0.000	0.010	0.000
OF	59.100	-4.827	0.000	9.024	0.000	0.000	0.000	0.000	0.012	0.000
OF	62.300	-4.788	0.000	9.026	0.000	0.000	0.000	0.000	0.012	0.000
OF	65.600	-4.749	0.000	9.026	0.000	0.000	0.000	0.000	0.012	0.000
OF	68.900	-4.710	0.000	9.028	0.000	0.000	0.000	0.000	0.012	0.000
OF	72.200	-4.670	0.000	9.029	0.000	0.000	0.000	0.000	0.012	0.000
OF	75.500	-4.631	0.000	9.030	0.000	0.000	0.000	0.000	0.012	0.000
OF	78.700	-4.592	0.000	9.031	0.000	0.000	0.000	0.000	0.012	0.000
OF	82.000	-4.553	0.000	9.032	0.000	0.000	0.000	0.000	0.012	0.000
OF	85.300	-4.514	0.000	9.034	0.000	0.000	0.000	0.000	0.012	0.000
OF	88.600	-4.475	0.000	9.035	0.000	0.000	0.000	0.000	0.012	0.000
OF	91.900	-4.435	0.000	9.036	0.000	0.000	0.000	0.000	0.012	0.000
OF	95.100	-4.396	0.000	9.038	0.000	0.000	0.000	0.000	0.012	0.000
OF	98.400	-4.357	0.000	9.039	0.000	0.000	0.000	0.000	0.012	0.000
OF	101.700	-4.318	0.000	9.040	0.000	0.000	0.000	0.000	0.012	0.000
OF	105.000	-4.279	0.000	9.042	0.000	0.000	0.000	0.000	0.012	0.000
OF	108.300	-4.240	0.000	9.044	0.000	0.000	0.000	0.000	0.012	0.000
OF	111.500	-4.200	0.000	9.046	0.000	0.000	0.000	0.000	0.012	0.000
OF	114.800	-4.161	0.000	9.047	0.000	0.000	0.000	0.000	0.010	0.000
OF	118.100	-4.133	0.000	9.049	0.000	0.000	0.000	0.000	0.005	0.000
OF	121.400	-4.127	0.000	9.051	0.000	0.000	0.000	0.000	0.002	0.000
OF	124.700	-4.121	0.000	9.053	0.000	0.000	0.000	0.000	0.002	0.000
OF	128.000	-4.115	0.000	9.055	0.000	0.000	0.000	0.000	0.002	0.000
OF	131.200	-4.109	0.000	9.057	0.000	0.000	0.000	0.000	0.002	0.000
OF	134.500	-4.102	0.000	9.059	0.000	0.000	0.000	0.000	0.002	0.000
OF	137.800	-4.096	0.000	9.061	0.000	0.000	0.000	0.000	0.002	0.000
OF	141.100	-4.090	0.000	9.063	0.000	0.000	0.000	0.000	0.002	0.000
OF	144.400	-4.084	0.000	9.064	0.000	0.000	0.000	0.000	0.002	0.000
OF	147.600	-4.078	0.000	9.066	0.000	0.000	0.000	0.000	0.002	0.000
OF	150.900	-4.072	0.000	9.067	0.000	0.000	0.000	0.000	0.002	0.000
OF	154.200	-4.066	0.000	9.069	0.000	0.000	0.000	0.000	0.002	0.000
OF	157.500	-4.060	0.000	9.070	0.000	0.000	0.000	0.000	0.002	0.000
OF	160.800	-4.054	0.000	9.072	0.000	0.000	0.000	0.000	0.002	0.000
OF	164.000	-4.048	0.000	9.073	0.000	0.000	0.000	0.000	0.002	0.000
OF	167.300	-4.042	0.000	9.075	0.000	0.000	0.000	0.000	0.002	0.000
OF	170.600	-4.036	0.000	9.076	0.000	0.000	0.000	0.000	0.002	0.000
OF	173.900	-4.030	0.000	9.077	0.000	0.000	0.000	0.000	0.002	0.000
OF	177.200	-4.024	0.000	9.079	0.000	0.000	0.000	0.000	0.002	0.000
OF	180.400	-4.018	0.000	9.080	0.000	0.000	0.000	0.000	0.002	0.000
OF	183.700	-4.012	0.000	9.082	0.000	0.000	0.000	0.000	0.002	0.000
OF	187.000	-4.006	0.000	9.083	0.000	0.000	0.000	0.000	0.001	0.000
OF	190.300	-4.007	0.000	9.085	0.000	0.000	0.000	0.000	0.003	0.000
OF	193.600	-3.987	0.000	9.086	0.000	0.000	0.000	0.000	0.016	0.000
OF	196.800	-3.902	0.000	9.086	0.000	0.000	0.000	0.000	0.026	0.000
OF	200.100	-3.818	0.000	9.087	0.000	0.000	0.000	0.000	0.026	0.000
OF	203.400	-3.733	0.000	9.087	0.000	0.000	0.000	0.000	0.026	0.000
OF	206.700	-3.649	0.000	9.088	0.000	0.000	0.000	0.000	0.026	0.000
OF	210.000	-3.564	0.000	9.089	0.000	0.000	0.000	0.000	0.026	0.000
OF	213.300	-3.480	0.000	9.090	0.000	0.000	0.000	0.000	0.026	0.000
OF	216.500	-3.395	0.000	9.091	0.000	0.000	0.000	0.000	0.026	0.000
OF	219.800	-3.311	0.000	9.092	0.000	0.000	0.000	0.000	0.026	0.000
OF	223.100	-3.226	0.000	9.093	0.000	0.000	0.000	0.000	0.026	0.000
OF	226.400	-3.141	0.000	9.094	0.000	0.000	0.000	0.000	0.026	0.000
OF	229.700	-3.057	0.000	9.095	0.000	0.000	0.000	0.000	0.026	0.000
OF	232.900	-2.972	0.000	9.096	0.000	0.000	0.000	0.000	0.026	0.000
OF	236.200	-2.888	0.000	9.097	0.000	0.000	0.000	0.000	0.026	0.000
OF	239.500	-2.803	0.000	9.099	0.000	0.000	0.000	0.000	0.026	0.000
OF	242.800	-2.719	0.000	9.100	0.000	0.000	0.000	0.000	0.026	0.000
OF	246.100	-2.634	0.000	9.101	0.000	0.000	0.000	0.000	0.026	0.000
OF	249.300	-2.550	0.000	9.102	0.000	0.000	0.000	0.000	0.026	0.000
OF	252.600	-2.465	0.000	9.104	0.000	0.000	0.000	0.000	0.026	0.000
OF	255.900	-2.381	0.000	9.105	0.000	0.000	0.000	0.000	0.026	0.000
OF	259.200	-2.296	0.000	9.107	0.000	0.000	0.000	0.000	0.026	0.000
OF	262.500	-2.208	0.000	9.108	0.000	0.000	0.000	0.000	0.029	0.000
OF	265.700	-2.108	0.000	9.110	0.000	0.000	0.000	0.000	0.031	0.000
OF	269.000	-2.007	0.000	9.111	0.000	0.000	0.000	0.000	0.024	0.000
OF	272.300	-1.947	0.000	9.113	0.000	0.000	0.000	0.000	0.017	0.000
OF	275.600	-1.897	0.000	9.115	0.000	0.000	0.000	0.000	0.015	0.000
OF	278.900	-1.847	0.000	9.117	0.000	0.000	0.000	0.000	0.015	0.000
OF	282.200	-1.797	0.000	9.119	0.000	0.000	0.000	0.000	0.015	0.000
OF	285.400	-1.747	0.000	9.122	0.000	0.000	0.000	0.000	0.015	0.000
OF	288.700	-1.696	0.000	9.123	0.000	0.000	0.000	0.000	0.015	0.000
OF	292.000	-1.646	0.000	9.126	0.000	0.000	0.000	0.000	0.015	0.000
OF	295.300	-1.596	0.000	9.128	0.000	0.000	0.000	0.000	0.016	0.000
OF	298.600	-1.543	0.000	9.130	0.000	0.000	0.000	0.000	0.017	0.000
OF	301.800	-1.489	0.000	9.132	0.000	0.000	0.000	0.000	0.017	0.000

OF	305.100	-1.434	0.000	9.134	0.000	0.000	0.000	0.000	0.016	0.000
OF	308.400	-1.380	0.000	9.136	0.000	0.000	0.000	0.000	0.016	0.000
OF	311.700	-1.326	0.000	9.138	0.000	0.000	0.000	0.000	0.016	0.000
OF	315.000	-1.271	0.000	9.140	0.000	0.000	0.000	0.000	0.017	0.000
OF	318.200	-1.217	0.000	9.142	0.000	0.000	0.000	0.000	0.017	0.000
OF	321.500	-1.163	0.000	9.144	0.000	0.000	0.000	0.000	0.016	0.000
OF	324.800	-1.108	0.000	9.146	0.000	0.000	0.000	0.000	0.016	0.000
OF	328.100	-1.054	0.000	9.148	0.000	0.000	0.000	0.000	0.016	0.000
OF	331.400	-1.000	0.000	9.150	0.000	0.000	0.000	0.000	0.017	0.000
OF	334.600	-0.945	0.000	9.152	0.000	0.000	0.000	0.000	0.017	0.000
OF	337.900	-0.891	0.000	9.154	0.000	0.000	0.000	0.000	0.016	0.000
OF	341.200	-0.837	0.000	9.156	0.000	0.000	0.000	0.000	0.016	0.000
OF	344.500	-0.782	0.000	9.158	0.000	0.000	0.000	0.000	0.016	0.000
OF	347.800	-0.728	0.000	9.160	0.000	0.000	0.000	0.000	0.017	0.000
OF	351.000	-0.674	0.000	9.162	0.000	0.000	0.000	0.000	0.017	0.000
OF	354.300	-0.619	0.000	9.165	0.000	0.000	0.000	0.000	0.016	0.000
OF	357.600	-0.565	0.000	9.167	0.000	0.000	0.000	0.000	0.016	0.000
OF	360.900	-0.511	0.000	9.168	0.000	0.000	0.000	0.000	0.016	0.000
OF	364.200	-0.456	0.000	9.171	0.000	0.000	0.000	0.000	0.017	0.000
OF	367.500	-0.397	0.000	9.173	0.000	0.000	0.000	0.000	0.021	0.000
OF	370.700	-0.320	0.000	9.175	0.000	0.000	0.000	0.000	0.024	0.000
OF	374.000	-0.243	0.000	9.177	0.000	0.000	0.000	0.000	0.023	0.000
OF	377.300	-0.166	0.000	9.179	0.000	0.000	0.000	0.000	0.023	0.000
OF	380.600	-0.089	0.000	9.181	0.000	0.000	0.000	0.000	0.023	0.000
OF	383.900	-0.012	0.000	9.183	0.000	0.000	0.000	0.000	0.023	0.000
IF	387.100	0.063	0.000	9.185	0.000	0.000	0.000	0.000	0.020	0.000
IF	390.400	0.119	0.000	9.187	0.000	0.000	0.000	0.000	0.013	0.000
IF	393.700	0.151	0.000	9.190	0.000	0.000	0.000	0.000	0.010	0.000
IF	397.000	0.184	0.000	9.193	0.000	0.000	0.000	0.000	0.009	0.000
IF	400.300	0.209	0.000	9.195	0.000	0.000	0.000	0.000	0.006	0.000
IF	403.500	0.223	0.000	9.198	0.000	0.000	0.000	0.000	0.006	0.000
IF	406.800	0.247	0.000	9.201	0.000	0.000	0.000	0.000	0.020	0.000
IF	410.100	0.354	0.000	9.202	0.000	0.000	0.000	0.000	0.033	0.000
IF	413.400	0.462	0.000	9.204	0.000	0.000	0.000	0.000	0.036	0.000
IF	416.700	0.593	0.000	9.206	0.000	0.000	0.000	0.000	0.042	0.000
IF	419.900	0.737	0.000	9.207	0.000	0.000	0.000	0.000	0.044	0.000
IF	423.200	0.880	0.000	9.208	0.000	0.000	0.000	0.000	0.037	0.000
IF	426.500	0.983	0.000	9.211	0.000	0.000	0.000	0.000	0.024	0.000
IF	429.800	1.037	0.000	9.214	0.000	0.000	0.000	0.000	0.016	0.000
IF	433.100	1.090	0.000	9.217	0.000	0.000	0.000	0.000	0.023	0.000
IF	436.400	1.191	0.000	9.219	0.000	0.000	0.000	0.000	0.041	0.000
IF	439.600	1.357	0.000	9.221	0.000	0.000	0.000	0.000	0.051	0.000
IF	442.900	1.523	0.000	9.223	0.000	0.000	0.000	0.000	0.049	0.000
IF	446.200	1.681	0.000	9.226	0.000	0.000	0.000	0.000	0.027	0.000
IF	449.500	1.699	0.000	9.230	0.000	0.000	0.000	0.000	0.005	0.000
IF	452.800	1.717	0.000	9.235	0.000	0.000	0.000	0.000	0.005	0.000
IF	456.000	1.735	0.000	9.239	0.000	0.000	0.000	0.000	0.015	0.000
IF	459.300	1.814	0.000	9.242	0.000	0.000	0.000	0.000	0.038	0.000
IF	462.600	1.987	0.000	9.244	0.000	0.000	0.000	0.000	0.052	0.000
IF	465.900	2.159	0.000	9.247	0.000	0.000	0.000	0.000	0.046	0.000
IF	469.200	2.290	0.000	9.250	0.000	0.000	0.000	0.000	0.029	0.000
IF	472.400	2.347	0.000	9.254	0.000	0.000	0.000	0.000	0.017	0.000
IF	475.700	2.404	0.000	9.258	0.000	0.000	0.000	0.000	0.016	0.000
IF	479.000	2.455	0.000	9.263	0.000	0.000	0.000	0.000	0.015	0.000
IF	482.300	2.500	0.000	9.267	0.000	0.000	0.000	0.000	0.014	0.000
IF	485.600	2.546	0.000	9.272	0.000	0.000	0.000	0.000	0.022	0.000
IF	488.800	2.646	0.000	9.275	0.000	0.000	0.000	0.000	0.038	0.000
IF	492.100	2.790	0.000	9.278	0.000	0.000	0.000	0.000	0.039	0.000
IF	495.400	2.906	0.000	9.281	0.000	0.000	0.000	0.000	0.024	0.000
IF	498.700	2.949	0.000	9.286	0.000	0.000	0.000	0.000	0.023	0.000
IF	502.000	3.056	0.000	9.290	0.000	0.000	0.000	0.000	0.033	0.000
IF	505.200	3.161	0.000	9.294	0.000	0.000	0.000	0.000	0.020	0.000
IF	508.500	3.184	0.000	9.299	0.000	0.000	0.000	0.000	0.007	0.000
IF	511.800	3.207	0.000	9.304	0.000	0.000	0.000	0.000	0.012	0.000
IF	515.100	3.264	0.000	9.308	0.000	0.000	0.000	0.000	0.028	0.000
IF	518.400	3.391	0.000	9.311	0.000	0.000	0.000	0.000	0.038	0.000
IF	521.700	3.517	0.000	9.314	0.000	0.000	0.000	0.000	0.026	0.000
IF	524.900	3.562	0.000	9.319	0.000	0.000	0.000	0.000	0.009	0.000
IF	528.200	3.579	0.000	9.325	0.000	0.000	0.000	0.000	0.009	0.000
IF	531.500	3.619	0.000	9.329	0.000	0.000	0.000	0.000	0.013	0.000
IF	534.800	3.667	0.000	9.333	0.000	0.000	0.000	0.000	0.015	0.000
IF	538.100	3.716	0.000	9.337	0.000	0.000	0.000	0.000	0.025	0.000
IF	541.300	3.830	0.000	9.340	0.000	0.000	0.000	0.000	0.035	0.000
IF	544.600	3.944	0.000	9.343	0.000	0.000	0.000	0.000	0.034	0.000
IF	547.900	4.055	0.000	9.347	0.000	0.000	0.000	0.000	0.033	0.000
IF	551.200	4.163	0.000	9.350	0.000	0.000	0.000	0.000	-0.007	0.000
IF	554.500	4.011	0.000	9.358	0.000	0.000	0.000	0.000	0.037	0.000
IF	557.700	4.404	0.000	9.356	0.000	0.000	0.000	0.000	0.054	0.000
IF	561.000	4.361	0.000	9.363	0.000	0.000	0.000	0.000	0.024	0.000
IF	564.300	4.564	0.000	9.366	0.000	0.000	0.000	0.000	0.044	0.000
IF	567.600	4.654	0.000	9.370	0.000	0.000	0.000	0.000	0.059	0.000
IF	570.900	4.955	0.000	9.372	0.000	0.000	0.000	0.000	0.125	0.000
IF	574.100	5.463	0.000	9.370	0.000	0.000	0.000	0.000	0.119	0.000
IF	577.400	5.726	0.000	9.378	0.000	0.000	0.000	0.000	0.075	0.000
IF	580.700	5.958	0.000	9.390	0.000	0.000	0.000	0.000	0.068	0.000
IF	584.000	6.174	0.000	9.403	0.000	0.000	0.000	0.000	0.065	0.000
IF	587.300	6.389	0.000	9.419	0.000	0.000	0.000	0.000	0.049	0.000
IF	590.500	6.492	0.000	9.439	0.000	0.000	0.000	0.000	0.013	0.000
IF	593.800	6.471	0.000	9.459	0.000	0.000	0.000	0.000	0.053	0.000
IF	597.100	6.844	0.000	9.468	0.000	0.000	0.000	0.000	0.063	0.000
IF	600.400	6.883	0.000	9.490	0.000	0.000	0.000	0.000	0.020	0.000
IF	603.700	6.976	0.000	9.507	0.000	0.000	0.000	0.000	0.034	0.000
IF	607.000	7.105	0.000	9.522	0.000	0.000	0.000	0.000	0.033	0.000
IF	610.200	7.191	0.000	9.537	0.000	0.000	0.000	0.000	-0.010	0.000
IF	613.500	7.042	0.000	9.556	0.000	0.000	0.000	0.000	-0.037	0.000
IF	616.800	6.949	0.000	9.568	0.000	0.000	0.000	0.000	0.000	0.000
IF	620.100	7.040	0.000	9.573	0.000	0.000	0.000	0.000	0.009	0.000
IF	623.400	7.006	0.000	9.580	0.000	0.000	0.000	0.000	0.025	0.000
IF	626.600	7.201	0.000	9.583	0.000	0.000	0.000	0.000	0.061	0.000
IF	629.900	7.404	0.000	9.587	0.000	0.000	0.000	0.000	0.057	0.000
IF	633.200	7.576	0.000	9.594	0.000	0.000	0.000	0.000	0.037	0.000
IF	636.500	7.651	0.000	9.603	0.000	0.000	0.000	0.000	0.020	0.000

IF	639.800	7.707	0.000	9.614	0.000	0.000	0.000	0.000	0.024	0.000
IF	643.000	7.809	0.000	9.623	0.000	0.000	0.000	0.000	0.031	0.000
IF	646.300	7.911	0.000	9.631	0.000	0.000	0.000	0.000	0.038	0.000
IF	649.600	8.058	0.000	9.641	0.000	0.000	0.000	0.000	0.058	0.000
IF	652.900	8.292	0.000	9.650	0.000	0.000	0.000	0.000	0.071	0.000
IF	656.200	8.526	0.000	9.672	0.000	0.000	0.000	0.000	0.072	0.000
IF	659.400	8.760	0.000	9.700	0.000	0.000	0.000	0.000	0.146	0.000
IF	662.700	9.475	0.000	9.818	0.000	0.000	0.000	0.000	0.225	0.000
IF	664.100	9.818	0.000	9.818	0.000	0.000	0.000	0.000	0.245	0.000
AS	1068.200	9.196	0.000	9.196	0.000	0.000	0.000	0.000	-0.052	0.000
IF	1071.500	9.026	0.000	9.196	0.000	0.000	0.000	0.000	0.000	0.000
IF	1073.900	9.196	0.000	9.196	0.000	0.000	0.000	0.000	0.071	0.000
AS	1088.100	9.196	0.000	9.196	0.000	0.000	0.000	0.000	-0.180	0.000
IF	1088.500	9.124	0.000	9.196	0.000	0.000	0.000	0.000	0.000	0.000
IF	1093.000	9.196	0.000	9.196	0.000	0.000	0.000	0.000	0.016	0.000
AS	1149.900	9.150	0.000	9.150	0.000	0.000	0.000	0.000	-0.046	0.000
IF	1154.000	8.960	0.000	9.150	0.000	0.000	0.000	0.000	-0.033	0.000
IF	1186.000	7.943	0.000	9.150	0.000	0.000	0.000	0.000	-0.002	0.000
IF	1214.500	8.861	0.000	9.150	0.000	0.000	0.000	0.000	0.006	0.000
IF	1225.500	8.179	0.000	9.150	0.000	0.000	0.000	0.000	-0.033	0.000
IF	1240.500	8.012	0.000	9.150	0.000	0.000	0.000	0.000	-0.022	0.000
IF	1257.500	7.487	0.000	9.151	0.000	0.000	0.000	0.000	-0.004	0.000
IF	1272.000	7.884	0.000	9.151	0.000	0.000	0.000	0.000	0.006	0.000
IF	1284.000	7.654	0.000	9.151	0.000	0.000	0.000	0.000	-0.012	0.000
IF	1299.500	7.552	0.000	9.151	0.000	0.000	0.000	0.000	-0.001	0.000
IF	1310.500	7.618	0.000	9.151	0.000	0.000	0.000	0.000	0.023	0.000
IF	1317.000	7.950	0.000	9.151	0.000	0.000	0.000	0.000	0.036	0.000
IF	1322.500	8.045	0.000	9.151	0.000	0.000	0.000	0.000	-0.015	0.000
IF	1336.500	7.651	0.000	9.151	0.000	0.000	0.000	0.000	-0.020	0.000
IF	1353.500	7.424	0.000	9.150	0.000	0.000	0.000	0.000	-0.001	0.000
IF	1382.500	7.585	0.000	9.150	0.000	0.000	0.000	0.000	0.005	0.000
IF	1395.000	7.618	0.000	9.150	0.000	0.000	0.000	0.000	-0.004	0.000
IF	1405.000	7.487	0.000	9.150	0.000	0.000	0.000	0.000	-0.010	0.000
IF	1415.500	7.421	0.000	9.150	0.000	0.000	0.000	0.000	0.086	0.000
IF	1424.000	9.127	0.000	9.149	0.000	0.000	0.000	0.000	0.040	0.000
IF	1428.500	7.946	0.000	9.149	0.000	0.000	0.000	0.000	-0.061	0.000
IF	1437.000	8.340	0.000	9.149	0.000	0.000	0.000	0.000	-0.020	0.000
IF	1448.500	7.552	0.000	9.149	0.000	0.000	0.000	0.000	-0.043	0.000
IF	1457.500	7.454	0.000	9.149	0.000	0.000	0.000	0.000	0.014	0.000
IF	1465.000	7.782	0.000	9.149	0.000	0.000	0.000	0.000	0.000	0.000
IF	1470.000	7.454	0.000	9.149	0.000	0.000	0.000	0.000	0.082	0.000
IF	1481.000	9.094	0.000	9.149	0.000	0.000	0.000	0.000	-0.011	0.000
IF	1497.500	7.159	0.000	9.149	0.000	0.000	0.000	0.000	-0.098	0.000
IF	1508.500	6.404	0.000	9.149	0.000	0.000	0.000	0.000	-0.041	0.000
IF	1517.500	6.339	0.000	9.149	0.000	0.000	0.000	0.000	-0.009	0.000
IF	1524.000	6.273	0.000	9.149	0.000	0.000	0.000	0.000	0.016	0.000
IF	1530.000	6.535	0.000	9.149	0.000	0.000	0.000	0.000	0.030	0.000
IF	1535.000	6.601	0.000	9.149	0.000	0.000	0.000	0.000	-0.005	0.000
IF	1542.000	6.470	0.000	9.149	0.000	0.000	0.000	0.000	-0.022	0.000
IF	1550.000	6.273	0.000	9.149	0.000	0.000	0.000	0.000	-0.013	0.000
IF	1559.500	6.240	0.000	9.149	0.000	0.000	0.000	0.000	-0.005	0.000
IF	1571.000	6.174	0.000	9.149	0.000	0.000	0.000	0.000	-0.015	0.000
IF	1577.000	5.978	0.000	9.150	0.000	0.000	0.000	0.000	-0.013	0.000
IF	1581.500	6.043	0.000	9.150	0.000	0.000	0.000	0.000	-0.009	0.000
IF	1587.500	5.879	0.000	9.150	0.000	0.000	0.000	0.000	-0.006	0.000
IF	1592.000	5.978	0.000	9.150	0.000	0.000	0.000	0.000	-0.050	0.000
IF	1598.000	5.354	0.000	9.150	0.000	0.000	0.000	0.000	-0.060	0.000
IF	1604.000	5.256	0.000	9.150	0.000	0.000	0.000	0.000	-0.026	0.000
IF	1610.500	5.026	0.000	9.151	0.000	0.000	0.000	0.000	-0.014	0.000
IF	1618.000	5.059	0.000	9.151	0.000	0.000	0.000	0.000	-0.002	0.000
IF	1624.000	4.993	0.000	9.151	0.000	0.000	0.000	0.000	-0.008	0.000
IF	1631.000	4.961	0.000	9.151	0.000	0.000	0.000	0.000	0.027	0.000
IF	1636.000	5.321	0.000	9.151	0.000	0.000	0.000	0.000	0.041	0.000
IF	1639.000	5.289	0.000	9.151	0.000	0.000	0.000	0.000	-0.021	0.000
IF	1651.500	4.993	0.000	9.151	0.000	0.000	0.000	0.000	-0.043	0.000
IF	1664.000	4.206	0.000	9.151	0.000	0.000	0.000	0.000	0.095	0.000
IF	1677.000	7.424	0.000	9.151	0.000	0.000	0.000	0.000	0.143	0.000
IF	1690.000	7.913	0.000	9.151	0.000	0.000	0.000	0.000	0.062	0.000
IF	1696.500	8.639	0.000	9.151	0.000	0.000	0.000	0.000	0.070	0.000
IF	1707.700	9.151	0.000	9.151	0.000	0.000	0.000	0.000	0.046	0.000
AS	1819.100	9.158	0.000	9.158	0.000	0.000	0.000	0.000	-0.011	0.000
IF	1822.000	9.127	0.000	9.158	0.000	0.000	0.000	0.000	-0.012	0.000
IF	1846.000	8.832	0.000	9.158	0.000	0.000	0.000	0.000	-0.010	0.000
IF	1866.000	8.665	0.000	9.158	0.000	0.000	0.000	0.000	-0.017	0.000
IF	1880.000	8.241	0.000	9.158	0.000	0.000	0.000	0.000	0.000	0.000
IF	1896.500	8.668	0.000	9.158	0.000	0.000	0.000	0.000	0.000	0.000
IF	1919.500	8.238	0.000	9.158	0.000	0.000	0.000	0.000	0.013	0.000
IF	1933.200	9.158	0.000	9.158	0.000	0.000	0.000	0.000	0.067	0.000
AS	2022.600	9.159	0.000	9.159	0.000	0.000	0.000	0.000	-0.110	0.000
IF	2031.000	8.238	0.000	9.159	0.000	0.000	0.000	0.000	-0.054	0.000
IF	2036.000	8.435	0.000	9.159	0.000	0.000	0.000	0.000	-0.166	0.000
IF	2037.500	7.159	0.000	9.159	0.000	0.000	0.000	0.000	-0.096	0.000
IF	2049.000	7.192	0.000	9.159	0.000	0.000	0.000	0.000	-0.030	0.000
IF	2079.000	5.909	0.000	9.160	0.000	0.000	0.000	0.000	0.036	0.000
IF	2096.500	8.894	0.000	9.160	0.000	0.000	0.000	0.000	0.017	0.000
IF	2106.500	6.368	0.000	9.160	0.000	0.000	0.000	0.000	-0.114	0.000
IF	2117.000	6.565	0.000	9.160	0.000	0.000	0.000	0.000	0.100	0.000
IF	2126.500	8.369	0.000	9.160	0.000	0.000	0.000	0.000	0.076	0.000
IF	2140.000	8.304	0.000	9.160	0.000	0.000	0.000	0.000	-0.090	0.000
IF	2149.000	6.339	0.000	9.160	0.000	0.000	0.000	0.000	-0.080	0.000
IF	2162.500	6.499	0.000	9.160	0.000	0.000	0.000	0.000	0.000	0.000
IF	2178.500	6.335	0.000	9.160	0.000	0.000	0.000	0.000	-0.009	0.000
IF	2189.000	6.270	0.000	9.160	0.000	0.000	0.000	0.000	-0.009	0.000
IF	2200.000	6.139	0.000	9.160	0.000	0.000	0.000	0.000	0.029	0.000
IF	2212.500	6.959	0.000	9.160	0.000	0.000	0.000	0.000	0.093	0.000
IF	2222.000	8.179	0.000	9.160	0.000	0.000	0.000	0.000	0.078	0.000
IF	2226.000	8.012	0.000	9.160	0.000	0.000	0.000	0.000	-0.043	0.000
IF	2239.000	7.451	0.000	9.160	0.000	0.000	0.000	0.000	0.027	0.000
IF	2254.500	8.796	0.000	9.160	0.000	0.000	0.000	0.000	0.051	0.000
IF	2264.000	8.730	0.000	9.160	0.000	0.000	0.000	0.000	-0.028	0.000
IF	2280.000	8.074	0.000	9.160	0.000	0.000	0.000	0.000	-0.025	0.000
IF	2291.500	8.041	0.000	9.160	0.000	0.000	0.000	0.000	0.010	0.000

	IF	2302.000	8.304	0.000	9.160	0.000	0.000	0.000	0.000	0.057	0.000
	IF	2311.200	9.160	0.000	9.160	0.000	0.000	0.000	0.000	0.093	0.000
	AS	2367.500	9.196	0.000	9.196	0.000	0.000	0.000	0.000	-0.137	0.000
	IF	2368.000	9.127	0.000	9.196	0.000	0.000	0.000	0.000	0.000	0.000
	IF	2369.400	9.196	0.000	9.196	0.000	0.000	0.000	0.000	0.049	0.000
	AS	2520.400	9.196	0.000	9.196	0.000	0.000	0.000	0.000	-0.124	0.000
	IF	2526.000	8.504	0.000	9.196	0.000	0.000	0.000	0.000	0.000	0.000
	IF	2528.900	9.196	0.000	9.196	0.000	0.000	0.000	0.000	0.239	0.000
	AS	2596.500	9.177	0.000	9.177	0.000	0.000	0.000	0.000	-0.046	0.000
	IF	2599.000	9.062	0.000	9.177	0.000	0.000	0.000	0.000	0.000	0.000
	IF	2600.800	9.177	0.000	9.177	0.000	0.000	0.000	0.000	0.064	0.000
	AS	2627.100	9.177	0.000	9.177	0.000	0.000	0.000	0.000	-0.043	0.000
	IF	2627.500	9.160	0.000	9.177	0.000	0.000	0.000	0.000	0.000	0.000
	IF	2628.000	9.177	0.000	9.177	0.000	0.000	0.000	0.000	0.034	0.000
	AS	2641.800	9.177	0.000	9.177	0.000	0.000	0.000	0.000	-0.069	0.000
	IF	2643.000	9.094	0.000	9.177	0.000	0.000	0.000	0.000	-0.022	0.000
	IF	2647.000	9.062	0.000	9.177	0.000	0.000	0.000	0.000	-0.031	0.000
	IF	2652.500	8.796	0.000	9.177	0.000	0.000	0.000	0.000	-0.022	0.000
	IF	2659.000	8.799	0.000	9.177	0.000	0.000	0.000	0.000	-0.021	0.000
	IF	2668.000	8.471	0.000	9.177	0.000	0.000	0.000	0.000	-0.023	0.000
	IF	2677.500	8.369	0.000	9.177	0.000	0.000	0.000	0.000	-0.010	0.000
	IF	2688.000	8.271	0.000	9.177	0.000	0.000	0.000	0.000	-0.003	0.000
	IF	2697.000	8.304	0.000	9.177	0.000	0.000	0.000	0.000	-0.012	0.000
	IF	2704.500	8.074	0.000	9.177	0.000	0.000	0.000	0.000	-0.038	0.000
	IF	2717.500	7.516	0.000	9.177	0.000	0.000	0.000	0.000	-0.041	0.000
	IF	2728.000	7.123	0.000	9.177	0.000	0.000	0.000	0.000	0.037	0.000
	IF	2729.000	7.943	0.000	9.177	0.000	0.000	0.000	0.000	0.055	0.000
	IF	2737.500	7.648	0.000	9.177	0.000	0.000	0.000	0.000	0.004	0.000
	IF	2747.500	8.009	0.000	9.177	0.000	0.000	0.000	0.000	0.002	0.000
	IF	2755.000	7.680	0.000	9.177	0.000	0.000	0.000	0.000	-0.024	0.000
	IF	2766.500	7.549	0.000	9.177	0.000	0.000	0.000	0.000	0.018	0.000
	IF	2780.000	8.140	0.000	9.177	0.000	0.000	0.000	0.000	0.032	0.000
	IF	2793.000	8.402	0.000	9.177	0.000	0.000	0.000	0.000	0.008	0.000
	IF	2801.500	8.304	0.000	9.177	0.000	0.000	0.000	0.000	0.004	0.000
	IF	2809.500	8.468	0.000	9.177	0.000	0.000	0.000	0.000	-0.002	0.000
	IF	2819.500	8.271	0.000	9.177	0.000	0.000	0.000	0.000	-0.012	0.000
	IF	2829.500	8.238	0.000	9.177	0.000	0.000	0.000	0.000	-0.008	0.000
	IF	2836.500	8.140	0.000	9.177	0.000	0.000	0.000	0.000	0.023	0.000
	IF	2845.500	8.599	0.000	9.177	0.000	0.000	0.000	0.000	0.012	0.000
	IF	2861.000	8.435	0.000	9.177	0.000	0.000	0.000	0.000	-0.009	0.000
	IF	2870.000	8.369	0.000	9.177	0.000	0.000	0.000	0.000	-0.012	0.000
	IF	2875.000	8.271	0.000	9.177	0.000	0.000	0.000	0.000	0.004	0.000
	IF	2885.000	8.435	0.000	9.177	0.000	0.000	0.000	0.000	-0.010	0.000
	IF	2894.000	8.074	0.000	9.177	0.000	0.000	0.000	0.000	-0.007	0.000
	IF	2904.000	8.304	0.000	9.177	0.000	0.000	0.000	0.000	0.036	0.000
	IF	2916.000	8.861	0.000	9.177	0.000	0.000	0.000	0.000	0.043	0.000
	IF	2924.100	9.177	0.000	9.177	0.000	0.000	0.000	0.000	0.039	0.000
	AS	2935.500	9.177	0.000	9.177	0.000	0.000	0.000	0.000	-0.013	0.000
	IF	2937.000	9.157	0.000	9.177	0.000	0.000	0.000	0.000	-0.014	0.000
	IF	2944.000	9.058	0.000	9.177	0.000	0.000	0.000	0.000	-0.002	0.000
	IF	2952.000	9.124	0.000	9.177	0.000	0.000	0.000	0.000	0.013	0.000
	IF	2953.200	9.177	0.000	9.177	0.000	0.000	0.000	0.000	0.044	0.000
	AS	5037.500	9.196	0.000	9.196	0.000	0.000	0.000	0.000	-0.147	0.000
	IF	5055.500	6.549	0.000	9.196	0.000	0.000	0.000	0.000	-0.090	0.000
	IF	5069.000	6.348	0.000	9.196	0.000	0.000	0.000	0.000	0.000	0.000
	IF	5079.000	6.549	0.000	9.196	0.000	0.000	0.000	0.000	0.016	0.000
	IF	5091.500	6.713	0.000	9.196	0.000	0.000	0.000	0.000	0.013	0.000
	IF	5102.000	6.844	0.000	9.196	0.000	0.000	0.000	0.000	-0.012	0.000
	IF	5113.000	6.447	0.000	9.196	0.000	0.000	0.000	0.000	-0.010	0.000
	IF	5135.000	6.512	0.000	9.196	0.000	0.000	0.000	0.000	0.012	0.000
	IF	5159.000	7.008	0.000	9.196	0.000	0.000	0.000	0.000	0.020	0.000
	IF	5175.500	7.303	0.000	9.196	0.000	0.000	0.000	0.000	0.006	0.000
	IF	5185.500	7.169	0.000	9.196	0.000	0.000	0.000	0.000	-0.038	0.000
	IF	5193.500	6.614	0.000	9.196	0.000	0.000	0.000	0.000	-0.036	0.000
	IF	5199.000	6.676	0.000	9.196	0.000	0.000	0.000	0.000	0.003	0.000
	IF	5205.000	6.647	0.000	9.196	0.000	0.000	0.000	0.000	0.054	0.000
	IF	5218.500	7.726	0.000	9.196	0.000	0.000	0.000	0.000	0.134	0.000
	IF	5224.000	9.196	0.000	9.196	0.000	0.000	0.000	0.000	0.267	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	-5.600	1.000	1.000	9.010	12.098	13.810	56.140	0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3.300	-5.549	0.000	9.011	0.000	0.000	0.000	0.000	0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	6.600	-5.497	0.000	9.011	0.000	0.000	0.000	0.000	0.016	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	9.800	-5.446	0.000	9.012	0.000	0.000	0.000	0.000	0.016	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	13.100	-5.395	0.000	9.012	0.000	0.000	0.000	0.000	0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	16.400	-5.344	0.000	9.013	0.000	0.000	0.000	0.000	0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	19.700	-5.293	0.000	9.013	0.000	0.000	0.000	0.000	0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	23.000	-5.241	0.000	9.014	0.000	0.000	0.000	0.000	0.016	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	26.200	-5.190	0.000	9.015	0.000	0.000	0.000	0.000	0.016	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	29.500	-5.139	0.000	9.015	0.000	0.000	0.000	0.000	0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES

OF	32.800	-5.088	0.000	9.016	0.000	0.000	0.000	0.000	0.014	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	36.100	-5.044	0.000	9.017	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	39.400	-5.015	0.000	9.018	0.000	0.000	0.000	0.000	0.009	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	42.700	-4.985	0.000	9.019	0.000	0.000	0.000	0.000	0.009	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	45.900	-4.956	0.000	9.020	0.000	0.000	0.000	0.000	0.009	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	49.200	-4.926	0.000	9.021	0.000	0.000	0.000	0.000	0.009	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	52.500	-4.897	0.000	9.022	0.000	0.000	0.000	0.000	0.009	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	55.800	-4.866	0.000	9.023	0.000	0.000	0.000	0.000	0.010	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	59.100	-4.827	0.000	9.024	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	62.300	-4.788	0.000	9.026	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	65.600	-4.749	0.000	9.026	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	68.900	-4.710	0.000	9.028	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	72.200	-4.670	0.000	9.029	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	75.500	-4.631	0.000	9.030	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	78.700	-4.592	0.000	9.031	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	82.000	-4.553	0.000	9.032	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	85.300	-4.514	0.000	9.034	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	88.600	-4.475	0.000	9.035	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	91.900	-4.435	0.000	9.036	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	95.100	-4.396	0.000	9.038	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	98.400	-4.357	0.000	9.039	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	101.700	-4.318	0.000	9.040	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	105.000	-4.279	0.000	9.042	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	108.300	-4.240	0.000	9.044	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	111.500	-4.200	0.000	9.046	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	114.800	-4.161	0.000	9.047	0.000	0.000	0.000	0.000	0.010	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	118.100	-4.133	0.000	9.049	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	121.400	-4.127	0.000	9.051	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	124.700	-4.121	0.000	9.053	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	128.000	-4.115	0.000	9.055	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	131.200	-4.109	0.000	9.057	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	134.500	-4.102	0.000	9.059	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	137.800	-4.096	0.000	9.061	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	141.100	-4.090	0.000	9.063	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES

OF	144.400	-4.084	0.000	9.064	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	147.600	-4.078	0.000	9.066	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	150.900	-4.072	0.000	9.067	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	154.200	-4.066	0.000	9.069	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	157.500	-4.060	0.000	9.070	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	160.800	-4.054	0.000	9.072	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	164.000	-4.048	0.000	9.073	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	167.300	-4.042	0.000	9.075	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	170.600	-4.036	0.000	9.076	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	173.900	-4.030	0.000	9.077	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	177.200	-4.024	0.000	9.079	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	180.400	-4.018	0.000	9.080	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	183.700	-4.012	0.000	9.082	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	187.000	-4.006	0.000	9.083	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	190.300	-4.007	0.000	9.085	0.000	0.000	0.000	0.000	0.003	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	193.600	-3.987	0.000	9.086	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	196.800	-3.902	0.000	9.086	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	200.100	-3.818	0.000	9.087	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	203.400	-3.733	0.000	9.087	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	206.700	-3.649	0.000	9.088	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	210.000	-3.564	0.000	9.089	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	213.300	-3.480	0.000	9.090	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	216.500	-3.395	0.000	9.091	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	219.800	-3.311	0.000	9.092	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	223.100	-3.226	0.000	9.093	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	226.400	-3.141	0.000	9.094	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	229.700	-3.057	0.000	9.095	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	232.900	-2.972	0.000	9.096	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	236.200	-2.888	0.000	9.097	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	239.500	-2.803	0.000	9.099	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	242.800	-2.719	0.000	9.100	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	246.100	-2.634	0.000	9.101	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	249.300	-2.550	0.000	9.102	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	252.600	-2.465	0.000	9.104	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES

OF	255.900	-2.381	0.000	9.105	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	259.200	-2.296	0.000	9.107	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	262.500	-2.208	0.000	9.108	0.000	0.000	0.000	0.000	0.029	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	265.700	-2.108	0.000	9.110	0.000	0.000	0.000	0.000	0.031	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	269.000	-2.007	0.000	9.111	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	272.300	-1.947	0.000	9.113	0.000	0.000	0.000	0.000	0.017	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	275.600	-1.897	0.000	9.115	0.000	0.000	0.000	0.000	0.015	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	278.900	-1.847	0.000	9.117	0.000	0.000	0.000	0.000	0.015	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	282.200	-1.797	0.000	9.119	0.000	0.000	0.000	0.000	0.015	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	285.400	-1.747	0.000	9.122	0.000	0.000	0.000	0.000	0.015	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	288.700	-1.696	0.000	9.123	0.000	0.000	0.000	0.000	0.015	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	292.000	-1.646	0.000	9.126	0.000	0.000	0.000	0.000	0.015	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	295.300	-1.596	0.000	9.128	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	298.600	-1.543	0.000	9.130	0.000	0.000	0.000	0.000	0.017	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	301.800	-1.489	0.000	9.132	0.000	0.000	0.000	0.000	0.017	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	305.100	-1.434	0.000	9.134	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	308.400	-1.380	0.000	9.136	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	311.700	-1.326	0.000	9.138	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	315.000	-1.271	0.000	9.140	0.000	0.000	0.000	0.000	0.017	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	318.200	-1.217	0.000	9.142	0.000	0.000	0.000	0.000	0.017	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	321.500	-1.163	0.000	9.144	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	324.800	-1.108	0.000	9.146	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	328.100	-1.054	0.000	9.148	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	331.400	-1.000	0.000	9.150	0.000	0.000	0.000	0.000	0.017	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	334.600	-0.945	0.000	9.152	0.000	0.000	0.000	0.000	0.017	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	337.900	-0.891	0.000	9.154	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	341.200	-0.837	0.000	9.156	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	344.500	-0.782	0.000	9.158	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	347.800	-0.728	0.000	9.160	0.000	0.000	0.000	0.000	0.017	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	351.000	-0.674	0.000	9.162	0.000	0.000	0.000	0.000	0.017	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	354.300	-0.619	0.000	9.165	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	357.600	-0.565	0.000	9.167	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	360.900	-0.511	0.000	9.168	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	364.200	-0.456	0.000	9.171	0.000	0.000	0.000	0.000	0.017	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES

OF	367.500	-0.397	0.000	9.173	0.000	0.000	0.000	0.000	0.021	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	370.700	-0.320	0.000	9.175	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	374.000	-0.243	0.000	9.177	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	377.300	-0.166	0.000	9.179	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	380.600	-0.089	0.000	9.181	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	383.900	-0.012	0.000	9.183	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	387.100	0.063	0.000	9.185	0.000	0.000	0.000	0.000	0.020	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	390.400	0.119	0.000	9.187	0.000	0.000	0.000	0.000	0.013	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	393.700	0.151	0.000	9.190	0.000	0.000	0.000	0.000	0.010	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	397.000	0.184	0.000	9.193	0.000	0.000	0.000	0.000	0.009	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	400.300	0.209	0.000	9.195	0.000	0.000	0.000	0.000	0.006	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	403.500	0.223	0.000	9.198	0.000	0.000	0.000	0.000	0.006	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	406.800	0.247	0.000	9.201	0.000	0.000	0.000	0.000	0.020	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	410.100	0.354	0.000	9.202	0.000	0.000	0.000	0.000	0.033	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	413.400	0.462	0.000	9.204	0.000	0.000	0.000	0.000	0.036	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	416.700	0.593	0.000	9.206	0.000	0.000	0.000	0.000	0.042	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	419.900	0.737	0.000	9.207	0.000	0.000	0.000	0.000	0.044	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	423.200	0.880	0.000	9.208	0.000	0.000	0.000	0.000	0.037	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	426.500	0.983	0.000	9.211	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	429.800	1.037	0.000	9.214	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	433.100	1.090	0.000	9.217	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	436.400	1.191	0.000	9.219	0.000	0.000	0.000	0.000	0.041	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	439.600	1.357	0.000	9.221	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
IF	442.900	1.523	0.000	9.223	0.000	0.000	0.000	0.000	0.049	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	446.200	1.681	0.000	9.226	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
IF	449.500	1.699	0.000	9.230	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
IF	452.800	1.717	0.000	9.235	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
IF	456.000	1.735	0.000	9.239	0.000	0.000	0.000	0.000	0.015	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	459.300	1.814	0.000	9.242	0.000	0.000	0.000	0.000	0.038	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	462.600	1.987	0.000	9.244	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
IF	465.900	2.159	0.000	9.247	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
IF	469.200	2.290	0.000	9.250	0.000	0.000	0.000	0.000	0.029	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	472.400	2.347	0.000	9.254	0.000	0.000	0.000	0.000	0.017	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	475.700	2.404	0.000	9.258	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES

IF	479.000	2.455	0.000	9.263	0.000	0.000	0.000	0.000	0.015	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	482.300	2.500	0.000	9.267	0.000	0.000	0.000	0.000	0.014	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	485.600	2.546	0.000	9.272	0.000	0.000	0.000	0.000	0.022	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	488.800	2.646	0.000	9.275	0.000	0.000	0.000	0.000	0.038	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	492.100	2.790	0.000	9.278	0.000	0.000	0.000	0.000	0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	495.400	2.906	0.000	9.281	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	498.700	2.949	0.000	9.286	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	502.000	3.056	0.000	9.290	0.000	0.000	0.000	0.000	0.033	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	505.200	3.161	0.000	9.294	0.000	0.000	0.000	0.000	0.020	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	508.500	3.184	0.000	9.299	0.000	0.000	0.000	0.000	0.007	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	511.800	3.207	0.000	9.304	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	515.100	3.264	0.000	9.308	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
IF	518.400	3.391	0.000	9.311	0.000	0.000	0.000	0.000	0.038	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	521.700	3.517	0.000	9.314	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	524.900	3.562	0.000	9.319	0.000	0.000	0.000	0.000	0.009	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	528.200	3.579	0.000	9.325	0.000	0.000	0.000	0.000	0.009	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	531.500	3.619	0.000	9.329	0.000	0.000	0.000	0.000	0.013	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	534.800	3.667	0.000	9.333	0.000	0.000	0.000	0.000	0.015	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	538.100	3.716	0.000	9.337	0.000	0.000	0.000	0.000	0.025	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	541.300	3.830	0.000	9.340	0.000	0.000	0.000	0.000	0.035	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	544.600	3.944	0.000	9.343	0.000	0.000	0.000	0.000	0.034	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	547.900	4.055	0.000	9.347	0.000	0.000	0.000	0.000	0.033	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	551.200	4.163	0.000	9.350	0.000	0.000	0.000	0.000	-0.007	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	554.500	4.011	0.000	9.358	0.000	0.000	0.000	0.000	0.037	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	557.700	4.404	0.000	9.356	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
IF	561.000	4.361	0.000	9.363	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	564.300	4.564	0.000	9.366	0.000	0.000	0.000	0.000	0.044	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	567.600	4.654	0.000	9.370	0.000	0.000	0.000	0.000	0.059	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	570.900	4.955	0.000	9.372	0.000	0.000	0.000	0.000	0.125	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	574.100	5.463	0.000	9.370	0.000	0.000	0.000	0.000	0.119	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	577.400	5.726	0.000	9.378	0.000	0.000	0.000	0.000	0.075	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	580.700	5.958	0.000	9.390	0.000	0.000	0.000	0.000	0.068	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	584.000	6.174	0.000	9.403	0.000	0.000	0.000	0.000	0.065	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	587.300	6.389	0.000	9.419	0.000	0.000	0.000	0.000	0.049	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES

IF	590.500	6.492	0.000	9.439	0.000	0.000	0.000	0.000	0.013	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	593.800	6.471	0.000	9.459	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
IF	597.100	6.844	0.000	9.468	0.000	0.000	0.000	0.000	0.063	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	600.400	6.883	0.000	9.490	0.000	0.000	0.000	0.000	0.020	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	603.700	6.976	0.000	9.507	0.000	0.000	0.000	0.000	0.034	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	607.000	7.105	0.000	9.522	0.000	0.000	0.000	0.000	0.033	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	610.200	7.191	0.000	9.537	0.000	0.000	0.000	0.000	-0.010	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	613.500	7.042	0.000	9.556	0.000	0.000	0.000	0.000	-0.037	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	616.800	6.949	0.000	9.568	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	620.100	7.040	0.000	9.573	0.000	0.000	0.000	0.000	0.009	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	623.400	7.006	0.000	9.580	0.000	0.000	0.000	0.000	0.025	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	626.600	7.201	0.000	9.583	0.000	0.000	0.000	0.000	0.061	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	629.900	7.404	0.000	9.587	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
IF	633.200	7.576	0.000	9.594	0.000	0.000	0.000	0.000	0.037	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	636.500	7.651	0.000	9.603	0.000	0.000	0.000	0.000	0.020	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	639.800	7.707	0.000	9.614	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	643.000	7.809	0.000	9.623	0.000	0.000	0.000	0.000	0.031	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	646.300	7.911	0.000	9.631	0.000	0.000	0.000	0.000	0.038	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	649.600	8.058	0.000	9.641	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
IF	652.900	8.292	0.000	9.650	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	656.200	8.526	0.000	9.672	0.000	0.000	0.000	0.000	0.072	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	659.400	8.760	0.000	9.700	0.000	0.000	0.000	0.000	0.146	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	662.700	9.475	0.000	9.818	0.000	0.000	0.000	0.000	0.225	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	664.100	9.818	0.000	9.818	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
AS	1068.200	9.196	0.000	9.196	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
IF	1071.500	9.026	0.000	9.196	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1073.900	9.196	0.000	9.196	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
AS	1088.100	9.196	0.000	9.196	0.000	0.000	0.000	0.000	-0.180	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1088.500	9.124	0.000	9.196	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1093.000	9.196	0.000	9.196	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
AS	1149.900	9.150	0.000	9.150	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
IF	1154.000	8.960	0.000	9.150	0.000	0.000	0.000	0.000	-0.033	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1186.000	7.943	0.000	9.150	0.000	0.000	0.000	0.000	-0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1214.500	8.861	0.000	9.150	0.000	0.000	0.000	0.000	0.006	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES

IF	1225.500	8.179	0.000	9.150	0.000	0.000	0.000	0.000	-0.033	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1240.500	8.012	0.000	9.150	0.000	0.000	0.000	0.000	-0.022	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1257.500	7.487	0.000	9.151	0.000	0.000	0.000	0.000	-0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1272.000	7.884	0.000	9.151	0.000	0.000	0.000	0.000	0.006	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1284.000	7.654	0.000	9.151	0.000	0.000	0.000	0.000	-0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1299.500	7.552	0.000	9.151	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
IF	1310.500	7.618	0.000	9.151	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1317.000	7.950	0.000	9.151	0.000	0.000	0.000	0.000	0.036	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1322.500	8.045	0.000	9.151	0.000	0.000	0.000	0.000	-0.015	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1336.500	7.651	0.000	9.151	0.000	0.000	0.000	0.000	-0.020	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1353.500	7.424	0.000	9.150	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
IF	1382.500	7.585	0.000	9.150	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
IF	1395.000	7.618	0.000	9.150	0.000	0.000	0.000	0.000	-0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1405.000	7.487	0.000	9.150	0.000	0.000	0.000	0.000	-0.010	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1415.500	7.421	0.000	9.150	0.000	0.000	0.000	0.000	0.086	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1424.000	9.127	0.000	9.149	0.000	0.000	0.000	0.000	0.040	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1428.500	7.946	0.000	9.149	0.000	0.000	0.000	0.000	-0.061	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1437.000	8.340	0.000	9.149	0.000	0.000	0.000	0.000	-0.020	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1448.500	7.552	0.000	9.149	0.000	0.000	0.000	0.000	-0.043	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1457.500	7.454	0.000	9.149	0.000	0.000	0.000	0.000	0.014	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1465.000	7.782	0.000	9.149	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1470.000	7.454	0.000	9.149	0.000	0.000	0.000	0.000	0.082	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1481.000	9.094	0.000	9.149	0.000	0.000	0.000	0.000	-0.011	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1497.500	7.159	0.000	9.149	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
IF	1508.500	6.404	0.000	9.149	0.000	0.000	0.000	0.000	-0.041	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1517.500	6.339	0.000	9.149	0.000	0.000	0.000	0.000	-0.009	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1524.000	6.273	0.000	9.149	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1530.000	6.535	0.000	9.149	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
IF	1535.000	6.601	0.000	9.149	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
IF	1542.000	6.470	0.000	9.149	0.000	0.000	0.000	0.000	-0.022	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1550.000	6.273	0.000	9.149	0.000	0.000	0.000	0.000	-0.013	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1559.500	6.240	0.000	9.149	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
IF	1571.000	6.174	0.000	9.149	0.000	0.000	0.000	0.000	-0.015	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1577.000	5.978	0.000	9.150	0.000	0.000	0.000	0.000	-0.013	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES

IF	1581.500	6.043	0.000	9.150	0.000	0.000	0.000	0.000	-0.009	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1587.500	5.879	0.000	9.150	0.000	0.000	0.000	0.000	-0.006	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1592.000	5.978	0.000	9.150	0.000	0.000	0.000	0.000	-0.050	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1598.000	5.354	0.000	9.150	0.000	0.000	0.000	0.000	-0.060	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1604.000	5.256	0.000	9.150	0.000	0.000	0.000	0.000	-0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1610.500	5.026	0.000	9.151	0.000	0.000	0.000	0.000	-0.014	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1618.000	5.059	0.000	9.151	0.000	0.000	0.000	0.000	-0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1624.000	4.993	0.000	9.151	0.000	0.000	0.000	0.000	-0.008	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1631.000	4.961	0.000	9.151	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
IF	1636.000	5.321	0.000	9.151	0.000	0.000	0.000	0.000	0.041	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1639.000	5.289	0.000	9.151	0.000	0.000	0.000	0.000	-0.021	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1651.500	4.993	0.000	9.151	0.000	0.000	0.000	0.000	-0.043	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1664.000	4.206	0.000	9.151	0.000	0.000	0.000	0.000	0.095	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1677.000	7.424	0.000	9.151	0.000	0.000	0.000	0.000	0.143	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1690.000	7.913	0.000	9.151	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1696.500	8.639	0.000	9.151	0.000	0.000	0.000	0.000	0.070	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1707.700	9.151	0.000	9.151	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
AS	1819.100	9.158	0.000	9.158	0.000	0.000	0.000	0.000	-0.011	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1822.000	9.127	0.000	9.158	0.000	0.000	0.000	0.000	-0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1846.000	8.832	0.000	9.158	0.000	0.000	0.000	0.000	-0.010	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1866.000	8.665	0.000	9.158	0.000	0.000	0.000	0.000	-0.017	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1880.000	8.241	0.000	9.158	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1896.500	8.668	0.000	9.158	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1919.500	8.238	0.000	9.158	0.000	0.000	0.000	0.000	0.013	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1933.200	9.158	0.000	9.158	0.000	0.000	0.000	0.000	0.067	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
AS	2022.600	9.159	0.000	9.159	0.000	0.000	0.000	0.000	-0.110	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2031.000	8.238	0.000	9.159	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
IF	2036.000	8.435	0.000	9.159	0.000	0.000	0.000	0.000	-0.166	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2037.500	7.159	0.000	9.159	0.000	0.000	0.000	0.000	-0.096	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2049.000	7.192	0.000	9.159	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
IF	2079.000	5.909	0.000	9.160	0.000	0.000	0.000	0.000	0.036	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2096.500	8.894	0.000	9.160	0.000	0.000	0.000	0.000	0.017	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2106.500	6.368	0.000	9.160	0.000	0.000	0.000	0.000	-0.114	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2117.000	6.565	0.000	9.160	0.000	0.000	0.000	0.000	0.100	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES

IF	2126.500	8.369	0.000	9.160	0.000	0.000	0.000	0.000	0.076	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2140.000	8.304	0.000	9.160	0.000	0.000	0.000	0.000	-0.090	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2149.000	6.339	0.000	9.160	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	2162.500	6.499	0.000	9.160	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2178.500	6.335	0.000	9.160	0.000	0.000	0.000	0.000	-0.009	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2189.000	6.270	0.000	9.160	0.000	0.000	0.000	0.000	-0.009	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2200.000	6.139	0.000	9.160	0.000	0.000	0.000	0.000	0.029	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2212.500	6.959	0.000	9.160	0.000	0.000	0.000	0.000	0.093	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2222.000	8.179	0.000	9.160	0.000	0.000	0.000	0.000	0.078	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2226.000	8.012	0.000	9.160	0.000	0.000	0.000	0.000	-0.043	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2239.000	7.451	0.000	9.160	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
IF	2254.500	8.796	0.000	9.160	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
IF	2264.000	8.730	0.000	9.160	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
IF	2280.000	8.074	0.000	9.160	0.000	0.000	0.000	0.000	-0.025	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2291.500	8.041	0.000	9.160	0.000	0.000	0.000	0.000	0.010	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2302.000	8.304	0.000	9.160	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
IF	2311.200	9.160	0.000	9.160	0.000	0.000	0.000	0.000	0.093	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
AS	2367.500	9.196	0.000	9.196	0.000	0.000	0.000	0.000	-0.137	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2368.000	9.127	0.000	9.196	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2369.400	9.196	0.000	9.196	0.000	0.000	0.000	0.000	0.049	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
AS	2520.400	9.196	0.000	9.196	0.000	0.000	0.000	0.000	-0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2526.000	8.504	0.000	9.196	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2528.900	9.196	0.000	9.196	0.000	0.000	0.000	0.000	0.239	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
AS	2596.500	9.177	0.000	9.177	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
IF	2599.000	9.062	0.000	9.177	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2600.800	9.177	0.000	9.177	0.000	0.000	0.000	0.000	0.064	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
AS	2627.100	9.177	0.000	9.177	0.000	0.000	0.000	0.000	-0.043	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2627.500	9.160	0.000	9.177	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2628.000	9.177	0.000	9.177	0.000	0.000	0.000	0.000	0.034	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
AS	2641.800	9.177	0.000	9.177	0.000	0.000	0.000	0.000	-0.069	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2643.000	9.094	0.000	9.177	0.000	0.000	0.000	0.000	-0.022	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2647.000	9.062	0.000	9.177	0.000	0.000	0.000	0.000	-0.031	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2652.500	8.796	0.000	9.177	0.000	0.000	0.000	0.000	-0.022	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2659.000	8.799	0.000	9.177	0.000	0.000	0.000	0.000	-0.021	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES

IF	2668.000	8.471	0.000	9.177	0.000	0.000	0.000	0.000	-0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2677.500	8.369	0.000	9.177	0.000	0.000	0.000	0.000	-0.010	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2688.000	8.271	0.000	9.177	0.000	0.000	0.000	0.000	-0.003	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2697.000	8.304	0.000	9.177	0.000	0.000	0.000	0.000	-0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2704.500	8.074	0.000	9.177	0.000	0.000	0.000	0.000	-0.038	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2717.500	7.516	0.000	9.177	0.000	0.000	0.000	0.000	-0.041	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2728.000	7.123	0.000	9.177	0.000	0.000	0.000	0.000	0.037	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2729.000	7.943	0.000	9.177	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	2737.500	7.648	0.000	9.177	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2747.500	8.009	0.000	9.177	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2755.000	7.680	0.000	9.177	0.000	0.000	0.000	0.000	-0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2766.500	7.549	0.000	9.177	0.000	0.000	0.000	0.000	0.018	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2780.000	8.140	0.000	9.177	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
IF	2793.000	8.402	0.000	9.177	0.000	0.000	0.000	0.000	0.008	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2801.500	8.304	0.000	9.177	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2809.500	8.468	0.000	9.177	0.000	0.000	0.000	0.000	-0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2819.500	8.271	0.000	9.177	0.000	0.000	0.000	0.000	-0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2829.500	8.238	0.000	9.177	0.000	0.000	0.000	0.000	-0.008	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2836.500	8.140	0.000	9.177	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2845.500	8.599	0.000	9.177	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2861.000	8.435	0.000	9.177	0.000	0.000	0.000	0.000	-0.009	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2870.000	8.369	0.000	9.177	0.000	0.000	0.000	0.000	-0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2875.000	8.271	0.000	9.177	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2885.000	8.435	0.000	9.177	0.000	0.000	0.000	0.000	-0.010	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2894.000	8.074	0.000	9.177	0.000	0.000	0.000	0.000	-0.007	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2904.000	8.304	0.000	9.177	0.000	0.000	0.000	0.000	0.036	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2916.000	8.861	0.000	9.177	0.000	0.000	0.000	0.000	0.043	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2924.100	9.177	0.000	9.177	0.000	0.000	0.000	0.000	0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
AS	2935.500	9.177	0.000	9.177	0.000	0.000	0.000	0.000	-0.013	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2937.000	9.157	0.000	9.177	0.000	0.000	0.000	0.000	-0.014	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2944.000	9.058	0.000	9.177	0.000	0.000	0.000	0.000	-0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2952.000	9.124	0.000	9.177	0.000	0.000	0.000	0.000	0.013	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	2953.200	9.177	0.000	9.177	0.000	0.000	0.000	0.000	0.044	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
AS	5037.500	9.196	0.000	9.196	0.000	0.000	0.000	0.000	-0.147	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES

IF	5055.500	6.549	0.000	9.196	0.000	0.000	0.000	0.000	-0.090	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5069.000	6.348	0.000	9.196	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5079.000	6.549	0.000	9.196	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5091.500	6.713	0.000	9.196	0.000	0.000	0.000	0.000	0.013	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5102.000	6.844	0.000	9.196	0.000	0.000	0.000	0.000	-0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5113.000	6.447	0.000	9.196	0.000	0.000	0.000	0.000	-0.010	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5135.000	6.512	0.000	9.196	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5159.000	7.008	0.000	9.196	0.000	0.000	0.000	0.000	0.020	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5175.500	7.303	0.000	9.196	0.000	0.000	0.000	0.000	0.006	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5185.500	7.169	0.000	9.196	0.000	0.000	0.000	0.000	-0.038	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5193.500	6.614	0.000	9.196	0.000	0.000	0.000	0.000	-0.036	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5199.000	6.676	0.000	9.196	0.000	0.000	0.000	0.000	0.003	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5205.000	6.647	0.000	9.196	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
IF	5218.500	7.726	0.000	9.196	0.000	0.000	0.000	0.000	0.134	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5224.000	9.196	0.000	9.196	0.000	0.000	0.000	0.000	0.267	0.000

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

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

1

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

	LOCATION	CONTROLLING WAVE HEIGHT	SPECTRAL PEAK WAVE PERIOD	WAVE CREST ELEVATION
IE	0.00	11.13	13.81	16.80
OF	3.30	11.10	13.81	16.78
OF	6.60	11.06	13.81	16.75
OF	9.80	11.02	13.81	16.73
OF	13.10	10.98	13.81	16.70
OF	16.40	10.94	13.81	16.67
OF	19.70	10.91	13.81	16.65
OF	23.00	10.87	13.81	16.62
OF	26.20	10.83	13.81	16.60
OF	29.50	10.79	13.81	16.57
OF	32.80	10.76	13.81	16.55
OF	36.10	10.72	13.81	16.52
OF	39.40	10.70	13.81	16.51
OF	42.70	10.68	13.81	16.50
OF	45.90	10.66	13.81	16.48
OF	49.20	10.64	13.81	16.47
OF	52.50	10.62	13.81	16.45
OF	55.80	10.60	13.81	16.44
OF	59.10	10.57	13.81	16.42
OF	62.30	10.54	13.81	16.40
OF	65.60	10.51	13.81	16.38
OF	68.90	10.48	13.81	16.37
OF	72.20	10.45	13.81	16.35
OF	75.50	10.43	13.81	16.33
OF	78.70	10.40	13.81	16.31
OF	82.00	10.37	13.81	16.29
OF	85.30	10.34	13.81	16.27
OF	88.60	10.31	13.81	16.25
OF	91.90	10.28	13.81	16.23
OF	95.10	10.26	13.81	16.22
OF	98.40	10.23	13.81	16.20
OF	101.70	10.20	13.81	16.18
OF	105.00	10.17	13.81	16.16
OF	108.30	10.14	13.81	16.14
OF	111.50	10.12	13.81	16.13
OF	114.80	10.09	13.81	16.11
OF	118.10	10.07	13.81	16.10
OF	121.40	10.06	13.81	16.10
OF	124.70	10.06	13.81	16.10
OF	128.00	10.06	13.81	16.10
OF	131.20	10.06	13.81	16.10
OF	134.50	10.05	13.81	16.10
OF	137.80	10.05	13.81	16.10
OF	141.10	10.05	13.81	16.10
OF	144.40	10.04	13.81	16.09
OF	147.60	10.04	13.81	16.09
OF	150.90	10.04	13.81	16.09
OF	154.20	10.03	13.81	16.09
OF	157.50	10.03	13.81	16.09
OF	160.80	10.03	13.81	16.09
OF	164.00	10.02	13.81	16.09

OF	167.30	10.02	13.81	16.09
OF	170.60	10.02	13.81	16.09
OF	173.90	10.01	13.81	16.09
OF	177.20	10.01	13.81	16.08
OF	180.40	10.00	13.81	16.08
OF	183.70	10.00	13.81	16.08
OF	187.00	10.00	13.81	16.08
OF	190.30	10.00	13.81	16.09
OF	193.60	9.99	13.81	16.08
OF	196.80	9.92	13.81	16.03
OF	200.10	9.86	13.81	15.99
OF	203.40	9.80	13.81	15.94
OF	206.70	9.73	13.81	15.90
OF	210.00	9.67	13.81	15.86
OF	213.30	9.61	13.81	15.82
OF	216.50	9.55	13.81	15.77
OF	219.80	9.48	13.81	15.73
OF	223.10	9.42	13.81	15.69
OF	226.40	9.36	13.81	15.64
OF	229.70	9.30	13.81	15.60
OF	232.90	9.23	13.81	15.56
OF	236.20	9.17	13.81	15.52
OF	239.50	9.11	13.81	15.47
OF	242.80	9.05	13.81	15.43
OF	246.10	8.98	13.81	15.39
OF	249.30	8.92	13.81	15.35
OF	252.60	8.86	13.81	15.30
OF	255.90	8.80	13.81	15.26
OF	259.20	8.73	13.81	15.22
OF	262.50	8.67	13.81	15.18
OF	265.70	8.59	13.81	15.13
OF	269.00	8.52	13.81	15.07
OF	272.30	8.48	13.81	15.05
OF	275.60	8.44	13.81	15.02
OF	278.90	8.40	13.81	15.00
OF	282.20	8.37	13.81	14.98
OF	285.40	8.33	13.81	14.95
OF	288.70	8.29	13.81	14.93
OF	292.00	8.26	13.81	14.91
OF	295.30	8.22	13.81	14.88
OF	298.60	8.18	13.81	14.86
OF	301.80	8.14	13.81	14.83
OF	305.10	8.10	13.81	14.81
OF	308.40	8.07	13.81	14.78
OF	311.70	8.03	13.81	14.76
OF	315.00	7.99	13.81	14.73
OF	318.20	7.95	13.81	14.70
OF	321.50	7.91	13.81	14.68
OF	324.80	7.87	13.81	14.65
OF	328.10	7.83	13.81	14.63
OF	331.40	7.79	13.81	14.60
OF	334.60	7.75	13.81	14.58
OF	337.90	7.71	13.81	14.55
OF	341.20	7.67	13.81	14.53
OF	344.50	7.63	13.81	14.50
OF	347.80	7.59	13.81	14.47
OF	351.00	7.55	13.81	14.45
OF	354.30	7.51	13.81	14.42
OF	357.60	7.47	13.81	14.40
OF	360.90	7.43	13.81	14.37
OF	364.20	7.39	13.81	14.35
OF	367.50	7.35	13.81	14.32
OF	370.70	7.29	13.81	14.28
OF	374.00	7.24	13.81	14.24
OF	377.30	7.18	13.81	14.21
OF	380.60	7.12	13.81	14.17
OF	383.90	7.07	13.81	14.13
IF	387.10	7.01	13.81	14.09
IF	390.40	6.97	13.81	14.07
IF	393.70	6.95	13.81	14.05
IF	397.00	6.93	13.81	14.04
IF	400.30	6.91	13.81	14.03
IF	403.50	6.90	13.81	14.03
IF	406.80	6.88	13.81	14.02
IF	410.10	6.80	13.81	13.96
IF	413.40	6.72	13.81	13.91
IF	416.70	6.63	13.81	13.84
IF	419.90	6.52	13.81	13.77
IF	423.20	6.41	13.81	13.69
IF	426.50	6.33	13.81	13.64
IF	429.80	6.29	13.81	13.62
IF	433.10	6.26	13.81	13.60
IF	436.40	6.18	13.81	13.55
IF	439.60	6.06	13.81	13.46
IF	442.90	5.93	13.81	13.38
IF	446.20	5.81	13.81	13.30
IF	449.50	5.80	13.81	13.29
IF	452.80	5.79	13.81	13.29
IF	456.00	5.78	13.81	13.29
IF	459.30	5.73	13.81	13.25
IF	462.60	5.59	13.81	13.16
IF	465.90	5.47	13.81	13.07
IF	469.20	5.37	13.81	13.01
IF	472.40	5.33	13.81	12.98
IF	475.70	5.29	13.81	12.96
IF	479.00	5.25	13.81	12.94
IF	482.30	5.22	13.81	12.92
IF	485.60	5.19	13.81	12.90
IF	488.80	5.12	13.81	12.86
IF	492.10	5.01	13.81	12.78
IF	495.40	4.92	13.81	12.73
IF	498.70	4.89	13.81	12.71

IF	502.00	4.81	13.81	12.66
IF	505.20	4.74	13.81	12.61
IF	508.50	4.72	13.81	12.61
IF	511.80	4.71	13.81	12.60
IF	515.10	4.67	13.81	12.58
IF	518.40	4.57	13.81	12.51
IF	521.70	4.48	13.81	12.45
IF	524.90	4.45	13.81	12.43
IF	528.20	4.44	13.81	12.43
IF	531.50	4.41	13.81	12.42
IF	534.80	4.38	13.81	12.40
IF	538.10	4.34	13.81	12.38
IF	541.30	4.26	13.81	12.32
IF	544.60	4.17	13.81	12.27
IF	547.90	4.09	13.81	12.21
IF	551.20	4.01	13.81	12.16
IF	554.50	4.05	13.81	12.19
IF	557.70	3.83	13.81	12.04
IF	561.00	3.85	13.81	12.05
IF	564.30	3.72	13.81	11.97
IF	567.60	3.65	13.81	11.93
IF	570.90	3.42	13.81	11.77
IF	574.10	3.03	13.81	11.49
IF	577.40	2.83	13.81	11.36
IF	580.70	2.66	13.81	11.25
IF	584.00	2.51	13.81	11.16
IF	587.30	2.35	13.81	11.07
IF	590.50	2.29	13.81	11.04
IF	593.80	2.30	13.81	11.07
IF	597.10	2.04	13.81	10.89
IF	600.40	2.02	13.81	10.91
IF	603.70	1.97	13.81	10.88
IF	607.00	1.88	13.81	10.84
IF	610.20	1.82	13.81	10.81
IF	613.50	1.85	13.81	10.85
IF	616.80	1.87	13.81	10.88
IF	620.10	1.86	13.81	10.88
IF	623.40	1.87	13.81	10.89
IF	626.60	1.84	13.81	10.87
IF	629.90	1.70	13.81	10.77
IF	633.20	1.57	13.81	10.69
IF	636.50	1.52	13.81	10.67
IF	639.80	1.48	13.81	10.65
IF	643.00	1.41	13.81	10.61
IF	646.30	1.34	13.81	10.57
IF	649.60	1.23	13.81	10.50
IF	652.90	1.06	13.81	10.39
IF	656.20	0.89	13.81	10.30
IF	659.40	0.73	13.81	10.21
IF	662.70	0.27	13.81	10.01
IF	664.10	0.01	13.81	9.82
AS	1068.20	0.00	0.00	9.20
IF	1071.50	0.03	0.22	9.22
IF	1073.90	0.01	0.26	9.20
AS	1088.10	0.00	0.00	9.20
IF	1088.50	0.01	0.13	9.21
IF	1093.00	0.01	0.24	9.20
AS	1149.90	0.00	0.00	9.15
IF	1154.00	0.04	0.23	9.18
IF	1186.00	0.16	0.46	9.26
IF	1214.50	0.17	0.56	9.27
IF	1225.50	0.26	0.59	9.33
IF	1240.50	0.29	0.63	9.35
IF	1257.50	0.33	0.67	9.38
IF	1272.00	0.35	0.70	9.40
IF	1284.00	0.38	0.72	9.41
IF	1299.50	0.40	0.74	9.43
IF	1310.50	0.42	0.76	9.45
IF	1317.00	0.42	0.77	9.45
IF	1322.50	0.42	0.78	9.45
IF	1336.50	0.46	0.80	9.47
IF	1353.50	0.49	0.82	9.49
IF	1382.50	0.53	0.86	9.52
IF	1395.00	0.54	0.88	9.53
IF	1405.00	0.56	0.89	9.54
IF	1415.50	0.58	0.90	9.55
IF	1424.00	0.02	0.91	9.16
IF	1428.50	0.12	0.91	9.23
IF	1437.00	0.20	0.92	9.29
IF	1448.50	0.29	0.93	9.35
IF	1457.50	0.33	0.94	9.38
IF	1465.00	0.36	0.95	9.40
IF	1470.00	0.39	0.96	9.42
IF	1481.00	0.04	0.97	9.18
IF	1497.50	0.24	0.98	9.32
IF	1508.50	0.31	0.99	9.36
IF	1517.50	0.35	1.00	9.39
IF	1524.00	0.38	1.01	9.41
IF	1530.00	0.40	1.01	9.43
IF	1535.00	0.42	1.02	9.44
IF	1542.00	0.44	1.02	9.46
IF	1550.00	0.47	1.03	9.48
IF	1559.50	0.50	1.04	9.50
IF	1571.00	0.53	1.05	9.52
IF	1577.00	0.55	1.05	9.54
IF	1581.50	0.56	1.06	9.54
IF	1587.50	0.58	1.06	9.56
IF	1592.00	0.59	1.06	9.56
IF	1598.00	0.61	1.07	9.58
IF	1604.00	0.62	1.07	9.59
IF	1610.50	0.64	1.08	9.60
IF	1618.00	0.66	1.09	9.61

IF	1624.00	0.67	1.09	9.62
IF	1631.00	0.68	1.10	9.63
IF	1636.00	0.69	1.10	9.64
IF	1639.00	0.70	1.10	9.64
IF	1651.50	0.73	1.11	9.66
IF	1664.00	0.75	1.12	9.68
IF	1677.00	0.73	1.13	9.66
IF	1690.00	0.70	1.14	9.64
IF	1696.50	0.35	1.14	9.40
IF	1707.70	0.01	1.15	9.16
AS	1819.10	0.00	0.00	9.16
IF	1822.00	0.02	0.21	9.17
IF	1846.00	0.12	0.42	9.24
IF	1866.00	0.18	0.51	9.28
IF	1880.00	0.22	0.55	9.31
IF	1896.50	0.23	0.60	9.32
IF	1919.50	0.30	0.65	9.37
IF	1933.20	0.01	0.68	9.16
AS	2022.60	0.00	0.00	9.16
IF	2031.00	0.06	0.29	9.20
IF	2036.00	0.08	0.34	9.22
IF	2037.50	0.09	0.35	9.22
IF	2049.00	0.13	0.42	9.25
IF	2079.00	0.21	0.54	9.31
IF	2096.50	0.16	0.59	9.27
IF	2106.50	0.25	0.61	9.34
IF	2117.00	0.30	0.64	9.37
IF	2126.50	0.30	0.66	9.37
IF	2140.00	0.33	0.69	9.39
IF	2149.00	0.36	0.70	9.41
IF	2162.50	0.39	0.73	9.43
IF	2178.50	0.42	0.75	9.45
IF	2189.00	0.44	0.77	9.46
IF	2200.00	0.45	0.79	9.48
IF	2212.50	0.47	0.81	9.49
IF	2222.00	0.44	0.82	9.47
IF	2226.00	0.46	0.82	9.49
IF	2239.00	0.51	0.84	9.52
IF	2254.50	0.24	0.86	9.33
IF	2264.00	0.28	0.87	9.36
IF	2280.00	0.37	0.89	9.42
IF	2291.50	0.41	0.90	9.45
IF	2302.00	0.43	0.92	9.46
IF	2311.20	0.01	0.92	9.17
AS	2367.50	0.00	0.00	9.20
IF	2368.00	0.01	0.13	9.21
IF	2369.40	0.01	0.18	9.20
AS	2520.40	0.00	0.00	9.20
IF	2526.00	0.05	0.25	9.23
IF	2528.90	0.01	0.29	9.20
AS	2596.50	0.00	0.00	9.18
IF	2599.00	0.03	0.20	9.20
IF	2600.80	0.01	0.23	9.18
AS	2627.10	0.00	0.00	9.18
IF	2627.50	0.01	0.13	9.18
IF	2628.00	0.01	0.15	9.18
AS	2641.80	0.00	0.00	9.18
IF	2643.00	0.02	0.16	9.19
IF	2647.00	0.04	0.25	9.21
IF	2652.50	0.07	0.31	9.23
IF	2659.00	0.10	0.36	9.24
IF	2668.00	0.13	0.42	9.27
IF	2677.50	0.16	0.46	9.29
IF	2688.00	0.19	0.50	9.31
IF	2697.00	0.21	0.53	9.32
IF	2704.50	0.23	0.56	9.34
IF	2717.50	0.26	0.59	9.36
IF	2728.00	0.28	0.62	9.37
IF	2729.00	0.28	0.62	9.37
IF	2737.50	0.30	0.64	9.39
IF	2747.50	0.32	0.66	9.40
IF	2755.00	0.34	0.68	9.41
IF	2766.50	0.36	0.70	9.43
IF	2780.00	0.37	0.72	9.44
IF	2793.00	0.36	0.75	9.43
IF	2801.50	0.38	0.76	9.45
IF	2809.50	0.36	0.77	9.43
IF	2819.50	0.41	0.79	9.46
IF	2829.50	0.42	0.80	9.47
IF	2836.50	0.44	0.81	9.49
IF	2845.50	0.34	0.82	9.41
IF	2861.00	0.40	0.84	9.45
IF	2870.00	0.43	0.86	9.48
IF	2875.00	0.45	0.86	9.49
IF	2885.00	0.41	0.87	9.47
IF	2894.00	0.47	0.88	9.51
IF	2904.00	0.46	0.90	9.50
IF	2916.00	0.22	0.91	9.33
IF	2924.10	0.01	0.92	9.18
AS	2935.50	0.00	0.00	9.18
IF	2937.00	0.01	0.17	9.19
IF	2944.00	0.05	0.29	9.22
IF	2952.00	0.04	0.36	9.20
IF	2953.20	0.01	0.37	9.18
AS	5037.50	0.00	0.00	9.20
IF	5055.50	0.10	0.37	9.27
IF	5069.00	0.14	0.44	9.30
IF	5079.00	0.17	0.49	9.32
IF	5091.50	0.21	0.53	9.34
IF	5102.00	0.23	0.56	9.36
IF	5113.00	0.26	0.59	9.38
IF	5135.00	0.31	0.65	9.41

IF	5159.00	0.35	0.69	9.44
IF	5175.50	0.38	0.72	9.46
IF	5185.50	0.40	0.74	9.48
IF	5193.50	0.42	0.75	9.49
IF	5199.00	0.43	0.76	9.49
IF	5205.00	0.44	0.77	9.50
IF	5218.50	0.45	0.79	9.51
IF	5224.00	0.01	0.80	9.20

PART3 LOCATION OF AREAS ABOVE 100-YEAR SURGE

BETWEEN	664.10	AND	1068.20
BETWEEN	1073.90	AND	1088.10
BETWEEN	1093.00	AND	1149.90
BETWEEN	1707.70	AND	1819.10
BETWEEN	1933.20	AND	2022.60
BETWEEN	2311.20	AND	2367.50
BETWEEN	2369.40	AND	2520.40
BETWEEN	2528.90	AND	2596.50
BETWEEN	2600.80	AND	2627.10
BETWEEN	2628.00	AND	2641.80
BETWEEN	2924.10	AND	2935.50
BETWEEN	2953.20	AND	5037.50

PART4 LOCATION OF SURGE CHANGES

STATION	10-YEAR SURGE	100-YEAR SURGE
3.30	1.00	9.01
9.80	1.00	9.01
16.40	1.00	9.01
23.00	1.00	9.01
26.20	1.00	9.02
32.80	1.00	9.02
36.10	1.00	9.02
39.40	1.00	9.02
42.70	1.00	9.02
45.90	1.00	9.02
49.20	1.00	9.02
52.50	1.00	9.02
55.80	1.00	9.02
59.10	1.00	9.02
62.30	1.00	9.03
68.90	1.00	9.03
72.20	1.00	9.03
75.50	1.00	9.03
78.70	1.00	9.03
82.00	1.00	9.03
85.30	1.00	9.03
88.60	1.00	9.03
91.90	1.00	9.04
95.10	1.00	9.04
98.40	1.00	9.04
101.70	1.00	9.04
105.00	1.00	9.04
108.30	1.00	9.04
111.50	1.00	9.05
114.80	1.00	9.05
118.10	1.00	9.05
121.40	1.00	9.05
124.70	1.00	9.05
128.00	1.00	9.06
131.20	1.00	9.06
134.50	1.00	9.06
137.80	1.00	9.06
141.10	1.00	9.06
144.40	1.00	9.06
147.60	1.00	9.07
150.90	1.00	9.07
154.20	1.00	9.07
157.50	1.00	9.07
160.80	1.00	9.07
164.00	1.00	9.07
167.30	1.00	9.07
170.60	1.00	9.08
173.90	1.00	9.08
177.20	1.00	9.08
180.40	1.00	9.08
183.70	1.00	9.08
187.00	1.00	9.08
190.30	1.00	9.09
193.60	1.00	9.09
200.10	1.00	9.09
206.70	1.00	9.09
210.00	1.00	9.09
213.30	1.00	9.09
216.50	1.00	9.09
219.80	1.00	9.09
223.10	1.00	9.09
226.40	1.00	9.09
229.70	1.00	9.10
232.90	1.00	9.10
236.20	1.00	9.10
239.50	1.00	9.10
242.80	1.00	9.10
246.10	1.00	9.10
249.30	1.00	9.10
252.60	1.00	9.10
255.90	1.00	9.10
259.20	1.00	9.11
262.50	1.00	9.11
265.70	1.00	9.11
269.00	1.00	9.11
272.30	1.00	9.11
275.60	1.00	9.11
278.90	1.00	9.12
282.20	1.00	9.12

285.40	1.00	9.12
288.70	1.00	9.12
292.00	1.00	9.13
295.30	1.00	9.13
298.60	1.00	9.13
301.80	1.00	9.13
305.10	1.00	9.13
308.40	1.00	9.14
311.70	1.00	9.14
315.00	1.00	9.14
318.20	1.00	9.14
321.50	1.00	9.14
324.80	1.00	9.15
328.10	1.00	9.15
331.40	1.00	9.15
334.60	1.00	9.15
337.90	1.00	9.15
341.20	1.00	9.16
344.50	1.00	9.16
347.80	1.00	9.16
351.00	1.00	9.16
354.30	1.00	9.16
357.60	1.00	9.17
360.90	1.00	9.17
364.20	1.00	9.17
367.50	1.00	9.17
370.70	1.00	9.18
374.00	1.00	9.18
377.30	1.00	9.18
380.60	1.00	9.18
383.90	1.00	9.18
387.10	1.00	9.19
390.40	1.00	9.19
393.70	1.00	9.19
397.00	1.00	9.19
400.30	1.00	9.19
403.50	1.00	9.20
406.80	1.00	9.20
410.10	1.00	9.20
413.40	1.00	9.20
416.70	1.00	9.21
419.90	1.00	9.21
423.20	1.00	9.21
426.50	1.00	9.21
429.80	1.00	9.21
433.10	1.00	9.22
436.40	1.00	9.22
439.60	1.00	9.22
442.90	1.00	9.22
446.20	1.00	9.23
449.50	1.00	9.23
452.80	1.00	9.23
456.00	1.00	9.24
459.30	1.00	9.24
462.60	1.00	9.24
465.90	1.00	9.25
469.20	1.00	9.25
472.40	1.00	9.25
475.70	1.00	9.26
479.00	1.00	9.26
482.30	1.00	9.27
485.60	1.00	9.27
488.80	1.00	9.27
492.10	1.00	9.28
495.40	1.00	9.28
498.70	1.00	9.29
502.00	1.00	9.29
505.20	1.00	9.29
508.50	1.00	9.30
511.80	1.00	9.30
515.10	1.00	9.31
518.40	1.00	9.31
521.70	1.00	9.31
524.90	1.00	9.32
528.20	1.00	9.32
531.50	1.00	9.33
534.80	1.00	9.33
538.10	1.00	9.34
541.30	1.00	9.34
544.60	1.00	9.34
547.90	1.00	9.35
551.20	1.00	9.35
554.50	1.00	9.36
557.70	1.00	9.36
561.00	1.00	9.36
564.30	1.00	9.37
567.60	1.00	9.37
570.90	1.00	9.37
574.10	1.00	9.37
577.40	1.00	9.38
580.70	1.00	9.39
584.00	1.00	9.40
587.30	1.00	9.42
590.50	1.00	9.44
593.80	1.00	9.46
597.10	1.00	9.47
600.40	1.00	9.49
603.70	1.00	9.51
607.00	1.00	9.52
610.20	1.00	9.54
613.50	1.00	9.56
616.80	1.00	9.57

620.10	1.00	9.57
623.40	1.00	9.58
626.60	1.00	9.58
629.90	1.00	9.59
633.20	1.00	9.59
636.50	1.00	9.60
639.80	1.00	9.61
643.00	1.00	9.62
646.30	1.00	9.63
649.60	1.00	9.64
652.90	1.00	9.65
656.20	1.00	9.67
659.40	1.00	9.70
662.70	1.00	9.82
1068.20	1.00	9.20
1149.90	1.00	9.15
1257.50	1.00	9.15
1353.50	1.00	9.15
1424.00	1.00	9.15
1577.00	1.00	9.15
1610.50	1.00	9.15
1819.10	1.00	9.16
2022.60	1.00	9.16
2079.00	1.00	9.16
2367.50	1.00	9.20
2596.50	1.00	9.18
5037.50	1.00	9.20

PART5 LOCATION OF V ZONES

STATION OF GUTTER	LOCATION OF ZONE
574.58	WINDWARD

PART6 NUMBERED A ZONES AND V ZONES

STATION OF GUTTER	ELEVATION	ZONE DESIGNATION		FHF
0.00	16.80	V22	EL=17	120
3.30	16.78	V22	EL=17	120
6.60	16.75	V22	EL=17	120
9.80	16.73	V22	EL=17	120
13.10	16.70	V22	EL=17	120
16.40	16.67	V22	EL=17	120
19.70	16.65	V22	EL=17	120
23.00	16.62	V22	EL=17	120
26.20	16.60	V22	EL=17	120
29.50	16.57	V22	EL=17	120
32.80	16.55	V22	EL=17	120
36.10	16.52	V22	EL=17	120
39.40	16.51	V22	EL=17	120
41.78	16.50	V22	EL=16	120
42.70	16.50	V22	EL=16	120
45.90	16.48	V22	EL=16	120
49.20	16.47	V22	EL=16	120
52.50	16.45	V22	EL=16	120
55.80	16.44	V22	EL=16	120
59.10	16.42	V22	EL=16	120
62.30	16.40	V22	EL=16	120
65.60	16.38	V22	EL=16	120
68.90	16.37	V22	EL=16	120
72.20	16.35	V22	EL=16	120
75.50	16.33	V22	EL=16	120
78.70	16.31	V22	EL=16	120
82.00	16.29	V22	EL=16	120
85.30	16.27	V22	EL=16	120
88.60	16.25	V22	EL=16	120
91.90	16.23	V22	EL=16	120
95.10	16.22	V22	EL=16	120
98.40	16.20	V22	EL=16	120
101.70	16.18	V22	EL=16	120
105.00	16.16	V22	EL=16	120
108.30	16.14	V22	EL=16	120

111.50	16.13			
114.80	16.11	V22	EL=16	120
118.10	16.10	V22	EL=16	120
121.40	16.10	V22	EL=16	120
124.70	16.10	V22	EL=16	120
128.00	16.10	V22	EL=16	120
131.20	16.10	V22	EL=16	120
134.50	16.10	V22	EL=16	120
137.80	16.10	V22	EL=16	120
141.10	16.10	V22	EL=16	120
144.40	16.09	V22	EL=16	120
147.60	16.09	V23	EL=16	130
150.90	16.09	V23	EL=16	130
154.20	16.09	V23	EL=16	130
157.50	16.09	V23	EL=16	130
160.80	16.09	V23	EL=16	130
164.00	16.09	V23	EL=16	130
167.30	16.09	V23	EL=16	130
170.60	16.09	V23	EL=16	130
173.90	16.09	V23	EL=16	130
177.20	16.08	V23	EL=16	130
180.40	16.08	V23	EL=16	130
183.70	16.08	V23	EL=16	130
187.00	16.08	V23	EL=16	130
190.30	16.09	V23	EL=16	130
193.60	16.08	V23	EL=16	130
196.80	16.03	V23	EL=16	130
200.10	15.99	V23	EL=16	130
203.40	15.94	V23	EL=16	130
206.70	15.90	V23	EL=16	130
210.00	15.86	V23	EL=16	130
213.30	15.82	V23	EL=16	130
216.50	15.77	V23	EL=16	130
219.80	15.73	V23	EL=16	130
223.10	15.69	V23	EL=16	130
226.40	15.64	V23	EL=16	130
229.70	15.60	V23	EL=16	130
232.90	15.56	V23	EL=16	130
236.20	15.52	V23	EL=16	130
237.51	15.50	V23	EL=15	130
239.50	15.47	V23	EL=15	130
242.80	15.43	V23	EL=15	130
246.10	15.39	V23	EL=15	130
249.30	15.35	V23	EL=15	130
252.60	15.30	V23	EL=15	130
255.90	15.26	V23	EL=15	130
259.20	15.22	V23	EL=15	130
262.50	15.18	V23	EL=15	130
265.70	15.13	V23	EL=15	130
269.00	15.07	V23	EL=15	130
272.30	15.05	V23	EL=15	130

275.60	15.02			
278.90	15.00	V23	EL=15	130
282.20	14.98	V23	EL=15	130
285.40	14.95	V23	EL=15	130
288.70	14.93	V23	EL=15	130
292.00	14.91	V23	EL=15	130
295.30	14.88	V23	EL=15	130
298.60	14.86	V23	EL=15	130
301.80	14.83	V23	EL=15	130
305.10	14.81	V23	EL=15	130
308.40	14.78	V23	EL=15	130
311.70	14.76	V23	EL=15	130
315.00	14.73	V23	EL=15	130
318.20	14.70	V23	EL=15	130
321.50	14.68	V23	EL=15	130
324.80	14.65	V23	EL=15	130
328.10	14.63	V23	EL=15	130
331.40	14.60	V23	EL=15	130
334.60	14.58	V23	EL=15	130
337.90	14.55	V23	EL=15	130
341.20	14.53	V23	EL=15	130
344.44	14.50	V23	EL=15	130
344.50	14.50	V23	EL=14	130
347.80	14.47	V23	EL=14	130
351.00	14.45	V23	EL=14	130
354.30	14.42	V23	EL=14	130
357.60	14.40	V23	EL=14	130
360.90	14.37	V23	EL=14	130
364.20	14.35	V23	EL=14	130
367.50	14.32	V23	EL=14	130
370.70	14.28	V23	EL=14	130
374.00	14.24	V23	EL=14	130
377.30	14.21	V23	EL=14	130
380.60	14.17	V23	EL=14	130
383.90	14.13	V23	EL=14	130
387.10	14.09	V23	EL=14	130
390.40	14.07	V23	EL=14	130
393.70	14.05	V23	EL=14	130
397.00	14.04	V23	EL=14	130
400.30	14.03	V23	EL=14	130
403.50	14.03	V23	EL=14	130
406.80	14.02	V23	EL=14	130
410.10	13.96	V23	EL=14	130
413.40	13.91	V23	EL=14	130
416.70	13.84	V23	EL=14	130
419.90	13.77	V23	EL=14	130
423.20	13.69	V23	EL=14	130
426.50	13.64	V23	EL=14	130
429.80	13.62	V23	EL=14	130
433.10	13.60	V23	EL=14	130
436.40	13.55	V23	EL=14	130

438.13	13.50	V23	EL=13	130
439.60	13.46	V23	EL=13	130
442.90	13.38	V23	EL=13	130
446.20	13.30	V23	EL=13	130
449.50	13.29	V23	EL=13	130
452.80	13.29	V23	EL=13	130
456.00	13.29	V23	EL=13	130
459.30	13.25	V23	EL=13	130
462.60	13.16	V23	EL=13	130
465.90	13.07	V23	EL=13	130
469.20	13.01	V23	EL=13	130
472.40	12.98	V23	EL=13	130
475.70	12.96	V23	EL=13	130
479.00	12.94	V23	EL=13	130
482.30	12.92	V23	EL=13	130
485.60	12.90	V23	EL=13	130
488.80	12.86	V23	EL=13	130
492.10	12.78	V23	EL=13	130
495.40	12.73	V23	EL=13	130
498.70	12.71	V23	EL=13	130
502.00	12.66	V23	EL=13	130
505.20	12.61	V23	EL=13	130
508.50	12.61	V23	EL=13	130
511.80	12.60	V23	EL=13	130
515.10	12.58	V23	EL=13	130
518.40	12.51	V23	EL=13	130
519.07	12.50	V23	EL=12	130
521.70	12.45	V23	EL=12	130
524.90	12.43	V23	EL=12	130
528.20	12.43	V23	EL=12	130
531.50	12.42	V23	EL=12	130
534.80	12.40	V23	EL=12	130
538.10	12.38	V23	EL=12	130
541.30	12.32	V23	EL=12	130
544.60	12.27	V23	EL=12	130
547.90	12.21	V23	EL=12	130
551.20	12.16	V23	EL=12	130
554.50	12.19	V23	EL=12	130
557.70	12.04	V23	EL=12	130
561.00	12.05	V23	EL=12	130
564.30	11.97	V23	EL=12	130
567.60	11.93	V23	EL=12	130
570.90	11.77	V23	EL=12	130
573.98	11.50	V23	EL=11	130
574.10	11.49	V23	EL=11	130
574.58	11.47	A17	EL=11	85
577.40	11.36	A17	EL=11	85
580.70	11.25	A17	EL=11	85
584.00	11.16	A17	EL=11	85
587.30	11.07	A17	EL=11	85
590.50	11.04	A17	EL=11	85

593.80	11.07			
597.10	10.89	A17	EL=11	85
600.40	10.91	A17	EL=11	85
603.70	10.88	A17	EL=11	85
607.00	10.84	A17	EL=11	85
610.20	10.81	A17	EL=11	85
613.50	10.85	A17	EL=11	85
616.80	10.88	A17	EL=11	85
620.10	10.88	A17	EL=11	85
623.40	10.89	A17	EL=11	85
626.60	10.87	A17	EL=11	85
629.90	10.77	A17	EL=11	85
633.20	10.69	A17	EL=11	85
636.50	10.67	A17	EL=11	85
639.80	10.65	A17	EL=11	85
643.00	10.61	A17	EL=11	85
646.30	10.57	A17	EL=11	85
649.60	10.50	A17	EL=11	85
649.69	10.50	A17	EL=10	85
652.90	10.39	A17	EL=10	85
656.20	10.30	A17	EL=10	85
659.40	10.21	A17	EL=10	85
662.70	10.01	A17	EL=10	85
664.10	9.82			
1068.20	9.20	A17	EL= 9	85
1073.90	9.20			
1088.10	9.20	A17	EL= 9	85
1093.00	9.20			
1149.90	9.15	A17	EL= 9	85
1240.50	9.35	A17	EL= 9	85
1257.50	9.38	A17	EL= 9	85
1336.50	9.47	A17	EL= 9	85
1353.50	9.49	A17	EL= 9	85
1360.08	9.50	A17	EL=10	85
1415.50	9.55	A17	EL=10	85
1416.67	9.50	A17	EL= 9	85
1424.00	9.16	A17	EL= 9	85
1559.96	9.50	A17	EL=10	85
1571.00	9.52	A17	EL=10	85
1577.00	9.54	A17	EL=10	85
1604.00	9.59	A17	EL=10	85
1610.50	9.60	A17	EL=10	85
1693.76	9.50	A17	EL= 9	85
1707.70	9.16			
1819.10	9.16	A17	EL= 9	85
1933.20	9.16			
2022.60	9.16	A17	EL= 9	85
2049.00	9.25	A17	EL= 9	85
2079.00	9.31	A17	EL= 9	85
2231.90	9.50	A17	EL=10	85
2240.46	9.50	A17	EL= 9	85
2311.20	9.17			
2367.50	9.20	A17	EL= 9	85
2369.40	9.20			
2520.40	9.20			

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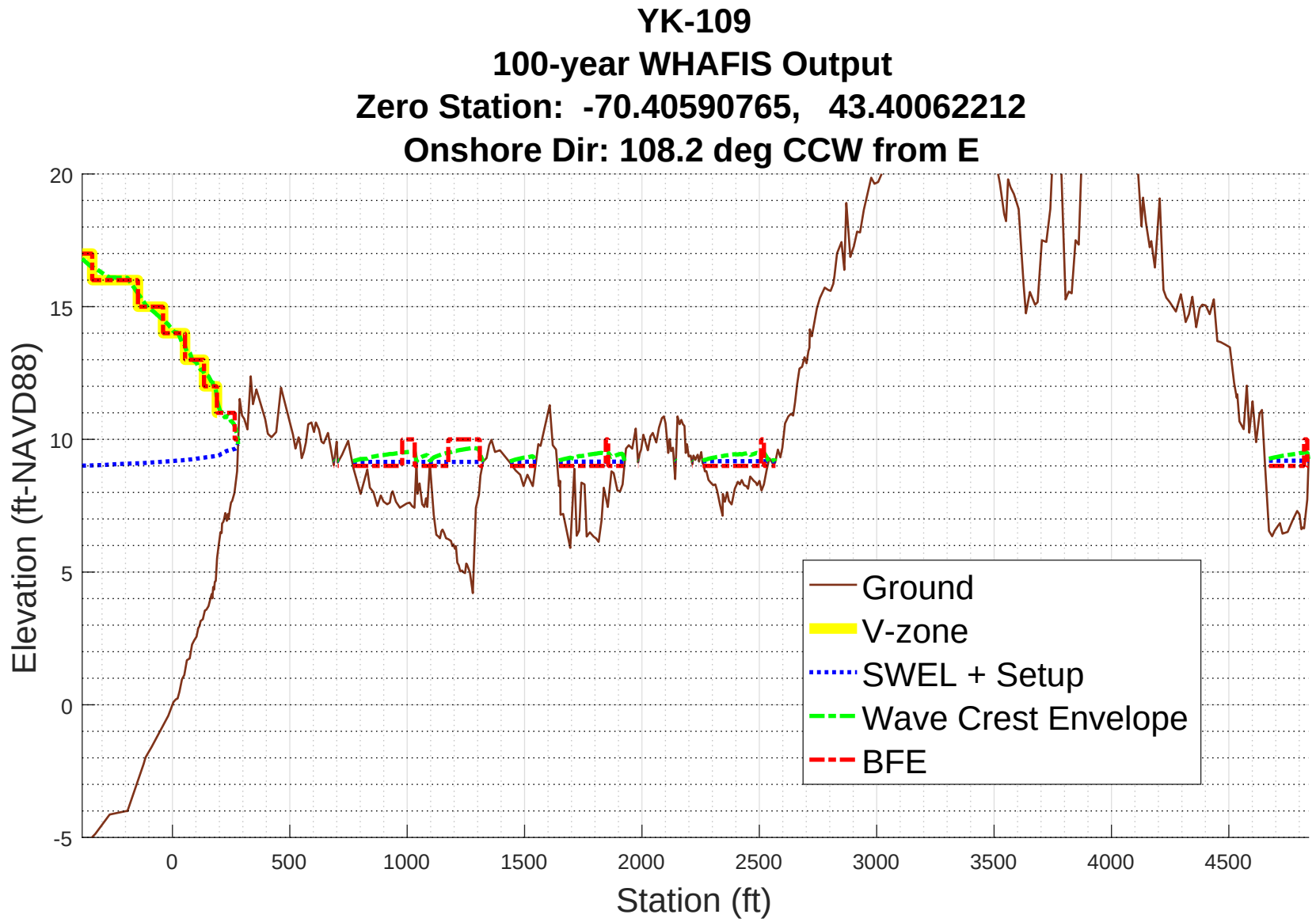
                                                    A17  EL= 9      85
                          2528.90           9.20
                          2596.50           9.18
                                                    A17  EL= 9      85
                          2600.80           9.18
                          2627.10           9.18
                                                    A17  EL= 9      85
                          2628.00           9.18
                          2641.80           9.18
                                                    A17  EL= 9      85
                          2892.58           9.50
                                                    A17  EL=10      85
                          2904.10           9.50
                                                    A17  EL= 9      85
                          2924.10           9.18
                          2935.50           9.18
                                                    A17  EL= 9      85
                          2953.20           9.18
                          5037.50           9.20
                                                    A17  EL= 9      85
                          5203.28           9.50
                                                    A17  EL=10      85
                          5218.73           9.50
                                                    A17  EL= 9      85
                          5224.00           9.20
                               ZONE TERMINATED AT END OF TRANSECT
                               PART 7   POSTSCRIPT NOTES
                     PS#  1   START(386190.0292,4806153.2539)
                     PS#  2   END(385540.2958,4808129.6323)
-1.000000e+00
```


YK-109
100-year WHAFIS Output
Zero Station: -70.40590765, 43.40062212
Onshore Dir: 108.2 deg CCW from E
Elevation (ft-NAVD88)
Station (ft)
20
15
10
5
0
-5
0
500
1000
1500
2000
2500
3000
3500
4000
4500
Ground
V-zone
SWEL + Setup
Wave Crest Envelope
BFE

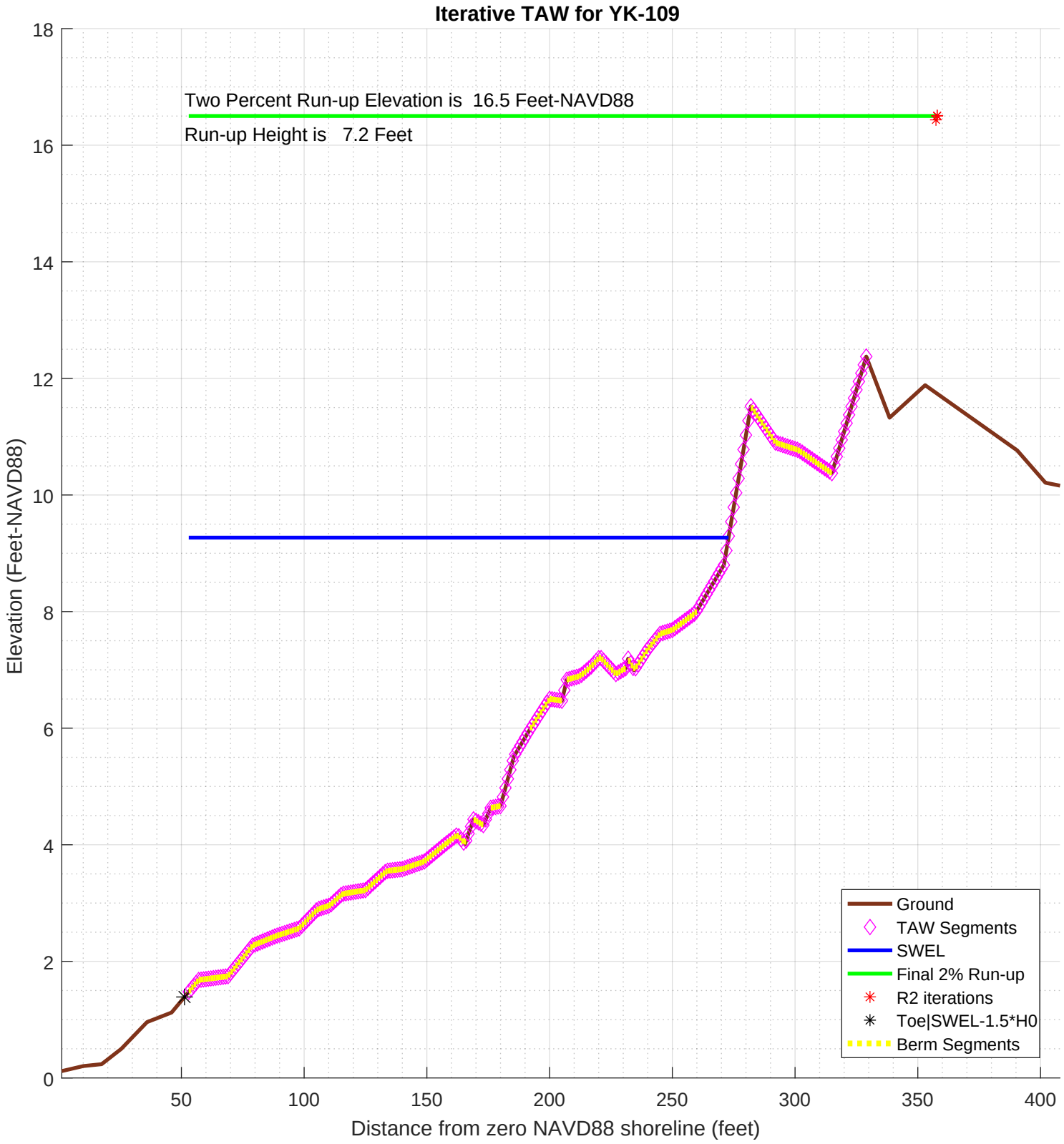
```
_____________________________________________________________
PART 4: TAW

Input Paramters:
    TWL- 9.0102 feet
    HS-  5.2103 feet
    PER- 13.7882 seconds
    TOE- x: 25.5 , z: 0.49869 feet
    TOP- x: 329 , z: 12.3753 feet
    GBERM-   0.6
    GGROUGH- 0.6
    GBETA-   1
    GPERM-   1

RUNNING TAW:
...
MATLAB DIARY: /4_taw/logfiles/YK-109-DIARY.txt

CHECKING VALIDITY:
...
TAW method is valid!
Using TAW runup to detemine runup elevation
TAW 2% runup: 16.501 feet

PART 4 COMPLETE_____________________________________________
```


Iterative TAW for YK-109
Two Percent Run-up Elevation is 16.5 Feet-NAVD88
Run-up Height is 7.2 Feet
Elevation (Feet-NAVD88)
Distance from zero NAVD88 shoreline (feet)
0
2
4
6
8
10
12
14
16
18
50
100
150
200
250
300
350
400
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 Kennebunkport, York county, Maine
% TRANSECT ID: YK-109
% calculation by SJH, Ransom Consulting, Inc. 02-Apr-2020
% 100-year wave runup using TAW methodology
% including berm and weighted average with foreshore if necessary
%
% chk nld 20200220
%
% This script assumes that the incident wave conditions provided
% as input in the configuration section below are the
% appropriate values located at the end of the foreshore
% or toe of the slope on which the run-up is being calculated
% the script does not attempt to apply a depth limit or any other
% transformation to the incident wave conditions other than
% conversion of the peak wave period to the spectral mean wave
% as recommended in the references below
%
% references:
%
% Van der Meer, J.W., 2002. Technical Report Wave Run-up and
% Wave Overtopping at Dikes. TAW Technical Advisory Committee on
% Flood Defence, The Netherlands.
%
% FEMA. 2007,  Atlantic Ocean and Gulf of Mexico Coastal Guidelines Update
%
%
%

%-------------------------------------------------------------------------
% CONFIG
%-------------------------------------------------------------------------
fname='inpfiles/YK-109sta_ele_include.csv';   % file with station, elevation, include
                                    % third colunm is 0 for excluded points
imgname='logfiles/YK-109-runup';
SWEL=9.0102;  % 100-yr still water level including wave setup.
H0=5.2103;    % significant wave height at toe of structure
Tp=13.7882;    % peak period, 1/fma,
T0=Tp/1.1;

gamma_berm=0.61088;   % this may get changed automatically below
gamma_rough=0.6;
gamma_beta=1;
gamma_perm=1;

setupAtToe=0.19397;
maxSetup=0.8081;   % only used in case of berm/shallow foreshore weighted average

plotTitle='Iterative TAW for YK-109'

plotTitle =

Iterative TAW for YK-109



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

SWEL=SWEL+setupAtToe

SWEL =

    9.20417

SWEL_fore=SWEL+maxSetup

SWEL_fore =

   10.01227



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

L0 =

  803.953420258207


% 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 =

                    1.38872


% 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 =

                   17.01962


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

toe_sta =

          51.2594075418113

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

top_sta =

          361.488926197972


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

top_sta =

          361.488926197972

toe_sta

toe_sta =

          51.2594075418113




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

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

ans =

-!!- Location of SWEL-1.5*H0 is 250.9 ft landward of toe of slope


ans =

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


ans =

-!!-       setup is adjusted to 0.26 feet


ans =

-!!-       SWEL is adjusted to 9.27 feet


k =

     1
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23
    24
    25
    26
    27
    28



% now iterate converge on a runup elevation
tol=0.01;  % convergence criteria
R2del=999;
R2_new=3*H0; %initial guess
R2=R2_new;
iter=0;
R2_all=[];
topStaAll=[];
Berm_Segs=[];
TAW_ALWAYS_VALID=1;
while(abs(R2del) > tol && iter <= 25)
    iter=iter+1;
    sprintf ('!----------------- STARTING ITERATION %d -----------------!',iter)
    % elevation of toe of slope
    Ztoe
    % station of toe slope (relative to 0-NAVD88 shoreline
    toe_sta
    % station of top of slope/extent of 2% run-up
    top_sta
    % elevation of top of slope/extent of 2% run-up
    Z2
    % incident significant wave height
    H0
```

```
% incident spectral peak wave period
Tp
% incident spectral mean wave period
T0

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

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

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

% check validity
TAW_VALID=1;
if (Irb*gamma_berm < 0.5 | Irb*gamma_berm > 10 )
   sprintf('!!! - - Iribaren number: %6.2f is outside the valid range (0.5-10), TAW NOT VALID - - !!!\n', Irb*gam
   TAW_VALID=0;
else
   sprintf('!!! - - Iribaren number: %6.2f is in the valid range (0.5-10), TAW RECOMMENDED - - !!!\n', Irb*gamma_
end
```

```
    islope=1/slope;
    if (slope < 1/8 | slope > 1)
       sprintf('!!! - - slope: 1:%3.1f V:H is outside the valid range (1:8 - 1:1), TAW NOT VALID - - !!!\n', islope)
       TAW_VALID=0;
    else
       sprintf('!!! - - slope: 1:%3.1f V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!\n', islope)
    end
    if TAW_VALID == 0
       TAW_ALWAYS_VALID=0;
    end

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


    % check to see if we need to evaluate a shallow foreshore
    if berm_width > 0.25 * L0;
       disp ('!   Berm_width is greater than 1/4 wave length')
       disp ('!   Runup will be weighted average with foreshore calculation assuming depth limited wave height on ber
       % do the foreshore calculation
       fore_H0=0.78*(SWEL_fore-min(Berm_Heights))
       % get upper slope
       fore_toe_sta=-999;
       fore_toe_dep=-999;
       for kk=length(dep)-1:-1:1
          ddep=dep(kk+1)-dep(kk);
          dsta=sta(kk+1)-sta(kk);
          s=ddep/dsta;
          if s < 1/15
             break
          end
          fore_toe_sta=sta(kk);
          fore_toe_dep=dep(kk);
          upper_slope=(Z2-fore_toe_dep)/(top_sta-fore_toe_sta)
       end
       fore_Irb=upper_slope/(sqrt(fore_H0/L0));
       fore_gamma=gamma_perm*gamma_beta*gamma_rough;
       if (fore_Irb < 1.8)
          fore_R2=fore_gamma*fore_H0*1.77*fore_Irb;
       else
          fore_R2=fore_gamma*fore_H0*(4.3-(1.6/sqrt(fore_Irb)));
       end
       if berm_width >= L0
          R2_new=fore_R2
          disp ('berm is wider than one wavelength, use full shallow foreshore solution');
       else
          w2=(berm_width-0.25*L0)/(0.75*L0)
          w1=1-w2
          R2_new=w2*fore_R2 + w1*R2_new
       end
    end % end berm width check
    % convergence criterion
    R2del=abs(R2-R2_new)
    R2_all(iter)=R2_new;
    % get the new top station (for plot purposes)
    Z2=R2_new+SWEL
    top_sta=-999;
    for kk=1:length(sta)-1
       if ((Z2 > dep(kk)) & (Z2 <= dep(kk+1)))    % here is the intersection of z2 with profile
          top_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Z2)
          break;
       end
    end
    if top_sta==-999
       dy=Z2-dep(end);
       top_sta=sta(end)+dy/S(end);
    end
    topStaAll(iter)=top_sta;
end
ans =
!----------------- STARTING ITERATION 1 -----------------!
Ztoe =
                1.38872
toe_sta =
        51.2594075418113
top_sta =
        361.488926197972
Z2 =
               17.01962
H0 =
                 5.2103
Tp =
                13.7882
T0 =
        12.5347272727273
R2 =
                15.6309
```

```
Z2 =
          24.8993453256456
top_sta =
          416.611174016409
Lslope =
          365.351766474598
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 1
dh =
          7.76611882564563
rdh_sum =
         0.848255617431113
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 2
dh =
          7.71541532564563
rdh_sum =
          1.69098654792369
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 3
dh =
          7.66471132564563
rdh_sum =
          2.52811265393303
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 4
dh =
          7.61400732564563
rdh_sum =
           3.3595551616345
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 5
dh =
          7.58592132564563
rdh_sum =
          4.18781598962189
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 6
dh =
          7.58045332564563
rdh_sum =
          5.01545463942327
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 7
dh =
          7.57498532564563
rdh_sum =
          5.84247022067872
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 8
dh =
          7.56951732564563
rdh_sum =
          6.66886184472152
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 9
dh =
          7.56404932564563
rdh_sum =
          7.49462862458054
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 10
dh =
          7.55858132564563
rdh_sum =
          8.31976967498268
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 11
dh =
          7.55311282564563
rdh_sum =
          9.14428405501672
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 12
dh =
          7.54764432564563
rdh_sum =
          9.96817088265169
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 13
dh =
          7.54217632564563
rdh_sum =
          10.7914293350618
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 14
dh =
          7.53670832564563
rdh_sum =
          11.6140585337903
```

```
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 15
dh =
          7.53124032564563
rdh_sum =
          12.4360576020906
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 16
dh =
          7.52577232564563
rdh_sum =
          13.2574256649283
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 17
dh =
          7.49679182564563
rdh_sum =
          14.0754348482489
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 18
dh =
          7.44429832564563
rdh_sum =
          14.8872983329729
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 19
dh =
          7.39180482564563
rdh_sum =
           15.692938013876
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 20
dh =
          7.33931132564563
rdh_sum =
          16.4922773444658
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 21
dh =
          7.28681782564563
rdh_sum =
          17.2852413561528
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 22
dh =
          7.23432432564563
rdh_sum =
           18.071756677026
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 23
dh =
          7.18183082564563
rdh_sum =
          18.8517515502285
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 24
dh =
          7.12933782564563
rdh_sum =
          19.6251559150329
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 25
dh =
          7.07684432564563
rdh_sum =
          20.3919012357362
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 26
dh =
          7.02435082564563
rdh_sum =
          21.1519207068156
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 27
dh =
          6.98947032564563
rdh_sum =
          21.9074349174411
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 28
dh =
          6.97220282564563
rdh_sum =
          22.6607083236397
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 29
dh =
          6.95493532564563
rdh_sum =
          23.4117340616669
```

```
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 30
dh =
          6.93766732564563
rdh_sum =
           24.160505263312
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 31
dh =
          6.92039982564563
rdh_sum =
          24.9070152520235
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 32
dh =
          6.90313232564563
rdh_sum =
          25.6512573473466
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 33
dh =
          6.88586482564563
rdh_sum =
          26.3932249302866
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 34
dh =
          6.86859732564563
rdh_sum =
          27.1329114434886
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 35
dh =
          6.85132982564563
rdh_sum =
          27.8703103914149
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 36
dh =
          6.83492582564563
rdh_sum =
           28.605530208927
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 37
dh =
          6.82024832564563
rdh_sum =
          29.3387953685961
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 38
dh =
          6.80643432564563
rdh_sum =
          30.0702166930533
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 39
dh =
          6.79261982564563
rdh_sum =
          30.7997901015478
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 40
dh =
          6.77880532564563
rdh_sum =
          31.5275116120467
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 41
dh =
          6.76499132564563
rdh_sum =
          32.2533773418801
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 42
dh =
          6.75117732564563
rdh_sum =
          32.9773833736096
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 43
dh =
          6.73736332564563
rdh_sum =
          33.6995258220515
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 44
dh =
          6.72354932564563
rdh_sum =
          34.4198008343446
```

```
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 45
dh =
          6.70973532564563
rdh_sum =
          35.1382045900163
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 46
dh =
          6.68095632564563
rdh_sum =
           35.852697788433
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 47
dh =
          6.63721182564563
rdh_sum =
          36.5612160567695
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 48
dh =
          6.59346732564563
rdh_sum =
          37.2637231291401
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 49
dh =
          6.54972282564563
rdh_sum =
          37.9601837851373
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 50
dh =
          6.50597782564563
rdh_sum =
          38.6505637862654
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 51
dh =
          6.46223332564563
rdh_sum =
          39.3348300905878
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 52
dh =
          6.41848882564563
rdh_sum =
          40.0129506501654
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 53
dh =
          6.38239932564563
rdh_sum =
           40.685977561138
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 54
dh =
          6.36162082564563
rdh_sum =
           41.356062478056
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 55
dh =
          6.34849782564563
rdh_sum =
          42.0242858846649
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 56
dh =
          6.33537432564563
rdh_sum =
          42.6906450767993
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 57
dh =
          6.32225082564563
rdh_sum =
          43.3551374503503
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 58
dh =
          6.30256582564563
rdh_sum =
          44.0168248129168
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 59
dh =
          6.26975732564563
rdh_sum =
          44.6738245276504
```

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ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 60
dh =
          6.23038732564563
rdh_sum =
          45.3251788594287
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 61
dh =
          6.19101732564563
rdh_sum =
          45.9708664859469
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 62
dh =
          6.15164732564563
rdh_sum =
          46.6108668832074
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 63
dh =
          6.12039282564563
rdh_sum =
          47.2463383003591
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 64
dh =
          6.10536982564563
rdh_sum =
          47.8796284822891
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 65
dh =
          6.09846282564563
rdh_sum =
           48.511914895596
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 66
dh =
          6.09155582564563
rdh_sum =
          49.1431969666819
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 67
dh =
          6.08464882564563
rdh_sum =
          49.7734741263038
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 68
dh =
          6.07774182564563
rdh_sum =
          50.4027458095758
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 69
dh =
          6.07083482564563
rdh_sum =
          51.0310114559721
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 70
dh =
          6.06392782564563
rdh_sum =
           51.658270509329
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 71
dh =
          6.05702082564563
rdh_sum =
          52.2845224178473
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 72
dh =
          6.05011382564563
rdh_sum =
          52.9097666340949
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 73
dh =
          6.02736132564563
rdh_sum =
          53.5316875718993
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 74
dh =
          5.98876332564563
rdh_sum =
          54.1479577667726
```

```
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 75
dh =
          5.95016532564563
rdh_sum =
          54.7585614750199
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 76
dh =
          5.91156732564563
rdh_sum =
          55.3634837202232
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 77
dh =
          5.87296932564563
rdh_sum =
          55.9627102952693
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 78
dh =
          5.83437082564563
rdh_sum =
          56.5562276902341
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 79
dh =
          5.79577232564563
rdh_sum =
          57.1440232419627
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 80
dh =
          5.75717432564563
rdh_sum =
          57.7260851364406
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 81
dh =
          5.72696382564563
rdh_sum =
          58.3036515289516
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 82
dh =
          5.71352882564563
rdh_sum =
          58.8792166244575
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 83
dh =
          5.70848182564563
rdh_sum =
          59.4540295894656
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 84
dh =
          5.70343432564563
rdh_sum =
          60.0280901762341
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 85
dh =
          5.69838682564563
rdh_sum =
          60.6013982132672
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 86
dh =
          5.69333932564563
rdh_sum =
          61.1739535308118
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 87
dh =
          5.68829182564563
rdh_sum =
          61.7457559608578
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 88
dh =
          5.67847732564563
rdh_sum =
           62.316093981034
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 89
dh =
          5.66389582564563
rdh_sum =
          62.8842551796871
```

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ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 90
dh =
          5.64931432564563
rdh_sum =
          63.4502382396087
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 91
dh =
          5.63473282564563
rdh_sum =
          64.0140418856828
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 92
dh =
          5.62015132564563
rdh_sum =
          64.5756648849101
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 93
dh =
          5.60556982564563
rdh_sum =
          65.1351060464325
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 94
dh =
          5.59098832564563
rdh_sum =
          65.6923642215553
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 95
dh =
          5.57640682564563
rdh_sum =
          66.2474383037701
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 96
dh =
          5.56182532564563
rdh_sum =
          66.8003272287756
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 97
dh =
          5.53716532564563
rdh_sum =
           67.349518347071
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 98
dh =
          5.50242732564563
rdh_sum =
          67.8934958810016
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 99
dh =
          5.46768882564563
rdh_sum =
          68.4322549320602
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 100
dh =
          5.43295032564563
rdh_sum =
          68.9657912491122
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 101
dh =
          5.39821232564563
rdh_sum =
          69.4941012291069
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 102
dh =
          5.36347382564563
rdh_sum =
          70.0171816917753
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 103
dh =
          5.32873532564563
rdh_sum =
          70.5350301056271
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 104
dh =
          5.29399732564563
rdh_sum =
           71.047644588375
```

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ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 105
dh =
          5.25974132564563
rdh_sum =
          71.5550964048885
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 106
dh =
          5.22645032564563
rdh_sum =
          72.0575302222905
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 107
dh =
          5.19364232564563
rdh_sum =
          72.5550186016048
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 108
dh =
          5.16083382564563
rdh_sum =
          73.0475617131806
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 109
dh =
          5.12802532564563
rdh_sum =
          73.5351602865434
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 110
dh =
          5.11708932564563
rdh_sum =
          74.0211109513435
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 111
dh =
          5.14989782564563
rdh_sum =
          74.5120058036855
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 112
dh =
          5.20457832564563
rdh_sum =
           75.011142658953
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 113
dh =
          5.21512382564563
rdh_sum =
          75.5118691358874
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 117
dh =
          4.84505282564563
rdh_sum =
          75.9569225315907
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 118
dh =
          4.86965932564563
rdh_sum =
          76.4056641094895
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 119
dh =
          4.89426532564563
rdh_sum =
          76.8580966153833
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 120
dh =
          4.91887182564563
rdh_sum =
          77.3142227419547
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 124
dh =
          4.63179832564563
rdh_sum =
          77.7274605031275
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 125
dh =
          4.62359632564563
rdh_sum =
          78.1394809224232
```

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ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 126
dh =
          4.61539432564563
rdh_sum =
          78.5502845377831
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 127
dh =
          4.60719232564563
rdh_sum =
          78.9598718945882
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 140
dh =
          3.25794682564563
rdh_sum =
           79.182275633657
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 141
dh =
          3.19232982564563
rdh_sum =
          79.3965076068413
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 142
dh =
          3.12671282564563
rdh_sum =
          79.6026796409093
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 143
dh =
          3.06109582564563
rdh_sum =
          79.8009067166457
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 144
dh =
          2.99547932564563
rdh_sum =
          79.9913069830396
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 145
dh =
          2.92986282564563
rdh_sum =
          80.1740015908386
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 146
dh =
          2.86424582564563
rdh_sum =
           80.349114648833
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 147
dh =
          2.79862882564563
rdh_sum =
          80.5167732918083
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 148
dh =
          2.76910132564563
rdh_sum =
          80.6811197215741
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 149
dh =
          2.77566282564563
rdh_sum =
          80.8461998906477
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 150
dh =
          2.78222432564563
rdh_sum =
          81.0120151096002
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 151
dh =
          2.78878632564563
rdh_sum =
          81.1785667422881
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 152
dh =
          2.79534832564563
rdh_sum =
          81.3458560937231
```

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ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 155
dh =
          2.43177132564563
rdh_sum =
           81.47431353211
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 156
dh =
          2.41984082564563
rdh_sum =
          81.6015698950754
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 157
dh =
          2.40791032564563
rdh_sum =
          81.7276300047683
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 158
dh =
          2.39598032564563
rdh_sum =
          81.8524987486434
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 159
dh =
          2.38404982564563
rdh_sum =
           81.976180929705
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 160
dh =
          2.36598832564563
rdh_sum =
          82.0980760506278
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 161
dh =
          2.33566582564563
rdh_sum =
           82.216996206662
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 162
dh =
          2.29921232564563
rdh_sum =
          82.3323820581369
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 163
dh =
          2.26275832564563
rdh_sum =
          82.4442800104416
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 164
dh =
          2.22630432564563
rdh_sum =
          82.5527369390318
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 165
dh =
          2.18464282564563
rdh_sum =
          82.6573192202618
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 166
dh =
          2.13777382564563
rdh_sum =
          82.7576171318566
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 167
dh =
          2.09090482564563
rdh_sum =
          82.8537104758807
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 168
dh =
          2.06710982564563
rdh_sum =
          82.9477000071846
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 169
dh =
          2.08946282564563
rdh_sum =
          83.0436652653811
```

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ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 170
dh =
          2.13488982564563
rdh_sum =
          83.1437021436228
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 171
dh =
          2.18031682564563
rdh_sum =
          83.2478856580707
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 172
dh =
          2.22574382564563
rdh_sum =
          83.3562900471524
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 173
dh =
          2.27117082564563
rdh_sum =
          83.4689887576381
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 174
dh =
          2.31659782564563
rdh_sum =
          83.5860544308647
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 175
dh =
          2.32700832564563
rdh_sum =
          83.7041310260816
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 176
dh =
          2.30240182564563
rdh_sum =
           83.819824263379
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 177
dh =
          2.27779532564563
rdh_sum =
          83.9331552917301
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 178
dh =
          2.25318932564563
rdh_sum =
          84.0441454374541
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 180
dh =
          2.11621432564563
rdh_sum =
          84.1424993069838
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 181
dh =
          2.19495432564563
rdh_sum =
          84.2480348039705
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 182
dh =
          2.23760532564563
rdh_sum =
          84.3575534359086
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 183
dh =
          2.20807782564563
rdh_sum =
          84.4643076075868
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 184
dh =
          2.14246082564563
rdh_sum =
          84.5650303881152
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 185
dh =
          2.07684382564563
rdh_sum =
          84.6598780226891
```

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ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 186
dh =
          2.01122732564563
rdh_sum =
          84.7490090985171
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 187
dh =
          1.94561082564563
rdh_sum =
          84.8325843944113
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 188
dh =
          1.88655532564563
rdh_sum =
          84.9112986996486
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 189
dh =
          1.83406182564563
rdh_sum =
          84.9858042039234
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 190
dh =
          1.78156832564563
rdh_sum =
          85.0562074709875
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 191
dh =
          1.72907482564563
rdh_sum =
          85.1226160919853
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 192
dh =
          1.67658182564563
rdh_sum =
          85.1851386950022
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 193
dh =
          1.64377332564563
rdh_sum =
          85.2452880865953
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 194
dh =
          1.63064982564563
rdh_sum =
          85.3045002225038
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 195
dh =
          1.61752632564563
rdh_sum =
          85.3627820026147
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 196
dh =
          1.60440282564563
rdh_sum =
          85.4201403413781
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 197
dh =
          1.59127982564563
rdh_sum =
          85.4765822024862
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 198
dh =
          1.56917732564563
rdh_sum =
          85.5314961812989
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 199
dh =
          1.53809532564563
rdh_sum =
          85.5842950025976
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 200
dh =
          1.50701382564563
rdh_sum =
          85.6350179667766
```

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ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 201
dh =
          1.47593232564563
rdh_sum =
          85.6837045221589
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 202
dh =
          1.44485082564563
rdh_sum =
          85.7303942958719
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 203
dh =
          1.41376932564563
rdh_sum =
          85.7751270903689
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 204
dh =
          1.38268732564563
rdh_sum =
          85.8179428494174
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 205
dh =
          1.35160582564563
rdh_sum =
           85.858881746785
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 206
dh =
          1.32052432564563
rdh_sum =
          85.8979840898746
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 207
dh =
          1.27938232564563
rdh_sum =
          85.9347176837212
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 230
dh =
         -2.22269667435437
rdh_sum =
          85.9837855061443
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 231
dh =
         -2.16036067435437
rdh_sum =
          86.0301824792242
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 232
dh =
         -2.09802467435437
rdh_sum =
          86.0739798028252
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 233
dh =
         -2.03568867435437
rdh_sum =
          86.1152490848663
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 234
dh =
         -1.97335267435437
rdh_sum =
          86.1540623300808
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 235
dh =
         -1.91101667435437
rdh_sum =
          86.1904919287141
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 236
dh =
         -1.84868067435437
rdh_sum =
          86.2246106451611
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 237
dh =
         -1.78634467435437
rdh_sum =
          86.2564916065446
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ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 238
dh =
         -1.72400867435437
rdh_sum =
          86.286208291237
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 239
dh =
         -1.66167267435437
rdh_sum =
          86.3138345173268
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 240
dh =
         -1.62359767435437
rdh_sum =
          86.3402203406954
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 241
dh =
         -1.60978367435437
rdh_sum =
          86.3661629862386
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 242
dh =
         -1.59596967435437
rdh_sum =
          86.3916661082255
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 243
dh =
         -1.58215567435437
rdh_sum =
          86.4167333643137
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 244
dh =
         -1.56834167435437
rdh_sum =
          86.4413684155204
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 245
dh =
         -1.55452767435437
rdh_sum =
          86.4655749261945
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 246
dh =
         -1.54071367435437
rdh_sum =
          86.4893565639885
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 247
dh =
         -1.52689967435437
rdh_sum =
          86.5127169998297
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 248
dh =
         -1.51308567435437
rdh_sum =
          86.5356599078924
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 249
dh =
         -1.49543417435437
rdh_sum =
          86.5580746519191
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 250
dh =
         -1.47010817435437
rdh_sum =
          86.5797420982635
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 251
dh =
         -1.44094517435437
rdh_sum =
          86.6005643814635
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 252
dh =
         -1.41178217435437
rdh_sum =
          86.6205579638301
```

```
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 253
dh =
         -1.38261917435437
rdh_sum =
          86.6397393361451
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 254
dh =
         -1.35345617435437
rdh_sum =
          86.6581250170936
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 255
dh =
         -1.32429317435437
rdh_sum =
          86.6757315526972
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 256
dh =
         -1.29513017435437
rdh_sum =
          86.6925755157452
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 257
dh =
         -1.26596717435437
rdh_sum =
          86.7086735052255
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 258
dh =
         -1.23680417435437
rdh_sum =
           86.724042145754
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 259
dh =
         -1.20764117435437
rdh_sum =
          86.7386980870036
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 260
dh =
         -1.17847817435437
rdh_sum =
          86.7526580031323
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 261
dh =
         -1.14931517435437
rdh_sum =
          86.7659385922104
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 262
dh =
         -1.12015217435437
rdh_sum =
          86.7785565756465
ans =
!------- End Berm Factor Calculation, Iter: 1 ---------!
berm_width =
   219
rB =
         0.599422310485056
rdh_mean =
         0.396249116783774
gamma_berm =
         0.638098250625137
slope =
         0.160644629661688
Irb =
          1.99549337517634
gamma_berm =
         0.638098250625137
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.6
gamma =
         0.382858950375082
ans =
!!! - - Iribaren number:   1.27 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:6.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          7.04571530897157
```

```
!   Berm_width is greater than 1/4 wave length
!   Runup will be weighted average with foreshore calculation assuming depth limited wave height on berm
fore_H0 =
                6.63775593
upper_slope =
         0.142949999999999
upper_slope =
         0.142950011159322
upper_slope =
         0.142950022072332
upper_slope =
         0.142950032747096
upper_slope =
         0.142950043191332
upper_slope =
         0.142950053412426
upper_slope =
         0.142950063417456
upper_slope =
         0.142950073213199
upper_slope =
         0.142950072455386
upper_slope =
         0.142950081957829
upper_slope =
         0.142950091267547
upper_slope =
         0.142950100390343
upper_slope =
         0.142950109331792
upper_slope =
         0.142950118097247
w2 =
       0.0298717885582036
w1 =
         0.970128211441796
R2_new =
          7.16652805111859
R2del =
          8.46437194888141
Z2 =
          16.4349733767642
ans =
!----------------- STARTING ITERATION 2 -----------------!
Ztoe =
                   1.38872
toe_sta =
          51.2594075418113
top_sta =
          357.399058249488
Z2 =
          16.4349733767642
H0 =
                    5.2103
Tp =
                   13.7882
T0 =
          12.5347272727273
R2 =
          7.16652805111859
Z2 =
          16.4349733767642
top_sta =
          357.399058249488
Lslope =
          306.139650707676
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 1
dh =
          7.76611882564563
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 2
dh =
          7.71541532564563
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 3
dh =
          7.66471132564563
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 4
dh =
          7.61400732564563
rdh_sum =
     4
```

```
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 5
dh =
          7.58592132564563
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 6
dh =
          7.58045332564563
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 7
dh =
          7.57498532564563
rdh_sum =
     7
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 8
dh =
          7.56951732564563
rdh_sum =
     8
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 9
dh =
          7.56404932564563
rdh_sum =
     9
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 10
dh =
          7.55858132564563
rdh_sum =
    10
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 11
dh =
          7.55311282564563
rdh_sum =
    11
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 12
dh =
          7.54764432564563
rdh_sum =
    12
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 13
dh =
          7.54217632564563
rdh_sum =
    13
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 14
dh =
          7.53670832564563
rdh_sum =
    14
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 15
dh =
          7.53124032564563
rdh_sum =
    15
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 16
dh =
          7.52577232564563
rdh_sum =
    16
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 17
dh =
          7.49679182564563
rdh_sum =
    17
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 18
dh =
          7.44429832564563
rdh_sum =
    18
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 19
dh =
          7.39180482564563
rdh_sum =
    19
```

```
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 20
dh =
          7.33931132564563
rdh_sum =
    20
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 21
dh =
          7.28681782564563
rdh_sum =
    21
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 22
dh =
          7.23432432564563
rdh_sum =
    22
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 23
dh =
          7.18183082564563
rdh_sum =
    23
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 24
dh =
          7.12933782564563
rdh_sum =
          23.7734043648044
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 25
dh =
          7.07684432564563
rdh_sum =
          24.5401496855077
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 26
dh =
          7.02435082564563
rdh_sum =
          25.3001691565871
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 27
dh =
          6.98947032564563
rdh_sum =
          26.0556833672126
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 28
dh =
          6.97220282564563
rdh_sum =
          26.8089567734112
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 29
dh =
          6.95493532564563
rdh_sum =
          27.5599825114384
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 30
dh =
          6.93766732564563
rdh_sum =
          28.3087537130835
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 31
dh =
          6.92039982564563
rdh_sum =
           29.055263701795
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 32
dh =
          6.90313232564563
rdh_sum =
          29.7995057971181
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 33
dh =
          6.88586482564563
rdh_sum =
          30.5414733800581
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 34
dh =
          6.86859732564563
rdh_sum =
          31.2811598932601
```

```
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 35
dh =
          6.85132982564563
rdh_sum =
          32.0185588411864
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 36
dh =
          6.83492582564563
rdh_sum =
          32.7537786586985
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 37
dh =
          6.82024832564563
rdh_sum =
          33.4870438183676
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 38
dh =
          6.80643432564563
rdh_sum =
          34.2184651428248
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 39
dh =
          6.79261982564563
rdh_sum =
          34.9480385513193
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 40
dh =
          6.77880532564563
rdh_sum =
          35.6757600618182
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 41
dh =
          6.76499132564563
rdh_sum =
          36.4016257916515
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 42
dh =
          6.75117732564563
rdh_sum =
           37.125631823381
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 43
dh =
          6.73736332564563
rdh_sum =
           37.847774271823
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 44
dh =
          6.72354932564563
rdh_sum =
          38.5680492841161
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 45
dh =
          6.70973532564563
rdh_sum =
          39.2864530397878
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 46
dh =
          6.68095632564563
rdh_sum =
          40.0009462382045
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 47
dh =
          6.63721182564563
rdh_sum =
           40.709464506541
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 48
dh =
          6.59346732564563
rdh_sum =
          41.4119715789115
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 49
dh =
          6.54972282564563
rdh_sum =
          42.1084322349088
```

```
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 50
dh =
          6.50597782564563
rdh_sum =
          42.7988122360369
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 51
dh =
          6.46223332564563
rdh_sum =
          43.4830785403593
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 52
dh =
          6.41848882564563
rdh_sum =
          44.1611990999369
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 53
dh =
          6.38239932564563
rdh_sum =
          44.8342260109095
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 54
dh =
          6.36162082564563
rdh_sum =
          45.5043109278275
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 55
dh =
          6.34849782564563
rdh_sum =
          46.1725343344364
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 56
dh =
          6.33537432564563
rdh_sum =
          46.8388935265708
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 57
dh =
          6.32225082564563
rdh_sum =
          47.5033859001218
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 58
dh =
          6.30256582564563
rdh_sum =
          48.1650732626883
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 59
dh =
          6.26975732564563
rdh_sum =
          48.8220729774218
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 60
dh =
          6.23038732564563
rdh_sum =
          49.4734273092001
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 61
dh =
          6.19101732564563
rdh_sum =
          50.1191149357184
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 62
dh =
          6.15164732564563
rdh_sum =
          50.7591153329789
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 63
dh =
          6.12039282564563
rdh_sum =
          51.3945867501306
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 64
dh =
          6.10536982564563
rdh_sum =
          52.0278769320606
```

```
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 65
dh =
          6.09846282564563
rdh_sum =
          52.6601633453675
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 66
dh =
          6.09155582564563
rdh_sum =
          53.2914454164534
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 67
dh =
          6.08464882564563
rdh_sum =
          53.9217225760753
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 68
dh =
          6.07774182564563
rdh_sum =
          54.5509942593473
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 69
dh =
          6.07083482564563
rdh_sum =
          55.1792599057436
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 70
dh =
          6.06392782564563
rdh_sum =
          55.8065189591005
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 71
dh =
          6.05702082564563
rdh_sum =
          56.4327708676188
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 72
dh =
          6.05011382564563
rdh_sum =
          57.0580150838663
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 73
dh =
          6.02736132564563
rdh_sum =
          57.6799360216708
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 74
dh =
          5.98876332564563
rdh_sum =
          58.2962062165441
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 75
dh =
          5.95016532564563
rdh_sum =
          58.9068099247914
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 76
dh =
          5.91156732564563
rdh_sum =
          59.5117321699947
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 77
dh =
          5.87296932564563
rdh_sum =
          60.1109587450408
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 78
dh =
          5.83437082564563
rdh_sum =
          60.7044761400056
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 79
dh =
          5.79577232564563
rdh_sum =
          61.2922716917342
```

```
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 80
dh =
          5.75717432564563
rdh_sum =
          61.8743335862121
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 81
dh =
          5.72696382564563
rdh_sum =
          62.4518999787231
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 82
dh =
          5.71352882564563
rdh_sum =
           63.027465074229
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 83
dh =
          5.70848182564563
rdh_sum =
          63.6022780392371
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 84
dh =
          5.70343432564563
rdh_sum =
          64.1763386260056
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 85
dh =
          5.69838682564563
rdh_sum =
          64.7496466630387
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 86
dh =
          5.69333932564563
rdh_sum =
          65.3222019805833
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 87
dh =
          5.68829182564563
rdh_sum =
          65.8940044106293
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 88
dh =
          5.67847732564563
rdh_sum =
          66.4643424308055
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 89
dh =
          5.66389582564563
rdh_sum =
          67.0325036294586
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 90
dh =
          5.64931432564563
rdh_sum =
          67.5984866893802
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 91
dh =
          5.63473282564563
rdh_sum =
          68.1622903354543
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 92
dh =
          5.62015132564563
rdh_sum =
          68.7239133346816
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 93
dh =
          5.60556982564563
rdh_sum =
           69.283354496204
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 94
dh =
          5.59098832564563
rdh_sum =
          69.8406126713268
```

```
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 95
dh =
          5.57640682564563
rdh_sum =
          70.3956867535416
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 96
dh =
          5.56182532564563
rdh_sum =
          70.9485756785471
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 97
dh =
          5.53716532564563
rdh_sum =
          71.4977667968424
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 98
dh =
          5.50242732564563
rdh_sum =
          72.0417443307731
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 99
dh =
          5.46768882564563
rdh_sum =
          72.5805033818317
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 100
dh =
          5.43295032564563
rdh_sum =
          73.1140396988837
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 101
dh =
          5.39821232564563
rdh_sum =
          73.6423496788784
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 102
dh =
          5.36347382564563
rdh_sum =
          74.1654301415468
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 103
dh =
          5.32873532564563
rdh_sum =
          74.6832785553986
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 104
dh =
          5.29399732564563
rdh_sum =
          75.1958930381465
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 105
dh =
          5.25974132564563
rdh_sum =
            75.70334485466
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 106
dh =
          5.22645032564563
rdh_sum =
          76.2057786720619
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 107
dh =
          5.19364232564563
rdh_sum =
          76.7032670513763
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 108
dh =
          5.16083382564563
rdh_sum =
          77.1958101629521
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 109
dh =
          5.12802532564563
rdh_sum =
          77.6834087363148
```

```
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 110
dh =
          5.11708932564563
rdh_sum =
           78.169359401115
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 111
dh =
          5.14989782564563
rdh_sum =
           78.660254253457
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 112
dh =
          5.20457832564563
rdh_sum =
          79.1593911087245
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 113
dh =
          5.21512382564563
rdh_sum =
          79.6601175856588
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 117
dh =
          4.84505282564563
rdh_sum =
          80.1051709813622
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 118
dh =
          4.86965932564563
rdh_sum =
           80.553912559261
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 119
dh =
          4.89426532564563
rdh_sum =
          81.0063450651548
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 120
dh =
          4.91887182564563
rdh_sum =
          81.4624711917262
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 124
dh =
          4.63179832564563
rdh_sum =
           81.875708952899
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 125
dh =
          4.62359632564563
rdh_sum =
          82.2877293721947
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 126
dh =
          4.61539432564563
rdh_sum =
          82.6985329875546
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 127
dh =
          4.60719232564563
rdh_sum =
          83.1081203443597
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 140
dh =
          3.25794682564563
rdh_sum =
          83.3305240834285
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 141
dh =
          3.19232982564563
rdh_sum =
          83.5447560566128
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 142
dh =
          3.12671282564563
rdh_sum =
          83.7509280906808
```

```
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 143
dh =
          3.06109582564563
rdh_sum =
          83.9491551664172
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 144
dh =
          2.99547932564563
rdh_sum =
          84.1395554328111
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 145
dh =
          2.92986282564563
rdh_sum =
          84.3222500406101
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 146
dh =
          2.86424582564563
rdh_sum =
          84.4973630986045
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 147
dh =
          2.79862882564563
rdh_sum =
          84.6650217415798
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 148
dh =
          2.76910132564563
rdh_sum =
          84.8293681713456
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 149
dh =
          2.77566282564563
rdh_sum =
          84.9944483404192
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 150
dh =
          2.78222432564563
rdh_sum =
          85.1602635593717
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 151
dh =
          2.78878632564563
rdh_sum =
          85.3268151920595
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 152
dh =
          2.79534832564563
rdh_sum =
          85.4941045434945
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 155
dh =
          2.43177132564563
rdh_sum =
          85.6225619818814
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 156
dh =
          2.41984082564563
rdh_sum =
          85.7498183448469
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 157
dh =
          2.40791032564563
rdh_sum =
          85.8758784545398
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 158
dh =
          2.39598032564563
rdh_sum =
          86.0007471984149
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 159
dh =
          2.38404982564563
rdh_sum =
          86.1244293794765
```

```
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 160
dh =
          2.36598832564563
rdh_sum =
          86.2463245003993
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 161
dh =
          2.33566582564563
rdh_sum =
          86.3652446564335
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 162
dh =
          2.29921232564563
rdh_sum =
          86.4806305079084
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 163
dh =
          2.26275832564563
rdh_sum =
          86.5925284602131
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 164
dh =
          2.22630432564563
rdh_sum =
          86.7009853888033
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 165
dh =
          2.18464282564563
rdh_sum =
          86.8055676700333
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 166
dh =
          2.13777382564563
rdh_sum =
          86.9058655816281
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 167
dh =
          2.09090482564563
rdh_sum =
          87.0019589256522
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 168
dh =
          2.06710982564563
rdh_sum =
          87.0959484569561
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 169
dh =
          2.08946282564563
rdh_sum =
          87.1919137151526
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 170
dh =
          2.13488982564563
rdh_sum =
          87.2919505933943
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 171
dh =
          2.18031682564563
rdh_sum =
          87.3961341078422
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 172
dh =
          2.22574382564563
rdh_sum =
          87.5045384969239
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 173
dh =
          2.27117082564563
rdh_sum =
          87.6172372074096
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 174
dh =
          2.31659782564563
rdh_sum =
          87.7343028806362
```

```
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 175
dh =
          2.32700832564563
rdh_sum =
          87.8523794758531
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 176
dh =
          2.30240182564563
rdh_sum =
          87.9680727131505
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 177
dh =
          2.27779532564563
rdh_sum =
          88.0814037415016
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 178
dh =
          2.25318932564563
rdh_sum =
          88.1923938872256
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 180
dh =
          2.11621432564563
rdh_sum =
          88.2907477567553
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 181
dh =
          2.19495432564563
rdh_sum =
           88.396283253742
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 182
dh =
          2.23760532564563
rdh_sum =
          88.5058018856801
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 183
dh =
          2.20807782564563
rdh_sum =
          88.6125560573583
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 184
dh =
          2.14246082564563
rdh_sum =
          88.7132788378867
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 185
dh =
          2.07684382564563
rdh_sum =
          88.8081264724606
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 186
dh =
          2.01122732564563
rdh_sum =
          88.8972575482886
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 187
dh =
          1.94561082564563
rdh_sum =
          88.9808328441828
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 188
dh =
          1.88655532564563
rdh_sum =
          89.0595471494201
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 189
dh =
          1.83406182564563
rdh_sum =
          89.1340526536949
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 190
dh =
          1.78156832564563
rdh_sum =
           89.204455920759
```

```
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 191
dh =
          1.72907482564563
rdh_sum =
          89.2708645417568
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 192
dh =
          1.67658182564563
rdh_sum =
          89.3333871447736
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 193
dh =
          1.64377332564563
rdh_sum =
          89.3935365363668
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 194
dh =
          1.63064982564563
rdh_sum =
          89.4527486722753
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 195
dh =
          1.61752632564563
rdh_sum =
          89.5110304523861
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 196
dh =
          1.60440282564563
rdh_sum =
          89.5683887911496
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 197
dh =
          1.59127982564563
rdh_sum =
          89.6248306522577
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 198
dh =
          1.56917732564563
rdh_sum =
          89.6797446310704
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 199
dh =
          1.53809532564563
rdh_sum =
           89.732543452369
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 200
dh =
          1.50701382564563
rdh_sum =
          89.7832664165481
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 201
dh =
          1.47593232564563
rdh_sum =
          89.8319529719303
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 202
dh =
          1.44485082564563
rdh_sum =
          89.8786427456434
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 203
dh =
          1.41376932564563
rdh_sum =
          89.9233755401404
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 204
dh =
          1.38268732564563
rdh_sum =
          89.9661912991889
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 205
dh =
          1.35160582564563
rdh_sum =
          90.0071301965565
```

```
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 206
dh =
          1.32052432564563
rdh_sum =
          90.0462325396461
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 207
dh =
          1.27938232564563
rdh_sum =
          90.0829661334927
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 230
dh =
         -2.22269667435437
rdh_sum =
          90.3021186487666
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 231
dh =
         -2.16036067435437
rdh_sum =
          90.5100733224362
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 232
dh =
         -2.09802467435437
rdh_sum =
          90.7070482177608
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 233
dh =
         -2.03568867435437
rdh_sum =
          90.8932695963373
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 234
dh =
         -1.97335267435437
rdh_sum =
          91.0689717491566
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 235
dh =
         -1.91101667435437
rdh_sum =
          91.2343968216635
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 236
dh =
         -1.84868067435437
rdh_sum =
           91.389794632953
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 237
dh =
         -1.78634467435437
rdh_sum =
          91.5354224892364
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 238
dh =
         -1.72400867435437
rdh_sum =
          91.6715449917164
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 239
dh =
         -1.66167267435437
rdh_sum =
           91.798433839016
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 240
dh =
         -1.62359767435437
rdh_sum =
          91.9198193644708
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 241
dh =
         -1.60978367435437
rdh_sum =
          92.0392342243335
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 242
dh =
         -1.59596967435437
rdh_sum =
          92.1566923749204
```

```
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 243
dh =
         -1.58215567435437
rdh_sum =
          92.2722078443018
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 244
dh =
         -1.56834167435437
rdh_sum =
          92.3857947317873
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 245
dh =
         -1.55452767435437
rdh_sum =
           92.497467207409
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 246
dh =
         -1.54071367435437
rdh_sum =
          92.6072395114018
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 247
dh =
         -1.52689967435437
rdh_sum =
           92.715125953681
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 248
dh =
         -1.51308567435437
rdh_sum =
          92.8211409133179
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 249
dh =
         -1.49543417435437
rdh_sum =
          92.9247855310674
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 250
dh =
         -1.47010817435437
rdh_sum =
          93.0250707195188
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 251
dh =
         -1.44094517435437
rdh_sum =
          93.1215485652906
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 252
dh =
         -1.41178217435437
rdh_sum =
          93.2142850172389
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 253
dh =
         -1.38261917435437
rdh_sum =
          93.3033466356868
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 254
dh =
         -1.35345617435437
rdh_sum =
           93.388800581547
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 255
dh =
         -1.32429317435437
rdh_sum =
          93.4707146053449
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 256
dh =
         -1.29513017435437
rdh_sum =
          93.5491570361462
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 257
dh =
         -1.26596717435437
rdh_sum =
          93.6241967703897
```

```
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 258
dh =
         -1.23680417435437
rdh_sum =
          93.6959032606272
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 259
dh =
         -1.20764117435437
rdh_sum =
          93.7643465041727
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 260
dh =
         -1.17847817435437
rdh_sum =
          93.8295970316627
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 261
dh =
         -1.14931517435437
rdh_sum =
          93.8917258955289
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 262
dh =
         -1.12015217435437
rdh_sum =
           93.950804658386
ans =
!------- End Berm Factor Calculation, Iter: 2 ---------!
berm_width =
   219
rB =
         0.715359802278982
rdh_mean =
          0.42899910802916
gamma_berm =
         0.591528914818617
gamma_berm =
                        0.6
slope =
          0.17266827735217
Irb =
          2.14484856596198
gamma_berm =
                        0.6
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                        0.6
gamma =
                       0.36
ans =
!!! - - Iribaren number:   1.29 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 =
          7.12090401671524
!   Berm_width is greater than 1/4 wave length
!   Runup will be weighted average with foreshore calculation assuming depth limited wave height on berm
fore_H0 =
                6.63775593
upper_slope =
         0.142949999999999
upper_slope =
         0.142950032895755
upper_slope =
         0.142950063696177
upper_slope =
         0.142950092595283
upper_slope =
         0.142950119763855
upper_slope =
         0.142950145352816
upper_slope =
         0.142950169496034
upper_slope =
         0.142950192312667
upper_slope =
         0.142950187170488
upper_slope =
         0.142950208338442
upper_slope =
         0.142950228431855
upper_slope =
         0.142950247530522
```

```
upper_slope =
         0.142950265706527
upper_slope =
         0.142950283025154
w2 =
        0.0298717885582036
w1 =
         0.970128211441796
R2_new =
          7.23947111989603
R2del =
        0.0729430687774446
Z2 =
          16.5079164455417
ans =
!----------------- STARTING ITERATION 3 -----------------!
Ztoe =
                    1.38872
toe_sta =
          51.2594075418113
top_sta =
          357.909328055556
Z2 =
          16.5079164455417
H0 =
                     5.2103
Tp =
                    13.7882
T0 =
          12.5347272727273
R2 =
          7.23947111989603
Z2 =
          16.5079164455417
top_sta =
          357.909328055556
Lslope =
          306.649920513744
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 1
dh =
          7.76611882564563
rdh_sum =
     1
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 2
dh =
          7.71541532564563
rdh_sum =
     2
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 3
dh =
          7.66471132564563
rdh_sum =
     3
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 4
dh =
          7.61400732564563
rdh_sum =
     4
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 5
dh =
          7.58592132564563
rdh_sum =
     5
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 6
dh =
          7.58045332564563
rdh_sum =
     6
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 7
dh =
          7.57498532564563
rdh_sum =
     7
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 8
dh =
          7.56951732564563
rdh_sum =
     8
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 9
dh =
          7.56404932564563
```

```
rdh_sum =
     9
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 10
dh =
          7.55858132564563
rdh_sum =
    10
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 11
dh =
          7.55311282564563
rdh_sum =
    11
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 12
dh =
          7.54764432564563
rdh_sum =
    12
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 13
dh =
          7.54217632564563
rdh_sum =
    13
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 14
dh =
          7.53670832564563
rdh_sum =
    14
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 15
dh =
          7.53124032564563
rdh_sum =
    15
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 16
dh =
          7.52577232564563
rdh_sum =
    16
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 17
dh =
          7.49679182564563
rdh_sum =
    17
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 18
dh =
          7.44429832564563
rdh_sum =
    18
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 19
dh =
          7.39180482564563
rdh_sum =
    19
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 20
dh =
          7.33931132564563
rdh_sum =
    20
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 21
dh =
          7.28681782564563
rdh_sum =
    21
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 22
dh =
          7.23432432564563
rdh_sum =
          21.7865153208732
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 23
dh =
          7.18183082564563
rdh_sum =
          22.5665101940757
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 24
dh =
          7.12933782564563
```

```
rdh_sum =
          23.3399145588801
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 25
dh =
          7.07684432564563
rdh_sum =
          24.1066598795834
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 26
dh =
          7.02435082564563
rdh_sum =
          24.8666793506628
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 27
dh =
          6.98947032564563
rdh_sum =
          25.6221935612883
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 28
dh =
          6.97220282564563
rdh_sum =
          26.3754669674869
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 29
dh =
          6.95493532564563
rdh_sum =
          27.1264927055141
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 30
dh =
          6.93766732564563
rdh_sum =
          27.8752639071592
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 31
dh =
          6.92039982564563
rdh_sum =
          28.6217738958707
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 32
dh =
          6.90313232564563
rdh_sum =
          29.3660159911938
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 33
dh =
          6.88586482564563
rdh_sum =
          30.1079835741338
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 34
dh =
          6.86859732564563
rdh_sum =
          30.8476700873358
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 35
dh =
          6.85132982564563
rdh_sum =
          31.5850690352621
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 36
dh =
          6.83492582564563
rdh_sum =
          32.3202888527742
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 37
dh =
          6.82024832564563
rdh_sum =
          33.0535540124433
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 38
dh =
          6.80643432564563
rdh_sum =
          33.7849753369005
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 39
dh =
          6.79261982564563
```

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rdh_sum =
          34.514548745395
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 40
dh =
          6.77880532564563
rdh_sum =
          35.2422702558939
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 41
dh =
          6.76499132564563
rdh_sum =
          35.9681359857273
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 42
dh =
          6.75117732564563
rdh_sum =
          36.6921420174568
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 43
dh =
          6.73736332564563
rdh_sum =
          37.4142844658987
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 44
dh =
          6.72354932564563
rdh_sum =
          38.1345594781918
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 45
dh =
          6.70973532564563
rdh_sum =
          38.8529632338635
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 46
dh =
          6.68095632564563
rdh_sum =
          39.5674564322802
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 47
dh =
          6.63721182564563
rdh_sum =
          40.2759747006167
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 48
dh =
          6.59346732564563
rdh_sum =
          40.9784817729873
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 49
dh =
          6.54972282564563
rdh_sum =
          41.6749424289845
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 50
dh =
          6.50597782564563
rdh_sum =
          42.3653224301126
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 51
dh =
          6.46223332564563
rdh_sum =
          43.049588734435
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 52
dh =
          6.41848882564563
rdh_sum =
          43.7277092940126
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 53
dh =
          6.38239932564563
rdh_sum =
          44.4007362049852
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 54
dh =
          6.36162082564563
```

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rdh_sum =
          45.0708211219032
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 55
dh =
          6.34849782564563
rdh_sum =
          45.7390445285121
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 56
dh =
          6.33537432564563
rdh_sum =
          46.4054037206465
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 57
dh =
          6.32225082564563
rdh_sum =
          47.0698960941975
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 58
dh =
          6.30256582564563
rdh_sum =
           47.731583456764
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 59
dh =
          6.26975732564563
rdh_sum =
          48.3885831714976
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 60
dh =
          6.23038732564563
rdh_sum =
          49.0399375032759
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 61
dh =
          6.19101732564563
rdh_sum =
          49.6856251297941
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 62
dh =
          6.15164732564563
rdh_sum =
          50.3256255270546
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 63
dh =
          6.12039282564563
rdh_sum =
          50.9610969442063
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 64
dh =
          6.10536982564563
rdh_sum =
          51.5943871261363
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 65
dh =
          6.09846282564563
rdh_sum =
          52.2266735394432
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 66
dh =
          6.09155582564563
rdh_sum =
          52.8579556105291
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 67
dh =
          6.08464882564563
rdh_sum =
           53.488232770151
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 68
dh =
          6.07774182564563
rdh_sum =
           54.117504453423
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 69
dh =
          6.07083482564563
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rdh_sum =
          54.7457700998193
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 70
dh =
          6.06392782564563
rdh_sum =
          55.3730291531762
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 71
dh =
          6.05702082564563
rdh_sum =
          55.9992810616945
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 72
dh =
          6.05011382564563
rdh_sum =
          56.6245252779421
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 73
dh =
          6.02736132564563
rdh_sum =
          57.2464462157465
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 74
dh =
          5.98876332564563
rdh_sum =
          57.8627164106198
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 75
dh =
          5.95016532564563
rdh_sum =
          58.4733201188671
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 76
dh =
          5.91156732564563
rdh_sum =
          59.0782423640704
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 77
dh =
          5.87296932564563
rdh_sum =
          59.6774689391165
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 78
dh =
          5.83437082564563
rdh_sum =
          60.2709863340813
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 79
dh =
          5.79577232564563
rdh_sum =
          60.8587818858099
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 80
dh =
          5.75717432564563
rdh_sum =
          61.4408437802878
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 81
dh =
          5.72696382564563
rdh_sum =
          62.0184101727988
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 82
dh =
          5.71352882564563
rdh_sum =
          62.5939752683047
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 83
dh =
          5.70848182564563
rdh_sum =
          63.1687882333128
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 84
dh =
          5.70343432564563
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rdh_sum =
          63.7428488200813
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 85
dh =
          5.69838682564563
rdh_sum =
          64.3161568571144
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 86
dh =
          5.69333932564563
rdh_sum =
           64.888712174659
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 87
dh =
          5.68829182564563
rdh_sum =
           65.460514604705
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 88
dh =
          5.67847732564563
rdh_sum =
          66.0308526248812
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 89
dh =
          5.66389582564563
rdh_sum =
          66.5990138235343
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 90
dh =
          5.64931432564563
rdh_sum =
          67.1649968834559
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 91
dh =
          5.63473282564563
rdh_sum =
            67.72880052953
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 92
dh =
          5.62015132564563
rdh_sum =
          68.2904235287573
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 93
dh =
          5.60556982564563
rdh_sum =
          68.8498646902797
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 94
dh =
          5.59098832564563
rdh_sum =
          69.4071228654025
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 95
dh =
          5.57640682564563
rdh_sum =
          69.9621969476173
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 96
dh =
          5.56182532564563
rdh_sum =
          70.5150858726228
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 97
dh =
          5.53716532564563
rdh_sum =
          71.0642769909181
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 98
dh =
          5.50242732564563
rdh_sum =
          71.6082545248488
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 99
dh =
          5.46768882564563
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rdh_sum =
          72.1470135759074
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 100
dh =
          5.43295032564563
rdh_sum =
          72.6805498929594
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 101
dh =
          5.39821232564563
rdh_sum =
          73.2088598729541
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 102
dh =
          5.36347382564563
rdh_sum =
          73.7319403356225
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 103
dh =
          5.32873532564563
rdh_sum =
          74.2497887494743
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 104
dh =
          5.29399732564563
rdh_sum =
          74.7624032322222
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 105
dh =
          5.25974132564563
rdh_sum =
          75.2698550487357
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 106
dh =
          5.22645032564563
rdh_sum =
          75.7722888661376
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 107
dh =
          5.19364232564563
rdh_sum =
           76.269777245452
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 108
dh =
          5.16083382564563
rdh_sum =
          76.7623203570278
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 109
dh =
          5.12802532564563
rdh_sum =
          77.2499189303906
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 110
dh =
          5.11708932564563
rdh_sum =
          77.7358695951907
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 111
dh =
          5.14989782564563
rdh_sum =
          78.2267644475327
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 112
dh =
          5.20457832564563
rdh_sum =
          78.7259013028002
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 113
dh =
          5.21512382564563
rdh_sum =
          79.2266277797345
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 117
dh =
          4.84505282564563
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rdh_sum =
          79.6716811754379
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 118
dh =
          4.86965932564563
rdh_sum =
          80.1204227533367
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 119
dh =
          4.89426532564563
rdh_sum =
          80.5728552592305
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 120
dh =
          4.91887182564563
rdh_sum =
          81.0289813858019
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 124
dh =
          4.63179832564563
rdh_sum =
          81.4422191469747
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 125
dh =
          4.62359632564563
rdh_sum =
          81.8542395662704
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 126
dh =
          4.61539432564563
rdh_sum =
          82.2650431816303
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 127
dh =
          4.60719232564563
rdh_sum =
          82.6746305384354
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 140
dh =
          3.25794682564563
rdh_sum =
          82.8970342775042
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 141
dh =
          3.19232982564563
rdh_sum =
          83.1112662506885
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 142
dh =
          3.12671282564563
rdh_sum =
          83.3174382847565
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 143
dh =
          3.06109582564563
rdh_sum =
          83.5156653604929
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 144
dh =
          2.99547932564563
rdh_sum =
          83.7060656268868
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 145
dh =
          2.92986282564563
rdh_sum =
          83.8887602346858
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 146
dh =
          2.86424582564563
rdh_sum =
          84.0638732926802
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 147
dh =
          2.79862882564563
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rdh_sum =
          84.2315319356555
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 148
dh =
          2.76910132564563
rdh_sum =
          84.3958783654213
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 149
dh =
          2.77566282564563
rdh_sum =
          84.5609585344949
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 150
dh =
          2.78222432564563
rdh_sum =
          84.7267737534474
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 151
dh =
          2.78878632564563
rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 152
dh =
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rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 155
dh =
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rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 156
dh =
          2.41984082564563
rdh_sum =
          85.3163285389226
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 157
dh =
          2.40791032564563
rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 158
dh =
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rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 159
dh =
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rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 160
dh =
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rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 161
dh =
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rdh_sum =
          85.9317548505092
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 162
dh =
          2.29921232564563
rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 163
dh =
          2.26275832564563
rdh_sum =
          86.1590386542888
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 164
dh =
          2.22630432564563
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rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 165
dh =
          2.18464282564563
rdh_sum =
          86.372077864109
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 166
dh =
          2.13777382564563
rdh_sum =
          86.4723757757038
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 167
dh =
          2.09090482564563
rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 168
dh =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 169
dh =
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rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 170
dh =
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rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 171
dh =
          2.18031682564563
rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 172
dh =
          2.22574382564563
rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 173
dh =
          2.27117082564563
rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 174
dh =
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rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 175
dh =
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rdh_sum =
          87.4188896699288
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 176
dh =
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rdh_sum =
          87.5345829072262
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 177
dh =
          2.27779532564563
rdh_sum =
          87.6479139355773
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 178
dh =
          2.25318932564563
rdh_sum =
          87.7589040813013
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 180
dh =
          2.11621432564563
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rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 181
dh =
          2.19495432564563
rdh_sum =
          87.9627934478177
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 182
dh =
          2.23760532564563
rdh_sum =
          88.0723120797558
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 183
dh =
          2.20807782564563
rdh_sum =
          88.179066251434
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 184
dh =
          2.14246082564563
rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 185
dh =
          2.07684382564563
rdh_sum =
          88.3746366665363
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 186
dh =
          2.01122732564563
rdh_sum =
          88.4637677423643
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 187
dh =
          1.94561082564563
rdh_sum =
          88.5473430382585
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 188
dh =
          1.88655532564563
rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 189
dh =
          1.83406182564563
rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 190
dh =
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rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 191
dh =
          1.72907482564563
rdh_sum =
          88.8373747358325
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 192
dh =
          1.67658182564563
rdh_sum =
          88.8998973388493
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 193
dh =
          1.64377332564563
rdh_sum =
          88.9600467304425
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 194
dh =
          1.63064982564563
rdh_sum =
          89.019258866351
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 195
dh =
          1.61752632564563
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rdh_sum =
          89.0775406464618
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 196
dh =
          1.60440282564563
rdh_sum =
          89.1348989852253
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 197
dh =
          1.59127982564563
rdh_sum =
          89.1913408463334
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 198
dh =
          1.56917732564563
rdh_sum =
          89.2462548251461
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 199
dh =
          1.53809532564563
rdh_sum =
          89.2990536464447
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 200
dh =
          1.50701382564563
rdh_sum =
          89.3497766106238
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 201
dh =
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rdh_sum =
          89.3984631660061
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 202
dh =
          1.44485082564563
rdh_sum =
          89.4451529397191
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 203
dh =
          1.41376932564563
rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 204
dh =
          1.38268732564563
rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 205
dh =
          1.35160582564563
rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 206
dh =
          1.32052432564563
rdh_sum =
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ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 207
dh =
          1.27938232564563
rdh_sum =
          89.6494763275684
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 230
dh =
         -2.22269667435437
rdh_sum =
           89.864581241822
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 231
dh =
         -2.16036067435437
rdh_sum =
          90.0686766619864
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 232
dh =
          -2.09802467435437
```

```
rdh_sum =
          90.2619791032649
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 233
dh =
         -2.03568867435437
rdh_sum =
          90.4447129781502
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 234
dh =
         -1.97335267435437
rdh_sum =
          90.6171104322198
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 235
dh =
         -1.91101667435437
rdh_sum =
          90.7794111742744
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 236
dh =
         -1.84868067435437
rdh_sum =
          90.9318623009406
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 237
dh =
         -1.78634467435437
rdh_sum =
          91.0747181158696
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 238
dh =
         -1.72400867435437
rdh_sum =
          91.2082399436611
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 239
dh =
         -1.66167267435437
rdh_sum =
          91.3326959386508
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 240
dh =
         -1.62359767435437
rdh_sum =
          91.4517492625477
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 241
dh =
         -1.60978367435437
rdh_sum =
          91.5688680756012
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 242
dh =
         -1.59596967435437
rdh_sum =
          91.6840661368142
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 243
dh =
         -1.58215567435437
rdh_sum =
          91.7973572742128
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 244
dh =
         -1.56834167435437
rdh_sum =
          91.9087553843491
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 245
dh =
         -1.55452767435437
rdh_sum =
          92.0182744318018
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 246
dh =
         -1.54071367435437
rdh_sum =
          92.1259284486748
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 247
dh =
         -1.52689967435437
```

```
rdh_sum =
          92.2317315340926
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 248
dh =
         -1.51308567435437
rdh_sum =
          92.3356978536937
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 249
dh =
         -1.49543417435437
rdh_sum =
          92.4373378777191
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 250
dh =
         -1.47010817435437
rdh_sum =
           92.535681042143
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 251
dh =
         -1.44094517435437
rdh_sum =
          92.6302879791299
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 252
dh =
         -1.41178217435437
rdh_sum =
          92.7212236149184
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 253
dh =
         -1.38261917435437
rdh_sum =
          92.8085534637293
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 254
dh =
         -1.35345617435437
rdh_sum =
          92.8923436172723
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 255
dh =
         -1.32429317435437
rdh_sum =
          92.9726607341619
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 256
dh =
         -1.29513017435437
rdh_sum =
           93.049572029241
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 257
dh =
         -1.26596717435437
rdh_sum =
          93.1231452628161
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 258
dh =
         -1.23680417435437
rdh_sum =
          93.1934487298054
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 259
dh =
         -1.20764117435437
rdh_sum =
          93.2605512488005
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 260
dh =
         -1.17847817435437
rdh_sum =
           93.324522151045
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 261
dh =
         -1.14931517435437
rdh_sum =
          93.3854312693304
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 262
dh =
         -1.12015217435437
```

```
rdh_sum =
          93.4433489268122
ans =
!------- End Berm Factor Calculation, Iter: 3 ---------!
berm_width =
   219
rB =
         0.714169433447429
rdh_mean =
         0.426681958569919
gamma_berm =
         0.590553779166689
gamma_berm =
                       0.6
slope =
         0.172495267045574
Irb =
           2.1426994687816
gamma_berm =
                       0.6
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.6
gamma =
                      0.36
ans =
!!! - - Iribaren number:   1.29 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 =
          7.11376900728523
!   Berm_width is greater than 1/4 wave length
!   Runup will be weighted average with foreshore calculation assuming depth limited wave height on berm
fore_H0 =
                6.63775593
upper_slope =
         0.142949999999999
upper_slope =
         0.142950032352692
upper_slope =
         0.142950062677596
upper_slope =
         0.142950091159563
upper_slope =
         0.142950117961641
upper_slope =
         0.142950143228193
upper_slope =
         0.142950167087503
upper_slope =
         0.142950189653953
upper_slope =
         0.142950184651122
upper_slope =
         0.142950205606223
upper_slope =
         0.142950225511188
upper_slope =
         0.142950244443027
upper_slope =
         0.142950262471399
upper_slope =
         0.142950279659471
w2 =
        0.0298717885582036
w1 =
         0.970128211441796
R2_new =
          7.23254923815925
R2del =
       0.00692188173678421
Z2 =
          16.5009945638049
% final 2% runup elevation
Z2=R2_new+SWEL
Z2 =
          16.5009945638049
diary off
-1.000000e+00
```

_____
PART 5: RUNUP2

for transect: YK-109

Station locations shifted by: -4.62 feet from their
original location to set the shoreline to
elevation 0 for RUNUP2 input

_____RUNUP2 INPUT CONVERSIONS_____
for transect: YK-109

Incident significant wave height: 7.56 feet

Peak wave period: 13.81 seconds

Mean wave height: 4.73 feet

Local Depth below SWEL: 14.61 feet

Mean wave height deshoaled using Hunt approximation for
celerity assuming constant wave energy flux.
References: R.G. Dean and R.A. Dalrymple. 2000. Water

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

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

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

Depth, D = 14.61
Period, T = 11.74
Waveheight, H = 4.73
Deep water wavelength, L0 (ft)
L0 = g*T*T/twopi
L0 = 32.17*11.74*11.74/6.28 = 705.57
Deep water wave celerity, C0 (ft/s)
C0 = L0/T
C0 = 705.57/11.74 = 60.11
Angular frequency, sigma (rad/s)
sigma = twopi/T
sigma = 6.28/11.74 = 0.54
Hunts (1979) approximation for Celerity C1H (ft/s) at Depth D (ft)
y = sigma.*sigma.*D./g
y = 0.54*0.54*14.61/32.17 = 0.13
C1H = sqrt(g.*D./(y+1./(1 + 0.6522.*y + 0.4622.*y.^2 + 0.0864.*y.^4 +0.0675.*y.^5)))
C1H = 21.21
Shoaling Coefficient KsH
KsH = sqrt(C0/C1H)
KsH = sqrt(60.11/21.21) = 1.68
Deepwater Wave Height H0_H (ft)
H0_H = H/KsH
H0_H = 4.73/1.68 = 2.81

Deepwater mean wave height: 2.81 feet

_____END RUNUP2 CONVERSIONS_____

_____RUNUP2 RESULTS_____
for transect: YK-109

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:
2.67
2.67
2.67
2.81
2.81
2.81
2.95
2.95
2.95

RUNUP2 mean wave periods:
11.15
11.74
12.33
11.15
11.74
12.33
11.15
11.74
12.33

RUNUP2 runup above SWEL:
0.81
0.83
0.85
0.80
0.83
0.84
0.81
0.82
0.84

RUNUP2 Mean runup height above SWEL: 0.83 feet

RUNUP2 2-percent runup height above SWEL: 1.82 feet

RUNUP2 2-percent runup elevation: 10.82 feet-NAVD88

RUNUP2 Messages:
No Messages

_____END RUNUP2 RESULTS_____

_____ACES BEACH RUNUP_____

Incident significant wave height: 7.56 feet

Significant wave height is mean wave height divided by 0.626
Reference: D.2.8.1.2.1 Atlanic and Gulf of Mexico G&S Feb. 2007

Deepwater significant wave height: 4.49 feet

Peak wave period: 13.81 seconds

Average beach Slope: 1:39.94 (H:V)

ACES IRREGULAR WAVE RUNUP ON BEACHES

Reference:
Leenknecht, David A., Andre Szuwaiski, and Ann Sherlock. 1992.
"Automated Coastal Engineering System Technical Reference",
Coastal Engineering Research Center, Department of the Army

```
# Waterways Experiments Station, Corps of Eniggneers, 3909 Halls
# Ferry Road, Vicksburg, Mississippi 39180-6199.

INPUTS:

Acceleration Due to Gravity,        g  =   32.174
Deepwater Significant Wave height,  Hs =     4.49
Wave Period,                        T  =    13.81
Beach Slope,                        S  =    0.025

EQUATIONS:

Runup,           R   = Hs * a * Irb^b
Iribarren,       Irb = S/sqrt(Hs/L0)
Wavelength,      L0  = g * T^2 / 2 / pi

COEFFICIENTS:
(Mase, H. 1989, "Random Wave Runup Height on Gentle Slopes,"
j. Waterway, Port, Coastal and Ocean Engineering Division,
ASCE, Vol 115, No. 5, pp 649-661.)

               [Rmax,  R2%, R-1/3, R-1/10, R-mean]
          a = [2.32, 1.86,  1.70,   1.38,   0.88]
          b = [0.77, 0.71,  0.71,   0.70,   0.69]

RESULTS:

       RUNUP = [ 4.8,  4.1,   3.8,    3.1,    2.0]

ACES RUNUP CALCULATED USING 'Aces_Beach_Runup.m'

ACES Beach 2-percent runup height above SWEL: 4.12 feet

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

ACES BEACH RUNUP is valid

_____________END ACES BEACH RESULTS_____________________

PART 5 COMPLETE_____________________________________________
```

```
  FEMA                                                  sjh            job 2
  RUNUP2 transect: YK-109                                                 1
17.0
  -5.60 -384.4 0.6
  -5.05 -349.4 0.6
  -4.14 -267.4 0.6
  -4.00 -191.4 0.6
  -1.98 -114.4 0.6
  0.24  22.1   0.6
  1.68  61.6   0.6
  2.57  102.6  0.6
  3.16  120.1  0.6
  3.71  153.6  0.6
  4.67  184.6  0.6
  5.52  190.1  0.6
  6.50  204.6  0.6
  7.22  225.1  0.6
  7.22  239.1  0.6
  7.98  264.1  0.6
  8.80  275.6  0.6
  11.52 286.6  0.6
  11.52 319.6  0.6
1 12.38 333.6  0.6
 9.0   2.67  11.15
 9.0   2.67  11.74
 9.0   2.67  12.33
 9.0   2.81  11.15
 9.0   2.81  11.74
 9.0   2.81  12.33
 9.0   2.95  11.15
 9.0   2.95  11.74
 9.0   2.95  12.33
```

****

CROSS SECTION PROFILE

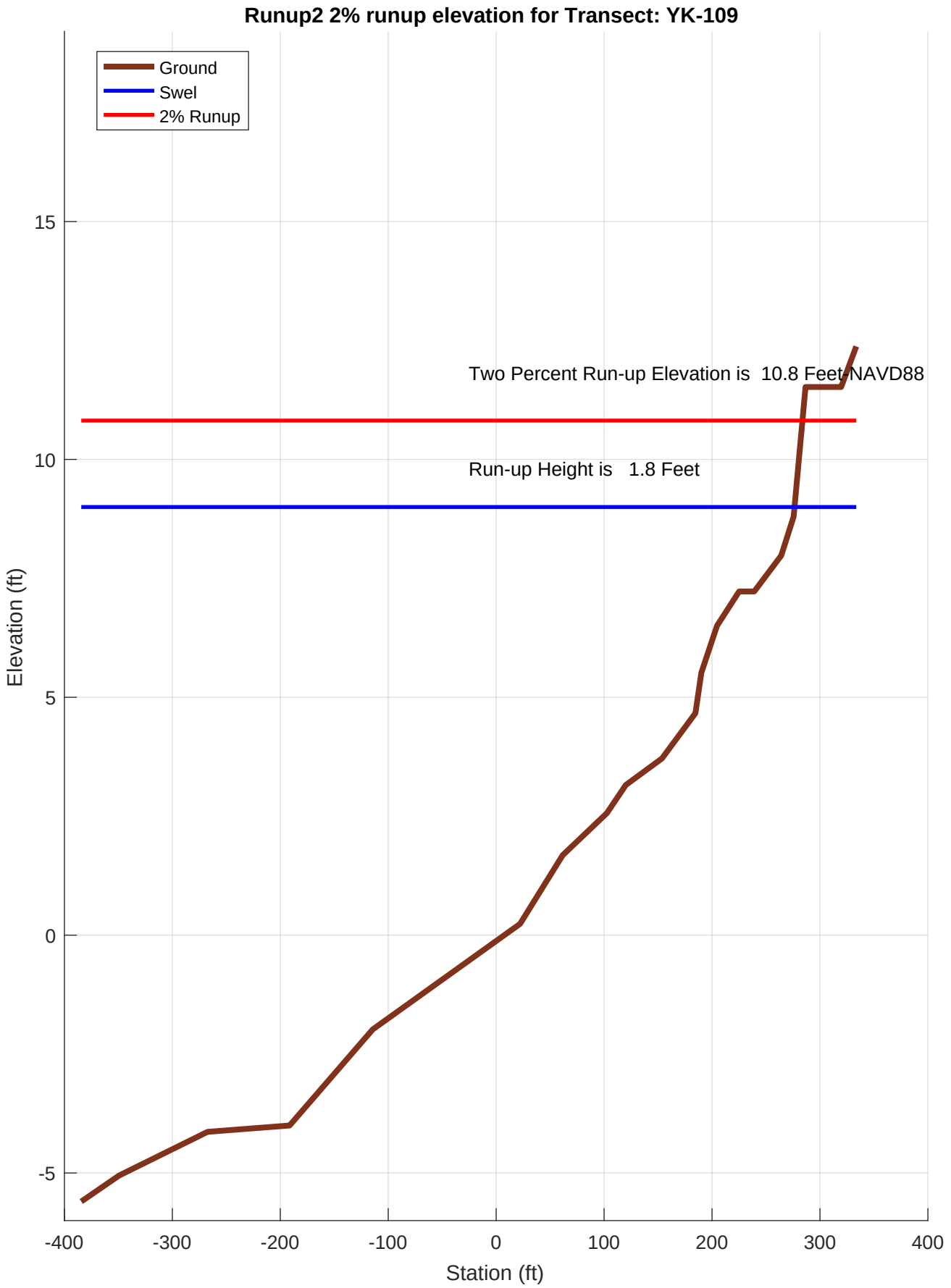
	LENGTH	ELEV.	SLOPE	ROUGHNESS
1	-384.4	-5.6		
			.00	.60
2	-349.4	-5.0		
			90.11	.60
3	-267.4	-4.1		
			542.86	.60
4	-191.4	-4.0		
			38.12	.60
5	-114.4	-2.0		
			61.49	.60
6	22.1	.3		
			27.43	.60
7	61.6	1.7		
			46.07	.60
8	102.6	2.6		
			29.66	.60
9	120.1	3.2		
			60.91	.60
10	153.6	3.7		
			32.29	.60
11	184.6	4.7		
			6.47	.60
12	190.1	5.5		
			14.80	.60
13	204.6	6.5		
			28.47	.60
14	225.1	7.2		
			FLAT	.60
15	239.1	7.2		
			32.89	.60
16	264.1	8.0		
			14.02	.60
17	275.6	8.8		
			4.04	.60
18	286.6	11.5		
			FLAT	.60
19	319.6	11.5		
			16.28	.60
20	333.6	12.4		

LAST SLOPE 17.00 LAST ROUGHNESS .60

****

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	2.67	11.15	8	17	.81	6.02
9.00	2.67	11.74	7	17	.83	6.46
9.00	2.67	12.33	7	17	.85	6.64
9.00	2.81	11.15	7	17	.80	6.52
9.00	2.81	11.74	7	17	.83	6.70
9.00	2.81	12.33	7	17	.84	6.89
9.00	2.95	11.15	7	17	.81	6.76
9.00	2.95	11.74	7	17	.82	6.95
9.00	2.95	12.33	7	17	.84	7.13


Runup2 2% runup elevation for Transect: YK-109
Ground
Swel
2% Runup
Two Percent Run-up Elevation is 10.8 Feet NAVD88
Run-up Height is 1.8 Feet
Elevation (ft)
15
10
5
0
-5
-400
-300
-200
-100
0
100
200
300
400
Station (ft)