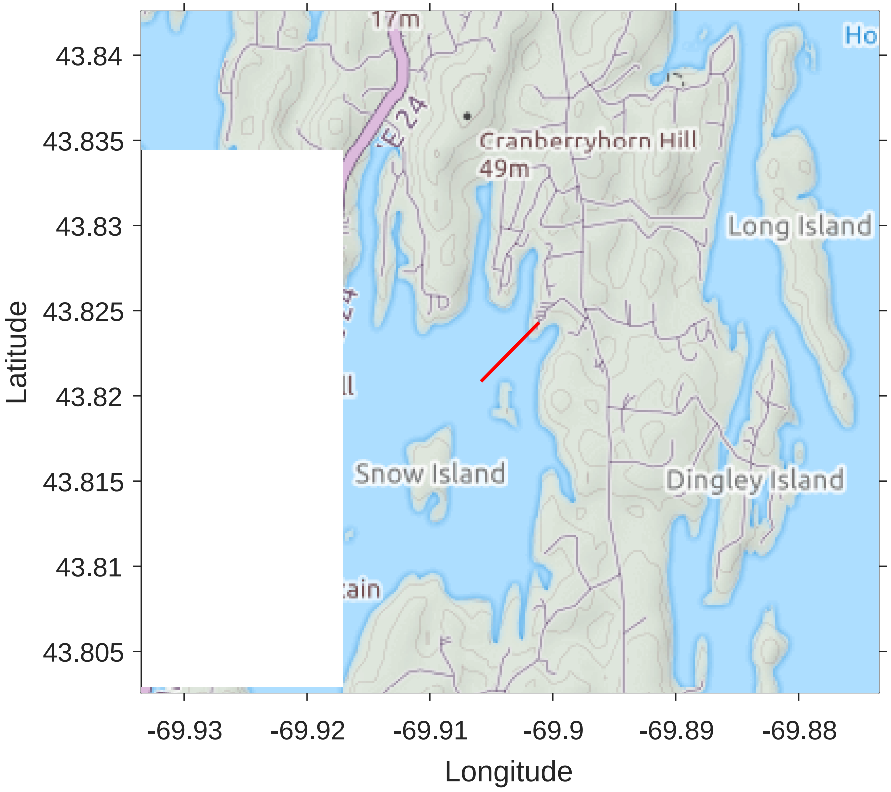
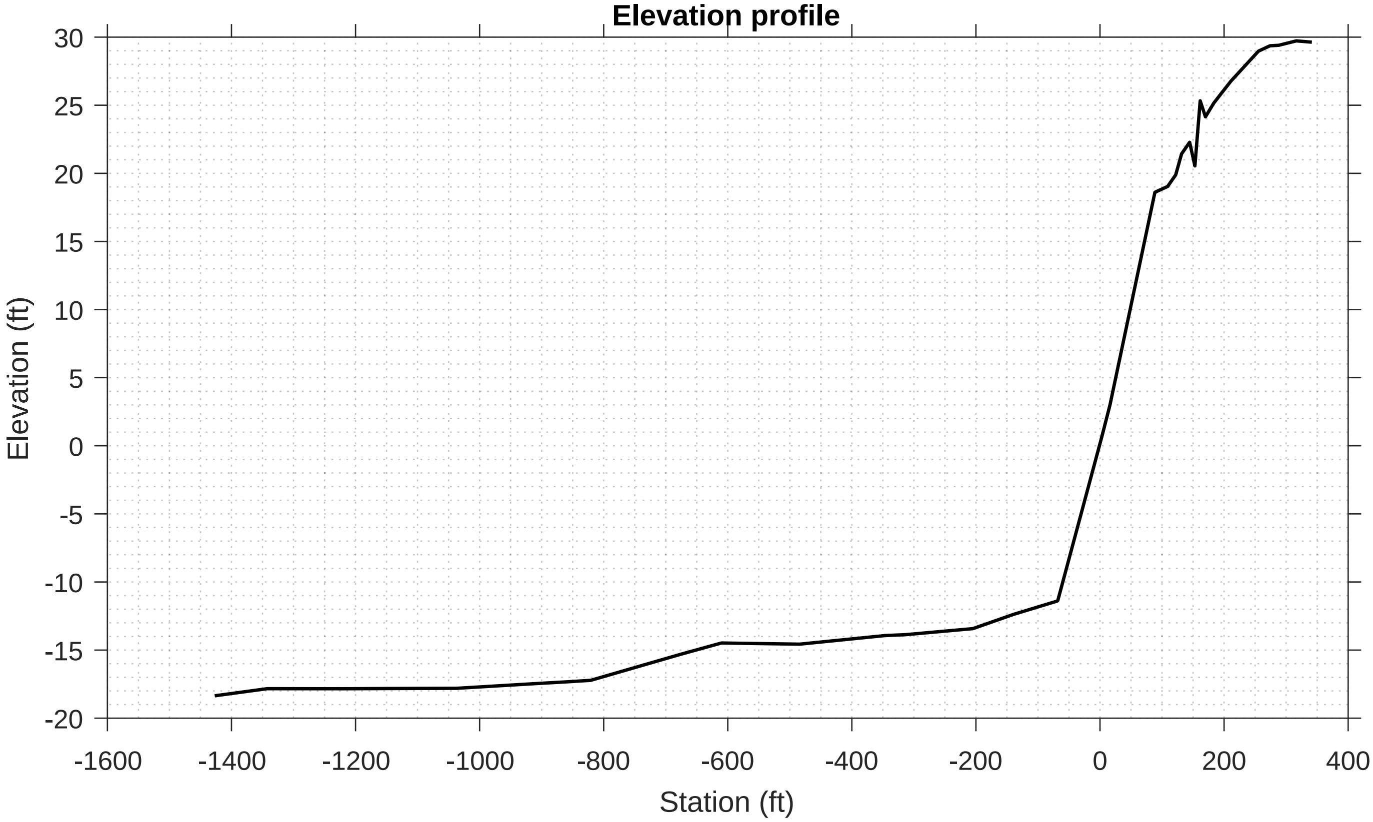
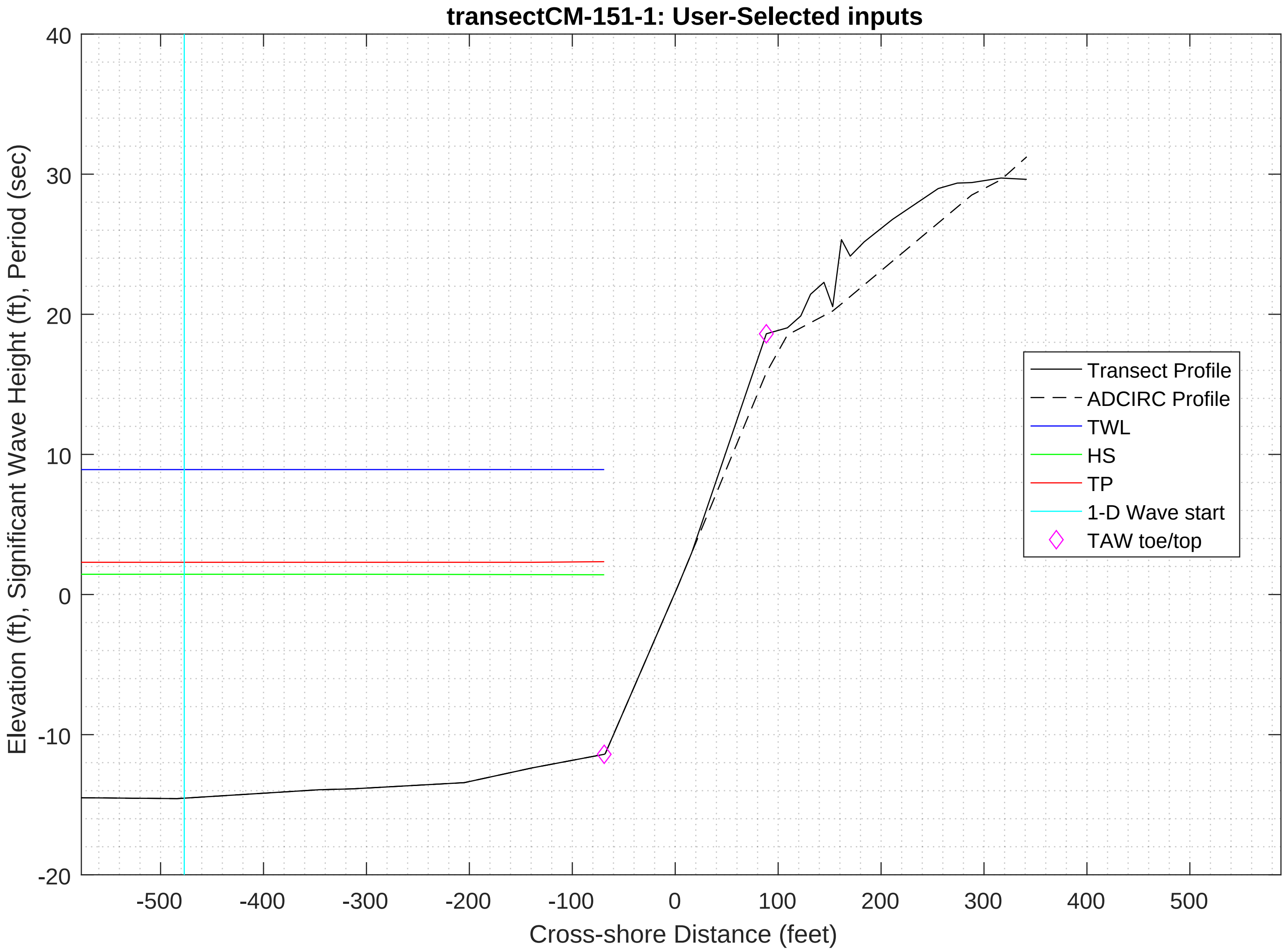
Transect Number: CM-151-1



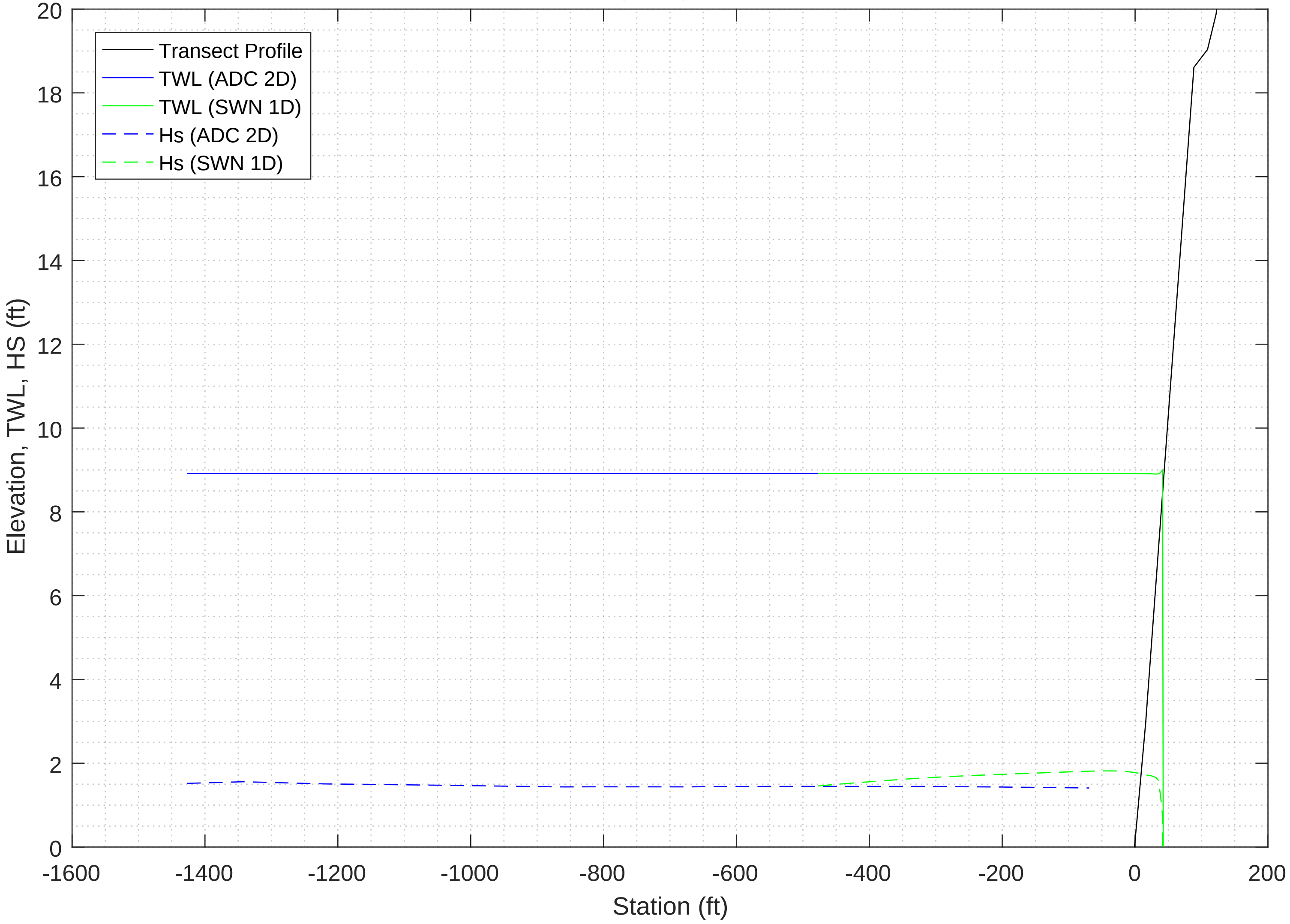
Elevation profile



```
_______________________________________________________
DATA LOG FOR TRANSECT ID: CM-151-1
_______________________________________________________


_______________________________________________________
PART 1: USER INPUT


SWAN 1-D / WHAFIS input
_______________________
station:    -477 ft
LON:        -69.9033 deg E
LAT:        43.8227 deg N
Bottom ELEV:       -14.5324 ft-NAVD88
TWL:        8.9177 ft-NAVD88
HS:         1.4461 ft
TP:         2.3 sec
Wave Direction bin: 45 deg CCW from East (90 deg sector)
Transect Direction:   36.2752 deg CCW from East


TAW/RUNUP input
_______________
toe sta:     -69 ft
toe elev:    -11.402 ft-NAVD88
top sta:     88.5 ft
top elev:    18.6089 ft-NAVD88
*Wave and water level conditions at toe to be calculated in SWAN 1-D*

PART 1 COMPLETE________________________________________
```


transectCM-151-1: User-Selected inputs
Elevation (ft), Significant Wave Height (ft), Period (sec)
40
30
20
10
0
-10
-20
-500
-400
-300
-200
-100
0
100
200
300
400
500
Cross-shore Distance (feet)
Transect Profile
ADCIRC Profile
TWL
HS
TP
1-D Wave start
TAW toe/top

```
_______________________________________________________
PART 2: SWAN 1-D

swan input grid name: 2_swan/gridfiles/CM-151-1zmeters_xmeters.grd
swan file name:       2_swan/swanfiles/CM-151-1.swn
swan output name:     2_swan/swanfiles/CM-151-1.dat

Boundary Conditions:
    TWL- 2.7181 meters
    HS-  0.44077 meters
    PER- 2.3 seconds

Batch File: 2_swan/swanfiles/runswan.dat

SWAN maximum additional wave setup: 0.082529 feet
SWAN output at toe:
    SETUP- -0.00097113 feet
    HS-    1.8096 feet
    PER-   2.2995 seconds

PART 2 COMPLETE________________________________________
```



2-D ADCIRC+SWAN and SWAN 1-D results, Transect: CM-151-1

```
1
                    Execution started at 20200220.141951


                    ---------------------------------------
                                     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      172       0.   172     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      172   0      1       1

 !READinp BOTtom [fac]  ’fname1’  [idla]  [nhedf]  [FREe|FORmat[form]|UNFormatted]

  READ    BOTTOM   -1. ’../gridfiles/CM-151-1zmeters_xmeters.grd’    1      0       FREE

 !--------------------------------------------------------------------------

 ! -- WIND [vel] [dir]

 WIND      25.1  0

 ! -- BOUnd SHAPespec

 BOUND SHAPE JONSWAP 3.3  PEAK DSPR POWER

 ! -- BOUndspec

 ! BOU SIDE W CCW CON FILE ’swanspec.txt’ 1

 BOUN SIDE W CCW CONSTANT PAR   0.44077     2.3     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      172  172    0
 !TABLe 'sname' < HEADer|NOHEADer|INDexed > 'fname' <output parameters> (output time)
  Table 'curve'   HEADER 'CM-151-1.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             173 MYC              1
                     : MCGRD           174
                     : 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  33.34 % of wet grid points ( 99.50 % required)

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

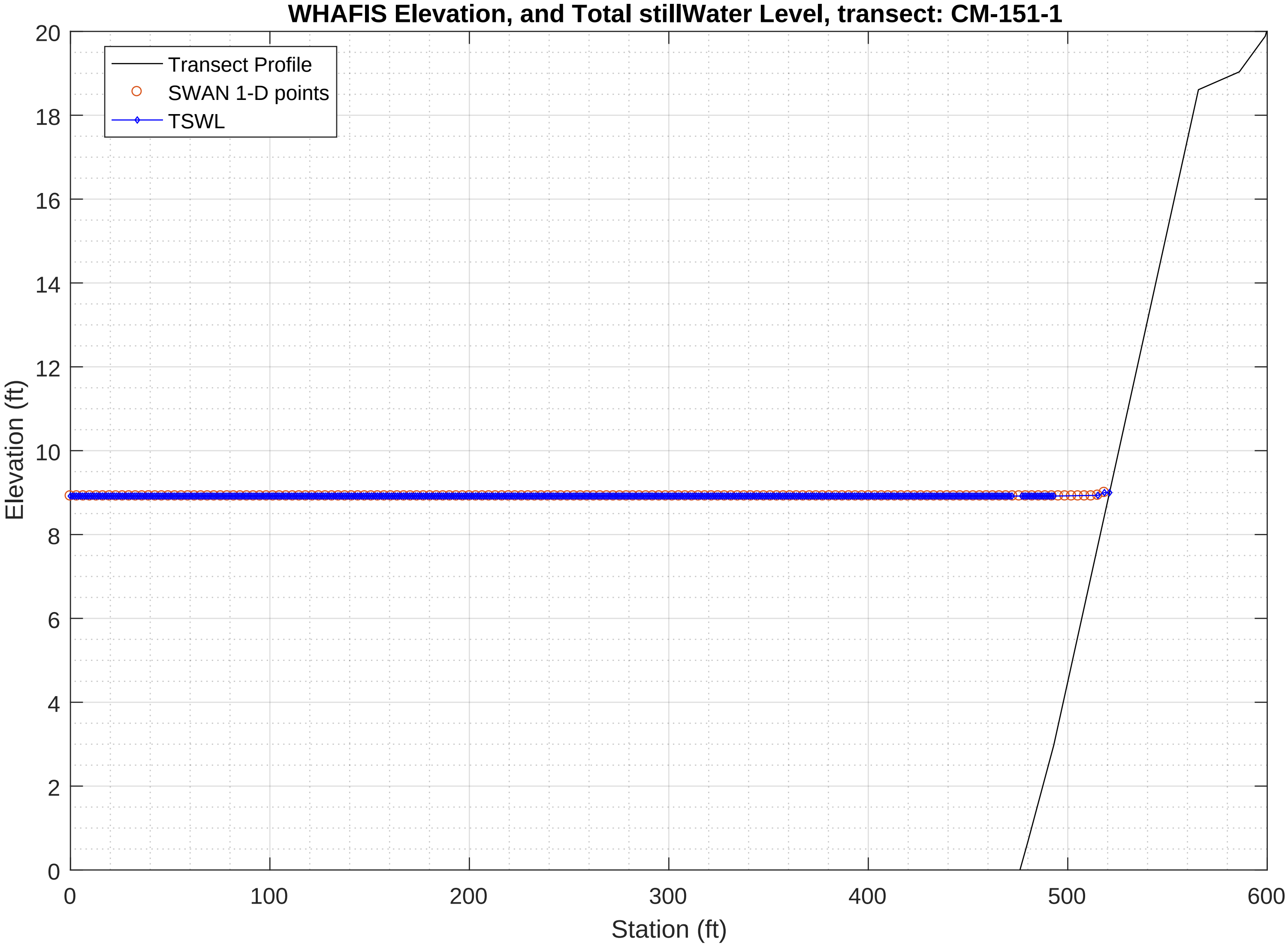
```
iteration    3; sweep 4
accuracy OK in   0.63 % of wet grid points ( 99.50 % required)

iteration    4; sweep 1
iteration    4; sweep 2
iteration    4; sweep 3
iteration    4; sweep 4
accuracy OK in   3.15 % 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  23.28 % 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  27.05 % 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  31.45 % 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  35.23 % 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  43.40 % of wet grid points ( 99.50 % required)

iteration   10; sweep 1
iteration   10; sweep 2
iteration   10; sweep 3
iteration   10; sweep 4
accuracy OK in  75.48 % of wet grid points ( 99.50 % required)

iteration   11; sweep 1
iteration   11; sweep 2
iteration   11; sweep 3
iteration   11; sweep 4
accuracy OK in  86.80 % of wet grid points ( 99.50 % required)

iteration   12; sweep 1
iteration   12; sweep 2
iteration   12; sweep 3
iteration   12; sweep 4
accuracy OK in 100.00 % of wet grid points ( 99.50 % required)


STOP
```

```
%
%
% Run:1     Table:curve             SWAN version:41.20A
%
%       Xp            Yp            Hsig          TPsmoo        RTpeak        Tm_10         Dir           Dspr          Depth         Setup
%       [m]           [m]           [m]           [sec]         [sec]         [sec]         [degr]        [degr]        [m]           [m]
%
           0.            0.       0.44420        2.2940        2.4105        2.0530         0.008       31.6621        7.1500      0.000000
           1.            0.       0.44564        2.2939        2.4105        2.0498         0.008       31.7057        7.1400     -0.000003
           2.            0.       0.44708        2.2937        2.4105        2.0467         0.008       31.7491        7.1400     -0.000005
           3.            0.       0.44850        2.2936        2.4105        2.0437         0.008       31.7924        7.1300     -0.000008
           4.            0.       0.44990        2.2934        2.4105        2.0408         0.008       31.8355        7.1300     -0.000010
           5.            0.       0.45129        2.2933        2.4105        2.0381         0.008       31.8785        7.1200     -0.000013
           6.            0.       0.45266        2.2931        2.4105        2.0354         0.008       31.9214        7.1200     -0.000015
           7.            0.       0.45402        2.2930        2.4105        2.0329         0.008       31.9641        7.1200     -0.000018
           8.            0.       0.45536        2.2929        2.4105        2.0304         0.008       32.0067        7.1100     -0.000020
           9.            0.       0.45669        2.2928        2.4105        2.0280         0.009       32.0490        7.1100     -0.000023
          10.            0.       0.45801        2.2927        2.4105        2.0257         0.009       32.0912        7.1000     -0.000025
          11.            0.       0.45931        2.2926        2.4105        2.0236         0.009       32.1333        7.1000     -0.000028
          12.            0.       0.46060        2.2925        2.4105        2.0214         0.009       32.1750        7.0900     -0.000030
          13.            0.       0.46188        2.2924        2.4105        2.0194         0.009       32.2166        7.0900     -0.000033
          14.            0.       0.46314        2.2923        2.4105        2.0174         0.009       32.2580        7.0800     -0.000036
          15.            0.       0.46440        2.2922        2.4105        2.0155         0.009       32.2991        7.0800     -0.000038
          16.            0.       0.46564        2.2921        2.4105        2.0137         0.009       32.3400        7.0700     -0.000041
          17.            0.       0.46687        2.2920        2.4105        2.0120         0.009       32.3805        7.0700     -0.000043
          18.            0.       0.46808        2.2920        2.4105        2.0103         0.010       32.4208        7.0600     -0.000046
          19.            0.       0.46929        2.2919        2.4105        2.0087         0.010       32.4608        7.0600     -0.000048
          20.            0.       0.47048        2.2918        2.4105        2.0072         0.010       32.5005        7.0599     -0.000051
          21.            0.       0.47167        2.2918        2.4105        2.0057         0.010       32.5399        7.0499     -0.000053
          22.            0.       0.47284        2.2917        2.4105        2.0043         0.011       32.5789        7.0499     -0.000056
          23.            0.       0.47400        2.2916        2.4105        2.0029         0.011       32.6175        7.0399     -0.000059
          24.            0.       0.47520        2.2916        2.4105        2.0015         0.014       32.6523        7.0399     -0.000061
          25.            0.       0.47642        2.2915        2.4105        2.0001         0.018       32.6856        7.0299     -0.000064
          26.            0.       0.47769        2.2915        2.4105        1.9985         0.026       32.7149        7.0299     -0.000067
          27.            0.       0.47894        2.2914        2.4105        1.9971         0.036       32.7450        7.0199     -0.000070
          28.            0.       0.48017        2.2913        2.4105        1.9957         0.046       32.7758        7.0199     -0.000073
          29.            0.       0.48135        2.2913        2.4105        1.9944         0.055       32.8090        7.0099     -0.000076
          30.            0.       0.48256        2.2912        2.4105        1.9930         0.069       32.8414        7.0099     -0.000079
          31.            0.       0.48377        2.2912        2.4105        1.9918         0.085       32.8739        7.0099     -0.000081
          32.            0.       0.48496        2.2911        2.4105        1.9905         0.101       32.9066        6.9999     -0.000084
          33.            0.       0.48611        2.2911        2.4105        1.9894         0.114       32.9402        6.9999     -0.000087
          34.            0.       0.48724        2.2910        2.4105        1.9883         0.127       32.9739        6.9899     -0.000090
          35.            0.       0.48837        2.2909        2.4105        1.9873         0.139       33.0077        6.9899     -0.000092
          36.            0.       0.48949        2.2909        2.4105        1.9863         0.154       33.0418        6.9799     -0.000095
          37.            0.       0.49063        2.2909        2.4105        1.9853         0.175       33.0762        6.9799     -0.000098
          38.            0.       0.49175        2.2908        2.4105        1.9844         0.195       33.1106        6.9699     -0.000100
          39.            0.       0.49283        2.2908        2.4105        1.9835         0.210       33.1447        6.9699     -0.000103
          40.            0.       0.49390        2.2907        2.4105        1.9828         0.224       33.1771        6.9599     -0.000106
          41.            0.       0.49499        2.2907        2.4105        1.9821         0.237       33.2064        6.9599     -0.000108
          42.            0.       0.49606        2.2907        2.4105        1.9815         0.250       33.2349        6.9599     -0.000111
          43.            0.       0.49715        2.2906        2.4105        1.9809         0.264       33.2606        6.9599     -0.000114
          44.            0.       0.49820        2.2906        2.4105        1.9804         0.277       33.2865        6.9599     -0.000117
          45.            0.       0.49922        2.2906        2.4105        1.9800         0.290       33.3130        6.9499     -0.000120
          46.            0.       0.50021        2.2906        2.4105        1.9797         0.303       33.3399        6.9499     -0.000122
          47.            0.       0.50116        2.2906        2.4105        1.9794         0.313       33.3679        6.9499     -0.000125
          48.            0.       0.50208        2.2906        2.4105        1.9792         0.321       33.3957        6.9499     -0.000127
          49.            0.       0.50303        2.2906        2.4105        1.9791         0.334       33.4212        6.9499     -0.000130
          50.            0.       0.50397        2.2906        2.4105        1.9789         0.346       33.4458        6.9399     -0.000133
          51.            0.       0.50488        2.2906        2.4105        1.9789         0.356       33.4698        6.9399     -0.000135
          52.            0.       0.50576        2.2906        2.4105        1.9789         0.363       33.4938        6.9399     -0.000138
          53.            0.       0.50661        2.2906        2.4105        1.9789         0.368       33.5175        6.9299     -0.000140
          54.            0.       0.50745        2.2906        2.4105        1.9790         0.372       33.5408        6.9299     -0.000142
          55.            0.       0.50828        2.2906        2.4105        1.9791         0.376       33.5633        6.9199     -0.000145
          56.            0.       0.50911        2.2906        2.4105        1.9792         0.378       33.5848        6.9199     -0.000147
          57.            0.       0.50993        2.2907        2.4105        1.9794         0.379       33.6055        6.9199     -0.000149
          58.            0.       0.51077        2.2907        2.4105        1.9795         0.385       33.6256        6.9098     -0.000152
          59.            0.       0.51161        2.2907        2.4105        1.9796         0.392       33.6450        6.9098     -0.000154
```

60.	0.	0.51241	2.2908	2.4105	1.9798	0.394	33.6636	6.8998	-0.000157
61.	0.	0.51320	2.2908	2.4105	1.9801	0.394	33.6815	6.8998	-0.000159
62.	0.	0.51397	2.2908	2.4105	1.9804	0.395	33.6991	6.8998	-0.000161
63.	0.	0.51473	2.2909	2.4105	1.9807	0.395	33.7162	6.8898	-0.000163
64.	0.	0.51549	2.2909	2.4105	1.9810	0.397	33.7334	6.8898	-0.000166
65.	0.	0.51623	2.2910	2.4105	1.9813	0.398	33.7501	6.8798	-0.000168
66.	0.	0.51697	2.2910	2.4105	1.9817	0.399	33.7662	6.8798	-0.000170
67.	0.	0.51770	2.2911	2.4105	1.9821	0.401	33.7814	6.8798	-0.000172
68.	0.	0.51840	2.2911	2.4105	1.9826	0.403	33.7957	6.8698	-0.000175
69.	0.	0.51910	2.2912	2.4105	1.9831	0.406	33.8095	6.8698	-0.000177
70.	0.	0.51979	2.2913	2.4105	1.9836	0.408	33.8227	6.8598	-0.000179
71.	0.	0.52048	2.2913	2.4105	1.9841	0.411	33.8355	6.8598	-0.000181
72.	0.	0.52114	2.2914	2.4105	1.9847	0.413	33.8483	6.8498	-0.000183
73.	0.	0.52180	2.2915	2.4105	1.9853	0.417	33.8610	6.8498	-0.000185
74.	0.	0.52245	2.2916	2.4105	1.9859	0.419	33.8737	6.8498	-0.000188
75.	0.	0.52310	2.2917	2.4105	1.9865	0.420	33.8864	6.8398	-0.000190
76.	0.	0.52375	2.2917	2.4105	1.9872	0.420	33.8990	6.8398	-0.000192
77.	0.	0.52438	2.2918	2.4105	1.9878	0.421	33.9113	6.8298	-0.000194
78.	0.	0.52502	2.2919	2.4105	1.9885	0.422	33.9232	6.8298	-0.000196
79.	0.	0.52564	2.2920	2.4105	1.9892	0.422	33.9350	6.8298	-0.000198
80.	0.	0.52627	2.2921	2.4105	1.9898	0.423	33.9463	6.8198	-0.000200
81.	0.	0.52689	2.2922	2.4105	1.9905	0.424	33.9572	6.8198	-0.000202
82.	0.	0.52750	2.2923	2.4105	1.9912	0.425	33.9676	6.8098	-0.000204
83.	0.	0.52811	2.2924	2.4105	1.9919	0.426	33.9775	6.8098	-0.000206
84.	0.	0.52871	2.2925	2.4105	1.9926	0.427	33.9869	6.7898	-0.000208
85.	0.	0.52931	2.2926	2.4105	1.9933	0.428	33.9960	6.7798	-0.000211
86.	0.	0.52989	2.2928	2.4105	1.9941	0.431	34.0048	6.7598	-0.000213
87.	0.	0.53049	2.2929	2.4105	1.9948	0.433	34.0130	6.7498	-0.000215
88.	0.	0.53107	2.2930	2.4105	1.9955	0.436	34.0206	6.7298	-0.000217
89.	0.	0.53166	2.2931	2.4105	1.9962	0.439	34.0277	6.7098	-0.000219
90.	0.	0.53225	2.2932	2.4105	1.9969	0.443	34.0344	6.6998	-0.000221
91.	0.	0.53284	2.2934	2.4105	1.9976	0.446	34.0408	6.6798	-0.000223
92.	0.	0.53342	2.2935	2.4105	1.9983	0.449	34.0470	6.6698	-0.000225
93.	0.	0.53400	2.2936	2.4105	1.9990	0.452	34.0529	6.6498	-0.000227
94.	0.	0.53459	2.2938	2.4105	1.9997	0.454	34.0592	6.6298	-0.000230
95.	0.	0.53518	2.2939	2.4105	2.0004	0.456	34.0652	6.6198	-0.000232
96.	0.	0.53576	2.2941	2.4105	2.0010	0.458	34.0710	6.5998	-0.000234
97.	0.	0.53636	2.2942	2.4105	2.0017	0.459	34.0761	6.5898	-0.000236
98.	0.	0.53695	2.2944	2.4105	2.0023	0.461	34.0806	6.5698	-0.000238
99.	0.	0.53756	2.2945	2.4105	2.0029	0.465	34.0847	6.5498	-0.000240
100.	0.	0.53817	2.2947	2.4105	2.0034	0.469	34.0886	6.5398	-0.000243
101.	0.	0.53877	2.2948	2.4105	2.0040	0.473	34.0922	6.5198	-0.000245
102.	0.	0.53936	2.2950	2.4105	2.0046	0.478	34.0957	6.5098	-0.000247
103.	0.	0.53995	2.2952	2.4105	2.0053	0.482	34.0989	6.4898	-0.000249
104.	0.	0.54053	2.2953	2.4105	2.0059	0.486	34.1020	6.4797	-0.000251
105.	0.	0.54110	2.2955	2.4105	2.0066	0.490	34.1048	6.4597	-0.000254
106.	0.	0.54167	2.2957	2.4105	2.0073	0.494	34.1074	6.4497	-0.000256
107.	0.	0.54222	2.2959	2.4105	2.0080	0.498	34.1096	6.4297	-0.000258
108.	0.	0.54278	2.2961	2.4105	2.0087	0.502	34.1115	6.4197	-0.000260
109.	0.	0.54333	2.2963	2.4105	2.0094	0.505	34.1128	6.4097	-0.000262
110.	0.	0.54387	2.2964	2.4105	2.0101	0.508	34.1137	6.3897	-0.000265
111.	0.	0.54442	2.2966	2.4105	2.0108	0.510	34.1140	6.3797	-0.000267
112.	0.	0.54497	2.2968	2.4105	2.0115	0.515	34.1144	6.3597	-0.000269
113.	0.	0.54556	2.2970	2.4105	2.0121	0.523	34.1176	6.3497	-0.000271
114.	0.	0.54614	2.2973	2.4105	2.0126	0.531	34.1203	6.3397	-0.000273
115.	0.	0.54672	2.2975	2.4105	2.0132	0.540	34.1218	6.3197	-0.000276
116.	0.	0.54728	2.2977	2.4105	2.0138	0.549	34.1212	6.3097	-0.000278
117.	0.	0.54783	2.2979	2.4105	2.0145	0.558	34.1206	6.2997	-0.000280
118.	0.	0.54837	2.2981	2.4105	2.0152	0.566	34.1202	6.2797	-0.000282
119.	0.	0.54892	2.2983	2.4105	2.0159	0.573	34.1201	6.2697	-0.000285
120.	0.	0.54945	2.2986	2.4105	2.0165	0.579	34.1206	6.2497	-0.000287
121.	0.	0.54999	2.2988	2.4105	2.0172	0.584	34.1213	6.2397	-0.000289
122.	0.	0.55052	2.2990	2.4105	2.0179	0.589	34.1219	6.2297	-0.000291
123.	0.	0.55105	2.2993	2.4105	2.0186	0.594	34.1224	6.2097	-0.000293
124.	0.	0.55157	2.2995	2.4105	2.0193	0.598	34.1217	6.1997	-0.000296
125.	0.	0.55203	2.2997	2.4105	2.0199	0.602	34.1176	6.1197	-0.000298
126.	0.	0.55239	2.2998	2.4105	2.0202	0.606	34.1095	5.9497	-0.000302

127.	0.	0.55273	2.2998	2.4105	2.0205	0.610	34.0988	5.7797	-0.000306
128.	0.	0.55303	2.2998	2.4105	2.0207	0.613	34.0866	5.6097	-0.000310
129.	0.	0.55330	2.2998	2.4105	2.0209	0.616	34.0723	5.4497	-0.000314
130.	0.	0.55351	2.2997	2.4105	2.0209	0.619	34.0557	5.2797	-0.000319
131.	0.	0.55367	2.2996	2.4105	2.0209	0.621	34.0360	5.1097	-0.000325
132.	0.	0.55379	2.2994	2.4105	2.0207	0.622	34.0127	4.9397	-0.000331
133.	0.	0.55382	2.2991	2.4105	2.0204	0.622	33.9853	4.7697	-0.000339
134.	0.	0.55377	2.2987	2.4105	2.0199	0.623	33.9535	4.5997	-0.000347
135.	0.	0.55362	2.2982	2.4105	2.0194	0.622	33.9173	4.4296	-0.000357
136.	0.	0.55334	2.2976	2.4105	2.0188	0.622	33.8757	4.2596	-0.000369
137.	0.	0.55294	2.2969	2.4105	2.0179	0.622	33.8294	4.0896	-0.000382
138.	0.	0.55238	2.2961	2.4105	2.0169	0.622	33.7747	3.9196	-0.000398
139.	0.	0.55164	2.2952	2.4105	2.0158	0.622	33.7125	3.7496	-0.000417
140.	0.	0.55070	2.2942	2.4105	2.0144	0.623	33.6424	3.5796	-0.000440
141.	0.	0.54955	2.2931	2.4105	2.0128	0.624	33.5585	3.4095	-0.000467
142.	0.	0.54814	2.2920	2.4105	2.0111	0.625	33.4577	3.2395	-0.000501
143.	0.	0.54647	2.2909	2.4105	2.0091	0.625	33.3372	3.0695	-0.000541
144.	0.	0.54450	2.2899	2.4105	2.0070	0.624	33.1956	2.8994	-0.000590
145.	0.	0.54223	2.2891	2.4105	2.0048	0.625	33.0265	2.7293	-0.000650
146.	0.	0.53963	2.2887	2.4105	2.0025	0.624	32.8200	2.5593	-0.000725
147.	0.	0.53669	2.2888	2.4105	2.0002	0.623	32.5633	2.3892	-0.000818
148.	0.	0.53327	2.2895	2.4105	1.9980	0.620	32.2461	2.2091	-0.000940
149.	0.	0.52980	2.2920	2.4105	1.9964	0.622	31.8603	2.0289	-0.001102
150.	0.	0.52653	2.2957	2.4105	1.9960	0.653	31.3362	1.8587	-0.001308
151.	0.	0.52304	2.3015	2.4105	1.9976	0.731	30.6306	1.6483	-0.001657
152.	0.	0.52040	2.3102	2.4105	2.0036	0.805	29.6251	1.4378	-0.002182
153.	0.	0.51731	2.3185	2.4105	2.0144	0.981	28.2641	1.2170	-0.002959
154.	0.	0.51193	2.3276	2.4105	2.0243	1.370	26.3470	1.0061	-0.003900
155.	0.	0.50478	2.3352	2.4105	1.9892	2.145	23.8364	0.7853	-0.004662
156.	0.	0.48652	2.3319	2.4105	1.8667	3.413	21.5336	0.5665	-0.003530
157.	0.	0.38200	2.3108	2.4105	1.8329	3.083	19.0881	0.3651	0.005129
158.	0.	0.22796	2.3166	2.4105	1.7808	357.779	19.6040	0.1652	0.025155
159.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000
160.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000
161.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000
162.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000
163.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000
164.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000
165.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000
166.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000
167.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000
168.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000
169.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000
170.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000
171.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000
172.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000

```
PART 3: WHAFIS

WHAFIS input:  CM-151-1.dat
WHAFIS output: CM-151-1.out

PART 3 COMPLETE________________________________________
```


WHAFIS Elevation, and Total stillWater Level, transect: CM-151-1
Transect Profile
SWAN 1-D points
TSWL
Elevation (ft)
Station (ft)
0
2
4
6
8
10
12
14
16
18
20
0
100
200
300
400
500
600

```
WAVE HEIGHT COMPUTATIONS FOR FLOOD INSURANCE STUDIES (WHAFIS VERSION 4.0G, 08_2007)
Executed on: Thu Feb 20 14:57:37 2020
Input file:  C:\FEMA-TransectAnalysis\LOMR-TransectAnalysis-Harpswell\3_whafis\whafis4\CM-151-1.dat
Output file: C:\FEMA-TransectAnalysis\LOMR-TransectAnalysis-Harpswell\3_whafis\whafis4\CM-151-1.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   -14.532     1.000     1.000     8.918     2.314     2.300    56.140     0.005     0.000
        OF     1.000   -14.527     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF     2.000   -14.523     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF     3.000   -14.518     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF     4.000   -14.514     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF     5.000   -14.509     0.000     8.918     0.000     0.000     0.000     0.000     0.005     0.000
        OF     6.000   -14.504     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF     7.000   -14.500     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF     8.000   -14.495     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF     9.000   -14.491     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    10.000   -14.486     0.000     8.918     0.000     0.000     0.000     0.000     0.005     0.000
        OF    11.000   -14.481     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    12.000   -14.477     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    13.000   -14.472     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    14.000   -14.468     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    15.000   -14.463     0.000     8.918     0.000     0.000     0.000     0.000     0.005     0.000
        OF    16.000   -14.458     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    17.000   -14.454     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    18.000   -14.449     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    19.000   -14.445     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    20.000   -14.440     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    21.000   -14.436     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    22.000   -14.431     0.000     8.918     0.000     0.000     0.000     0.000     0.005     0.000
        OF    23.000   -14.426     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    24.000   -14.422     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    25.000   -14.417     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    26.000   -14.413     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    27.000   -14.408     0.000     8.918     0.000     0.000     0.000     0.000     0.005     0.000
        OF    28.000   -14.403     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    29.000   -14.399     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    30.000   -14.394     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    31.000   -14.390     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    32.000   -14.385     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    33.000   -14.381     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    34.000   -14.376     0.000     8.918     0.000     0.000     0.000     0.000     0.005     0.000
        OF    35.000   -14.371     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    36.000   -14.367     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    37.000   -14.362     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    38.000   -14.358     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    39.000   -14.353     0.000     8.918     0.000     0.000     0.000     0.000     0.005     0.000
        OF    40.000   -14.348     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    41.000   -14.344     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    42.000   -14.339     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    43.000   -14.335     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    44.000   -14.330     0.000     8.918     0.000     0.000     0.000     0.000     0.005     0.000
        OF    45.000   -14.325     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    46.000   -14.321     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    47.000   -14.316     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    48.000   -14.312     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    49.000   -14.307     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    50.000   -14.303     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    51.000   -14.298     0.000     8.918     0.000     0.000     0.000     0.000     0.005     0.000
        OF    52.000   -14.293     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    53.000   -14.289     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    54.000   -14.284     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    55.000   -14.280     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    56.000   -14.275     0.000     8.918     0.000     0.000     0.000     0.000     0.005     0.000
        OF    57.000   -14.270     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    58.000   -14.266     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    59.000   -14.261     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    60.000   -14.257     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    61.000   -14.252     0.000     8.918     0.000     0.000     0.000     0.000     0.005     0.000
        OF    62.000   -14.247     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    63.000   -14.243     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    64.000   -14.238     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    65.000   -14.234     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    66.000   -14.229     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    67.000   -14.225     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    68.000   -14.220     0.000     8.918     0.000     0.000     0.000     0.000     0.005     0.000
        OF    69.000   -14.215     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    70.000   -14.211     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    71.000   -14.206     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    72.000   -14.202     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    73.000   -14.197     0.000     8.918     0.000     0.000     0.000     0.000     0.005     0.000
        OF    74.000   -14.192     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    75.000   -14.188     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    76.000   -14.183     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    77.000   -14.179     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    78.000   -14.174     0.000     8.918     0.000     0.000     0.000     0.000     0.005     0.000
        OF    79.000   -14.169     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    80.000   -14.165     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    81.000   -14.160     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    82.000   -14.156     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    83.000   -14.151     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    84.000   -14.147     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    85.000   -14.142     0.000     8.918     0.000     0.000     0.000     0.000     0.005     0.000
        OF    86.000   -14.137     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    87.000   -14.133     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    88.000   -14.128     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    89.000   -14.124     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    90.000   -14.119     0.000     8.918     0.000     0.000     0.000     0.000     0.005     0.000
        OF    91.000   -14.114     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
        OF    92.000   -14.110     0.000     8.918     0.000     0.000     0.000     0.000     0.004     0.000
```

```
OF     93.000    -14.105      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF     94.000    -14.101      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF     95.000    -14.096      0.000      8.918      0.000      0.000      0.000      0.000      0.005      0.000
OF     96.000    -14.091      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF     97.000    -14.087      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF     98.000    -14.082      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF     99.000    -14.078      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    100.000    -14.073      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    101.000    -14.069      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    102.000    -14.064      0.000      8.918      0.000      0.000      0.000      0.000      0.005      0.000
OF    103.000    -14.059      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    104.000    -14.055      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    105.000    -14.050      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    106.000    -14.046      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    107.000    -14.041      0.000      8.918      0.000      0.000      0.000      0.000      0.005      0.000
OF    108.000    -14.036      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    109.000    -14.032      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    110.000    -14.027      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    111.000    -14.023      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    112.000    -14.018      0.000      8.918      0.000      0.000      0.000      0.000      0.005      0.000
OF    113.000    -14.013      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    114.000    -14.009      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    115.000    -14.004      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    116.000    -14.000      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    117.000    -13.995      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    118.000    -13.991      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    119.000    -13.986      0.000      8.918      0.000      0.000      0.000      0.000      0.005      0.000
OF    120.000    -13.981      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    121.000    -13.977      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    122.000    -13.972      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    123.000    -13.968      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    124.000    -13.963      0.000      8.918      0.000      0.000      0.000      0.000      0.005      0.000
OF    125.000    -13.958      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    126.000    -13.954      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    127.000    -13.949      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    128.000    -13.945      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    129.000    -13.940      0.000      8.918      0.000      0.000      0.000      0.000      0.005      0.000
OF    130.000    -13.935      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    131.000    -13.932      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    132.000    -13.930      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    133.000    -13.928      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    134.000    -13.926      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    135.000    -13.924      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    136.000    -13.922      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    137.000    -13.920      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    138.000    -13.918      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    139.000    -13.916      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    140.000    -13.914      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    141.000    -13.912      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    142.000    -13.910      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    143.000    -13.908      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    144.000    -13.906      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    145.000    -13.905      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    146.000    -13.903      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    147.000    -13.901      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    148.000    -13.899      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    149.000    -13.897      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    150.000    -13.895      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    151.000    -13.893      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    152.000    -13.891      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    153.000    -13.889      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    154.000    -13.887      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    155.000    -13.885      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    156.000    -13.883      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    157.000    -13.881      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    158.000    -13.879      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    159.000    -13.877      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    160.000    -13.875      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    161.000    -13.873      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    162.000    -13.871      0.000      8.918      0.000      0.000      0.000      0.000      0.002      0.000
OF    163.000    -13.869      0.000      8.918      0.000      0.000      0.000      0.000      0.003      0.000
OF    164.000    -13.865      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    165.000    -13.861      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    166.000    -13.857      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    167.000    -13.853      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    168.000    -13.849      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    169.000    -13.845      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    170.000    -13.841      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    171.000    -13.837      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    172.000    -13.833      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    173.000    -13.829      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    174.000    -13.825      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    175.000    -13.821      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    176.000    -13.816      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    177.000    -13.812      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    178.000    -13.808      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    179.000    -13.804      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    180.000    -13.800      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    181.000    -13.796      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    182.000    -13.792      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    183.000    -13.788      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    184.000    -13.784      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    185.000    -13.780      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    186.000    -13.776      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    187.000    -13.772      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    188.000    -13.767      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    189.000    -13.763      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    190.000    -13.759      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    191.000    -13.755      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    192.000    -13.751      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    193.000    -13.747      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    194.000    -13.743      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
```

```
OF    195.000    -13.739      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    196.000    -13.735      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    197.000    -13.731      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    198.000    -13.727      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    199.000    -13.723      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    200.000    -13.719      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    201.000    -13.714      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    202.000    -13.710      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    203.000    -13.706      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    204.000    -13.702      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    205.000    -13.698      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    206.000    -13.694      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    207.000    -13.690      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    208.000    -13.686      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    209.000    -13.682      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    210.000    -13.678      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    211.000    -13.674      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    212.000    -13.670      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    213.000    -13.666      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    214.000    -13.661      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    215.000    -13.657      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    216.000    -13.653      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    217.000    -13.649      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    218.000    -13.645      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    219.000    -13.641      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    220.000    -13.637      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    221.000    -13.633      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    222.000    -13.629      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    223.000    -13.625      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    224.000    -13.621      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    225.000    -13.617      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    226.000    -13.613      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    227.000    -13.608      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    228.000    -13.604      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    229.000    -13.600      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    230.000    -13.596      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    231.000    -13.592      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    232.000    -13.588      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    233.000    -13.584      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    234.000    -13.580      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    235.000    -13.576      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    236.000    -13.572      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    237.000    -13.568      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    238.000    -13.564      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    239.000    -13.559      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    240.000    -13.555      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    241.000    -13.551      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    242.000    -13.547      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    243.000    -13.543      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    244.000    -13.539      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    245.000    -13.535      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    246.000    -13.531      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    247.000    -13.527      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    248.000    -13.523      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    249.000    -13.519      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    250.000    -13.515      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    251.000    -13.511      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    252.000    -13.506      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    253.000    -13.502      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    254.000    -13.498      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    255.000    -13.494      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    256.000    -13.490      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    257.000    -13.486      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    258.000    -13.482      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    259.000    -13.478      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    260.000    -13.474      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    261.000    -13.470      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    262.000    -13.466      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    263.000    -13.462      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    264.000    -13.458      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    265.000    -13.453      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    266.000    -13.449      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    267.000    -13.445      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    268.000    -13.441      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    269.000    -13.437      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    270.000    -13.433      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    271.000    -13.429      0.000      8.918      0.000      0.000      0.000      0.000      0.004      0.000
OF    272.000    -13.425      0.000      8.918      0.000      0.000      0.000      0.000      0.009      0.000
OF    273.000    -13.410      0.000      8.918      0.000      0.000      0.000      0.000      0.015      0.000
OF    274.000    -13.394      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    275.000    -13.378      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    276.000    -13.362      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    277.000    -13.346      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    278.000    -13.330      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    279.000    -13.314      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    280.000    -13.298      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    281.000    -13.282      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    282.000    -13.266      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    283.000    -13.250      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    284.000    -13.234      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    285.000    -13.218      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    286.000    -13.202      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    287.000    -13.186      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    288.000    -13.170      0.000      8.918      0.000      0.000      0.000      0.000      0.015      0.000
OF    289.000    -13.155      0.000      8.918      0.000      0.000      0.000      0.000      0.015      0.000
OF    290.000    -13.139      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    291.000    -13.123      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    292.000    -13.107      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    293.000    -13.091      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    294.000    -13.075      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    295.000    -13.059      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    296.000    -13.043      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
```

```
OF    297.000    -13.027      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    298.000    -13.011      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    299.000    -12.995      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    300.000    -12.979      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    301.000    -12.963      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    302.000    -12.947      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    303.000    -12.931      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    304.000    -12.915      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    305.000    -12.899      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    306.000    -12.883      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    307.000    -12.867      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    308.000    -12.851      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    309.000    -12.835      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    310.000    -12.819      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    311.000    -12.803      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    312.000    -12.787      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    313.000    -12.771      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    314.000    -12.755      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    315.000    -12.739      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    316.000    -12.723      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    317.000    -12.707      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    318.000    -12.691      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    319.000    -12.675      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    320.000    -12.659      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    321.000    -12.643      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    322.000    -12.627      0.000      8.918      0.000      0.000      0.000      0.000      0.015      0.000
OF    323.000    -12.612      0.000      8.918      0.000      0.000      0.000      0.000      0.015      0.000
OF    324.000    -12.596      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    325.000    -12.580      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    326.000    -12.564      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    327.000    -12.548      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    328.000    -12.532      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    329.000    -12.516      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    330.000    -12.500      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    331.000    -12.484      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    332.000    -12.468      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    333.000    -12.452      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    334.000    -12.436      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    335.000    -12.420      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    336.000    -12.404      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    337.000    -12.388      0.000      8.918      0.000      0.000      0.000      0.000      0.016      0.000
OF    338.000    -12.372      0.000      8.918      0.000      0.000      0.000      0.000      0.015      0.000
OF    339.000    -12.358      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    340.000    -12.344      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    341.000    -12.330      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    342.000    -12.317      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    343.000    -12.303      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    344.000    -12.289      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    345.000    -12.275      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    346.000    -12.261      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    347.000    -12.247      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    348.000    -12.233      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    349.000    -12.219      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    350.000    -12.206      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    351.000    -12.192      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    352.000    -12.178      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    353.000    -12.164      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    354.000    -12.150      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    355.000    -12.136      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    356.000    -12.122      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    357.000    -12.109      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    358.000    -12.095      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    359.000    -12.081      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    360.000    -12.067      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    361.000    -12.053      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    362.000    -12.039      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    363.000    -12.025      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    364.000    -12.012      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    365.000    -11.998      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    366.000    -11.984      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    367.000    -11.970      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    368.000    -11.956      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    369.000    -11.942      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    370.000    -11.928      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    371.000    -11.914      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    372.000    -11.901      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    373.000    -11.887      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    374.000    -11.873      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    375.000    -11.859      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    376.000    -11.845      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    377.000    -11.831      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    378.000    -11.817      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    379.000    -11.804      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    380.000    -11.790      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    381.000    -11.776      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    382.000    -11.762      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    383.000    -11.748      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    384.000    -11.734      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    385.000    -11.720      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    386.000    -11.707      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    387.000    -11.693      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    388.000    -11.679      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    389.000    -11.665      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    390.000    -11.651      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    391.000    -11.637      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    392.000    -11.623      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    393.000    -11.609      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    394.000    -11.596      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    395.000    -11.582      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    396.000    -11.568      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    397.000    -11.554      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
OF    398.000    -11.540      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
```

```
          OF    399.000    -11.526      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
          OF    400.000    -11.512      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
          OF    401.000    -11.499      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
          OF    402.000    -11.485      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
          OF    403.000    -11.471      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
          OF    404.000    -11.457      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
          OF    405.000    -11.443      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
          OF    406.000    -11.429      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
          OF    407.000    -11.415      0.000      8.918      0.000      0.000      0.000      0.000      0.014      0.000
          OF    408.000    -11.402      0.000      8.918      0.000      0.000      0.000      0.000      0.029      0.000
          OF    409.000    -11.358      0.000      8.918      0.000      0.000      0.000      0.000      0.107      0.000
          OF    410.000    -11.188      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          OF    411.000    -11.018      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    412.000    -10.849      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    413.000    -10.680      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    414.000    -10.510      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    415.000    -10.341      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    416.000    -10.171      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    417.000    -10.002      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    418.000     -9.833      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    419.000     -9.663      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    420.000     -9.494      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          OF    421.000     -9.324      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          OF    422.000     -9.155      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    423.000     -8.986      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    424.000     -8.816      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    425.000     -8.647      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    426.000     -8.477      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          OF    427.000     -8.307      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    428.000     -8.138      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    429.000     -7.969      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    430.000     -7.799      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          OF    431.000     -7.630      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    432.000     -7.460      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    433.000     -7.291      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    434.000     -7.122      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    435.000     -6.952      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          OF    436.000     -6.782      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    437.000     -6.613      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    438.000     -6.444      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    439.000     -6.274      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    440.000     -6.105      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    441.000     -5.935      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          OF    442.000     -5.766      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    443.000     -5.596      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    444.000     -5.427      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    445.000     -5.258      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    446.000     -5.088      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          OF    447.000     -4.918      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          OF    448.000     -4.749      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    449.000     -4.580      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    450.000     -4.410      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    451.000     -4.241      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    452.000     -4.071      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          OF    453.000     -3.902      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    454.000     -3.732      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    455.000     -3.563      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    456.000     -3.394      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    457.000     -3.224      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          OF    458.000     -3.054      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    459.000     -2.885      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    460.000     -2.716      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    461.000     -2.546      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          OF    462.000     -2.376      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    463.000     -2.207      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    464.000     -2.038      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    465.000     -1.868      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    466.000     -1.699      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          OF    467.000     -1.529      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          OF    468.000     -1.360      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    469.000     -1.191      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    470.000     -1.021      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          OF    471.000     -0.852      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          OF    472.000     -0.682      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          IF    477.000      0.165      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          IF    478.000      0.335      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          IF    479.000      0.504      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          IF    480.000      0.675      0.000      8.918      0.000      0.000      0.000      0.000      0.174      0.000
          IF    481.000      0.852      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
          IF    482.000      1.030      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
          IF    483.000      1.207      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
          IF    484.000      1.384      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
          IF    485.000      1.561      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
          IF    486.000      1.739      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
          IF    487.000      1.916      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
          IF    488.000      2.093      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
          IF    489.000      2.271      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
          IF    490.000      2.448      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
          IF    491.000      2.625      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
          IF    492.000      2.802      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
          IF    493.000      2.980      0.000      8.918      0.000      0.000      0.000      0.000      0.214      0.000
          IF    515.100      7.742      0.000      8.934      0.000      0.000      0.000      0.000      0.215      0.000
          IF    518.400      8.449      0.000      9.000      0.000      0.000      0.000      0.000      0.217      0.000
          IF    520.900      9.000      0.000      9.000      0.000      0.000      0.000      0.000      0.220      0.000
          ET      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
1
            END        END      FETCH SURGE ELEV SURGE ELEV    INITIAL    INITIAL                BOTTOM    AVERAGE
        STATION  ELEVATION     LENGTH    10-YEAR   100-YEAR WAVE HEIGHT  W. PERIOD                SLOPE    A-ZONES
  IE      0.000    -14.532      1.000      1.000      8.918      2.314      2.300     56.140      0.005      0.000
            END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
        STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
  OF      1.000    -14.527      0.000      8.918      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
OF     2.000   -14.523     0.000     8.918     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
OF     3.000   -14.518     0.000     8.918     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
OF     4.000   -14.514     0.000     8.918     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
OF     5.000   -14.509     0.000     8.918     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     6.000   -14.504     0.000     8.918     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
OF     7.000   -14.500     0.000     8.918     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
OF     8.000   -14.495     0.000     8.918     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
OF     9.000   -14.491     0.000     8.918     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
OF    10.000   -14.486     0.000     8.918     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    11.000   -14.481     0.000     8.918     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
OF    12.000   -14.477     0.000     8.918     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
OF    13.000   -14.472     0.000     8.918     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
OF    14.000   -14.468     0.000     8.918     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
OF    15.000   -14.463     0.000     8.918     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    16.000   -14.458     0.000     8.918     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
OF    17.000   -14.454     0.000     8.918     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
OF    18.000   -14.449     0.000     8.918     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
OF    19.000   -14.445     0.000     8.918     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
OF    20.000   -14.440     0.000     8.918     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
OF    21.000   -14.436     0.000     8.918     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
OF    22.000   -14.431     0.000     8.918     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    23.000   -14.426     0.000     8.918     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
OF    24.000   -14.422     0.000     8.918     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
OF    25.000   -14.417     0.000     8.918     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
OF    26.000   -14.413     0.000     8.918     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
OF    27.000   -14.408     0.000     8.918     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    28.000   -14.403     0.000     8.918     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
OF    29.000   -14.399     0.000     8.918     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
OF    30.000   -14.394     0.000     8.918     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
OF    31.000   -14.390     0.000     8.918     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
OF    32.000   -14.385     0.000     8.918     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
OF    33.000   -14.381     0.000     8.918     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
OF    34.000   -14.376     0.000     8.918     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    35.000   -14.371     0.000     8.918     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
OF     36.000    -14.367      0.000      8.918      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
OF     37.000    -14.362      0.000      8.918      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
OF     38.000    -14.358      0.000      8.918      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
OF     39.000    -14.353      0.000      8.918      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     40.000    -14.348      0.000      8.918      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
OF     41.000    -14.344      0.000      8.918      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
OF     42.000    -14.339      0.000      8.918      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
OF     43.000    -14.335      0.000      8.918      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
OF     44.000    -14.330      0.000      8.918      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     45.000    -14.325      0.000      8.918      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
OF     46.000    -14.321      0.000      8.918      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
OF     47.000    -14.316      0.000      8.918      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
OF     48.000    -14.312      0.000      8.918      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
OF     49.000    -14.307      0.000      8.918      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
OF     50.000    -14.303      0.000      8.918      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
OF     51.000    -14.298      0.000      8.918      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     52.000    -14.293      0.000      8.918      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
OF     53.000    -14.289      0.000      8.918      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
OF     54.000    -14.284      0.000      8.918      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
OF     55.000    -14.280      0.000      8.918      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
OF     56.000    -14.275      0.000      8.918      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     57.000    -14.270      0.000      8.918      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
OF     58.000    -14.266      0.000      8.918      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
OF     59.000    -14.261      0.000      8.918      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
OF     60.000    -14.257      0.000      8.918      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
OF     61.000    -14.252      0.000      8.918      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     62.000    -14.247      0.000      8.918      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
OF     63.000    -14.243      0.000      8.918      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
OF     64.000    -14.238      0.000      8.918      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
OF     65.000    -14.234      0.000      8.918      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
OF     66.000    -14.229      0.000      8.918      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
OF     67.000    -14.225      0.000      8.918      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
OF     68.000    -14.220      0.000      8.918      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     69.000    -14.215      0.000      8.918      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
OF    70.000   -14.211     0.000     8.918     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
OF    71.000   -14.206     0.000     8.918     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
OF    72.000   -14.202     0.000     8.918     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
OF    73.000   -14.197     0.000     8.918     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    74.000   -14.192     0.000     8.918     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
OF    75.000   -14.188     0.000     8.918     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
OF    76.000   -14.183     0.000     8.918     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
OF    77.000   -14.179     0.000     8.918     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
OF    78.000   -14.174     0.000     8.918     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    79.000   -14.169     0.000     8.918     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
OF    80.000   -14.165     0.000     8.918     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
OF    81.000   -14.160     0.000     8.918     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
OF    82.000   -14.156     0.000     8.918     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
OF    83.000   -14.151     0.000     8.918     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
OF    84.000   -14.147     0.000     8.918     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
OF    85.000   -14.142     0.000     8.918     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    86.000   -14.137     0.000     8.918     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
OF    87.000   -14.133     0.000     8.918     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
OF    88.000   -14.128     0.000     8.918     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
OF    89.000   -14.124     0.000     8.918     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
OF    90.000   -14.119     0.000     8.918     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    91.000   -14.114     0.000     8.918     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
OF    92.000   -14.110     0.000     8.918     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
OF    93.000   -14.105     0.000     8.918     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
OF    94.000   -14.101     0.000     8.918     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
OF    95.000   -14.096     0.000     8.918     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    96.000   -14.091     0.000     8.918     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
OF    97.000   -14.087     0.000     8.918     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
OF    98.000   -14.082     0.000     8.918     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
OF    99.000   -14.078     0.000     8.918     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
OF   100.000   -14.073     0.000     8.918     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
OF   101.000   -14.069     0.000     8.918     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
OF   102.000   -14.064     0.000     8.918     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   103.000   -14.059     0.000     8.918     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
OF    104.000    -14.055      0.000      8.918      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
OF    105.000    -14.050      0.000      8.918      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
OF    106.000    -14.046      0.000      8.918      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
OF    107.000    -14.041      0.000      8.918      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    108.000    -14.036      0.000      8.918      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
OF    109.000    -14.032      0.000      8.918      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
OF    110.000    -14.027      0.000      8.918      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
OF    111.000    -14.023      0.000      8.918      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
OF    112.000    -14.018      0.000      8.918      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    113.000    -14.013      0.000      8.918      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
OF    114.000    -14.009      0.000      8.918      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
OF    115.000    -14.004      0.000      8.918      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
OF    116.000    -14.000      0.000      8.918      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
OF    117.000    -13.995      0.000      8.918      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
OF    118.000    -13.991      0.000      8.918      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
OF    119.000    -13.986      0.000      8.918      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    120.000    -13.981      0.000      8.918      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
OF    121.000    -13.977      0.000      8.918      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
OF    122.000    -13.972      0.000      8.918      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
OF    123.000    -13.968      0.000      8.918      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
OF    124.000    -13.963      0.000      8.918      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    125.000    -13.958      0.000      8.918      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
OF    126.000    -13.954      0.000      8.918      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
OF    127.000    -13.949      0.000      8.918      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
OF    128.000    -13.945      0.000      8.918      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
OF    129.000    -13.940      0.000      8.918      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    130.000    -13.935      0.000      8.918      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
OF    131.000    -13.932      0.000      8.918      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    132.000    -13.930      0.000      8.918      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    133.000    -13.928      0.000      8.918      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    134.000    -13.926      0.000      8.918      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    135.000    -13.924      0.000      8.918      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    136.000    -13.922      0.000      8.918      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    137.000    -13.920      0.000      8.918      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    138.000    -13.918      0.000      8.918      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    139.000    -13.916      0.000      8.918      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    140.000    -13.914      0.000      8.918      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    141.000    -13.912      0.000      8.918      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    142.000    -13.910      0.000      8.918      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    143.000    -13.908      0.000      8.918      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    144.000    -13.906      0.000      8.918      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    145.000    -13.905      0.000      8.918      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    146.000    -13.903      0.000      8.918      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    147.000    -13.901      0.000      8.918      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    148.000    -13.899      0.000      8.918      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    149.000    -13.897      0.000      8.918      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    150.000    -13.895      0.000      8.918      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    151.000    -13.893      0.000      8.918      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    152.000    -13.891      0.000      8.918      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    153.000    -13.889      0.000      8.918      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    154.000    -13.887      0.000      8.918      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    155.000    -13.885      0.000      8.918      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    156.000    -13.883      0.000      8.918      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    157.000    -13.881      0.000      8.918      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    158.000    -13.879      0.000      8.918      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    159.000    -13.877      0.000      8.918      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    160.000    -13.875      0.000      8.918      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    161.000    -13.873      0.000      8.918      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    162.000    -13.871      0.000      8.918      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    163.000    -13.869      0.000      8.918      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    164.000    -13.865      0.000      8.918      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
OF    165.000    -13.861      0.000      8.918      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
OF    166.000    -13.857      0.000      8.918      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
OF    167.000    -13.853      0.000      8.918      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
OF    168.000    -13.849      0.000      8.918      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
OF    169.000    -13.845      0.000      8.918      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
OF    170.000    -13.841      0.000      8.918      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
OF    171.000    -13.837      0.000      8.918      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
OF    172.000    -13.833      0.000      8.918      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
OF    173.000    -13.829      0.000      8.918      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
OF    174.000    -13.825      0.000      8.918      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
OF    175.000    -13.821      0.000      8.918      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
OF    176.000    -13.816      0.000      8.918      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
OF    177.000    -13.812      0.000      8.918      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
OF    178.000    -13.808      0.000      8.918      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
OF    179.000    -13.804      0.000      8.918      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
OF    180.000    -13.800      0.000      8.918      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
OF    181.000    -13.796      0.000      8.918      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
OF    182.000    -13.792      0.000      8.918      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
OF    183.000    -13.788      0.000      8.918      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
OF    184.000    -13.784      0.000      8.918      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
OF    185.000    -13.780      0.000      8.918      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
OF    186.000    -13.776      0.000      8.918      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
OF    187.000    -13.772      0.000      8.918      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
OF    188.000    -13.767      0.000      8.918      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
OF    189.000    -13.763      0.000      8.918      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
OF    190.000    -13.759      0.000      8.918      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
OF    191.000    -13.755      0.000      8.918      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
OF    192.000    -13.751      0.000      8.918      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
OF    193.000    -13.747      0.000      8.918      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
OF    194.000    -13.743      0.000      8.918      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
OF    195.000    -13.739      0.000      8.918      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
OF    196.000    -13.735      0.000      8.918      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
OF    197.000    -13.731      0.000      8.918      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
OF    198.000    -13.727      0.000      8.918      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
OF    199.000    -13.723      0.000      8.918      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
OF    200.000    -13.719      0.000      8.918      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
OF    201.000    -13.714      0.000      8.918      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
OF    202.000    -13.710      0.000      8.918      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
OF    203.000    -13.706      0.000      8.918      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
OF    204.000    -13.702      0.000      8.918      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
OF    205.000    -13.698      0.000      8.918      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
OF   206.000   -13.694     0.000     8.918     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
OF   207.000   -13.690     0.000     8.918     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
OF   208.000   -13.686     0.000     8.918     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
OF   209.000   -13.682     0.000     8.918     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
OF   210.000   -13.678     0.000     8.918     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
OF   211.000   -13.674     0.000     8.918     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
OF   212.000   -13.670     0.000     8.918     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
OF   213.000   -13.666     0.000     8.918     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
OF   214.000   -13.661     0.000     8.918     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
OF   215.000   -13.657     0.000     8.918     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
OF   216.000   -13.653     0.000     8.918     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
OF   217.000   -13.649     0.000     8.918     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
OF   218.000   -13.645     0.000     8.918     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
OF   219.000   -13.641     0.000     8.918     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
OF   220.000   -13.637     0.000     8.918     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
OF   221.000   -13.633     0.000     8.918     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
OF   222.000   -13.629     0.000     8.918     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
OF   223.000   -13.625     0.000     8.918     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
OF   224.000   -13.621     0.000     8.918     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
OF   225.000   -13.617     0.000     8.918     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
OF   226.000   -13.613     0.000     8.918     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
OF   227.000   -13.608     0.000     8.918     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
OF   228.000   -13.604     0.000     8.918     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
OF   229.000   -13.600     0.000     8.918     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
OF   230.000   -13.596     0.000     8.918     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
OF   231.000   -13.592     0.000     8.918     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
OF   232.000   -13.588     0.000     8.918     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
OF   233.000   -13.584     0.000     8.918     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
OF   234.000   -13.580     0.000     8.918     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
OF   235.000   -13.576     0.000     8.918     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
OF   236.000   -13.572     0.000     8.918     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
OF   237.000   -13.568     0.000     8.918     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
OF   238.000   -13.564     0.000     8.918     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
OF   239.000   -13.559     0.000     8.918     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
OF    240.000     -13.555      0.000      8.918      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
OF    241.000     -13.551      0.000      8.918      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
OF    242.000     -13.547      0.000      8.918      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
OF    243.000     -13.543      0.000      8.918      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
OF    244.000     -13.539      0.000      8.918      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
OF    245.000     -13.535      0.000      8.918      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
OF    246.000     -13.531      0.000      8.918      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
OF    247.000     -13.527      0.000      8.918      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
OF    248.000     -13.523      0.000      8.918      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
OF    249.000     -13.519      0.000      8.918      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
OF    250.000     -13.515      0.000      8.918      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
OF    251.000     -13.511      0.000      8.918      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
OF    252.000     -13.506      0.000      8.918      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
OF    253.000     -13.502      0.000      8.918      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
OF    254.000     -13.498      0.000      8.918      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
OF    255.000     -13.494      0.000      8.918      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
OF    256.000     -13.490      0.000      8.918      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
OF    257.000     -13.486      0.000      8.918      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
OF    258.000     -13.482      0.000      8.918      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
OF    259.000     -13.478      0.000      8.918      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
OF    260.000     -13.474      0.000      8.918      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
OF    261.000     -13.470      0.000      8.918      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
OF    262.000     -13.466      0.000      8.918      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
OF    263.000     -13.462      0.000      8.918      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
OF    264.000     -13.458      0.000      8.918      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
OF    265.000     -13.453      0.000      8.918      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
OF    266.000     -13.449      0.000      8.918      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
OF    267.000     -13.445      0.000      8.918      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
OF    268.000     -13.441      0.000      8.918      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
OF    269.000     -13.437      0.000      8.918      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
OF    270.000     -13.433      0.000      8.918      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
OF    271.000     -13.429      0.000      8.918      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
OF    272.000     -13.425      0.000      8.918      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    273.000     -13.410      0.000      8.918      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     274.000    -13.394      0.000      8.918      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     275.000    -13.378      0.000      8.918      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     276.000    -13.362      0.000      8.918      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     277.000    -13.346      0.000      8.918      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     278.000    -13.330      0.000      8.918      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     279.000    -13.314      0.000      8.918      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     280.000    -13.298      0.000      8.918      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     281.000    -13.282      0.000      8.918      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     282.000    -13.266      0.000      8.918      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     283.000    -13.250      0.000      8.918      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     284.000    -13.234      0.000      8.918      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     285.000    -13.218      0.000      8.918      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     286.000    -13.202      0.000      8.918      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     287.000    -13.186      0.000      8.918      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     288.000    -13.170      0.000      8.918      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     289.000    -13.155      0.000      8.918      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     290.000    -13.139      0.000      8.918      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     291.000    -13.123      0.000      8.918      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     292.000    -13.107      0.000      8.918      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     293.000    -13.091      0.000      8.918      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     294.000    -13.075      0.000      8.918      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     295.000    -13.059      0.000      8.918      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     296.000    -13.043      0.000      8.918      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     297.000    -13.027      0.000      8.918      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     298.000    -13.011      0.000      8.918      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     299.000    -12.995      0.000      8.918      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     300.000    -12.979      0.000      8.918      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     301.000    -12.963      0.000      8.918      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     302.000    -12.947      0.000      8.918      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     303.000    -12.931      0.000      8.918      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     304.000    -12.915      0.000      8.918      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     305.000    -12.899      0.000      8.918      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     306.000    -12.883      0.000      8.918      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     307.000    -12.867      0.000      8.918      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    308.000    -12.851      0.000      8.918      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    309.000    -12.835      0.000      8.918      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    310.000    -12.819      0.000      8.918      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    311.000    -12.803      0.000      8.918      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    312.000    -12.787      0.000      8.918      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    313.000    -12.771      0.000      8.918      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    314.000    -12.755      0.000      8.918      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    -12.739      0.000      8.918      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    316.000    -12.723      0.000      8.918      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    317.000    -12.707      0.000      8.918      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    318.000    -12.691      0.000      8.918      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    319.000    -12.675      0.000      8.918      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    320.000    -12.659      0.000      8.918      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    321.000    -12.643      0.000      8.918      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    322.000    -12.627      0.000      8.918      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    323.000    -12.612      0.000      8.918      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    324.000    -12.596      0.000      8.918      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    325.000    -12.580      0.000      8.918      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    326.000    -12.564      0.000      8.918      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    327.000    -12.548      0.000      8.918      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    328.000    -12.532      0.000      8.918      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    329.000    -12.516      0.000      8.918      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    330.000    -12.500      0.000      8.918      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    331.000    -12.484      0.000      8.918      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    332.000    -12.468      0.000      8.918      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    333.000    -12.452      0.000      8.918      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    334.000    -12.436      0.000      8.918      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    335.000    -12.420      0.000      8.918      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    336.000    -12.404      0.000      8.918      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    337.000    -12.388      0.000      8.918      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    338.000    -12.372      0.000      8.918      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    339.000    -12.358      0.000      8.918      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    340.000    -12.344      0.000      8.918      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    341.000    -12.330      0.000      8.918      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   342.000   -12.317     0.000     8.918     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   343.000   -12.303     0.000     8.918     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   344.000   -12.289     0.000     8.918     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   345.000   -12.275     0.000     8.918     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   346.000   -12.261     0.000     8.918     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   347.000   -12.247     0.000     8.918     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   348.000   -12.233     0.000     8.918     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   349.000   -12.219     0.000     8.918     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   350.000   -12.206     0.000     8.918     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   351.000   -12.192     0.000     8.918     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   352.000   -12.178     0.000     8.918     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   353.000   -12.164     0.000     8.918     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   354.000   -12.150     0.000     8.918     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   355.000   -12.136     0.000     8.918     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   356.000   -12.122     0.000     8.918     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   357.000   -12.109     0.000     8.918     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   358.000   -12.095     0.000     8.918     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   359.000   -12.081     0.000     8.918     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   360.000   -12.067     0.000     8.918     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   361.000   -12.053     0.000     8.918     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   362.000   -12.039     0.000     8.918     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   363.000   -12.025     0.000     8.918     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   364.000   -12.012     0.000     8.918     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   365.000   -11.998     0.000     8.918     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   366.000   -11.984     0.000     8.918     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   367.000   -11.970     0.000     8.918     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   368.000   -11.956     0.000     8.918     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   369.000   -11.942     0.000     8.918     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   370.000   -11.928     0.000     8.918     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   371.000   -11.914     0.000     8.918     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   372.000   -11.901     0.000     8.918     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   373.000   -11.887     0.000     8.918     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   374.000   -11.873     0.000     8.918     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   375.000   -11.859     0.000     8.918     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    376.000    -11.845      0.000      8.918      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    377.000    -11.831      0.000      8.918      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    378.000    -11.817      0.000      8.918      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    379.000    -11.804      0.000      8.918      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    380.000    -11.790      0.000      8.918      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    381.000    -11.776      0.000      8.918      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    382.000    -11.762      0.000      8.918      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    383.000    -11.748      0.000      8.918      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    384.000    -11.734      0.000      8.918      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    385.000    -11.720      0.000      8.918      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    386.000    -11.707      0.000      8.918      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    387.000    -11.693      0.000      8.918      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    388.000    -11.679      0.000      8.918      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    389.000    -11.665      0.000      8.918      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    390.000    -11.651      0.000      8.918      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    391.000    -11.637      0.000      8.918      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    392.000    -11.623      0.000      8.918      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    393.000    -11.609      0.000      8.918      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    394.000    -11.596      0.000      8.918      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    395.000    -11.582      0.000      8.918      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    396.000    -11.568      0.000      8.918      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    397.000    -11.554      0.000      8.918      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    398.000    -11.540      0.000      8.918      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    399.000    -11.526      0.000      8.918      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    400.000    -11.512      0.000      8.918      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    401.000    -11.499      0.000      8.918      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    402.000    -11.485      0.000      8.918      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    403.000    -11.471      0.000      8.918      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    404.000    -11.457      0.000      8.918      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    405.000    -11.443      0.000      8.918      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    406.000    -11.429      0.000      8.918      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    407.000    -11.415      0.000      8.918      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    408.000    -11.402      0.000      8.918      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    409.000    -11.358      0.000      8.918      0.000      0.000      0.000      0.000      0.107      0.000
```

```
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    410.000    -11.188      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    411.000    -11.018      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    412.000    -10.849      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    413.000    -10.680      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    414.000    -10.510      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    415.000    -10.341      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    416.000    -10.171      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    417.000    -10.002      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    418.000     -9.833      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    419.000     -9.663      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    420.000     -9.494      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    421.000     -9.324      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    422.000     -9.155      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    423.000     -8.986      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    424.000     -8.816      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    425.000     -8.647      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    426.000     -8.477      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    427.000     -8.307      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    428.000     -8.138      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    429.000     -7.969      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    430.000     -7.799      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    431.000     -7.630      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    432.000     -7.460      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    433.000     -7.291      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    434.000     -7.122      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    435.000     -6.952      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    436.000     -6.782      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    437.000     -6.613      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    438.000     -6.444      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    439.000     -6.274      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    440.000     -6.105      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    441.000     -5.935      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    442.000     -5.766      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    443.000     -5.596      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
```

```
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    444.000     -5.427      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    445.000     -5.258      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    446.000     -5.088      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    447.000     -4.918      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    448.000     -4.749      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    449.000     -4.580      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    450.000     -4.410      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    451.000     -4.241      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    452.000     -4.071      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    453.000     -3.902      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    454.000     -3.732      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    455.000     -3.563      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    456.000     -3.394      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    457.000     -3.224      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    458.000     -3.054      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    459.000     -2.885      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    460.000     -2.716      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    461.000     -2.546      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    462.000     -2.376      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    463.000     -2.207      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    464.000     -2.038      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    465.000     -1.868      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    466.000     -1.699      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    467.000     -1.529      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    468.000     -1.360      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    469.000     -1.191      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    470.000     -1.021      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    471.000     -0.852      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
OF    472.000     -0.682      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
IF    477.000      0.165      0.000      8.918      0.000      0.000      0.000      0.000      0.169      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
IF    478.000      0.335      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
IF    479.000      0.504      0.000      8.918      0.000      0.000      0.000      0.000      0.170      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
IF    480.000      0.675      0.000      8.918      0.000      0.000      0.000      0.000      0.174      0.000
          END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
IF    481.000      0.852      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
```

```
            END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
        STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
  IF    482.000      1.030      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
            END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
        STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
  IF    483.000      1.207      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
            END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
        STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
  IF    484.000      1.384      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
            END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
        STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
  IF    485.000      1.561      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
            END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
        STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
  IF    486.000      1.739      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
            END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
        STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
  IF    487.000      1.916      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
            END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
        STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
  IF    488.000      2.093      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
            END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
        STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
  IF    489.000      2.271      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
            END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
        STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
  IF    490.000      2.448      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
            END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
        STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
  IF    491.000      2.625      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
            END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
        STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
  IF    492.000      2.802      0.000      8.918      0.000      0.000      0.000      0.000      0.177      0.000
            END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
        STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
  IF    493.000      2.980      0.000      8.918      0.000      0.000      0.000      0.000      0.214      0.000
            END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
        STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
  IF    515.100      7.742      0.000      8.934      0.000      0.000      0.000      0.000      0.215      0.000
            END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
        STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
  IF    518.400      8.449      0.000      9.000      0.000      0.000      0.000      0.000      0.217      0.000
            END        END  NEW SURGE  NEW SURGE                                                 BOTTOM    AVERAGE
        STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
  IF    520.900      9.000      0.000      9.000      0.000      0.000      0.000      0.000      0.220      0.000
  ------------------------------------------------END OF TRANSECT-------------------------------------------------
  NOTE:
  SURGE ELEVATION INCLUDES CONTRIBUTIONS FROM ASTRONOMICAL AND STORM TIDES.
1
                                                PART2: CONTROLLING WAVE HEIGHTS, SPECTRAL
                                                       PEAK WAVE PERIOD, AND WAVE CREST ELEVATIONS
                                          LOCATION        CONTROLLING  SPECTRAL PEAK   WAVE CREST
                                                          WAVE HEIGHT  WAVE PERIOD     ELEVATION
                                        IE       0.00         2.31         2.30        10.54
                                        OF       1.00         2.31         2.30        10.54
                                        OF       2.00         2.32         2.30        10.54
                                        OF       3.00         2.32         2.30        10.54
                                        OF       4.00         2.32         2.30        10.54
                                        OF       5.00         2.32         2.30        10.54
                                        OF       6.00         2.32         2.30        10.54
                                        OF       7.00         2.32         2.30        10.54
                                        OF       8.00         2.32         2.30        10.54
                                        OF       9.00         2.32         2.30        10.54
                                        OF      10.00         2.32         2.30        10.54
                                        OF      11.00         2.32         2.30        10.54
                                        OF      12.00         2.32         2.30        10.54
                                        OF      13.00         2.32         2.30        10.54
                                        OF      14.00         2.32         2.30        10.54
                                        OF      15.00         2.32         2.30        10.54
                                        OF      16.00         2.32         2.30        10.55
                                        OF      17.00         2.33         2.30        10.55
                                        OF      18.00         2.33         2.30        10.55
                                        OF      19.00         2.33         2.30        10.55
                                        OF      20.00         2.33         2.30        10.55
                                        OF      21.00         2.33         2.30        10.55
                                        OF      22.00         2.33         2.30        10.55
                                        OF      23.00         2.33         2.30        10.55
                                        OF      24.00         2.33         2.30        10.55
                                        OF      25.00         2.33         2.30        10.55
                                        OF      26.00         2.33         2.30        10.55
                                        OF      27.00         2.33         2.30        10.55
                                        OF      28.00         2.33         2.30        10.55
                                        OF      29.00         2.33         2.30        10.55
                                        OF      30.00         2.33         2.31        10.55
                                        OF      31.00         2.33         2.31        10.55
                                        OF      32.00         2.33         2.31        10.55
                                        OF      33.00         2.34         2.31        10.55
                                        OF      34.00         2.34         2.31        10.55
                                        OF      35.00         2.34         2.31        10.55
                                        OF      36.00         2.34         2.31        10.55
                                        OF      37.00         2.34         2.31        10.55
                                        OF      38.00         2.34         2.31        10.56
                                        OF      39.00         2.34         2.31        10.56
                                        OF      40.00         2.34         2.31        10.56
                                        OF      41.00         2.34         2.31        10.56
                                        OF      42.00         2.34         2.31        10.56
                                        OF      43.00         2.34         2.31        10.56
                                        OF      44.00         2.34         2.31        10.56
                                        OF      45.00         2.34         2.31        10.56
                                        OF      46.00         2.34         2.31        10.56
                                        OF      47.00         2.34         2.31        10.56
                                        OF      48.00         2.35         2.31        10.56
```

```
OF     49.00          2.35          2.31         10.56
OF     50.00          2.35          2.31         10.56
OF     51.00          2.35          2.31         10.56
OF     52.00          2.35          2.31         10.56
OF     53.00          2.35          2.31         10.56
OF     54.00          2.35          2.31         10.56
OF     55.00          2.35          2.31         10.56
OF     56.00          2.35          2.31         10.56
OF     57.00          2.35          2.31         10.56
OF     58.00          2.35          2.31         10.56
OF     59.00          2.35          2.31         10.56
OF     60.00          2.35          2.31         10.56
OF     61.00          2.35          2.31         10.57
OF     62.00          2.35          2.31         10.57
OF     63.00          2.35          2.31         10.57
OF     64.00          2.36          2.31         10.57
OF     65.00          2.36          2.31         10.57
OF     66.00          2.36          2.31         10.57
OF     67.00          2.36          2.31         10.57
OF     68.00          2.36          2.31         10.57
OF     69.00          2.36          2.31         10.57
OF     70.00          2.36          2.31         10.57
OF     71.00          2.36          2.31         10.57
OF     72.00          2.36          2.31         10.57
OF     73.00          2.36          2.31         10.57
OF     74.00          2.36          2.31         10.57
OF     75.00          2.36          2.31         10.57
OF     76.00          2.36          2.31         10.57
OF     77.00          2.36          2.31         10.57
OF     78.00          2.36          2.31         10.57
OF     79.00          2.36          2.31         10.57
OF     80.00          2.37          2.31         10.57
OF     81.00          2.37          2.31         10.57
OF     82.00          2.37          2.31         10.57
OF     83.00          2.37          2.31         10.58
OF     84.00          2.37          2.31         10.58
OF     85.00          2.37          2.31         10.58
OF     86.00          2.37          2.31         10.58
OF     87.00          2.37          2.31         10.58
OF     88.00          2.37          2.32         10.58
OF     89.00          2.37          2.32         10.58
OF     90.00          2.37          2.32         10.58
OF     91.00          2.37          2.32         10.58
OF     92.00          2.37          2.32         10.58
OF     93.00          2.37          2.32         10.58
OF     94.00          2.37          2.32         10.58
OF     95.00          2.37          2.32         10.58
OF     96.00          2.38          2.32         10.58
OF     97.00          2.38          2.32         10.58
OF     98.00          2.38          2.32         10.58
OF     99.00          2.38          2.32         10.58
OF    100.00          2.38          2.32         10.58
OF    101.00          2.38          2.32         10.58
OF    102.00          2.38          2.32         10.58
OF    103.00          2.38          2.32         10.58
OF    104.00          2.38          2.32         10.58
OF    105.00          2.38          2.32         10.58
OF    106.00          2.38          2.32         10.59
OF    107.00          2.38          2.32         10.59
OF    108.00          2.38          2.32         10.59
OF    109.00          2.38          2.32         10.59
OF    110.00          2.38          2.32         10.59
OF    111.00          2.39          2.32         10.59
OF    112.00          2.39          2.32         10.59
OF    113.00          2.39          2.32         10.59
OF    114.00          2.39          2.32         10.59
OF    115.00          2.39          2.32         10.59
OF    116.00          2.39          2.32         10.59
OF    117.00          2.39          2.32         10.59
OF    118.00          2.39          2.32         10.59
OF    119.00          2.39          2.32         10.59
OF    120.00          2.39          2.32         10.59
OF    121.00          2.39          2.32         10.59
OF    122.00          2.39          2.32         10.59
OF    123.00          2.39          2.32         10.59
OF    124.00          2.39          2.32         10.59
OF    125.00          2.39          2.32         10.59
OF    126.00          2.39          2.32         10.59
OF    127.00          2.40          2.32         10.59
OF    128.00          2.40          2.32         10.60
OF    129.00          2.40          2.32         10.60
OF    130.00          2.40          2.32         10.60
OF    131.00          2.40          2.32         10.60
OF    132.00          2.40          2.32         10.60
OF    133.00          2.40          2.32         10.60
OF    134.00          2.40          2.32         10.60
OF    135.00          2.40          2.32         10.60
OF    136.00          2.40          2.32         10.60
OF    137.00          2.40          2.32         10.60
OF    138.00          2.40          2.32         10.60
OF    139.00          2.40          2.32         10.60
OF    140.00          2.40          2.32         10.60
OF    141.00          2.40          2.32         10.60
OF    142.00          2.40          2.32         10.60
OF    143.00          2.41          2.32         10.60
OF    144.00          2.41          2.32         10.60
OF    145.00          2.41          2.32         10.60
OF    146.00          2.41          2.32         10.60
OF    147.00          2.41          2.32         10.60
OF    148.00          2.41          2.33         10.60
OF    149.00          2.41          2.33         10.60
OF    150.00          2.41          2.33         10.60
```

```
OF     151.00         2.41          2.33         10.61
OF     152.00         2.41          2.33         10.61
OF     153.00         2.41          2.33         10.61
OF     154.00         2.41          2.33         10.61
OF     155.00         2.41          2.33         10.61
OF     156.00         2.41          2.33         10.61
OF     157.00         2.41          2.33         10.61
OF     158.00         2.41          2.33         10.61
OF     159.00         2.42          2.33         10.61
OF     160.00         2.42          2.33         10.61
OF     161.00         2.42          2.33         10.61
OF     162.00         2.42          2.33         10.61
OF     163.00         2.42          2.33         10.61
OF     164.00         2.42          2.33         10.61
OF     165.00         2.42          2.33         10.61
OF     166.00         2.42          2.33         10.61
OF     167.00         2.42          2.33         10.61
OF     168.00         2.42          2.33         10.61
OF     169.00         2.42          2.33         10.61
OF     170.00         2.42          2.33         10.61
OF     171.00         2.42          2.33         10.61
OF     172.00         2.42          2.33         10.61
OF     173.00         2.42          2.33         10.61
OF     174.00         2.42          2.33         10.62
OF     175.00         2.42          2.33         10.62
OF     176.00         2.43          2.33         10.62
OF     177.00         2.43          2.33         10.62
OF     178.00         2.43          2.33         10.62
OF     179.00         2.43          2.33         10.62
OF     180.00         2.43          2.33         10.62
OF     181.00         2.43          2.33         10.62
OF     182.00         2.43          2.33         10.62
OF     183.00         2.43          2.33         10.62
OF     184.00         2.43          2.33         10.62
OF     185.00         2.43          2.33         10.62
OF     186.00         2.43          2.33         10.62
OF     187.00         2.43          2.33         10.62
OF     188.00         2.43          2.33         10.62
OF     189.00         2.43          2.33         10.62
OF     190.00         2.43          2.33         10.62
OF     191.00         2.43          2.33         10.62
OF     192.00         2.44          2.33         10.62
OF     193.00         2.44          2.33         10.62
OF     194.00         2.44          2.33         10.62
OF     195.00         2.44          2.33         10.62
OF     196.00         2.44          2.33         10.62
OF     197.00         2.44          2.33         10.62
OF     198.00         2.44          2.33         10.63
OF     199.00         2.44          2.33         10.63
OF     200.00         2.44          2.33         10.63
OF     201.00         2.44          2.33         10.63
OF     202.00         2.44          2.33         10.63
OF     203.00         2.44          2.33         10.63
OF     204.00         2.44          2.33         10.63
OF     205.00         2.44          2.33         10.63
OF     206.00         2.44          2.33         10.63
OF     207.00         2.44          2.34         10.63
OF     208.00         2.45          2.34         10.63
OF     209.00         2.45          2.34         10.63
OF     210.00         2.45          2.34         10.63
OF     211.00         2.45          2.34         10.63
OF     212.00         2.45          2.34         10.63
OF     213.00         2.45          2.34         10.63
OF     214.00         2.45          2.34         10.63
OF     215.00         2.45          2.34         10.63
OF     216.00         2.45          2.34         10.63
OF     217.00         2.45          2.34         10.63
OF     218.00         2.45          2.34         10.63
OF     219.00         2.45          2.34         10.63
OF     220.00         2.45          2.34         10.63
OF     221.00         2.45          2.34         10.64
OF     222.00         2.45          2.34         10.64
OF     223.00         2.45          2.34         10.64
OF     224.00         2.46          2.34         10.64
OF     225.00         2.46          2.34         10.64
OF     226.00         2.46          2.34         10.64
OF     227.00         2.46          2.34         10.64
OF     228.00         2.46          2.34         10.64
OF     229.00         2.46          2.34         10.64
OF     230.00         2.46          2.34         10.64
OF     231.00         2.46          2.34         10.64
OF     232.00         2.46          2.34         10.64
OF     233.00         2.46          2.34         10.64
OF     234.00         2.46          2.34         10.64
OF     235.00         2.46          2.34         10.64
OF     236.00         2.46          2.34         10.64
OF     237.00         2.46          2.34         10.64
OF     238.00         2.46          2.34         10.64
OF     239.00         2.46          2.34         10.64
OF     240.00         2.46          2.34         10.64
OF     241.00         2.47          2.34         10.64
OF     242.00         2.47          2.34         10.64
OF     243.00         2.47          2.34         10.64
OF     244.00         2.47          2.34         10.65
OF     245.00         2.47          2.34         10.65
OF     246.00         2.47          2.34         10.65
OF     247.00         2.47          2.34         10.65
OF     248.00         2.47          2.34         10.65
OF     249.00         2.47          2.34         10.65
OF     250.00         2.47          2.34         10.65
OF     251.00         2.47          2.34         10.65
OF     252.00         2.47          2.34         10.65
```

```
OF     253.00         2.47         2.34         10.65
OF     254.00         2.47         2.34         10.65
OF     255.00         2.47         2.34         10.65
OF     256.00         2.47         2.34         10.65
OF     257.00         2.48         2.34         10.65
OF     258.00         2.48         2.34         10.65
OF     259.00         2.48         2.34         10.65
OF     260.00         2.48         2.34         10.65
OF     261.00         2.48         2.34         10.65
OF     262.00         2.48         2.34         10.65
OF     263.00         2.48         2.34         10.65
OF     264.00         2.48         2.34         10.65
OF     265.00         2.48         2.34         10.65
OF     266.00         2.48         2.34         10.65
OF     267.00         2.48         2.34         10.65
OF     268.00         2.48         2.35         10.66
OF     269.00         2.48         2.35         10.66
OF     270.00         2.48         2.35         10.66
OF     271.00         2.48         2.35         10.66
OF     272.00         2.48         2.35         10.66
OF     273.00         2.48         2.35         10.66
OF     274.00         2.49         2.35         10.66
OF     275.00         2.49         2.35         10.66
OF     276.00         2.49         2.35         10.66
OF     277.00         2.49         2.35         10.66
OF     278.00         2.49         2.35         10.66
OF     279.00         2.49         2.35         10.66
OF     280.00         2.49         2.35         10.66
OF     281.00         2.49         2.35         10.66
OF     282.00         2.49         2.35         10.66
OF     283.00         2.49         2.35         10.66
OF     284.00         2.49         2.35         10.66
OF     285.00         2.49         2.35         10.66
OF     286.00         2.49         2.35         10.66
OF     287.00         2.49         2.35         10.66
OF     288.00         2.49         2.35         10.66
OF     289.00         2.49         2.35         10.66
OF     290.00         2.50         2.35         10.66
OF     291.00         2.50         2.35         10.66
OF     292.00         2.50         2.35         10.67
OF     293.00         2.50         2.35         10.67
OF     294.00         2.50         2.35         10.67
OF     295.00         2.50         2.35         10.67
OF     296.00         2.50         2.35         10.67
OF     297.00         2.50         2.35         10.67
OF     298.00         2.50         2.35         10.67
OF     299.00         2.50         2.35         10.67
OF     300.00         2.50         2.35         10.67
OF     301.00         2.50         2.35         10.67
OF     302.00         2.50         2.35         10.67
OF     303.00         2.50         2.35         10.67
OF     304.00         2.50         2.35         10.67
OF     305.00         2.50         2.35         10.67
OF     306.00         2.50         2.35         10.67
OF     307.00         2.51         2.35         10.67
OF     308.00         2.51         2.35         10.67
OF     309.00         2.51         2.35         10.67
OF     310.00         2.51         2.35         10.67
OF     311.00         2.51         2.35         10.67
OF     312.00         2.51         2.35         10.67
OF     313.00         2.51         2.35         10.67
OF     314.00         2.51         2.35         10.67
OF     315.00         2.51         2.35         10.68
OF     316.00         2.51         2.35         10.68
OF     317.00         2.51         2.35         10.68
OF     318.00         2.51         2.35         10.68
OF     319.00         2.51         2.35         10.68
OF     320.00         2.51         2.35         10.68
OF     321.00         2.51         2.35         10.68
OF     322.00         2.51         2.35         10.68
OF     323.00         2.51         2.35         10.68
OF     324.00         2.52         2.35         10.68
OF     325.00         2.52         2.35         10.68
OF     326.00         2.52         2.35         10.68
OF     327.00         2.52         2.35         10.68
OF     328.00         2.52         2.36         10.68
OF     329.00         2.52         2.36         10.68
OF     330.00         2.52         2.36         10.68
OF     331.00         2.52         2.36         10.68
OF     332.00         2.52         2.36         10.68
OF     333.00         2.52         2.36         10.68
OF     334.00         2.52         2.36         10.68
OF     335.00         2.52         2.36         10.68
OF     336.00         2.52         2.36         10.68
OF     337.00         2.52         2.36         10.68
OF     338.00         2.52         2.36         10.68
OF     339.00         2.52         2.36         10.69
OF     340.00         2.52         2.36         10.69
OF     341.00         2.53         2.36         10.69
OF     342.00         2.53         2.36         10.69
OF     343.00         2.53         2.36         10.69
OF     344.00         2.53         2.36         10.69
OF     345.00         2.53         2.36         10.69
OF     346.00         2.53         2.36         10.69
OF     347.00         2.53         2.36         10.69
OF     348.00         2.53         2.36         10.69
OF     349.00         2.53         2.36         10.69
OF     350.00         2.53         2.36         10.69
OF     351.00         2.53         2.36         10.69
OF     352.00         2.53         2.36         10.69
OF     353.00         2.53         2.36         10.69
OF     354.00         2.53         2.36         10.69
```

OF	355.00	2.53	2.36	10.69
OF	356.00	2.53	2.36	10.69
OF	357.00	2.54	2.36	10.69
OF	358.00	2.54	2.36	10.69
OF	359.00	2.54	2.36	10.69
OF	360.00	2.54	2.36	10.69
OF	361.00	2.54	2.36	10.69
OF	362.00	2.54	2.36	10.69
OF	363.00	2.54	2.36	10.69
OF	364.00	2.54	2.36	10.70
OF	365.00	2.54	2.36	10.70
OF	366.00	2.54	2.36	10.70
OF	367.00	2.54	2.36	10.70
OF	368.00	2.54	2.36	10.70
OF	369.00	2.54	2.36	10.70
OF	370.00	2.54	2.36	10.70
OF	371.00	2.54	2.36	10.70
OF	372.00	2.54	2.36	10.70
OF	373.00	2.54	2.36	10.70
OF	374.00	2.54	2.36	10.70
OF	375.00	2.55	2.36	10.70
OF	376.00	2.55	2.36	10.70
OF	377.00	2.55	2.36	10.70
OF	378.00	2.55	2.36	10.70
OF	379.00	2.55	2.36	10.70
OF	380.00	2.55	2.36	10.70
OF	381.00	2.55	2.36	10.70
OF	382.00	2.55	2.36	10.70
OF	383.00	2.55	2.36	10.70
OF	384.00	2.55	2.36	10.70
OF	385.00	2.55	2.36	10.70
OF	386.00	2.55	2.36	10.70
OF	387.00	2.55	2.36	10.70
OF	388.00	2.55	2.36	10.71
OF	389.00	2.55	2.36	10.71
OF	390.00	2.55	2.37	10.71
OF	391.00	2.55	2.37	10.71
OF	392.00	2.56	2.37	10.71
OF	393.00	2.56	2.37	10.71
OF	394.00	2.56	2.37	10.71
OF	395.00	2.56	2.37	10.71
OF	396.00	2.56	2.37	10.71
OF	397.00	2.56	2.37	10.71
OF	398.00	2.56	2.37	10.71
OF	399.00	2.56	2.37	10.71
OF	400.00	2.56	2.37	10.71
OF	401.00	2.56	2.37	10.71
OF	402.00	2.56	2.37	10.71
OF	403.00	2.56	2.37	10.71
OF	404.00	2.56	2.37	10.71
OF	405.00	2.56	2.37	10.71
OF	406.00	2.56	2.37	10.71
OF	407.00	2.56	2.37	10.71
OF	408.00	2.56	2.37	10.71
OF	409.00	2.57	2.37	10.71
OF	410.00	2.57	2.37	10.71
OF	411.00	2.57	2.37	10.71
OF	412.00	2.57	2.37	10.71
OF	413.00	2.57	2.37	10.72
OF	414.00	2.57	2.37	10.72
OF	415.00	2.57	2.37	10.72
OF	416.00	2.57	2.37	10.72
OF	417.00	2.57	2.37	10.72
OF	418.00	2.57	2.37	10.72
OF	419.00	2.57	2.37	10.72
OF	420.00	2.57	2.37	10.72
OF	421.00	2.57	2.37	10.72
OF	422.00	2.57	2.37	10.72
OF	423.00	2.57	2.37	10.72
OF	424.00	2.57	2.37	10.72
OF	425.00	2.57	2.37	10.72
OF	426.00	2.57	2.37	10.72
OF	427.00	2.57	2.37	10.72
OF	428.00	2.57	2.37	10.72
OF	429.00	2.57	2.37	10.72
OF	430.00	2.57	2.37	10.72
OF	431.00	2.57	2.37	10.72
OF	432.00	2.57	2.37	10.72
OF	433.00	2.57	2.37	10.72
OF	434.00	2.57	2.37	10.72
OF	435.00	2.57	2.37	10.72
OF	436.00	2.57	2.37	10.72
OF	437.00	2.57	2.37	10.72
OF	438.00	2.57	2.37	10.72
OF	439.00	2.57	2.37	10.72
OF	440.00	2.57	2.37	10.72
OF	441.00	2.57	2.37	10.72
OF	442.00	2.57	2.37	10.72
OF	443.00	2.57	2.37	10.72
OF	444.00	2.57	2.37	10.72
OF	445.00	2.57	2.37	10.72
OF	446.00	2.57	2.37	10.72
OF	447.00	2.57	2.37	10.72
OF	448.00	2.57	2.37	10.71
OF	449.00	2.57	2.37	10.71
OF	450.00	2.56	2.37	10.71
OF	451.00	2.56	2.37	10.71
OF	452.00	2.56	2.38	10.71
OF	453.00	2.56	2.38	10.71
OF	454.00	2.56	2.38	10.71
OF	455.00	2.56	2.38	10.71
OF	456.00	2.55	2.38	10.71

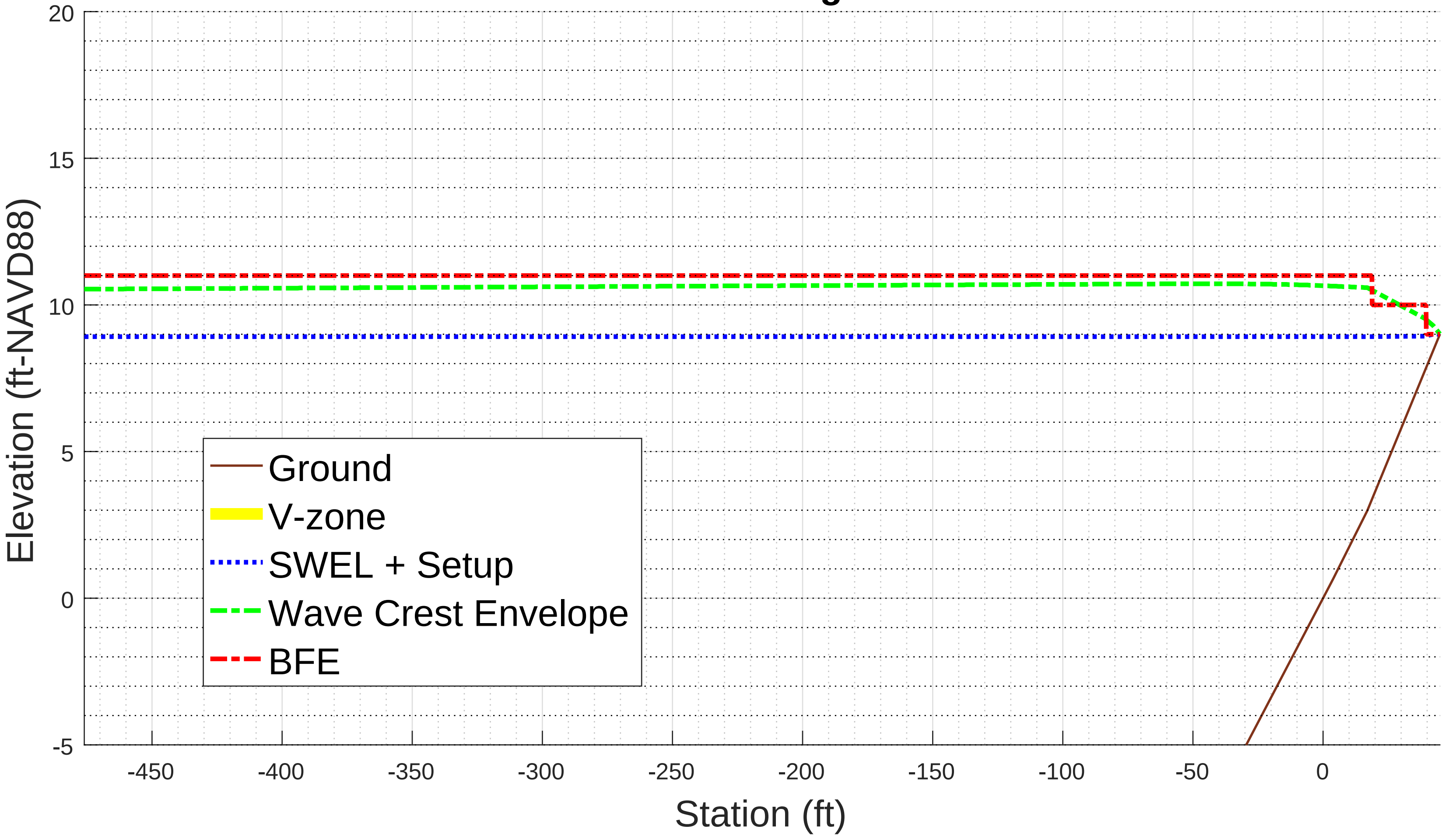
```
                                        OF     457.00         2.55         2.38        10.70
                                        OF     458.00         2.55         2.38        10.70
                                        OF     459.00         2.55         2.38        10.70
                                        OF     460.00         2.54         2.38        10.70
                                        OF     461.00         2.54         2.38        10.70
                                        OF     462.00         2.54         2.38        10.70
                                        OF     463.00         2.54         2.38        10.69
                                        OF     464.00         2.53         2.38        10.69
                                        OF     465.00         2.53         2.38        10.69
                                        OF     466.00         2.53         2.38        10.69
                                        OF     467.00         2.52         2.38        10.68
                                        OF     468.00         2.52         2.38        10.68
                                        OF     469.00         2.51         2.38        10.68
                                        OF     470.00         2.51         2.38        10.68
                                        OF     471.00         2.51         2.38        10.67
                                        OF     472.00         2.50         2.38        10.67
                                        IF     477.00         2.48         2.38        10.65
                                        IF     478.00         2.47         2.38        10.65
                                        IF     479.00         2.47         2.38        10.64
                                        IF     480.00         2.46         2.38        10.64
                                        IF     481.00         2.45         2.38        10.64
                                        IF     482.00         2.45         2.38        10.63
                                        IF     483.00         2.44         2.38        10.63
                                        IF     484.00         2.44         2.38        10.62
                                        IF     485.00         2.43         2.38        10.62
                                        IF     486.00         2.43         2.38        10.62
                                        IF     487.00         2.42         2.38        10.61
                                        IF     488.00         2.41         2.38        10.61
                                        IF     489.00         2.41         2.38        10.60
                                        IF     490.00         2.40         2.38        10.60
                                        IF     491.00         2.40         2.38        10.60
                                        IF     492.00         2.39         2.38        10.59
                                        IF     493.00         2.39         2.38        10.59
                                        IF     515.10         0.87         2.38         9.54
                                        IF     518.40         0.42         2.38         9.29
                                        IF     520.90         0.01         2.38         9.01
                                        PART3 LOCATION OF AREAS ABOVE 100-YEAR SURGE
                                        NO AREAS ABOVE 100-YEAR SURGE IN THIS TRANSECT
                                                  PART4 LOCATION OF SURGE CHANGES
                                        STATION          10-YEAR SURGE          100-YEAR SURGE
                                        515.10                 1.00                 8.93
                                        518.40                 1.00                 9.00
                                                   PART6 NUMBERED A ZONES AND V ZONES
                                        STATION OF GUTTER  ELEVATION  ZONE DESIGNATION   FHF
                                               0.00          10.54
                                                                          A19  EL=11      95
                                             493.00          10.59
                                                                          A19  EL=11      95
                                             494.93          10.50
                                                                          A19  EL=10      95
                                             515.10           9.54
                                                                          A19  EL=10      95
                                             515.69           9.50
                                                                          A19  EL= 9      95
                                             518.40           9.29
                                                                          A19  EL= 9      95
                                             520.90           9.01
                                                  ZONE TERMINATED AT END OF TRANSECT
                                                  PART 7   POSTSCRIPT NOTES
                         PS#  1   START(427362.6083,4852577.8247)
                         PS#  2   END(427502.6297,4852716.6923)
-1.000000e+00
```

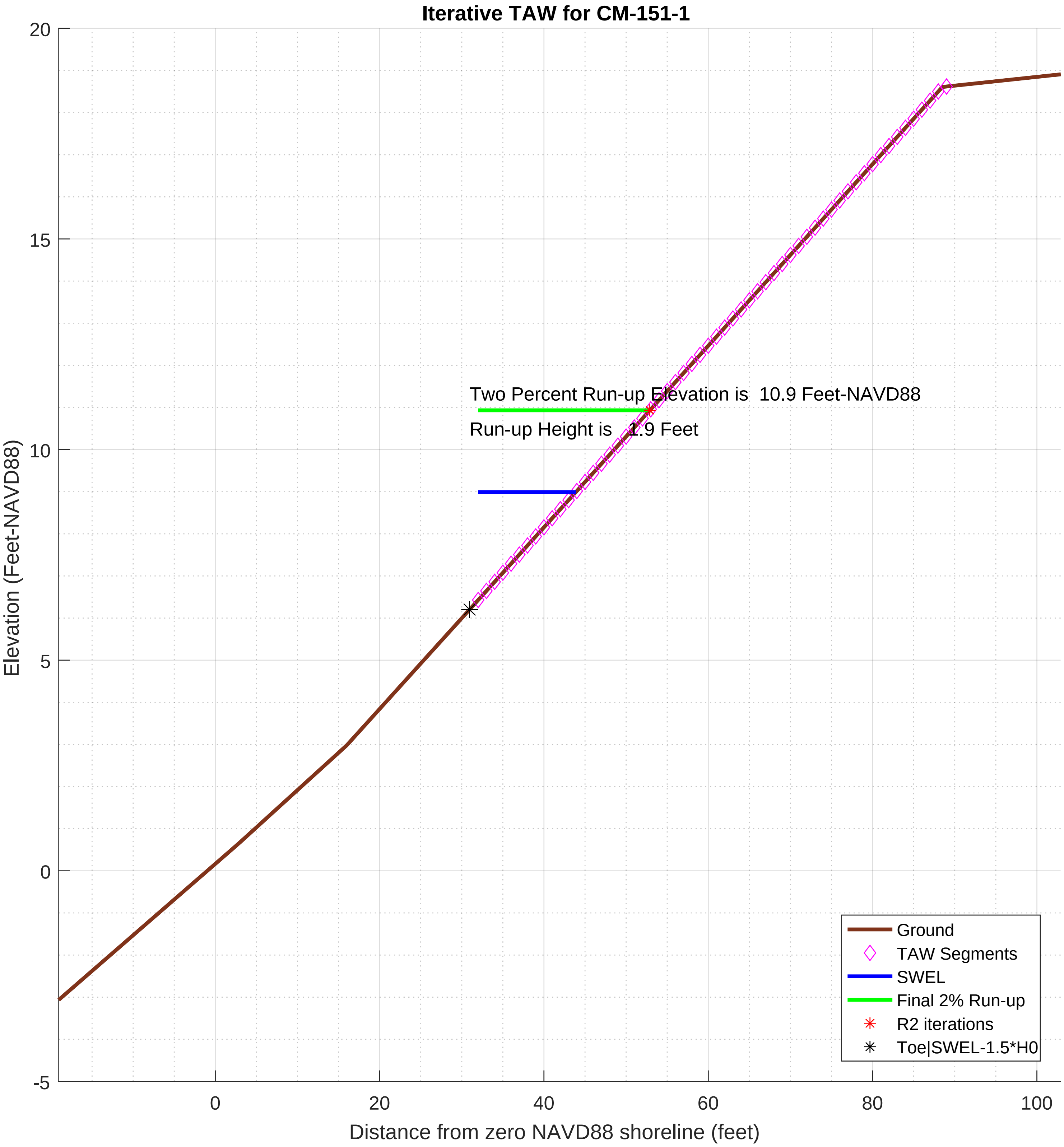
CM-151-1

100-year WHAFIS Output

Zero Station: -69.90204131, 43.82363459

Onshore Dir: 44.8 deg CCW from E




Iterative TAW for CM-151-1
Two Percent Run-up Elevation is 10.9 Feet-NAVD88
Run-up Height is 1.9 Feet
Elevation (Feet-NAVD88)
Distance from zero NAVD88 shoreline (feet)
20
15
10
5
0
-5
0
20
40
60
80
100
Ground
TAW Segments
SWEL
Final 2% Run-up
R2 iterations
Toe|SWEL-1.5*H0

```
diary on         % begin recording

% FEMA appeal for The Town of Harpswell, Cumberland county, Maine
% TRANSECT ID: CM-151-1
% calculation by SJH, Ransom Consulting, Inc. 20-Feb-2020
% 100-year wave runup using TAW methodology
% including berm and weighted average with foreshore if necessary
%
% chk nld 20200220
%
% This script assumes that the incident wave conditions provided
% as input in the configuration section below are the
% appropriate values located at the end of the foreshore
% or toe of the slope on which the run-up is being calculated
% the script does not attempt to apply a depth limit or any other
% transformation to the incident wave conditions other than
% conversion of the peak wave period to the spectral mean wave
% as recommended in the references below
%
% references:
%
% Van der Meer, J.W., 2002. Technical Report Wave Run-up and
% Wave Overtopping at Dikes. TAW Technical Advisory Committee on
% Flood Defence, The Netherlands.
%
% FEMA. 2007,  Atlantic Ocean and Gulf of Mexico Coastal Guidelines Update
%
%
%

%--------------------------------------------------------------------------
% CONFIG
%--------------------------------------------------------------------------
fname=’inpfiles/CM-151-1sta_ele_include.csv’;   % file with station, elevation, include
                                      % third colunm is 0 for excluded points
imgname=’logfiles/CM-151-1-runup’;
SWEL=8.9177;  % 100-yr still water level including wave setup.
H0=1.8096;    % significant wave height at toe of structure
Tp=2.2995;    % peak period, 1/fma,
T0=Tp/1.1;

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

setupAtToe=-0.00097113;
maxSetup=0.082529;   % only used in case of berm/shallow foreshore weighted average

plotTitle=’Iterative TAW for CM-151-1’

plotTitle =

Iterative TAW for CM-151-1



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

SWEL=SWEL+setupAtToe

SWEL =

                8.91672887

SWEL_fore=SWEL+maxSetup

SWEL_fore =

                8.99925787



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

L0 =

           22.360554364364


% 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 =

                6.20232887


% 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 =

               11.63112887


% 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 =

          30.9480399588073


top_sta =

          56.1312641252111

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

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

top_sta =

          56.1312641252111

toe_sta

toe_sta =

          30.9480399588073




% 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 112.9 ft landward of toe of slope


ans =

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


ans =

-!!-       setup is adjusted to 0.07 feet


ans =

-!!-       SWEL is adjusted to 8.99 feet


k =

     1
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23
    24
    25
    26
    27
    28
    29
    30
    31
    32
    33
    34
    35
    36
    37
    38
    39
    40
    41
    42
    43
    44
    45
    46
    47
    48
    49
    50
    51
    52
    53
    54
    55
```

```
% now iterate converge on a runup elevation
tol=0.01;  % convergence criteria
R2del=999;
R2_new=3*H0; %initial guess
R2=R2_new;
iter=0;
R2_all=[];
topStaAll=[];
Berm_Segs=[];
TAW_ALWAYS_VALID=1;
while(abs(R2del) > tol && iter <= 25)
    iter=iter+1;
    sprintf (’!----------------- STARTING ITERATION %d -----------------!’,iter)
    % elevation of toe of slope
    Ztoe
    % station of toe slope (relative to 0-NAVD88 shoreline
    toe_sta
    % station of top of slope/extent of 2% run-up
    top_sta
    % elevation of top of slope/extent of 2% run-up
    Z2
    % incident significant wave height
    H0
    % incident spectral peak wave period
    Tp
    % incident spectral mean wave period
    T0

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

```
   top_sta=sta(end)+dy/S(end)
end

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

% loop over profile segments to determine berm factor
% re-calculate influence of depth of berm based on this run-up elevation
% check for berm, berm width, berm height
berm_width=0;
rdh_sum=0;
Berm_Segs=[];
Berm_Heights=[];
for kk=1:length(sta)-1
   ddep=dep(kk+1)-dep(kk);
   dsta=sta(kk+1)-sta(kk);
   s=ddep/dsta;
   if  (s < 1/15)     % count it as a berm if slope is flatter than 1:15 (see TAW manual)
      sprintf (’Berm Factor Calculation: Iteration %d, Profile Segment: %d’,iter,kk)
      berm_width=berm_width+dsta;   % tally the width of all berm segments
      % compute the rdh for this segment and weight it by the segment length
      dh=SWEL-(dep(kk)+dep(kk+1))/2
      if  dh < 0
          chi=R2;
      else
          chi=2* H0;
      end
      if (dh <= R2 & dh >=-2*H0)
         rdh=(0.5-0.5*cos(3.14159*dh/chi)) ;
      else
         rdh=1;
      end
      rdh_sum=rdh_sum + rdh * dsta
      Berm_Segs=[Berm_Segs, kk];
      Berm_Heights=[Berm_Heights, (dep(kk)+dep(kk+1))/2];
   end
   if dep(kk) >= Z2  % jump out of loop if we reached limit of run-up for this iteration
      break
   end
end
sprintf (’!------- End Berm Factor Calculation, Iter: %d ---------!’,iter)
berm_width
rB=berm_width/Lslope
if (berm_width > 0)
   rdh_mean=rdh_sum/berm_width
else
   rdh_mean=1
end
gamma_berm=1- rB * (1-rdh_mean)
if gamma_berm > 1
   gamma_berm=1
end
if gamma_berm < 0.6
   gamma_berm =0.6
end
% Iribarren number
slope=(Z2-Ztoe)/(Lslope-berm_width)
Irb=(slope/(sqrt(H0/L0)))
% runup height
gamma_berm
gamma_perm
gamma_beta
gamma_rough
gamma=gamma_berm*gamma_perm*gamma_beta*gamma_rough
% check validity
TAW_VALID=1;
if (Irb*gamma_berm < 0.5 | Irb*gamma_berm > 10 )
   sprintf(’!!! - - Iribaren number: %6.2f is outside the valid range (0.5-10), TAW NOT VALID - - !!!\n’, Irb*gam
   TAW_VALID=0;
else
   sprintf(’!!! - - Iribaren number: %6.2f is in the valid range (0.5-10), TAW RECOMMENDED - - !!!\n’, Irb*gamma_
end
islope=1/slope;
if (slope < 1/8 | slope > 1)
   sprintf(’!!! - - slope: 1:%3.1f V:H is outside the valid range (1:8 - 1:1), TAW NOT VALID - - !!!\n’, islope)
   TAW_VALID=0;
else
   sprintf(’!!! - - slope: 1:%3.1f V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!\n’, islope)
end
if TAW_VALID == 0
   TAW_ALWAYS_VALID=0;
end

if (Irb*gamma_berm < 1.8)
   R2_new=gamma*H0*1.77*Irb
else
   R2_new=gamma*H0*(4.3-(1.6/sqrt(Irb)))
end
% check to see if we need to evaluate a shallow foreshore
if berm_width > 0.25 * L0;
```

```
       disp ('!   Berm_width is greater than 1/4 wave length')
       disp ('!   Runup will be weighted average with foreshore calculation assuming depth limited wave height on ber
       % do the foreshore calculation
       fore_H0=0.78*(SWEL_fore-min(Berm_Heights))
       % get upper slope
       fore_toe_sta=-999;
       fore_toe_dep=-999;
       for kk=length(dep)-1:-1:1
          ddep=dep(kk+1)-dep(kk);
          dsta=sta(kk+1)-sta(kk);
          s=ddep/dsta;
          if s < 1/15
             break
          end
          fore_toe_sta=sta(kk);
          fore_toe_dep=dep(kk);
          upper_slope=(Z2-fore_toe_dep)/(top_sta-fore_toe_sta)
       end
       fore_Irb=upper_slope/(sqrt(fore_H0/L0));
       fore_gamma=gamma_perm*gamma_beta*gamma_rough;
       if (fore_Irb < 1.8)
          fore_R2=fore_gamma*fore_H0*1.77*fore_Irb;
       else
          fore_R2=fore_gamma*fore_H0*(4.3-(1.6/sqrt(fore_Irb)));
       end
       if berm_width >= L0
          R2_new=fore_R2
          disp ('berm is wider than one wavelength, use full shallow foreshore solution');
       else
          w2=(berm_width-0.25*L0)/(0.75*L0)
          w1=1-w2
          R2_new=w2*fore_R2 + w1*R2_new
       end
    end % end berm width check
    % convergence criterion
    R2del=abs(R2-R2_new)
    R2_all(iter)=R2_new;
    % get the new top station (for plot purposes)
    Z2=R2_new+SWEL
    top_sta=-999;
    for kk=1:length(sta)-1
       if ((Z2 > dep(kk)) & (Z2 <= dep(kk+1)))    % here is the intersection of z2 with profile
          top_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Z2)
          break;
       end
    end
    if top_sta==-999
       dy=Z2-dep(end);
       top_sta=sta(end)+dy/S(end);
    end
    topStaAll(iter)=top_sta;
end
ans =
!----------------- STARTING ITERATION 1 -----------------!
Ztoe =
                6.20232887
toe_sta =
          30.9480399588073
top_sta =
          56.1312641252111
Z2 =
               11.63112887
H0 =
                    1.8096
Tp =
                    2.2995
T0 =
          2.09045454545455
R2 =
                    5.4288
Z2 =
          14.4194350899148
top_sta =
          69.0657139606017
Lslope =
          38.1176740017944
ans =
!------- End Berm Factor Calculation, Iter: 1 ---------!
berm_width =
     0
rB =
     0
rdh_mean =
     1
gamma_berm =
     1
slope =
         0.215572078703648
Irb =
         0.757778883529982
```

```
gamma_berm =
     1
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.8
gamma =
                       0.8
ans =
!!! - - Iribaren number:   0.76 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:4.6 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          1.94172776137237
R2del =
          3.48707223862763
Z2 =
          10.9323628512872
top_sta =
          52.8898138973211
ans =
!----------------- STARTING ITERATION 2 -----------------!
Ztoe =
                6.20232887
toe_sta =
          30.9480399588073
top_sta =
          52.8898138973211
Z2 =
          10.9323628512872
H0 =
                    1.8096
Tp =
                    2.2995
T0 =
          2.09045454545455
R2 =
          1.94172776137237
Z2 =
          10.9323628512872
top_sta =
          52.8898138973211
Lslope =
          21.9417739385138
ans =
!------- End Berm Factor Calculation, Iter: 2 ---------!
berm_width =
     0
rB =
     0
rdh_mean =
     1
gamma_berm =
     1
slope =
         0.215572086128583
Irb =
          0.75777890963011
gamma_berm =
     1
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.8
gamma =
                       0.8
ans =
!!! - - Iribaren number:   0.76 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:4.6 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          1.94172782825117
R2del =
      6.68788004976051e-08
Z2 =
           10.932362918166
top_sta =
          52.8898142075585
% final 2% runup elevation
Z2=R2_new+SWEL
Z2 =
           10.932362918166
diary off
-1.000000e+00
-1.000000e+00
```

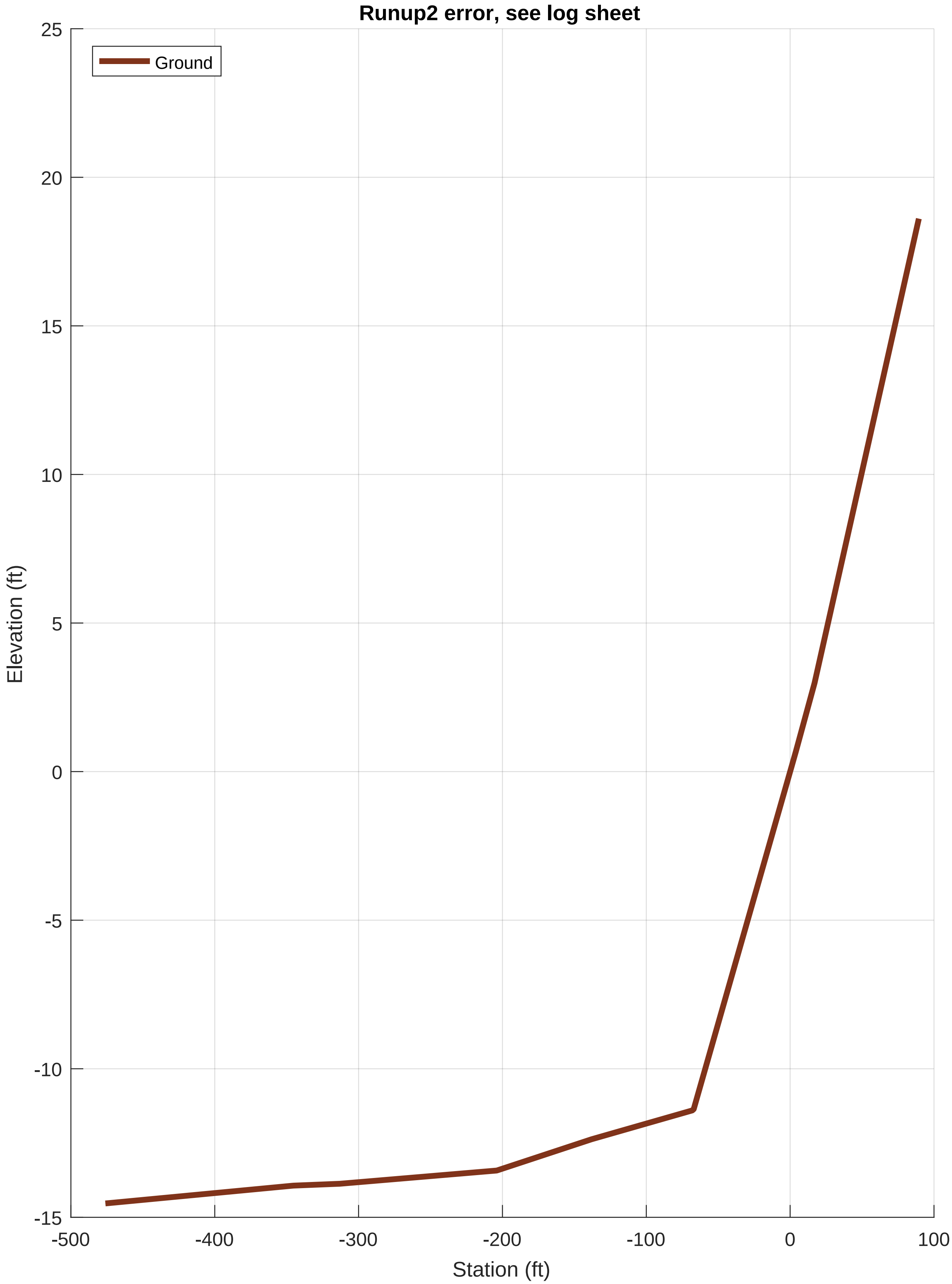
```
_______________________________________________________
PART 5: RUNUP2

        for transect: CM-151-1

Station locations shifted by: -0.97 feet from their
original location to set the shoreline to
elevation 0 for RUNUP2 input


______________RUNUP2 INPUT CONVERSIONS_________________
        for transect: CM-151-1

Incident significant wave height: 1.45 feet

Peak wave period: 2.30 seconds

Mean wave height: 0.91 feet

Local Depth below SWEL: 23.45 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 = 23.45
    Period, T = 1.95
    Waveheight, H = 0.91
Deep water wavelength, L0 (ft)
    L0 = g*T*T/twopi
    L0 = 32.17*1.95*1.95/6.28 = 19.57
Deep water wave celerity, C0 (ft/s)
    C0 = L0/T
    C0 = 19.57/1.95 = 10.01
Angular frequency, sigma (rad/s)
    sigma = twopi/T
    sigma = 6.28/1.95 = 3.21
Hunts (1979) approximation for Celerity C1H (ft/s) at Depth D (ft)
    y = sigma.*sigma.*D./g
    y = 3.21*3.21*23.45/32.17 = 7.53
    C1H = sqrt( g.*D./(y+1./(1 + 0.6522.*y + 0.4622.*y.^2 + 0.0864.*y.^4 +0.0675.*y.^5)) )
    C1H = 10.01
Shoaling Coefficient KsH
    KsH = sqrt(C0/C1H)
    KsH = sqrt(10.01/10.01) = 1.00
Deepwater Wave Height H0_H (ft)
    H0_H = H/KsH
    H0_H = 0.91/1.00 = 0.91

Deepwater mean wave height: 0.91 feet

______________END RUNUP2 CONVERSIONS___________________

______________RUNUP2 RESULTS___________________________
        for transect: CM-151-1

RUNUP2 SWEL:
8.92

RUNUP2 deepwater mean wave heights:
-9999.00
```

```
RUNUP2 mean wave periods:
-9999.00

RUNUP2 runup above SWEL:
-9999.00

RUNUP2 Mean runup height above SWEL: -9999.00 feet

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

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

RUNUP2 Messages:
RUNUP2 Failed

______________END RUNUP2 RESULTS_______________________


________________ACES BEACH RUNUP_______________________

Incident significant wave height: 1.45 feet

Significant wave height deshoaled using Hunt equation

Deepwater significant wave height: 1.27 feet

Peak wave period: 2.30 seconds

Average beach Slope: 1:17.06 (H:V)

ACES RUNUP CALCULATED USING ’Aces_Beach_Runup.m’

ACES Beach 2-percent runup height above SWEL: 0.93 feet

ACES Beach 2-percent runup elevation: 9.85 feet-NAVD88

ACES BEACH RUNUP is valid

_____________END ACES BEACH RESULTS____________________

PART 5 COMPLETE________________________________________
```

```
  FEMA                                                   sjh            job 2
  RUNUP2 transect: CM-151-1                                                 1
5.00
  -14.53 -476.0 0.8
  -13.94 -346.0 0.8
  -13.93 -345.0 0.8
  -13.87 -313.0 0.8
  -13.43 -204.0 0.8
  -13.41 -203.0 0.8
  -12.37 -138.0 0.8
  -11.40 -68.0  0.8
  -11.36 -67.0  0.8
  -9.32 -55.0  0.8
  -8.65 -51.0  0.8
  -6.78 -40.0  0.8
  -5.09 -30.0  0.8
  -4.92 -29.0  0.8
  -1.70 -10.0  0.8
  -0.68 -4.0   0.8
  0.16  1.0    0.8
  0.68  4.0    0.8
  2.98  17.0   0.8
1 18.61 89.5   0.8
 8.9   0.86  1.86
 8.9   0.86  1.95
 8.9   0.86  2.05
 8.9   0.91  1.86
 8.9   0.91  1.95
 8.9   0.91  2.05
 8.9   0.95  1.86
 8.9   0.95  1.95
 8.9   0.95  2.05
```

```
                      CROSS SECTION PROFILE

                    LENGTH   ELEV.    SLOPE     ROUGHNESS

          1         -476.0   -14.5
                                         .00        .80
          2         -346.0   -13.9
                                        FLAT        .80
          3         -345.0   -13.9
                                      320.00        .80
          4         -313.0   -13.8
                                      272.50        .80
          5         -204.0   -13.4
                                        FLAT        .80
          6         -203.0   -13.4
                                       59.09        .80
          7         -138.0   -12.3
                                       77.78        .80
          8          -68.0   -11.4
                                       10.00        .80
          9          -67.0   -11.3
                                        6.06        .80
         10          -55.0    -9.3
                                        5.97        .80
         11          -51.0    -8.6
                                        5.88        .80
         12          -40.0    -6.8
                                        5.92        .80
         13          -30.0    -5.1
                                        5.88        .80
         14          -29.0    -4.9
                                        5.90        .80
         15          -10.0    -1.7
                                        5.88        .80
         16           -4.0     -.7
                                        5.95        .80
         17            1.0      .2
                                        5.77        .80
         18            4.0      .7
                                        5.65        .80
         19           17.0     3.0
                                        4.64        .80
         20           89.5    18.6

                         LAST SLOPE   5.00     LAST ROUGHNESS    .80
```

```
 CLIENT- FEMA                            ** WAVE RUNUP-VERSION 2.0  **         ENGINEERED BY sjh         JOB      job 2
 PROJECT-RUNUP2 transect: CM-151-1                                                                   RUN    1   PAGE   2

************************************************************************************************************************


                                           OUTPUT TABLE
                                           ------------


                  INPUT PARAMETERS                                  RUNUP RESULTS
                  ----------------                                  -------------

        WATER LEVEL    DEEP WATER                           BREAKING SLOPE    RUNUP SLOPE    RUNUP ABOVE        BREAKER
        ABOVE DATUM    WAVE HEIGHT    WAVE PERIOD               NUMBER           NUMBER      WATER LEVEL        DEPTH
           (FT.)          (FT.)          (SEC.)                                                 (FT.)           (FT.)
```


Runup2 error, see log sheet
Ground
Elevation (ft)
Station (ft)
25
20
15
10
5
0
-5
-10
-15
-500
-400
-300
-200
-100
0
100