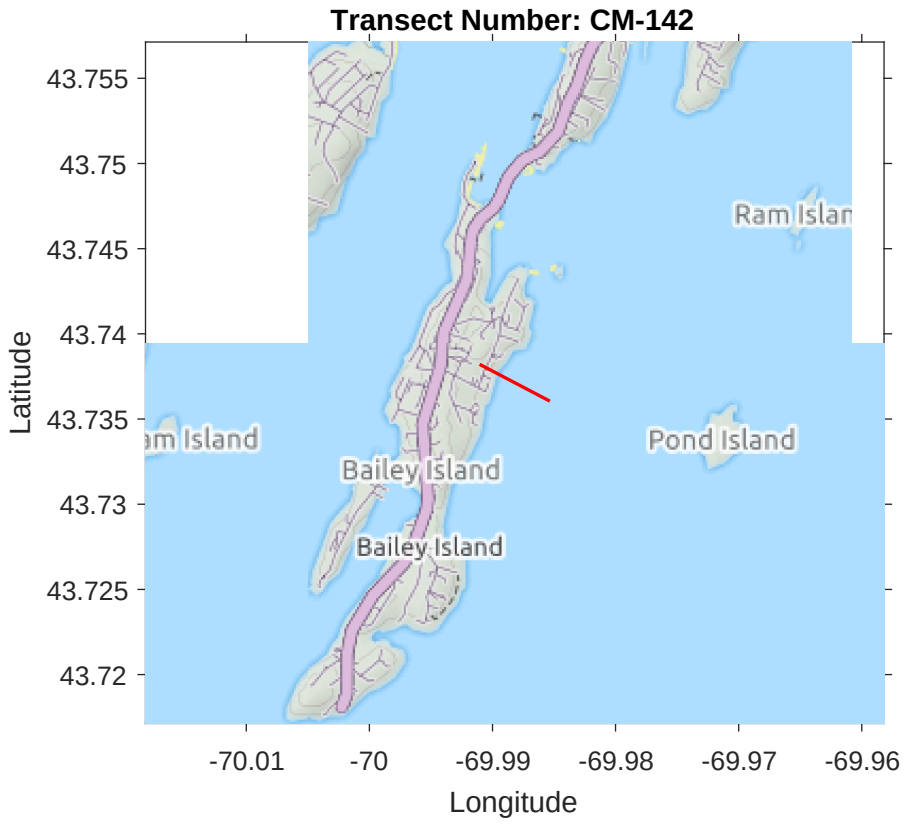
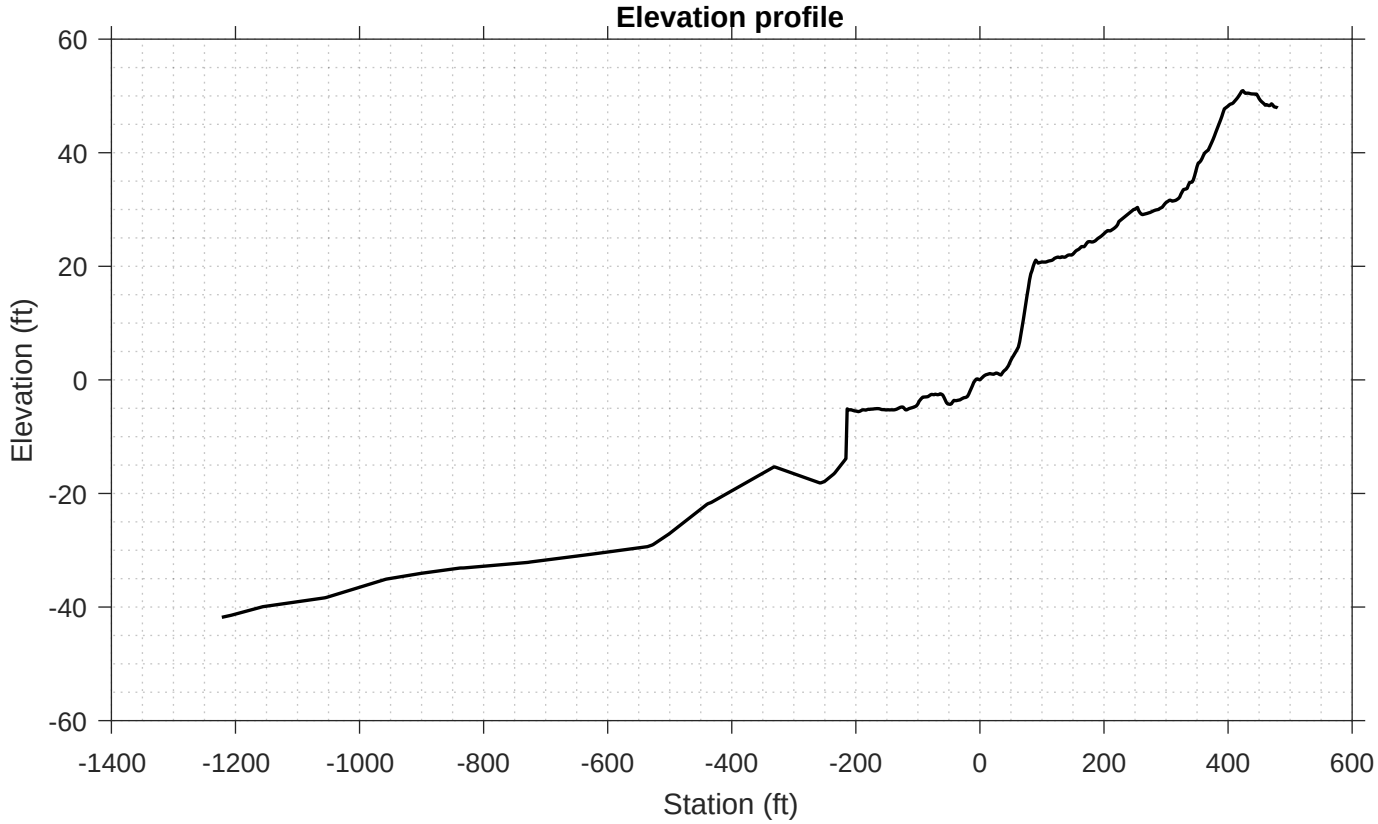

Transect Number: CM-142
43.755
43.75
43.745
43.74
43.735
43.73
43.725
43.72
Latitude
Ram Islan
Pond Island
Bailey Island
Bailey Island
-70.01
-70
-69.99
-69.98
-69.97
-69.96
Longitude


Elevation profile
60
40
20
0
-20
-40
-60
Elevation (ft)
-1400
-1200
-1000
-800
-600
-400
-200
0
200
400
600
Station (ft)

DATA LOG FOR TRANSECT ID: CM-142

PART 1: USER INPUT

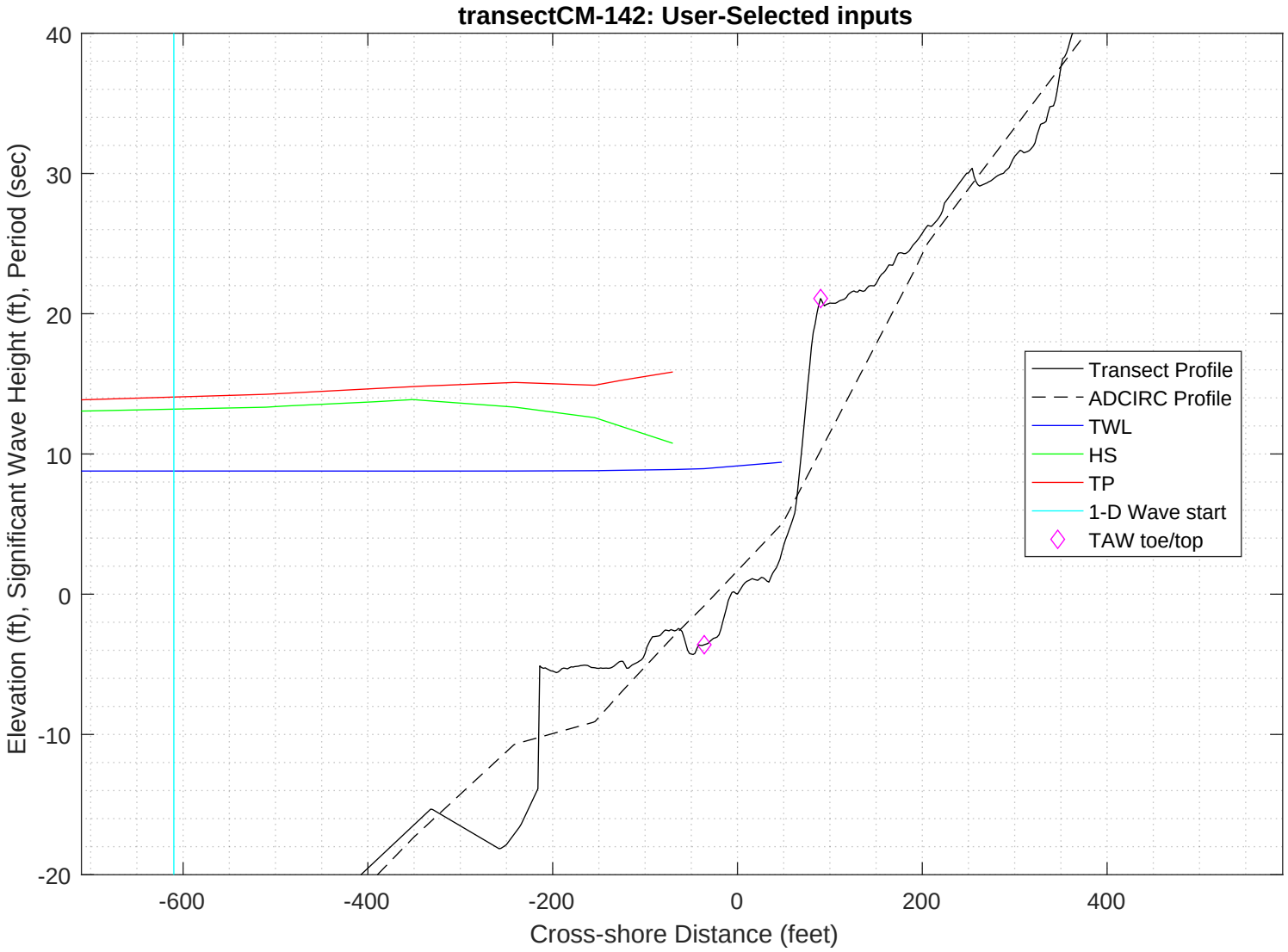
SWAN 1-D / WHAFIS input

station: -610 ft
LON: -69.9874 deg E
LAT: 43.7368 deg N
Bottom ELEV: -30.4571 ft-NAVD88
TWL: 8.7833 ft-NAVD88
HS: 13.1956 ft
TP: 14.0578 sec
Wave Direction bin: 180 deg CCW from East (90 deg sector)
Transect Direction: 159.2458 deg CCW from East

TAW/RUNUP input

toe sta: -36 ft
toe elev: -3.6017 ft-NAVD88
top sta: 90 ft
top elev: 21.0827 ft-NAVD88
Wave and water level conditions at toe to be calculated in SWAN 1-D

PART 1 COMPLETE


transectCM-142: User-Selected inputs
Elevation (ft), Significant Wave Height (ft), Period (sec)
Cross-shore Distance (feet)
40
30
20
10
0
-10
-20
-600
-400
-200
0
200
400
Transect Profile
ADCIRC Profile
TWL
HS
TP
1-D Wave start
TAW toe/top

_____
PART 2: SWAN 1-D

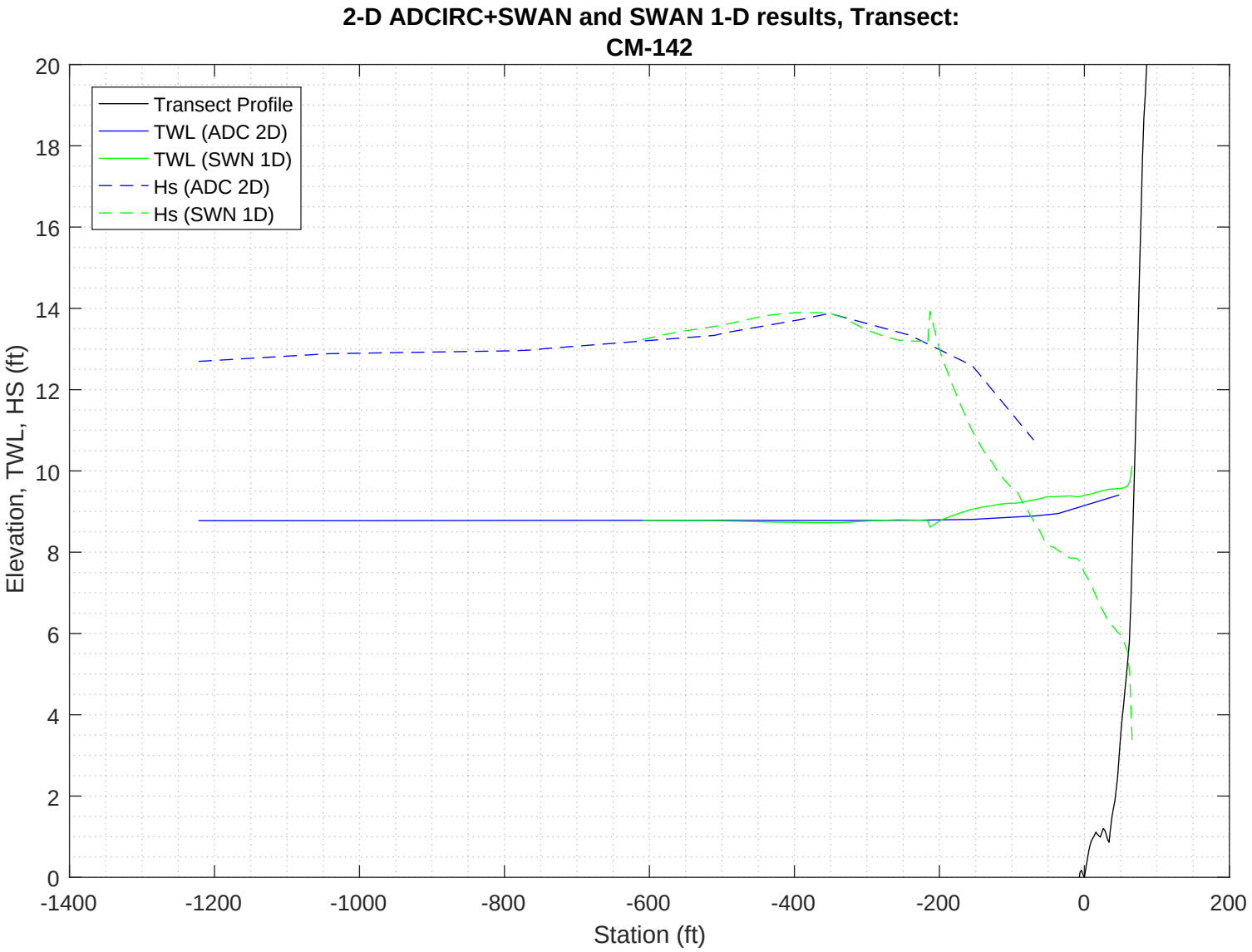
swan input grid name: 2_swan/gridfiles/CM-142zmeters_xmeters.grd
swan file name: 2_swan/swanfiles/CM-142.swn
swan output name: 2_swan/swanfiles/CM-142.dat

Boundary Conditions:
    TWL- 2.6772 meters
    HS- 4.022 meters
    PER- 14.0578 seconds

Batch File: 2_swan/swanfiles/runswan.dat

SWAN maximum additional wave setup: 1.3427 feet
SWAN output at toe:
    SETUP- 0.58856 feet
    HS-   8.0408 feet
    PER-   13.8504 seconds

PART 2 COMPLETE_____


2-D ADCIRC+SWAN and SWAN 1-D results, Transect:
CM-142
Transect Profile
TWL (ADC 2D)
TWL (SWN 1D)
Hs (ADC 2D)
Hs (SWN 1D)
Elevation, TWL, HS (ft)
Station (ft)
20
18
16
14
12
10
8
6
4
2
0
-1400
-1200
-1000
-800
-600
-400
-200
0
200

1

```
                    Execution started at 20200220.141945


                    ---------------------------------------
                                    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      206       0.   206     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      206   0      1       1
 !READinp BOTtom [fac]  'fname1'  [idla]  [nhedf]  [FREe|FORmat[form]|UNFormatted]
  READ    BOTTOM   -1. '../gridfiles/CM-142zmeters_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   4.022     14.0578     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      206  206    0
!TABLe 'sname' < HEADer|NOHEADer|INDexed > 'fname' <output parameters> (output time)
 Table 'curve'   HEADER 'CM-142.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             207 MYC              1
                     : MCGRD           208
                     : 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  26.58 % 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   0.49 % 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  30.44 % of wet grid points ( 99.50 % required)

iteration    5; sweep 1
iteration    5; sweep 2
iteration    5; sweep 3
iteration    5; sweep 4
accuracy OK in  81.65 % of wet grid points ( 99.50 % required)

iteration    6; sweep 1
iteration    6; sweep 2
iteration    6; sweep 3
iteration    6; sweep 4
accuracy OK in  99.04 % of wet grid points ( 99.50 % required)

iteration    7; sweep 1
iteration    7; sweep 2
iteration    7; sweep 3
iteration    7; sweep 4
accuracy OK in 100.00 % of wet grid points ( 99.50 % required)


STOP
```

%
%
% Run:1 Table:curve SWAN version:41.20A
%
% Xp Yp Hsig TPsmoo RTpeak Tm_10 Dir Dspr Depth Setup
% [m] [m] [m] [sec] [sec] [sec] [degr] [degr] [m] [m]
%
0. 0. 4.03211 13.8306 13.8874 12.6944 0.000 31.5064 11.9600 0.000000
1. 0. 4.03628 13.8311 13.8874 12.6505 0.000 31.4818 11.9500 -0.000027
2. 0. 4.04095 13.8317 13.8874 12.6073 0.000 31.4569 11.9299 -0.000092
3. 0. 4.04501 13.8322 13.8874 12.5651 0.000 31.4314 11.9199 -0.000120
4. 0. 4.04947 13.8326 13.8874 12.5244 0.000 31.4051 11.8998 -0.000186
5. 0. 4.05330 13.8331 13.8874 12.4848 0.000 31.3784 11.8898 -0.000215
6. 0. 4.05753 13.8336 13.8874 12.4466 0.000 31.3510 11.8697 -0.000282
7. 0. 4.06113 13.8340 13.8874 12.4093 0.000 31.3233 11.8597 -0.000312
8. 0. 4.06515 13.8345 13.8874 12.3734 0.000 31.2950 11.8396 -0.000379
9. 0. 4.06856 13.8349 13.8874 12.3383 0.000 31.2666 11.8296 -0.000410
10. 0. 4.07239 13.8354 13.8874 12.3044 0.000 31.2379 11.8095 -0.000479
11. 0. 4.07562 13.8358 13.8874 12.2711 0.000 31.2109 11.7995 -0.000508
12. 0. 4.07927 13.8362 13.8874 12.2390 0.000 31.1874 11.7794 -0.000574
13. 0. 4.08234 13.8366 13.8874 12.2074 0.000 31.1644 11.7694 -0.000601
14. 0. 4.08584 13.8370 13.8874 12.1770 0.000 31.1415 11.7493 -0.000666
15. 0. 4.08876 13.8374 13.8874 12.1469 0.000 31.1186 11.7393 -0.000693
16. 0. 4.09212 13.8378 13.8874 12.1180 0.000 31.0952 11.7192 -0.000759
17. 0. 4.09507 13.8381 13.8874 12.0894 0.000 31.0781 11.7092 -0.000789
18. 0. 4.09783 13.8385 13.8874 12.0615 0.000 31.0567 11.6992 -0.000817
19. 0. 4.10100 13.8389 13.8874 12.0346 0.000 31.0335 11.6791 -0.000884
20. 0. 4.10359 13.8392 13.8874 12.0080 0.000 31.0098 11.6691 -0.000912
21. 0. 4.10661 13.8396 13.8874 11.9824 0.000 30.9860 11.6490 -0.000980
22. 0. 4.10891 13.8399 13.8874 11.9569 0.000 30.9565 11.6390 -0.001006
23. 0. 4.11159 13.8403 13.8874 11.9327 0.000 30.9072 11.6089 -0.001106
24. 0. 4.11454 13.8406 13.8874 11.9093 0.000 30.8514 11.5688 -0.001245
25. 0. 4.11643 13.8410 13.8874 11.8859 0.000 30.7760 11.5387 -0.001340
26. 0. 4.11947 13.8414 13.8874 11.8643 0.000 30.6700 11.4684 -0.001592
27. 0. 4.12213 13.8417 13.8874 11.8427 0.000 30.5479 11.3982 -0.001846
28. 0. 4.12523 13.8422 13.8874 11.8216 0.000 30.4203 11.3179 -0.002147
29. 0. 4.12801 13.8426 13.8874 11.7999 0.000 30.2966 11.2476 -0.002413
30. 0. 4.13074 13.8430 13.8874 11.7783 0.000 30.1683 11.1773 -0.002684
31. 0. 4.13402 13.8434 13.8874 11.7570 0.000 30.0381 11.0970 -0.003006
32. 0. 4.13704 13.8438 13.8874 11.7351 0.000 29.9134 11.0267 -0.003291
33. 0. 4.14004 13.8442 13.8874 11.7130 0.000 29.7846 10.9564 -0.003582
34. 0. 4.14333 13.8446 13.8874 11.6914 0.000 29.6426 10.8761 -0.003924
35. 0. 4.14713 13.8451 13.8874 11.6701 0.000 29.4960 10.7857 -0.004322
36. 0. 4.15047 13.8455 13.8874 11.6482 0.000 29.3482 10.7053 -0.004680
37. 0. 4.15429 13.8460 13.8874 11.6266 0.000 29.1939 10.6149 -0.005096
38. 0. 4.15828 13.8465 13.8874 11.6049 0.000 29.0433 10.5245 -0.005521
39. 0. 4.16183 13.8469 13.8874 11.5826 0.000 28.8941 10.4441 -0.005905
40. 0. 4.16601 13.8474 13.8874 11.5607 0.000 28.7456 10.3537 -0.006349
41. 0. 4.16968 13.8479 13.8874 11.5383 0.001 28.6068 10.2733 -0.006740
42. 0. 4.17395 13.8484 13.8874 11.5162 0.001 28.4717 10.1828 -0.007187
43. 0. 4.17767 13.8488 13.8874 11.4936 0.001 28.3374 10.1024 -0.007586
44. 0. 4.18199 13.8493 13.8874 11.4713 0.001 28.2030 10.0120 -0.008047
45. 0. 4.18572 13.8498 13.8874 11.4485 0.001 28.0690 9.9315 -0.008458
46. 0. 4.19004 13.8503 13.8874 11.4261 0.001 27.9340 9.8411 -0.008932
47. 0. 4.19374 13.8508 13.8874 11.4031 0.001 27.7987 9.7606 -0.009353
48. 0. 4.19802 13.8513 13.8874 11.3806 0.002 27.6632 9.6702 -0.009840
49. 0. 4.20165 13.8518 13.8874 11.3575 0.002 27.5270 9.5897 -0.010270
50. 0. 4.20575 13.8524 13.8874 11.3349 0.002 27.3868 9.4992 -0.010766
51. 0. 4.20963 13.8529 13.8874 11.3126 0.001 27.2518 9.4087 -0.011252
52. 0. 4.21321 13.8534 13.8874 11.2899 0.001 27.1380 9.3283 -0.011673
53. 0. 4.21532 13.8539 13.8874 11.2658 0.000 27.0534 9.2781 -0.011889
54. 0. 4.21679 13.8543 13.8874 11.2415 360.000 26.9728 9.2380 -0.012035
55. 0. 4.21920 13.8548 13.8874 11.2187 359.999 26.8829 9.1777 -0.012315
56. 0. 4.22143 13.8553 13.8874 11.1963 359.998 26.7896 9.1174 -0.012592
57. 0. 4.22340 13.8557 13.8874 11.1741 359.998 26.6896 9.0571 -0.012867
58. 0. 4.22584 13.8562 13.8874 11.1528 359.997 26.5870 8.9868 -0.013211
59. 0. 4.22750 13.8566 13.8874 11.1311 359.996 26.4889 8.9265 -0.013474

60.	0.	4.22904	13.8571	13.8874	11.1098	359.995	26.3919	8.8663	-0.013733
61.	0.	4.23045	13.8575	13.8874	11.0887	359.994	26.2948	8.8060	-0.013988
62.	0.	4.23161	13.8580	13.8874	11.0679	359.993	26.1922	8.7458	-0.014239
63.	0.	4.23321	13.8584	13.8874	11.0480	359.992	26.0869	8.6754	-0.014561
64.	0.	4.23409	13.8588	13.8874	11.0276	359.991	25.9859	8.6152	-0.014800
65.	0.	4.23483	13.8593	13.8874	11.0074	359.990	25.8856	8.5550	-0.015034
66.	0.	4.23539	13.8597	13.8874	10.9876	359.990	25.7852	8.4947	-0.015260
67.	0.	4.23566	13.8601	13.8874	10.9680	359.990	25.6791	8.4345	-0.015480
68.	0.	4.23638	13.8605	13.8874	10.9494	359.989	25.5706	8.3642	-0.015773
69.	0.	4.23627	13.8609	13.8874	10.9303	359.989	25.4665	8.3040	-0.015973
70.	0.	4.23597	13.8613	13.8874	10.9115	359.989	25.3633	8.2438	-0.016161
71.	0.	4.23544	13.8616	13.8874	10.8930	359.989	25.2601	8.1837	-0.016339
72.	0.	4.23456	13.8620	13.8874	10.8748	359.989	25.1514	8.1235	-0.016504
73.	0.	4.23525	13.8624	13.8874	10.8521	359.988	25.0421	8.0533	-0.016747
74.	0.	4.23533	13.8627	13.8874	10.8269	359.988	24.9390	7.9931	-0.016878
75.	0.	4.23526	13.8630	13.8874	10.8015	359.988	24.8396	7.9330	-0.016987
76.	0.	4.23490	13.8633	13.8874	10.7760	359.988	24.7432	7.8729	-0.017070
77.	0.	4.23396	13.8636	13.8874	10.7513	359.987	24.6432	7.8129	-0.017124
78.	0.	4.23185	13.8639	13.8874	10.7326	359.982	24.5474	7.7428	-0.017193
79.	0.	4.22779	13.8641	13.8874	10.7162	359.978	24.4552	7.6829	-0.017105
80.	0.	4.22304	13.8643	13.8874	10.7011	359.977	24.3628	7.6230	-0.016980
81.	0.	4.21780	13.8645	13.8874	10.6868	359.976	24.2693	7.5632	-0.016823
82.	0.	4.21203	13.8647	13.8874	10.6732	359.972	24.1742	7.5034	-0.016633
83.	0.	4.20558	13.8648	13.8874	10.6605	359.972	24.0717	7.4436	-0.016409
84.	0.	4.20087	13.8649	13.8874	10.6447	359.985	23.9767	7.3737	-0.016303
85.	0.	4.19471	13.8650	13.8874	10.6255	359.977	23.9374	7.3342	-0.015844
86.	0.	4.18412	13.8649	13.8874	10.6013	359.960	23.9720	7.3654	-0.014612
87.	0.	4.17366	13.8648	13.8874	10.5771	359.942	24.0394	7.4067	-0.013315
88.	0.	4.16377	13.8647	13.8874	10.5541	359.924	24.1183	7.4479	-0.012069
89.	0.	4.15432	13.8645	13.8874	10.5322	359.906	24.2018	7.4891	-0.010872
90.	0.	4.14515	13.8643	13.8874	10.5118	359.890	24.2878	7.5303	-0.009720
91.	0.	4.13577	13.8641	13.8874	10.4938	359.876	24.3697	7.5714	-0.008596
92.	0.	4.12718	13.8639	13.8874	10.4783	359.865	24.4499	7.6024	-0.007603
93.	0.	4.11812	13.8637	13.8874	10.4632	359.857	24.5376	7.6435	-0.006545
94.	0.	4.10948	13.8635	13.8874	10.4488	359.849	24.6279	7.6845	-0.005530
95.	0.	4.10174	13.8632	13.8874	10.4332	359.847	24.7191	7.7254	-0.004571
96.	0.	4.09440	13.8630	13.8874	10.4180	359.849	24.8100	7.7663	-0.003653
97.	0.	4.08743	13.8627	13.8874	10.4031	359.853	24.9008	7.8072	-0.002772
98.	0.	4.08078	13.8624	13.8874	10.3887	359.857	24.9914	7.8481	-0.001925
99.	0.	4.07444	13.8621	13.8874	10.3747	359.861	25.0816	7.8889	-0.001109
100.	0.	4.06823	13.8618	13.8874	10.3611	359.865	25.1636	7.9297	-0.000324
101.	0.	4.06289	13.8616	13.8874	10.3487	359.869	25.2424	7.9603	0.000349
102.	0.	4.05723	13.8613	13.8874	10.3359	359.873	25.3277	8.0011	0.001084
103.	0.	4.05184	13.8610	13.8874	10.3234	359.877	25.4141	8.0418	0.001794
104.	0.	4.04669	13.8607	13.8874	10.3112	359.881	25.5003	8.0825	0.002479
105.	0.	4.04177	13.8604	13.8874	10.2994	359.884	25.5860	8.1231	0.003141
106.	0.	4.03707	13.8601	13.8874	10.2878	359.888	25.6713	8.1638	0.003780
107.	0.	4.03203	13.8598	13.8874	10.2763	359.892	25.7246	8.2044	0.004397
108.	0.	4.02867	13.8596	13.8874	10.2670	359.893	25.7047	8.2047	0.004677
109.	0.	4.02741	13.8594	13.8874	10.2613	359.893	25.6236	8.1546	0.004562
110.	0.	4.02590	13.8592	13.8874	10.2561	359.892	25.4959	8.0944	0.004372
111.	0.	4.02565	13.8591	13.8874	10.2531	359.892	25.3406	8.0039	0.003949
112.	0.	4.02445	13.8589	13.8874	10.2489	359.892	25.1781	7.9236	0.003617
113.	0.	4.02355	13.8587	13.8874	10.2453	359.892	25.0084	7.8332	0.003212
114.	0.	4.02194	13.8586	13.8874	10.2418	359.891	24.8224	7.7428	0.002825
115.	0.	4.02143	13.8584	13.8874	10.2407	359.890	24.6072	7.6222	0.002192
116.	0.	4.02163	13.8583	13.8874	10.2406	359.889	24.3696	7.4814	0.001384
117.	0.	4.02141	13.8581	13.8874	10.2395	359.888	24.1233	7.3406	0.000588
118.	0.	4.02068	13.8580	13.8874	10.2375	359.889	23.8731	7.1998	-0.000186
119.	0.	4.01938	13.8578	13.8874	10.2348	359.889	23.6205	7.0591	-0.000929
120.	0.	3.99577	13.8577	13.8874	10.2325	359.893	21.9200	6.9180	-0.001962
121.	0.	4.24649	13.8598	13.8874	10.4291	359.906	19.6616	4.1990	-0.051008
122.	0.	4.16982	13.8576	13.8874	10.3322	359.987	18.9347	4.2508	-0.039204
123.	0.	4.10045	13.8553	13.8874	10.2452	0.046	18.7122	4.2720	-0.027975
124.	0.	4.03013	13.8532	13.8874	10.1577	0.145	18.6793	4.3138	-0.016162
125.	0.	3.96217	13.8513	13.8874	10.0901	0.292	18.7050	4.3447	-0.005302
126.	0.	3.89940	13.8496	13.8874	10.0188	0.360	18.7117	4.3846	0.004646

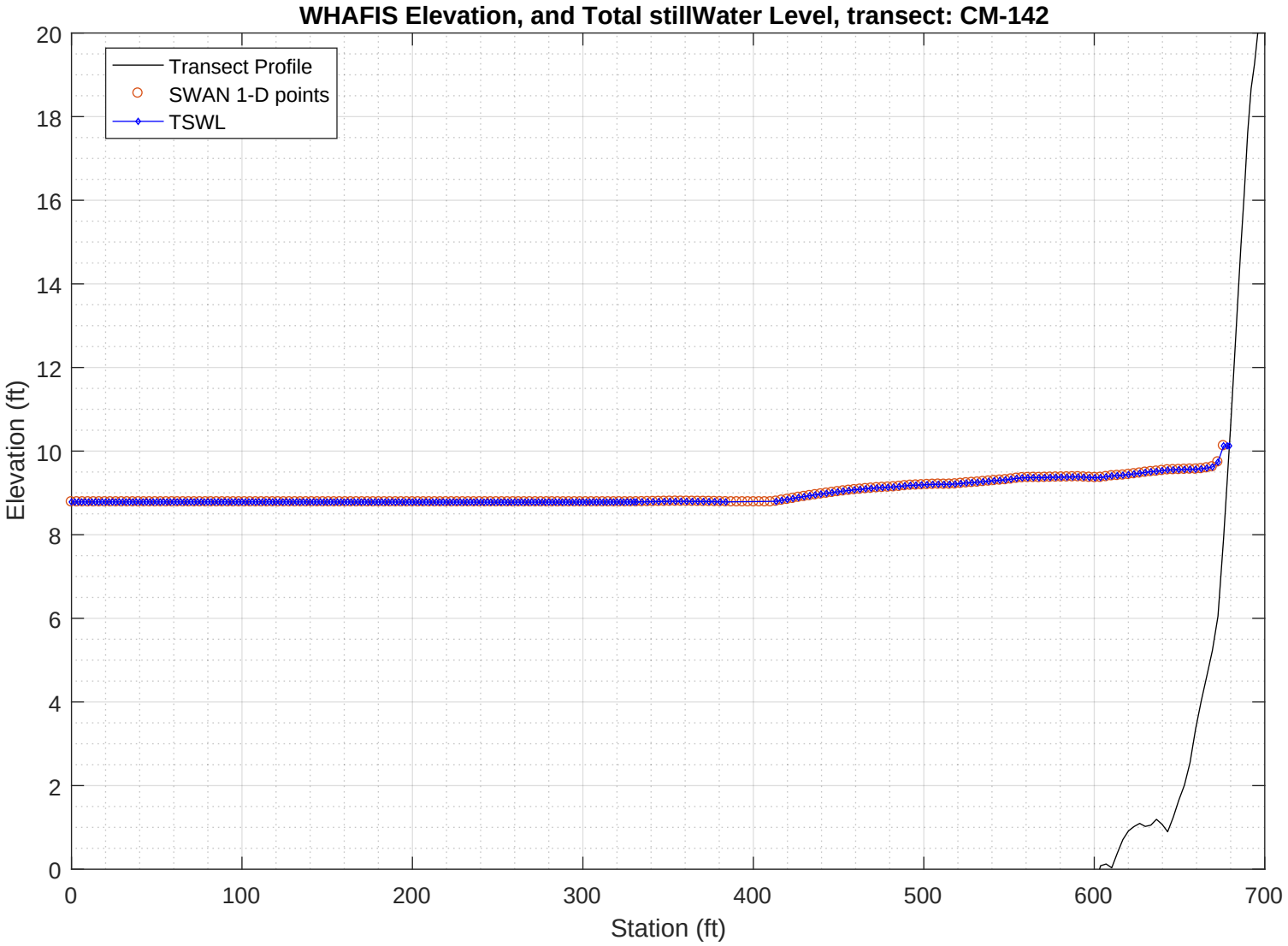
127.	0.	3.85028	13.8481	13.8874	9.9474	0.398	18.6280	4.3720	0.012030
128.	0.	3.80849	13.8466	13.8874	9.8839	0.426	18.5272	4.3179	0.017916
129.	0.	3.76163	13.8454	13.8874	9.8027	0.465	18.4749	4.3153	0.025278
130.	0.	3.70984	13.8444	13.8874	9.7399	0.466	18.4310	4.3229	0.032934
131.	0.	3.66898	13.8437	13.8874	9.6669	0.527	18.3682	4.2990	0.038978
132.	0.	3.62558	13.8431	13.8874	9.5959	0.612	18.3134	4.2954	0.045398
133.	0.	3.58240	13.8428	13.8874	9.5327	0.704	18.2660	4.2916	0.051568
134.	0.	3.53944	13.8426	13.8874	9.4773	0.797	18.2237	4.2875	0.057496
135.	0.	3.49902	13.8425	13.8874	9.4214	0.874	18.1927	4.2831	0.063054
136.	0.	3.45859	13.8425	13.8874	9.3694	0.942	18.1922	4.2886	0.068579
137.	0.	3.41777	13.8425	13.8874	9.3190	1.025	18.2315	4.3142	0.074204
138.	0.	3.37758	13.8425	13.8874	9.2734	1.106	18.2750	4.3496	0.079633
139.	0.	3.34150	13.8426	13.8874	9.2355	1.189	18.3013	4.3642	0.084223
140.	0.	3.30774	13.8427	13.8874	9.1959	1.278	18.3086	4.3785	0.088504
141.	0.	3.27758	13.8428	13.8874	9.1609	1.367	18.3075	4.3721	0.092143
142.	0.	3.24547	13.8430	13.8874	9.1281	1.448	18.3182	4.3861	0.096056
143.	0.	3.21489	13.8431	13.8874	9.1016	1.521	18.3169	4.3896	0.099591
144.	0.	3.18596	13.8433	13.8874	9.0791	1.586	18.2923	4.3828	0.102770
145.	0.	3.16107	13.8435	13.8874	9.0548	1.653	18.2259	4.3554	0.105367
146.	0.	3.13964	13.8437	13.8874	9.0338	1.722	18.1311	4.2973	0.107349
147.	0.	3.11686	13.8439	13.8874	9.0114	1.791	18.0640	4.2496	0.109599
148.	0.	3.08937	13.8441	13.8874	8.9827	1.863	18.1214	4.2529	0.112872
149.	0.	3.05413	13.8442	13.8874	8.9399	1.933	18.2632	4.3577	0.117701
150.	0.	3.02644	13.8443	13.8874	8.9114	1.990	18.3067	4.4010	0.121012
151.	0.	3.00764	13.8445	13.8874	8.9003	2.040	18.2624	4.3526	0.122620
152.	0.	2.98774	13.8446	13.8874	8.8879	2.090	18.2031	4.3144	0.124398
153.	0.	2.96650	13.8448	13.8874	8.8749	2.139	18.1326	4.2864	0.126362
154.	0.	2.94696	13.8450	13.8874	8.8655	2.188	18.0257	4.2380	0.127971
155.	0.	2.92930	13.8452	13.8874	8.8601	2.229	17.8179	4.1591	0.129080
156.	0.	2.92095	13.8456	13.8874	8.8723	2.276	17.5220	3.9683	0.128298
157.	0.	2.90409	13.8459	13.8874	8.8746	2.323	17.2542	3.8289	0.128879
158.	0.	2.88075	13.8462	13.8874	8.8686	2.376	17.0780	3.7307	0.130679
159.	0.	2.84635	13.8465	13.8874	8.8470	2.430	17.0009	3.7246	0.134643
160.	0.	2.81270	13.8467	13.8874	8.8269	2.480	16.9301	3.7185	0.138470
161.	0.	2.78401	13.8471	13.8874	8.8146	2.527	16.8192	3.6713	0.141339
162.	0.	2.75747	13.8474	13.8874	8.8064	2.581	16.7292	3.6038	0.143836
163.	0.	2.72208	13.8477	13.8874	8.7845	2.633	16.6906	3.6180	0.148046
164.	0.	2.69144	13.8481	13.8874	8.7699	2.687	16.6708	3.6014	0.151426
165.	0.	2.65781	13.8484	13.8874	8.7489	2.739	16.6662	3.6254	0.155415
166.	0.	2.62997	13.8487	13.8874	8.7369	2.788	16.6391	3.6084	0.158368
167.	0.	2.60265	13.8490	13.8874	8.7242	2.850	16.7230	3.6014	0.161415
168.	0.	2.56699	13.8492	13.8874	8.6862	2.948	17.0608	3.7264	0.166420
169.	0.	2.53020	13.8493	13.8874	8.6292	3.062	17.5426	3.9520	0.171960
170.	0.	2.50307	13.8494	13.8874	8.5815	3.151	17.8840	4.1358	0.175842
171.	0.	2.48970	13.8495	13.8874	8.5682	3.197	17.9912	4.1572	0.177248
172.	0.	2.47944	13.8497	13.8874	8.5652	3.209	17.9154	4.1279	0.177946
173.	0.	2.47690	13.8500	13.8874	8.5878	3.211	17.7790	3.9772	0.177211
174.	0.	2.46340	13.8502	13.8874	8.5803	3.234	17.7156	3.9684	0.178369
175.	0.	2.45084	13.8504	13.8874	8.5748	3.260	17.6676	3.9494	0.179393
176.	0.	2.43827	13.8506	13.8874	8.5690	3.283	17.5990	3.9304	0.180404
177.	0.	2.42854	13.8509	13.8874	8.5716	3.300	17.4990	3.8709	0.180894
178.	0.	2.41748	13.8511	13.8874	8.5718	3.319	17.4090	3.8216	0.181585
179.	0.	2.40425	13.8514	13.8874	8.5677	3.335	17.3044	3.7926	0.182598
180.	0.	2.39383	13.8517	13.8874	8.5741	3.324	17.0551	3.7129	0.182930
181.	0.	2.39475	13.8521	13.8874	8.6107	3.296	16.6107	3.4810	0.181002
182.	0.	2.39432	13.8527	13.8874	8.6484	3.258	16.0668	3.2288	0.178831
183.	0.	2.38953	13.8533	13.8874	8.6808	3.232	15.5416	2.9770	0.177024
184.	0.	2.36751	13.8540	13.8874	8.6879	3.239	15.2107	2.8284	0.178376
185.	0.	2.32544	13.8547	13.8874	8.6649	3.286	15.1047	2.8238	0.183800
186.	0.	2.28010	13.8553	13.8874	8.6366	3.326	14.9996	2.8598	0.189807
187.	0.	2.25242	13.8561	13.8874	8.6418	3.333	14.7813	2.7523	0.192282
188.	0.	2.22178	13.8569	13.8874	8.6441	3.344	14.5617	2.6553	0.195303
189.	0.	2.18431	13.8578	13.8874	8.6382	3.367	14.3980	2.5997	0.199678
190.	0.	2.14306	13.8587	13.8874	8.6269	3.397	14.2787	2.5748	0.204842
191.	0.	2.10326	13.8595	13.8874	8.6174	3.441	14.2226	2.5498	0.209818
192.	0.	2.05857	13.8603	13.8874	8.5965	3.493	14.2178	2.5858	0.215809
193.	0.	2.02180	13.8611	13.8874	8.5883	3.525	14.1573	2.5803	0.220282

194.	0.	1.99134	13.8618	13.8874	8.5913	3.561	14.1118	2.5336	0.223649
195.	0.	1.95265	13.8625	13.8874	8.5737	3.623	14.1877	2.5787	0.228702
196.	0.	1.91664	13.8630	13.8874	8.5558	3.657	14.1693	2.6332	0.233226
197.	0.	1.89802	13.8637	13.8874	8.5764	3.639	13.9696	2.5346	0.234562
198.	0.	1.88066	13.8644	13.8874	8.6031	3.605	13.6926	2.4056	0.235554
199.	0.	1.85787	13.8652	13.8874	8.6228	3.560	13.3612	2.2974	0.237418
200.	0.	1.83686	13.8661	13.8874	8.6521	3.485	12.9055	2.1387	0.238713
201.	0.	1.82229	13.8673	13.8874	8.6917	3.408	12.3485	1.8884	0.238438
202.	0.	1.78691	13.8684	13.8874	8.7237	3.273	11.8147	1.6921	0.242111
203.	0.	1.74458	13.8696	13.8874	8.7410	3.121	11.2705	1.5178	0.247774
204.	0.	1.69594	13.8707	13.8874	8.7816	2.942	10.7171	1.3353	0.255261
205.	0.	1.51943	13.8874	13.8874	9.1880	1.882	10.3727	1.1210	0.291012
206.	0.	1.02128	14.0201	13.8874	10.6035	358.697	11.7401	0.6793	0.409266

PART 3: WHAFIS

WHAFIS input: CM-142.dat
WHAFIS output: CM-142.out

PART 3 COMPLETE


WHAFIS Elevation, and Total stillWater Level, transect: CM-142
Transect Profile
SWAN 1-D points
TSWL
Elevation (ft)
Station (ft)
0
2
4
6
8
10
12
14
16
18
20
0
100
200
300
400
500
600
700

WAVE HEIGHT COMPUTATIONS FOR FLOOD INSURANCE STUDIES (WHAFIS VERSION 4.0G, 08_2007)
Executed on: Thu Feb 20 14:57:37 2020
Input file: C:\FEMA-TransectAnalysis\LOMR-TransectAnalysis-Harpswell\3_whafis\whafis4\CM-142.dat
Output file: C:\FEMA-TransectAnalysis\LOMR-TransectAnalysis-Harpswell\3_whafis\whafis4\CM-142.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	-30.457	1.000	1.000	8.783	21.113	14.058	56.140	0.015	0.000
OF	2.000	-30.427	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
OF	4.000	-30.398	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
OF	6.000	-30.368	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
OF	8.000	-30.339	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
OF	10.000	-30.309	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
OF	12.000	-30.280	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
OF	14.000	-30.250	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
OF	16.000	-30.221	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
OF	18.000	-30.191	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
OF	20.000	-30.162	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
OF	22.000	-30.132	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
OF	24.000	-30.103	0.000	8.783	0.000	0.000	0.000	0.000	0.014	0.000
OF	26.000	-30.074	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
OF	28.000	-30.044	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
OF	30.000	-30.015	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	32.000	-29.985	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	34.000	-29.956	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	36.000	-29.926	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	38.000	-29.897	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	40.000	-29.867	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	42.000	-29.838	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	44.000	-29.808	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	46.000	-29.779	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	48.000	-29.749	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	50.000	-29.720	0.000	8.784	0.000	0.000	0.000	0.000	0.014	0.000
OF	52.000	-29.691	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	54.000	-29.661	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	56.000	-29.632	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	58.000	-29.602	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	60.000	-29.573	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	62.000	-29.543	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	64.000	-29.514	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	66.000	-29.484	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	68.000	-29.455	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	70.000	-29.425	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	72.000	-29.396	0.000	8.784	0.000	0.000	0.000	0.000	0.015	0.000
OF	74.000	-29.366	0.000	8.784	0.000	0.000	0.000	0.000	0.025	0.000
OF	76.000	-29.295	0.000	8.784	0.000	0.000	0.000	0.000	0.037	0.000
OF	78.000	-29.218	0.000	8.784	0.000	0.000	0.000	0.000	0.039	0.000
OF	80.000	-29.140	0.000	8.784	0.000	0.000	0.000	0.000	0.039	0.000
OF	82.000	-29.063	0.000	8.784	0.000	0.000	0.000	0.000	0.050	0.000
OF	84.000	-28.941	0.000	8.784	0.000	0.000	0.000	0.000	0.067	0.000
OF	86.000	-28.795	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
OF	88.000	-28.649	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
OF	90.000	-28.503	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
OF	92.000	-28.357	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
OF	94.000	-28.211	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
OF	96.000	-28.065	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
OF	98.000	-27.919	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
OF	100.000	-27.774	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
OF	102.000	-27.628	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
OF	104.000	-27.482	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
OF	106.000	-27.336	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
OF	108.000	-27.190	0.000	8.784	0.000	0.000	0.000	0.000	0.076	0.000
OF	110.000	-27.032	0.000	8.784	0.000	0.000	0.000	0.000	0.082	0.000
OF	112.000	-26.861	0.000	8.784	0.000	0.000	0.000	0.000	0.086	0.000
OF	114.000	-26.690	0.000	8.784	0.000	0.000	0.000	0.000	0.085	0.000
OF	116.000	-26.520	0.000	8.784	0.000	0.000	0.000	0.000	0.085	0.000
OF	118.000	-26.349	0.000	8.784	0.000	0.000	0.000	0.000	0.086	0.000
OF	120.000	-26.178	0.000	8.784	0.000	0.000	0.000	0.000	0.086	0.000
OF	122.000	-26.007	0.000	8.784	0.000	0.000	0.000	0.000	0.086	0.000
OF	124.000	-25.836	0.000	8.784	0.000	0.000	0.000	0.000	0.085	0.000
OF	126.000	-25.666	0.000	8.784	0.000	0.000	0.000	0.000	0.085	0.000
OF	128.000	-25.495	0.000	8.784	0.000	0.000	0.000	0.000	0.086	0.000
OF	130.000	-25.324	0.000	8.784	0.000	0.000	0.000	0.000	0.086	0.000
OF	132.000	-25.153	0.000	8.783	0.000	0.000	0.000	0.000	0.085	0.000
OF	134.000	-24.983	0.000	8.783	0.000	0.000	0.000	0.000	0.085	0.000
OF	136.000	-24.812	0.000	8.783	0.000	0.000	0.000	0.000	0.086	0.000
OF	138.000	-24.641	0.000	8.783	0.000	0.000	0.000	0.000	0.086	0.000
OF	140.000	-24.470	0.000	8.783	0.000	0.000	0.000	0.000	0.085	0.000
OF	142.000	-24.300	0.000	8.783	0.000	0.000	0.000	0.000	0.085	0.000
OF	144.000	-24.129	0.000	8.783	0.000	0.000	0.000	0.000	0.086	0.000
OF	146.000	-23.958	0.000	8.783	0.000	0.000	0.000	0.000	0.086	0.000
OF	148.000	-23.787	0.000	8.783	0.000	0.000	0.000	0.000	0.085	0.000
OF	150.000	-23.617	0.000	8.783	0.000	0.000	0.000	0.000	0.085	0.000
OF	152.000	-23.446	0.000	8.783	0.000	0.000	0.000	0.000	0.086	0.000
OF	154.000	-23.275	0.000	8.783	0.000	0.000	0.000	0.000	0.086	0.000
OF	156.000	-23.104	0.000	8.783	0.000	0.000	0.000	0.000	0.085	0.000
OF	158.000	-22.934	0.000	8.783	0.000	0.000	0.000	0.000	0.085	0.000
OF	160.000	-22.763	0.000	8.783	0.000	0.000	0.000	0.000	0.086	0.000
OF	162.000	-22.592	0.000	8.782	0.000	0.000	0.000	0.000	0.086	0.000
OF	164.000	-22.421	0.000	8.782	0.000	0.000	0.000	0.000	0.085	0.000
OF	166.000	-22.251	0.000	8.782	0.000	0.000	0.000	0.000	0.085	0.000
OF	168.000	-22.080	0.000	8.782	0.000	0.000	0.000	0.000	0.086	0.000
OF	170.000	-21.909	0.000	8.782	0.000	0.000	0.000	0.000	0.073	0.000
OF	172.000	-21.786	0.000	8.782	0.000	0.000	0.000	0.000	0.051	0.000
OF	174.000	-21.705	0.000	8.782	0.000	0.000	0.000	0.000	0.041	0.000
OF	176.000	-21.624	0.000	8.782	0.000	0.000	0.000	0.000	0.047	0.000
OF	178.000	-21.517	0.000	8.782	0.000	0.000	0.000	0.000	0.058	0.000
OF	180.000	-21.393	0.000	8.782	0.000	0.000	0.000	0.000	0.062	0.000
OF	182.000	-21.269	0.000	8.782	0.000	0.000	0.000	0.000	0.062	0.000
OF	184.000	-21.145	0.000	8.782	0.000	0.000	0.000	0.000	0.062	0.000

OF	186.000	-21.021	0.000	8.782	0.000	0.000	0.000	0.000	0.062	0.000
OF	188.000	-20.897	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
OF	190.000	-20.774	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
OF	192.000	-20.650	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
OF	194.000	-20.526	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
OF	196.000	-20.402	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
OF	198.000	-20.278	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
OF	200.000	-20.154	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
OF	202.000	-20.030	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
OF	204.000	-19.906	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
OF	206.000	-19.783	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
OF	208.000	-19.659	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
OF	210.000	-19.535	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
OF	212.000	-19.411	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
OF	214.000	-19.287	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
OF	216.000	-19.163	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
OF	218.000	-19.039	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
OF	220.000	-18.915	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
OF	222.000	-18.791	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
OF	224.000	-18.668	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
OF	226.000	-18.544	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
OF	228.000	-18.420	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
OF	230.000	-18.296	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
OF	232.000	-18.172	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
OF	234.000	-18.048	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
OF	236.000	-17.924	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
OF	238.000	-17.800	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
OF	240.000	-17.677	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
OF	242.000	-17.553	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
OF	244.000	-17.429	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
OF	246.000	-17.305	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
OF	248.000	-17.181	0.000	8.779	0.000	0.000	0.000	0.000	0.062	0.000
OF	250.000	-17.057	0.000	8.779	0.000	0.000	0.000	0.000	0.062	0.000
OF	252.000	-16.933	0.000	8.779	0.000	0.000	0.000	0.000	0.062	0.000
OF	254.000	-16.809	0.000	8.779	0.000	0.000	0.000	0.000	0.062	0.000
OF	256.000	-16.685	0.000	8.779	0.000	0.000	0.000	0.000	0.062	0.000
OF	258.000	-16.562	0.000	8.779	0.000	0.000	0.000	0.000	0.062	0.000
OF	260.000	-16.438	0.000	8.779	0.000	0.000	0.000	0.000	0.062	0.000
OF	262.000	-16.314	0.000	8.779	0.000	0.000	0.000	0.000	0.062	0.000
OF	264.000	-16.190	0.000	8.779	0.000	0.000	0.000	0.000	0.062	0.000
OF	266.000	-16.066	0.000	8.779	0.000	0.000	0.000	0.000	0.062	0.000
OF	268.000	-15.942	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
OF	270.000	-15.818	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
OF	272.000	-15.694	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
OF	274.000	-15.571	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
OF	276.000	-15.447	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
OF	278.000	-15.323	0.000	8.780	0.000	0.000	0.000	0.000	0.024	0.000
OF	280.000	-15.351	0.000	8.780	0.000	0.000	0.000	0.000	-0.026	0.000
OF	282.000	-15.429	0.000	8.780	0.000	0.000	0.000	0.000	-0.039	0.000
OF	284.000	-15.506	0.000	8.780	0.000	0.000	0.000	0.000	-0.039	0.000
OF	286.000	-15.584	0.000	8.781	0.000	0.000	0.000	0.000	-0.039	0.000
OF	288.000	-15.662	0.000	8.781	0.000	0.000	0.000	0.000	-0.039	0.000
OF	290.000	-15.739	0.000	8.781	0.000	0.000	0.000	0.000	-0.039	0.000
OF	292.000	-15.817	0.000	8.781	0.000	0.000	0.000	0.000	-0.039	0.000
OF	294.000	-15.895	0.000	8.781	0.000	0.000	0.000	0.000	-0.039	0.000
OF	296.000	-15.972	0.000	8.781	0.000	0.000	0.000	0.000	-0.039	0.000
OF	298.000	-16.050	0.000	8.781	0.000	0.000	0.000	0.000	-0.039	0.000
OF	300.000	-16.127	0.000	8.781	0.000	0.000	0.000	0.000	-0.039	0.000
OF	302.000	-16.205	0.000	8.781	0.000	0.000	0.000	0.000	-0.039	0.000
OF	304.000	-16.283	0.000	8.781	0.000	0.000	0.000	0.000	-0.039	0.000
OF	306.000	-16.360	0.000	8.782	0.000	0.000	0.000	0.000	-0.039	0.000
OF	308.000	-16.438	0.000	8.782	0.000	0.000	0.000	0.000	-0.039	0.000
OF	310.000	-16.516	0.000	8.782	0.000	0.000	0.000	0.000	-0.039	0.000
OF	312.000	-16.593	0.000	8.782	0.000	0.000	0.000	0.000	-0.039	0.000
OF	314.000	-16.671	0.000	8.782	0.000	0.000	0.000	0.000	-0.039	0.000
OF	316.000	-16.749	0.000	8.782	0.000	0.000	0.000	0.000	-0.039	0.000
OF	318.000	-16.826	0.000	8.782	0.000	0.000	0.000	0.000	-0.039	0.000
OF	320.000	-16.904	0.000	8.782	0.000	0.000	0.000	0.000	-0.039	0.000
OF	322.000	-16.982	0.000	8.783	0.000	0.000	0.000	0.000	-0.039	0.000
OF	324.000	-17.059	0.000	8.783	0.000	0.000	0.000	0.000	-0.039	0.000
OF	326.000	-17.137	0.000	8.783	0.000	0.000	0.000	0.000	-0.039	0.000
OF	328.000	-17.215	0.000	8.783	0.000	0.000	0.000	0.000	-0.039	0.000
OF	330.000	-17.292	0.000	8.783	0.000	0.000	0.000	0.000	-0.038	0.000
OF	331.400	-17.345	0.000	8.784	0.000	0.000	0.000	0.000	-0.039	0.000
OF	334.600	-17.473	0.000	8.787	0.000	0.000	0.000	0.000	-0.039	0.000
OF	337.900	-17.600	0.000	8.789	0.000	0.000	0.000	0.000	-0.038	0.000
OF	341.200	-17.727	0.000	8.791	0.000	0.000	0.000	0.000	-0.039	0.000
OF	344.500	-17.855	0.000	8.794	0.000	0.000	0.000	0.000	-0.039	0.000
OF	347.800	-17.982	0.000	8.796	0.000	0.000	0.000	0.000	-0.039	0.000
OF	351.000	-18.109	0.000	8.798	0.000	0.000	0.000	0.000	-0.019	0.000
OF	354.300	-18.104	0.000	8.799	0.000	0.000	0.000	0.000	0.022	0.000
OF	357.600	-17.967	0.000	8.798	0.000	0.000	0.000	0.000	0.051	0.000
OF	360.900	-17.769	0.000	8.798	0.000	0.000	0.000	0.000	0.074	0.000
OF	364.200	-17.478	0.000	8.796	0.000	0.000	0.000	0.000	0.088	0.000
OF	367.500	-17.186	0.000	8.795	0.000	0.000	0.000	0.000	0.090	0.000
OF	370.700	-16.895	0.000	8.794	0.000	0.000	0.000	0.000	0.090	0.000
OF	374.000	-16.604	0.000	8.793	0.000	0.000	0.000	0.000	0.104	0.000
OF	377.300	-16.209	0.000	8.790	0.000	0.000	0.000	0.000	0.129	0.000
OF	380.600	-15.750	0.000	8.788	0.000	0.000	0.000	0.000	0.139	0.000
OF	383.900	-15.291	0.000	8.785	0.000	0.000	0.000	0.000	0.310	0.000
OF	413.400	-5.574	0.000	8.799	0.000	0.000	0.000	0.000	0.298	0.000
OF	416.700	-5.506	0.000	8.823	0.000	0.000	0.000	0.000	0.041	0.000
OF	419.900	-5.309	0.000	8.842	0.000	0.000	0.000	0.000	0.035	0.000
OF	423.200	-5.280	0.000	8.866	0.000	0.000	0.000	0.000	0.001	0.000
OF	426.500	-5.302	0.000	8.891	0.000	0.000	0.000	0.000	0.014	0.000
OF	429.800	-5.185	0.000	8.911	0.000	0.000	0.000	0.000	0.019	0.000
OF	433.100	-5.176	0.000	8.932	0.000	0.000	0.000	0.000	0.006	0.000
OF	436.400	-5.143	0.000	8.953	0.000	0.000	0.000	0.000	0.012	0.000
OF	439.600	-5.099	0.000	8.972	0.000	0.000	0.000	0.000	0.011	0.000
OF	442.900	-5.070	0.000	8.990	0.000	0.000	0.000	0.000	0.005	0.000
OF	446.200	-5.067	0.000	9.008	0.000	0.000	0.000	0.000	-0.011	0.000
OF	449.500	-5.142	0.000	9.027	0.000	0.000	0.000	0.000	-0.025	0.000

OF	452.800	-5.231	0.000	9.045	0.000	0.000	0.000	0.000	-0.017	0.000
OF	456.000	-5.250	0.000	9.060	0.000	0.000	0.000	0.000	-0.008	0.000
OF	459.300	-5.285	0.000	9.074	0.000	0.000	0.000	0.000	-0.002	0.000
OF	462.600	-5.267	0.000	9.086	0.000	0.000	0.000	0.000	0.001	0.000
OF	465.900	-5.276	0.000	9.098	0.000	0.000	0.000	0.000	-0.002	0.000
OF	469.200	-5.277	0.000	9.110	0.000	0.000	0.000	0.000	0.002	0.000
OF	472.400	-5.260	0.000	9.120	0.000	0.000	0.000	0.000	0.019	0.000
OF	475.700	-5.155	0.000	9.129	0.000	0.000	0.000	0.000	0.043	0.000
OF	479.000	-4.980	0.000	9.135	0.000	0.000	0.000	0.000	0.052	0.000
OF	482.300	-4.815	0.000	9.143	0.000	0.000	0.000	0.000	0.029	0.000
OF	485.600	-4.786	0.000	9.154	0.000	0.000	0.000	0.000	-0.047	0.000
OF	488.800	-5.122	0.000	9.169	0.000	0.000	0.000	0.000	-0.074	0.000
OF	492.100	-5.266	0.000	9.180	0.000	0.000	0.000	0.000	0.006	0.000
OF	495.400	-5.081	0.000	9.186	0.000	0.000	0.000	0.000	0.047	0.000
OF	498.700	-4.958	0.000	9.191	0.000	0.000	0.000	0.000	0.035	0.000
OF	502.000	-4.851	0.000	9.198	0.000	0.000	0.000	0.000	0.038	0.000
OF	505.200	-4.711	0.000	9.203	0.000	0.000	0.000	0.000	0.062	0.000
OF	508.500	-4.447	0.000	9.207	0.000	0.000	0.000	0.000	0.136	0.000
OF	511.800	-3.811	0.000	9.204	0.000	0.000	0.000	0.000	0.166	0.000
OF	515.100	-3.352	0.000	9.206	0.000	0.000	0.000	0.000	0.118	0.000
OF	518.400	-3.033	0.000	9.212	0.000	0.000	0.000	0.000	0.052	0.000
OF	521.700	-3.008	0.000	9.225	0.000	0.000	0.000	0.000	0.010	0.000
OF	524.900	-2.970	0.000	9.238	0.000	0.000	0.000	0.000	0.032	0.000
OF	528.200	-2.799	0.000	9.247	0.000	0.000	0.000	0.000	0.059	0.000
OF	531.500	-2.579	0.000	9.255	0.000	0.000	0.000	0.000	0.031	0.000
OF	534.800	-2.594	0.000	9.269	0.000	0.000	0.000	0.000	0.009	0.000
OF	538.100	-2.523	0.000	9.280	0.000	0.000	0.000	0.000	-0.001	0.000
OF	541.300	-2.601	0.000	9.293	0.000	0.000	0.000	0.000	-0.001	0.000
OF	544.600	-2.528	0.000	9.303	0.000	0.000	0.000	0.000	0.013	0.000
OF	547.900	-2.515	0.000	9.313	0.000	0.000	0.000	0.000	-0.055	0.000
OF	551.200	-2.893	0.000	9.329	0.000	0.000	0.000	0.000	-0.169	0.000
OF	554.500	-3.630	0.000	9.347	0.000	0.000	0.000	0.000	-0.200	0.000
OF	557.700	-4.193	0.000	9.360	0.000	0.000	0.000	0.000	-0.101	0.000
OF	561.000	-4.286	0.000	9.365	0.000	0.000	0.000	0.000	0.004	0.000
OF	564.300	-4.164	0.000	9.367	0.000	0.000	0.000	0.000	0.093	0.000
OF	567.600	-3.670	0.000	9.365	0.000	0.000	0.000	0.000	0.078	0.000
OF	570.900	-3.649	0.000	9.368	0.000	0.000	0.000	0.000	0.011	0.000
OF	574.100	-3.599	0.000	9.372	0.000	0.000	0.000	0.000	0.019	0.000
OF	577.400	-3.527	0.000	9.375	0.000	0.000	0.000	0.000	0.040	0.000
OF	580.700	-3.333	0.000	9.377	0.000	0.000	0.000	0.000	0.058	0.000
OF	584.000	-3.148	0.000	9.379	0.000	0.000	0.000	0.000	0.039	0.000
OF	587.300	-3.073	0.000	9.382	0.000	0.000	0.000	0.000	0.056	0.000
OF	590.500	-2.787	0.000	9.383	0.000	0.000	0.000	0.000	0.161	0.000
OF	593.800	-2.029	0.000	9.377	0.000	0.000	0.000	0.000	0.237	0.000
OF	597.100	-1.225	0.000	9.370	0.000	0.000	0.000	0.000	0.248	0.000
OF	600.400	-0.395	0.000	9.364	0.000	0.000	0.000	0.000	0.198	0.000
IF	603.700	0.081	0.000	9.368	0.000	0.000	0.000	0.000	0.079	0.000
IF	607.000	0.125	0.000	9.386	0.000	0.000	0.000	0.000	-0.007	0.000
IF	610.200	0.033	0.000	9.406	0.000	0.000	0.000	0.000	0.040	0.000
IF	613.500	0.383	0.000	9.414	0.000	0.000	0.000	0.000	0.103	0.000
IF	616.800	0.710	0.000	9.424	0.000	0.000	0.000	0.000	0.081	0.000
IF	620.100	0.916	0.000	9.438	0.000	0.000	0.000	0.000	0.047	0.000
IF	623.400	1.020	0.000	9.455	0.000	0.000	0.000	0.000	0.027	0.000
IF	626.600	1.095	0.000	9.472	0.000	0.000	0.000	0.000	0.000	0.000
IF	629.900	1.022	0.000	9.491	0.000	0.000	0.000	0.000	-0.006	0.000
IF	633.200	1.054	0.000	9.506	0.000	0.000	0.000	0.000	0.026	0.000
IF	636.500	1.193	0.000	9.517	0.000	0.000	0.000	0.000	0.003	0.000
IF	639.800	1.074	0.000	9.534	0.000	0.000	0.000	0.000	-0.046	0.000
IF	643.000	0.895	0.000	9.549	0.000	0.000	0.000	0.000	0.026	0.000
IF	646.300	1.241	0.000	9.553	0.000	0.000	0.000	0.000	0.115	0.000
IF	649.600	1.652	0.000	9.556	0.000	0.000	0.000	0.000	0.117	0.000
IF	652.900	2.010	0.000	9.562	0.000	0.000	0.000	0.000	0.136	0.000
IF	656.200	2.547	0.000	9.566	0.000	0.000	0.000	0.000	0.207	0.000
IF	659.400	3.354	0.000	9.566	0.000	0.000	0.000	0.000	0.227	0.000
IF	662.700	4.021	0.000	9.578	0.000	0.000	0.000	0.000	0.191	0.000
IF	666.000	4.618	0.000	9.596	0.000	0.000	0.000	0.000	0.183	0.000
IF	669.300	5.231	0.000	9.621	0.000	0.000	0.000	0.000	0.217	0.000
IF	672.600	6.051	0.000	9.738	0.000	0.000	0.000	0.000	0.405	0.000
IF	675.900	7.906	0.000	10.126	0.000	0.000	0.000	0.000	0.602	0.000
IF	678.000	9.303	0.000	10.126	0.000	0.000	0.000	0.000	0.653	0.000
IF	679.300	10.126	0.000	10.126	0.000	0.000	0.000	0.000	0.633	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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	END STATION	END ELEVATION	FETCH LENGTH	SURGE ELEV 10-YEAR	SURGE ELEV 100-YEAR	INITIAL WAVE HEIGHT	INITIAL W. PERIOD		BOTTOM SLOPE	AVERAGE A-ZONES
IE	0.000	-30.457	1.000	1.000	8.783	21.113	14.058	56.140	0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2.000	-30.427	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	4.000	-30.398	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	6.000	-30.368	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	8.000	-30.339	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	10.000	-30.309	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	12.000	-30.280	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	14.000	-30.250	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	16.000	-30.221	0.000	8.783	0.000	0.000	0.000	0.000	0.015	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES

OF	18.000	-30.191	0.000	8.783	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	20.000	-30.162	0.000	8.783	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	22.000	-30.132	0.000	8.783	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	24.000	-30.103	0.000	8.783	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	26.000	-30.074	0.000	8.783	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	28.000	-30.044	0.000	8.783	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	30.000	-30.015	0.000	8.784	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	32.000	-29.985	0.000	8.784	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	34.000	-29.956	0.000	8.784	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	36.000	-29.926	0.000	8.784	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	38.000	-29.897	0.000	8.784	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	40.000	-29.867	0.000	8.784	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	42.000	-29.838	0.000	8.784	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	44.000	-29.808	0.000	8.784	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	46.000	-29.779	0.000	8.784	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	48.000	-29.749	0.000	8.784	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	50.000	-29.720	0.000	8.784	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	52.000	-29.691	0.000	8.784	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	54.000	-29.661	0.000	8.784	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	56.000	-29.632	0.000	8.784	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	58.000	-29.602	0.000	8.784	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	60.000	-29.573	0.000	8.784	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	62.000	-29.543	0.000	8.784	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	64.000	-29.514	0.000	8.784	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	66.000	-29.484	0.000	8.784	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	68.000	-29.455	0.000	8.784	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	70.000	-29.425	0.000	8.784	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	72.000	-29.396	0.000	8.784	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	74.000	-29.366	0.000	8.784	0.000	0.000	0.000	0.000	0.025	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	76.000	-29.295	0.000	8.784	0.000	0.000	0.000	0.000	0.037	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	78.000	-29.218	0.000	8.784	0.000	0.000	0.000	0.000	0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	80.000	-29.140	0.000	8.784	0.000	0.000	0.000	0.000	0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	82.000	-29.063	0.000	8.784	0.000	0.000	0.000	0.000	0.050	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	84.000	-28.941	0.000	8.784	0.000	0.000	0.000	0.000	0.067	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES

OF	86.000	-28.795	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	88.000	-28.649	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	90.000	-28.503	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	92.000	-28.357	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	94.000	-28.211	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	96.000	-28.065	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	98.000	-27.919	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	100.000	-27.774	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	102.000	-27.628	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	104.000	-27.482	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	106.000	-27.336	0.000	8.784	0.000	0.000	0.000	0.000	0.073	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	108.000	-27.190	0.000	8.784	0.000	0.000	0.000	0.000	0.076	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	110.000	-27.032	0.000	8.784	0.000	0.000	0.000	0.000	0.082	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	112.000	-26.861	0.000	8.784	0.000	0.000	0.000	0.000	0.086	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	114.000	-26.690	0.000	8.784	0.000	0.000	0.000	0.000	0.085	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	116.000	-26.520	0.000	8.784	0.000	0.000	0.000	0.000	0.085	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	118.000	-26.349	0.000	8.784	0.000	0.000	0.000	0.000	0.086	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	120.000	-26.178	0.000	8.784	0.000	0.000	0.000	0.000	0.086	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	122.000	-26.007	0.000	8.784	0.000	0.000	0.000	0.000	0.086	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	124.000	-25.836	0.000	8.784	0.000	0.000	0.000	0.000	0.085	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	126.000	-25.666	0.000	8.784	0.000	0.000	0.000	0.000	0.085	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	128.000	-25.495	0.000	8.784	0.000	0.000	0.000	0.000	0.086	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	130.000	-25.324	0.000	8.784	0.000	0.000	0.000	0.000	0.086	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	132.000	-25.153	0.000	8.783	0.000	0.000	0.000	0.000	0.085	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	134.000	-24.983	0.000	8.783	0.000	0.000	0.000	0.000	0.085	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	136.000	-24.812	0.000	8.783	0.000	0.000	0.000	0.000	0.086	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	138.000	-24.641	0.000	8.783	0.000	0.000	0.000	0.000	0.086	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	140.000	-24.470	0.000	8.783	0.000	0.000	0.000	0.000	0.085	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	142.000	-24.300	0.000	8.783	0.000	0.000	0.000	0.000	0.085	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	144.000	-24.129	0.000	8.783	0.000	0.000	0.000	0.000	0.086	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	146.000	-23.958	0.000	8.783	0.000	0.000	0.000	0.000	0.086	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	148.000	-23.787	0.000	8.783	0.000	0.000	0.000	0.000	0.085	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	150.000	-23.617	0.000	8.783	0.000	0.000	0.000	0.000	0.085	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	152.000	-23.446	0.000	8.783	0.000	0.000	0.000	0.000	0.086	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES

OF	154.000	-23.275	0.000	8.783	0.000	0.000	0.000	0.000	0.086	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	156.000	-23.104	0.000	8.783	0.000	0.000	0.000	0.000	0.085	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	158.000	-22.934	0.000	8.783	0.000	0.000	0.000	0.000	0.085	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	160.000	-22.763	0.000	8.783	0.000	0.000	0.000	0.000	0.086	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	162.000	-22.592	0.000	8.782	0.000	0.000	0.000	0.000	0.086	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	164.000	-22.421	0.000	8.782	0.000	0.000	0.000	0.000	0.085	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	166.000	-22.251	0.000	8.782	0.000	0.000	0.000	0.000	0.085	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	168.000	-22.080	0.000	8.782	0.000	0.000	0.000	0.000	0.086	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	170.000	-21.909	0.000	8.782	0.000	0.000	0.000	0.000	0.073	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	172.000	-21.786	0.000	8.782	0.000	0.000	0.000	0.000	0.051	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	174.000	-21.705	0.000	8.782	0.000	0.000	0.000	0.000	0.041	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	176.000	-21.624	0.000	8.782	0.000	0.000	0.000	0.000	0.047	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	178.000	-21.517	0.000	8.782	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	180.000	-21.393	0.000	8.782	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	182.000	-21.269	0.000	8.782	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	184.000	-21.145	0.000	8.782	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	186.000	-21.021	0.000	8.782	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	188.000	-20.897	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	190.000	-20.774	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	192.000	-20.650	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	194.000	-20.526	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	196.000	-20.402	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	198.000	-20.278	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	200.000	-20.154	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	202.000	-20.030	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	204.000	-19.906	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	206.000	-19.783	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	208.000	-19.659	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	210.000	-19.535	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	212.000	-19.411	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	214.000	-19.287	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	216.000	-19.163	0.000	8.781	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	218.000	-19.039	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	220.000	-18.915	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES

OF	222.000	-18.791	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	224.000	-18.668	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	226.000	-18.544	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	228.000	-18.420	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	230.000	-18.296	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	232.000	-18.172	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	234.000	-18.048	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	236.000	-17.924	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	238.000	-17.800	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	240.000	-17.677	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	242.000	-17.553	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	244.000	-17.429	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	246.000	-17.305	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	248.000	-17.181	0.000	8.779	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	250.000	-17.057	0.000	8.779	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	252.000	-16.933	0.000	8.779	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	254.000	-16.809	0.000	8.779	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	256.000	-16.685	0.000	8.779	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	258.000	-16.562	0.000	8.779	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	260.000	-16.438	0.000	8.779	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	262.000	-16.314	0.000	8.779	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	264.000	-16.190	0.000	8.779	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	266.000	-16.066	0.000	8.779	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	268.000	-15.942	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	270.000	-15.818	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	272.000	-15.694	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	274.000	-15.571	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	276.000	-15.447	0.000	8.780	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	278.000	-15.323	0.000	8.780	0.000	0.000	0.000	0.000	0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	280.000	-15.351	0.000	8.780	0.000	0.000	0.000	0.000	-0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	282.000	-15.429	0.000	8.780	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	284.000	-15.506	0.000	8.780	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	286.000	-15.584	0.000	8.781	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	288.000	-15.662	0.000	8.781	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES

OF	290.000	-15.739	0.000	8.781	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	292.000	-15.817	0.000	8.781	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	294.000	-15.895	0.000	8.781	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	296.000	-15.972	0.000	8.781	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	298.000	-16.050	0.000	8.781	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	300.000	-16.127	0.000	8.781	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	302.000	-16.205	0.000	8.781	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	304.000	-16.283	0.000	8.781	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	306.000	-16.360	0.000	8.782	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	308.000	-16.438	0.000	8.782	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	310.000	-16.516	0.000	8.782	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	312.000	-16.593	0.000	8.782	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	314.000	-16.671	0.000	8.782	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	316.000	-16.749	0.000	8.782	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	318.000	-16.826	0.000	8.782	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	320.000	-16.904	0.000	8.782	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	322.000	-16.982	0.000	8.783	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	324.000	-17.059	0.000	8.783	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	326.000	-17.137	0.000	8.783	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	328.000	-17.215	0.000	8.783	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	330.000	-17.292	0.000	8.783	0.000	0.000	0.000	0.000	-0.038	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	331.400	-17.345	0.000	8.784	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	334.600	-17.473	0.000	8.787	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	337.900	-17.600	0.000	8.789	0.000	0.000	0.000	0.000	-0.038	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	341.200	-17.727	0.000	8.791	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	344.500	-17.855	0.000	8.794	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	347.800	-17.982	0.000	8.796	0.000	0.000	0.000	0.000	-0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	351.000	-18.109	0.000	8.798	0.000	0.000	0.000	0.000	-0.019	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	354.300	-18.104	0.000	8.799	0.000	0.000	0.000	0.000	0.022	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	357.600	-17.967	0.000	8.798	0.000	0.000	0.000	0.000	0.051	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	360.900	-17.769	0.000	8.798	0.000	0.000	0.000	0.000	0.074	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	364.200	-17.478	0.000	8.796	0.000	0.000	0.000	0.000	0.088	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	367.500	-17.186	0.000	8.795	0.000	0.000	0.000	0.000	0.090	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	370.700	-16.895	0.000	8.794	0.000	0.000	0.000	0.000	0.090	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES

OF	374.000	-16.604	0.000	8.793	0.000	0.000	0.000	0.000	0.104	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	377.300	-16.209	0.000	8.790	0.000	0.000	0.000	0.000	0.129	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	380.600	-15.750	0.000	8.788	0.000	0.000	0.000	0.000	0.139	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	383.900	-15.291	0.000	8.785	0.000	0.000	0.000	0.000	0.310	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	413.400	-5.574	0.000	8.799	0.000	0.000	0.000	0.000	0.298	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	416.700	-5.506	0.000	8.823	0.000	0.000	0.000	0.000	0.041	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	419.900	-5.309	0.000	8.842	0.000	0.000	0.000	0.000	0.035	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	423.200	-5.280	0.000	8.866	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	426.500	-5.302	0.000	8.891	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	429.800	-5.185	0.000	8.911	0.000	0.000	0.000	0.000	0.019	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	433.100	-5.176	0.000	8.932	0.000	0.000	0.000	0.000	0.006	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	436.400	-5.143	0.000	8.953	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	439.600	-5.099	0.000	8.972	0.000	0.000	0.000	0.000	0.011	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	442.900	-5.070	0.000	8.990	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	446.200	-5.067	0.000	9.008	0.000	0.000	0.000	0.000	-0.011	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	449.500	-5.142	0.000	9.027	0.000	0.000	0.000	0.000	-0.025	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	452.800	-5.231	0.000	9.045	0.000	0.000	0.000	0.000	-0.017	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	456.000	-5.250	0.000	9.060	0.000	0.000	0.000	0.000	-0.008	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	459.300	-5.285	0.000	9.074	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	462.600	-5.267	0.000	9.086	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	465.900	-5.276	0.000	9.098	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	469.200	-5.277	0.000	9.110	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	472.400	-5.260	0.000	9.120	0.000	0.000	0.000	0.000	0.019	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	475.700	-5.155	0.000	9.129	0.000	0.000	0.000	0.000	0.043	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	479.000	-4.980	0.000	9.135	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	482.300	-4.815	0.000	9.143	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	485.600	-4.786	0.000	9.154	0.000	0.000	0.000	0.000	-0.047	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	488.800	-5.122	0.000	9.169	0.000	0.000	0.000	0.000	-0.074	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	492.100	-5.266	0.000	9.180	0.000	0.000	0.000	0.000	0.006	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	495.400	-5.081	0.000	9.186	0.000	0.000	0.000	0.000	0.047	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	498.700	-4.958	0.000	9.191	0.000	0.000	0.000	0.000	0.035	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	502.000	-4.851	0.000	9.198	0.000	0.000	0.000	0.000	0.038	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	505.200	-4.711	0.000	9.203	0.000	0.000	0.000	0.000	0.062	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	508.500	-4.447	0.000	9.207	0.000	0.000	0.000	0.000	0.136	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES

OF	511.800	-3.811	0.000	9.204	0.000	0.000	0.000	0.000	0.166	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	515.100	-3.352	0.000	9.206	0.000	0.000	0.000	0.000	0.118	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	518.400	-3.033	0.000	9.212	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	521.700	-3.008	0.000	9.225	0.000	0.000	0.000	0.000	0.010	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	524.900	-2.970	0.000	9.238	0.000	0.000	0.000	0.000	0.032	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	528.200	-2.799	0.000	9.247	0.000	0.000	0.000	0.000	0.059	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	531.500	-2.579	0.000	9.255	0.000	0.000	0.000	0.000	0.031	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	534.800	-2.594	0.000	9.269	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	538.100	-2.523	0.000	9.280	0.000	0.000	0.000	0.000	-0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	541.300	-2.601	0.000	9.293	0.000	0.000	0.000	0.000	-0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	544.600	-2.528	0.000	9.303	0.000	0.000	0.000	0.000	0.013	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	547.900	-2.515	0.000	9.313	0.000	0.000	0.000	0.000	-0.055	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	551.200	-2.893	0.000	9.329	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	554.500	-3.630	0.000	9.347	0.000	0.000	0.000	0.000	-0.200	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	557.700	-4.193	0.000	9.360	0.000	0.000	0.000	0.000	-0.101	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	561.000	-4.286	0.000	9.365	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	564.300	-4.164	0.000	9.367	0.000	0.000	0.000	0.000	0.093	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	567.600	-3.670	0.000	9.365	0.000	0.000	0.000	0.000	0.078	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	570.900	-3.649	0.000	9.368	0.000	0.000	0.000	0.000	0.011	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	574.100	-3.599	0.000	9.372	0.000	0.000	0.000	0.000	0.019	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	577.400	-3.527	0.000	9.375	0.000	0.000	0.000	0.000	0.040	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	580.700	-3.333	0.000	9.377	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	584.000	-3.148	0.000	9.379	0.000	0.000	0.000	0.000	0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	587.300	-3.073	0.000	9.382	0.000	0.000	0.000	0.000	0.056	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	590.500	-2.787	0.000	9.383	0.000	0.000	0.000	0.000	0.161	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	593.800	-2.029	0.000	9.377	0.000	0.000	0.000	0.000	0.237	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	597.100	-1.225	0.000	9.370	0.000	0.000	0.000	0.000	0.248	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	600.400	-0.395	0.000	9.364	0.000	0.000	0.000	0.000	0.198	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	603.700	0.081	0.000	9.368	0.000	0.000	0.000	0.000	0.079	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	607.000	0.125	0.000	9.386	0.000	0.000	0.000	0.000	-0.007	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	610.200	0.033	0.000	9.406	0.000	0.000	0.000	0.000	0.040	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	613.500	0.383	0.000	9.414	0.000	0.000	0.000	0.000	0.103	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	616.800	0.710	0.000	9.424	0.000	0.000	0.000	0.000	0.081	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	620.100	0.916	0.000	9.438	0.000	0.000	0.000	0.000	0.047	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES

IF	623.400	1.020	0.000	9.455	0.000	0.000	0.000	0.000	0.027	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	626.600	1.095	0.000	9.472	0.000	0.000	0.000	0.000	0.000	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	629.900	1.022	0.000	9.491	0.000	0.000	0.000	0.000	-0.006	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	633.200	1.054	0.000	9.506	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	636.500	1.193	0.000	9.517	0.000	0.000	0.000	0.000	0.003	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	639.800	1.074	0.000	9.534	0.000	0.000	0.000	0.000	-0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	643.000	0.895	0.000	9.549	0.000	0.000	0.000	0.000	0.026	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	646.300	1.241	0.000	9.553	0.000	0.000	0.000	0.000	0.115	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	649.600	1.652	0.000	9.556	0.000	0.000	0.000	0.000	0.117	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	652.900	2.010	0.000	9.562	0.000	0.000	0.000	0.000	0.136	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	656.200	2.547	0.000	9.566	0.000	0.000	0.000	0.000	0.207	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	659.400	3.354	0.000	9.566	0.000	0.000	0.000	0.000	0.227	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	662.700	4.021	0.000	9.578	0.000	0.000	0.000	0.000	0.191	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	666.000	4.618	0.000	9.596	0.000	0.000	0.000	0.000	0.183	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	669.300	5.231	0.000	9.621	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	672.600	6.051	0.000	9.738	0.000	0.000	0.000	0.000	0.405	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	675.900	7.906	0.000	10.126	0.000	0.000	0.000	0.000	0.602	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	678.000	9.303	0.000	10.126	0.000	0.000	0.000	0.000	0.653	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	679.300	10.126	0.000	10.126	0.000	0.000	0.000	0.000	0.633	0.000

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

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

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

	LOCATION	CONTROLLING WAVE HEIGHT	SPECTRAL PEAK WAVE PERIOD	WAVE CREST ELEVATION
IE	0.00	21.11	14.06	23.56
OF	2.00	21.12	14.06	23.57
OF	4.00	21.12	14.06	23.57
OF	6.00	21.13	14.06	23.57
OF	8.00	21.13	14.06	23.58
OF	10.00	21.14	14.06	23.58
OF	12.00	21.14	14.06	23.58
OF	14.00	21.15	14.06	23.59
OF	16.00	21.15	14.06	23.59
OF	18.00	21.16	14.06	23.59
OF	20.00	21.16	14.06	23.60
OF	22.00	21.17	14.06	23.60
OF	24.00	21.17	14.06	23.60
OF	26.00	21.18	14.06	23.61
OF	28.00	21.18	14.06	23.61
OF	30.00	21.18	14.06	23.61
OF	32.00	21.19	14.06	23.62
OF	34.00	21.19	14.06	23.62
OF	36.00	21.20	14.06	23.62
OF	38.00	21.20	14.06	23.63
OF	40.00	21.21	14.06	23.63
OF	42.00	21.21	14.06	23.63
OF	44.00	21.22	14.06	23.64
OF	46.00	21.22	14.06	23.64
OF	48.00	21.23	14.06	23.64
OF	50.00	21.23	14.06	23.65
OF	52.00	21.24	14.06	23.65
OF	54.00	21.24	14.06	23.65
OF	56.00	21.25	14.06	23.66
OF	58.00	21.25	14.06	23.66
OF	60.00	21.26	14.06	23.66
OF	62.00	21.26	14.06	23.67
OF	64.00	21.27	14.06	23.67
OF	66.00	21.27	14.06	23.68
OF	68.00	21.28	14.06	23.68
OF	70.00	21.28	14.06	23.68
OF	72.00	21.29	14.06	23.69
OF	74.00	21.29	14.06	23.69
OF	76.00	21.31	14.06	23.70

OF	78.00	21.32	14.06	23.71
OF	80.00	21.33	14.06	23.72
OF	82.00	21.35	14.06	23.73
OF	84.00	21.37	14.06	23.74
OF	86.00	21.39	14.06	23.76
OF	88.00	21.42	14.06	23.78
OF	90.00	21.44	14.06	23.79
OF	92.00	21.47	14.06	23.81
OF	94.00	21.50	14.06	23.83
OF	96.00	21.52	14.06	23.85
OF	98.00	21.55	14.06	23.87
OF	100.00	21.57	14.06	23.89
OF	102.00	21.60	14.06	23.91
OF	104.00	21.60	14.06	23.90
OF	106.00	21.59	14.06	23.89
OF	108.00	21.57	14.06	23.88
OF	110.00	21.55	14.06	23.87
OF	112.00	21.53	14.06	23.86
OF	114.00	21.51	14.06	23.84
OF	116.00	21.49	14.06	23.83
OF	118.00	21.48	14.06	23.82
OF	120.00	21.46	14.06	23.80
OF	122.00	21.44	14.06	23.79
OF	124.00	21.41	14.06	23.77
OF	126.00	21.39	14.06	23.76
OF	128.00	21.37	14.06	23.75
OF	130.00	21.35	14.06	23.73
OF	132.00	21.33	14.06	23.72
OF	134.00	21.31	14.06	23.70
OF	136.00	21.29	14.06	23.69
OF	138.00	21.27	14.06	23.67
OF	140.00	21.25	14.06	23.66
OF	142.00	21.22	14.06	23.64
OF	144.00	21.20	14.06	23.62
OF	146.00	21.18	14.06	23.61
OF	148.00	21.16	14.06	23.59
OF	150.00	21.13	14.06	23.58
OF	152.00	21.11	14.06	23.56
OF	154.00	21.09	14.06	23.54
OF	156.00	21.06	14.06	23.53
OF	158.00	21.04	14.06	23.51
OF	160.00	21.02	14.06	23.49
OF	162.00	20.99	14.06	23.48
OF	164.00	20.97	14.06	23.46
OF	166.00	20.94	14.06	23.44
OF	168.00	20.92	14.06	23.42
OF	170.00	20.89	14.06	23.41
OF	172.00	20.87	14.06	23.39
OF	174.00	20.86	14.06	23.39
OF	176.00	20.85	14.06	23.38
OF	178.00	20.84	14.06	23.37
OF	180.00	20.82	14.06	23.36
OF	182.00	20.80	14.06	23.34
OF	184.00	20.78	14.06	23.33
OF	186.00	20.77	14.06	23.32
OF	188.00	20.75	14.06	23.30
OF	190.00	20.73	14.06	23.29
OF	192.00	20.71	14.06	23.28
OF	194.00	20.69	14.06	23.26
OF	196.00	20.67	14.06	23.25
OF	198.00	20.65	14.06	23.24
OF	200.00	20.63	14.06	23.22
OF	202.00	20.61	14.06	23.21
OF	204.00	20.59	14.06	23.20
OF	206.00	20.57	14.06	23.18
OF	208.00	20.55	14.06	23.17
OF	210.00	20.53	14.06	23.15
OF	212.00	20.51	14.06	23.14
OF	214.00	20.49	14.06	23.12
OF	216.00	20.47	14.06	23.11
OF	218.00	20.48	14.06	23.12
OF	220.00	20.50	14.06	23.13
OF	222.00	20.52	14.06	23.15
OF	224.00	20.53	14.06	23.15
OF	226.00	20.44	14.06	23.09
OF	228.00	20.35	14.06	23.03
OF	230.00	20.26	14.06	22.96
OF	232.00	20.17	14.06	22.90
OF	234.00	20.08	14.06	22.84
OF	236.00	19.99	14.06	22.78
OF	238.00	19.91	14.06	22.71
OF	240.00	19.82	14.06	22.65
OF	242.00	19.73	14.06	22.59
OF	244.00	19.64	14.06	22.53
OF	246.00	19.55	14.06	22.46
OF	248.00	19.46	14.06	22.40
OF	250.00	19.37	14.06	22.34
OF	252.00	19.28	14.06	22.28
OF	254.00	19.19	14.06	22.21
OF	256.00	19.10	14.06	22.15
OF	258.00	19.01	14.06	22.09
OF	260.00	18.92	14.06	22.03
OF	262.00	18.83	14.06	21.96
OF	264.00	18.74	14.06	21.90
OF	266.00	18.66	14.06	21.84
OF	268.00	18.57	14.06	21.78
OF	270.00	18.48	14.06	21.71
OF	272.00	18.39	14.06	21.65
OF	274.00	18.30	14.06	21.59
OF	276.00	18.21	14.06	21.53
OF	278.00	18.12	14.06	21.46
OF	280.00	18.11	14.06	21.46

OF	282.00	18.10	14.06	21.45
OF	284.00	18.09	14.06	21.44
OF	286.00	18.08	14.06	21.44
OF	288.00	18.10	14.06	21.45
OF	290.00	18.12	14.06	21.46
OF	292.00	18.14	14.06	21.48
OF	294.00	18.15	14.06	21.49
OF	296.00	18.17	14.06	21.50
OF	298.00	18.19	14.06	21.52
OF	300.00	18.21	14.06	21.53
OF	302.00	18.23	14.06	21.54
OF	304.00	18.25	14.06	21.56
OF	306.00	18.27	14.06	21.57
OF	308.00	18.29	14.06	21.59
OF	310.00	18.31	14.06	21.60
OF	312.00	18.33	14.06	21.61
OF	314.00	18.35	14.06	21.63
OF	316.00	18.37	14.06	21.64
OF	318.00	18.39	14.06	21.65
OF	320.00	18.40	14.06	21.66
OF	322.00	18.42	14.06	21.68
OF	324.00	18.44	14.06	21.69
OF	326.00	18.46	14.06	21.71
OF	328.00	18.48	14.06	21.72
OF	330.00	18.50	14.06	21.73
OF	331.40	18.51	14.06	21.74
OF	334.60	18.54	14.06	21.76
OF	337.90	18.57	14.06	21.79
OF	341.20	18.59	14.06	21.81
OF	344.50	18.62	14.06	21.83
OF	347.80	18.65	14.06	21.85
OF	351.00	18.68	14.06	21.87
OF	354.30	18.68	14.06	21.87
OF	357.60	18.66	14.06	21.86
OF	360.90	18.63	14.06	21.84
OF	364.20	18.58	14.06	21.80
OF	367.50	18.52	14.06	21.76
OF	370.70	18.47	14.06	21.72
OF	374.00	18.42	14.06	21.69
OF	377.30	18.34	14.06	21.63
OF	380.60	18.30	14.06	21.59
OF	383.90	18.10	14.06	21.45
OF	413.40	10.97	14.06	16.47
OF	416.70	10.93	14.06	16.48
OF	419.90	10.80	14.06	16.40
OF	423.20	10.80	14.06	16.42
OF	426.50	10.81	14.06	16.46
OF	429.80	10.76	14.06	16.44
OF	433.10	10.77	14.06	16.47
OF	436.40	10.76	14.06	16.48
OF	439.60	10.74	14.06	16.49
OF	442.90	10.73	14.06	16.50
OF	446.20	10.74	14.06	16.53
OF	449.50	10.76	14.06	16.56
OF	452.80	10.78	14.06	16.59
OF	456.00	10.79	14.06	16.61
OF	459.30	10.80	14.06	16.64
OF	462.60	10.81	14.06	16.65
OF	465.90	10.81	14.06	16.67
OF	469.20	10.82	14.06	16.68
OF	472.40	10.82	14.06	16.69
OF	475.70	10.80	14.06	16.69
OF	479.00	10.77	14.06	16.67
OF	482.30	10.66	14.06	16.60
OF	485.60	10.64	14.06	16.60
OF	488.80	10.71	14.06	16.67
OF	492.10	10.75	14.06	16.70
OF	495.40	10.71	14.06	16.69
OF	498.70	10.69	14.06	16.68
OF	502.00	10.67	14.06	16.67
OF	505.20	10.62	14.06	16.64
OF	508.50	10.43	14.06	16.51
OF	511.80	9.95	14.06	16.17
OF	515.10	9.61	14.06	15.93
OF	518.40	9.37	14.06	15.77
OF	521.70	9.36	14.06	15.78
OF	524.90	9.34	14.06	15.78
OF	528.20	9.22	14.06	15.70
OF	531.50	9.06	14.06	15.60
OF	534.80	9.07	14.06	15.62
OF	538.10	9.04	14.06	15.61
OF	541.30	9.06	14.06	15.63
OF	544.60	9.05	14.06	15.64
OF	547.90	9.05	14.06	15.65
OF	551.20	9.13	14.06	15.72
OF	554.50	9.27	14.06	15.83
OF	557.70	9.36	14.06	15.91
OF	561.00	9.38	14.06	15.93
OF	564.30	9.36	14.06	15.92
OF	567.60	9.28	14.06	15.86
OF	570.90	9.28	14.06	15.87
OF	574.10	9.28	14.06	15.87
OF	577.40	9.27	14.06	15.86
OF	580.70	9.23	14.06	15.84
OF	584.00	9.20	14.06	15.82
OF	587.30	9.19	14.06	15.82
OF	590.50	9.14	14.06	15.78
OF	593.80	8.74	14.06	15.50
OF	597.10	8.13	14.06	15.06
OF	600.40	7.50	14.06	14.61
IF	603.70	7.14	14.06	14.37
IF	607.00	7.12	14.06	14.37

IF	610.20	7.14	14.06	14.41
IF	613.50	6.95	14.06	14.28
IF	616.80	6.71	14.06	14.12
IF	620.10	6.56	14.06	14.03
IF	623.40	6.49	14.06	14.00
IF	626.60	6.45	14.06	13.99
IF	629.90	6.47	14.06	14.02
IF	633.20	6.47	14.06	14.03
IF	636.50	6.41	14.06	14.00
IF	639.80	6.44	14.06	14.04
IF	643.00	6.47	14.06	14.08
IF	646.30	6.40	14.06	14.03
IF	649.60	6.09	14.06	13.82
IF	652.90	5.82	14.06	13.64
IF	656.20	5.42	14.06	13.36
IF	659.40	4.80	14.06	12.93
IF	662.70	4.30	14.06	12.59
IF	666.00	3.85	14.06	12.29
IF	669.30	3.40	14.06	12.00
IF	672.60	2.86	14.06	11.74
IF	675.90	1.73	14.06	11.33
IF	678.00	0.64	14.06	10.57
IF	679.30	0.01	14.06	10.13

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
30.00	1.00	8.78
132.00	1.00	8.78
162.00	1.00	8.78
188.00	1.00	8.78
218.00	1.00	8.78
248.00	1.00	8.78
268.00	1.00	8.78
286.00	1.00	8.78
306.00	1.00	8.78
322.00	1.00	8.78
331.40	1.00	8.78
334.60	1.00	8.79
337.90	1.00	8.79
341.20	1.00	8.79
344.50	1.00	8.79
347.80	1.00	8.80
351.00	1.00	8.80
354.30	1.00	8.80
357.60	1.00	8.80
364.20	1.00	8.80
367.50	1.00	8.80
370.70	1.00	8.79
374.00	1.00	8.79
377.30	1.00	8.79
380.60	1.00	8.79
383.90	1.00	8.78
413.40	1.00	8.80
416.70	1.00	8.82
419.90	1.00	8.84
423.20	1.00	8.87
426.50	1.00	8.89
429.80	1.00	8.91
433.10	1.00	8.93
436.40	1.00	8.95
439.60	1.00	8.97
442.90	1.00	8.99
446.20	1.00	9.01
449.50	1.00	9.03
452.80	1.00	9.05
456.00	1.00	9.06
459.30	1.00	9.07
462.60	1.00	9.09
465.90	1.00	9.10
469.20	1.00	9.11
472.40	1.00	9.12
475.70	1.00	9.13
479.00	1.00	9.14
482.30	1.00	9.14
485.60	1.00	9.15
488.80	1.00	9.17
492.10	1.00	9.18
495.40	1.00	9.19
498.70	1.00	9.19
502.00	1.00	9.20
505.20	1.00	9.20
508.50	1.00	9.21
511.80	1.00	9.20
515.10	1.00	9.21
518.40	1.00	9.21
521.70	1.00	9.23
524.90	1.00	9.24
528.20	1.00	9.25
531.50	1.00	9.26
534.80	1.00	9.27
538.10	1.00	9.28
541.30	1.00	9.29
544.60	1.00	9.30
547.90	1.00	9.31
551.20	1.00	9.33
554.50	1.00	9.35
557.70	1.00	9.36
561.00	1.00	9.36
564.30	1.00	9.37
567.60	1.00	9.36
570.90	1.00	9.37

574.10	1.00	9.37
577.40	1.00	9.38
580.70	1.00	9.38
584.00	1.00	9.38
587.30	1.00	9.38
590.50	1.00	9.38
593.80	1.00	9.38
597.10	1.00	9.37
600.40	1.00	9.36
603.70	1.00	9.37
607.00	1.00	9.39
610.20	1.00	9.41
613.50	1.00	9.41
616.80	1.00	9.42
620.10	1.00	9.44
623.40	1.00	9.45
626.60	1.00	9.47
629.90	1.00	9.49
633.20	1.00	9.51
636.50	1.00	9.52
639.80	1.00	9.53
643.00	1.00	9.55
646.30	1.00	9.55
649.60	1.00	9.56
652.90	1.00	9.56
656.20	1.00	9.57
662.70	1.00	9.58
666.00	1.00	9.60
669.30	1.00	9.62
672.60	1.00	9.74
675.90	1.00	10.13

PART5 LOCATION OF V ZONES

STATION OF GUTTER	LOCATION OF ZONE
671.74	WINDWARD

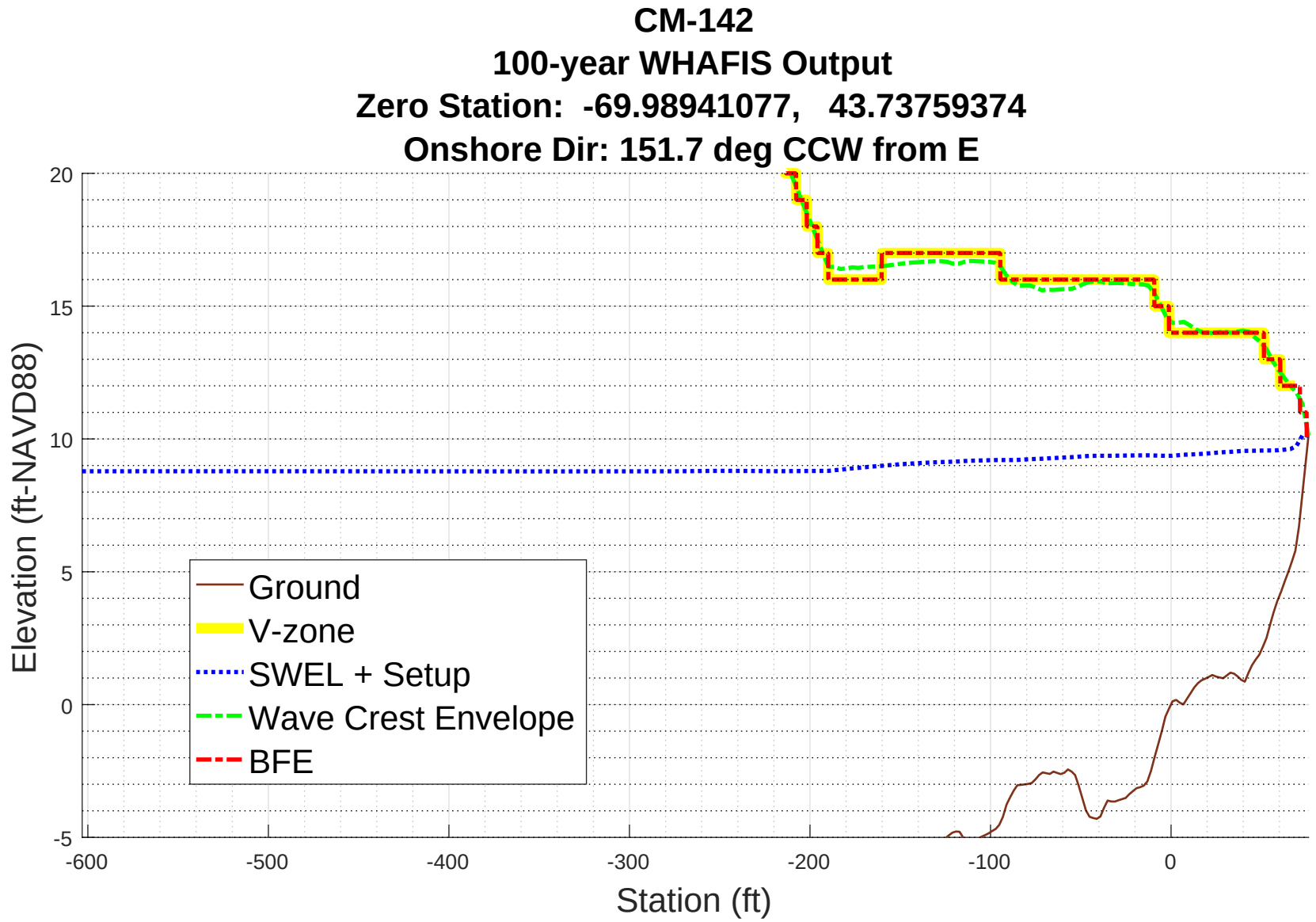
PART6 NUMBERED A ZONES AND V ZONES

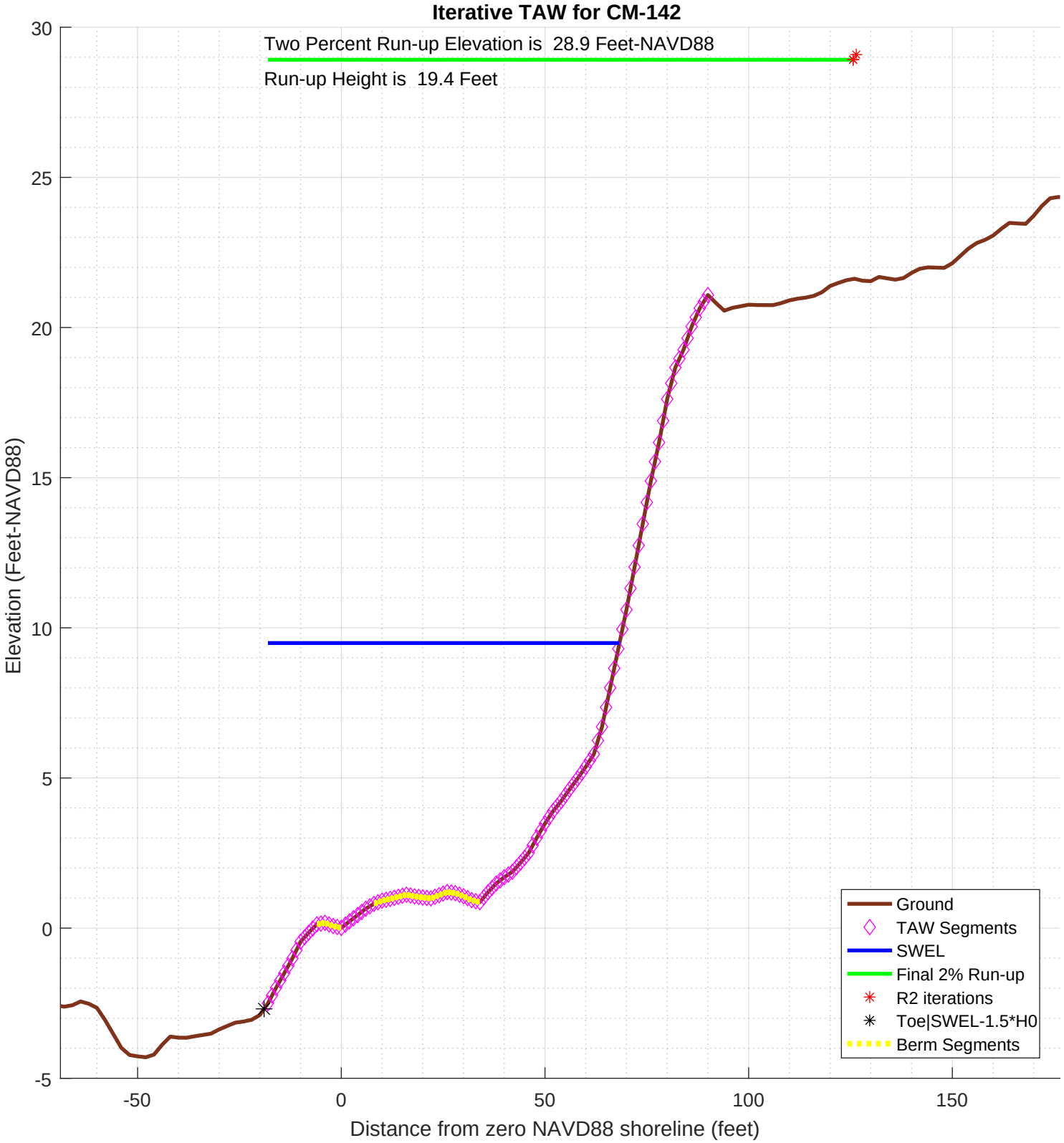
STATION OF GUTTER	ELEVATION	ZONE DESIGNATION		FHF
0.00	23.56	V22	EL=24	120
28.00	23.61	V22	EL=24	120
30.00	23.61	V22	EL=24	120
130.00	23.73	V22	EL=24	120
132.00	23.72	V22	EL=24	120
159.25	23.50	V22	EL=23	120
160.00	23.49	V22	EL=23	120
162.00	23.48	V22	EL=23	120
186.00	23.32	V22	EL=23	120
188.00	23.30	V22	EL=23	120
216.00	23.11	V22	EL=23	120
218.00	23.12	V22	EL=23	120
244.87	22.50	V22	EL=22	120
246.00	22.46	V22	EL=22	120
248.00	22.40	V22	EL=22	120
266.00	21.84	V22	EL=22	120
268.00	21.78	V22	EL=22	120
276.82	21.50	V22	EL=21	120
284.00	21.44	V22	EL=21	120
286.00	21.44	V22	EL=21	120
295.56	21.50	V22	EL=22	120
304.00	21.56	V22	EL=22	120
306.00	21.57	V22	EL=22	120
320.00	21.66	V22	EL=22	120
322.00	21.68	V22	EL=22	120
330.00	21.73	V22	EL=22	120
331.40	21.74	V22	EL=22	120
334.60	21.76	V22	EL=22	120
337.90	21.79	V22	EL=22	120
341.20	21.81	V22	EL=22	120
344.50	21.83	V22	EL=22	120
347.80	21.85	V22	EL=22	120
351.00	21.87	V22	EL=22	120

354.30	21.87			
357.60	21.86	V22	EL=22	120
360.90	21.84	V22	EL=22	120
364.20	21.80	V22	EL=22	120
367.50	21.76	V22	EL=22	120
370.70	21.72	V22	EL=22	120
374.00	21.69	V22	EL=22	120
377.30	21.63	V22	EL=22	120
380.60	21.59	V22	EL=22	120
382.83	21.50	V22	EL=22	120
383.90	21.45	V22	EL=21	120
389.55	20.50	V22	EL=21	120
395.48	19.50	V22	EL=20	120
401.40	18.50	V22	EL=19	120
407.33	17.50	V22	EL=18	120
413.25	16.50	V22	EL=17	120
413.40	16.47	V22	EL=16	120
416.70	16.48	V22	EL=16	120
419.90	16.40	V22	EL=16	120
423.20	16.42	V22	EL=16	120
426.50	16.46	V22	EL=16	120
429.80	16.44	V22	EL=16	120
433.10	16.47	V22	EL=16	120
436.40	16.48	V22	EL=16	120
439.60	16.49	V22	EL=16	120
442.32	16.50	V22	EL=16	120
442.90	16.50	V22	EL=17	120
446.20	16.53	V22	EL=17	120
449.50	16.56	V22	EL=17	120
452.80	16.59	V22	EL=17	120
456.00	16.61	V22	EL=17	120
459.30	16.64	V22	EL=17	120
462.60	16.65	V23	EL=17	130
465.90	16.67	V23	EL=17	130
469.20	16.68	V23	EL=17	130
472.40	16.69	V23	EL=17	130
475.70	16.69	V23	EL=17	130
479.00	16.67	V23	EL=17	130
482.30	16.60	V23	EL=17	130
485.60	16.60	V23	EL=17	130
488.80	16.67	V23	EL=17	130
492.10	16.70	V23	EL=17	130
495.40	16.69	V23	EL=17	130
498.70	16.68	V23	EL=17	130
502.00	16.67	V23	EL=17	130
505.20	16.64	V23	EL=17	130
508.50	16.51	V23	EL=17	130
508.57	16.50	V23	EL=16	130
511.80	16.17	V23	EL=16	130
515.10	15.93	V23	EL=16	130
518.40	15.77	V23	EL=16	130

521.70	15.78			
524.90	15.78	V23	EL=16	130
528.20	15.70	V23	EL=16	130
531.50	15.60	V23	EL=16	130
534.80	15.62	V23	EL=16	130
538.10	15.61	V23	EL=16	130
541.30	15.63	V23	EL=16	130
544.60	15.64	V23	EL=16	130
547.90	15.65	V23	EL=16	130
551.20	15.72	V23	EL=16	130
554.50	15.83	V23	EL=16	130
557.70	15.91	V23	EL=16	130
561.00	15.93	V23	EL=16	130
564.30	15.92	V23	EL=16	130
567.60	15.86	V23	EL=16	130
570.90	15.87	V23	EL=16	130
574.10	15.87	V23	EL=16	130
577.40	15.86	V23	EL=16	130
580.70	15.84	V23	EL=16	130
584.00	15.82	V23	EL=16	130
587.30	15.82	V23	EL=16	130
590.50	15.78	V23	EL=16	130
593.75	15.50	V23	EL=15	130
593.80	15.50	V23	EL=15	130
597.10	15.06	V23	EL=15	130
600.40	14.61	V23	EL=15	130
601.91	14.50	V23	EL=14	130
603.70	14.37	V23	EL=14	130
607.00	14.37	V23	EL=14	130
610.20	14.41	V23	EL=14	130
613.50	14.28	V23	EL=14	130
616.80	14.12	V23	EL=14	130
620.10	14.03	V23	EL=14	130
623.40	14.00	V23	EL=14	130
626.60	13.99	V23	EL=14	130
629.90	14.02	V23	EL=14	130
633.20	14.03	V23	EL=14	130
636.50	14.00	V23	EL=14	130
639.80	14.04	V23	EL=14	130
643.00	14.08	V23	EL=14	130
646.30	14.03	V23	EL=14	130
649.60	13.82	V23	EL=14	130
652.90	13.64	V23	EL=14	130
654.52	13.50	V23	EL=13	130
656.20	13.36	V23	EL=13	130
659.40	12.93	V23	EL=13	130
662.70	12.59	V23	EL=13	130
663.67	12.50	V23	EL=12	130
666.00	12.29	V23	EL=12	130
669.30	12.00	V23	EL=12	130
671.74	11.78	A20	EL=12	100

```
                              672.60          11.74
                                                        A20  EL=12     100
                              674.55          11.50
                                                        A20  EL=11     100
                              675.90          11.33
                                                        A20  EL=11     100
                              678.22          10.50
                                                        A20  EL=10     100
                              679.30          10.13
                                   ZONE TERMINATED AT END OF TRANSECT
                                   PART 7   POSTSCRIPT NOTES
                         PS#  1   START(420487.8136,4843117.1493)
                         PS#  2   END(420273.1339,4843232.6316)
-1.000000e+00
```


CM-142
100-year WHAFIS Output
Zero Station: -69.98941077, 43.73759374
Onshore Dir: 151.7 deg CCW from E
Elevation (ft-NAVD88)
Station (ft)
20
15
10
5
0
-5
-600
-500
-400
-300
-200
-100
0
Ground
V-zone
SWEL + Setup
Wave Crest Envelope
BFE


Iterative TAW for CM-142
Two Percent Run-up Elevation is 28.9 Feet-NAVD88
Run-up Height is 19.4 Feet
Elevation (Feet-NAVD88)
Distance from zero NAVD88 shoreline (feet)
30
25
20
15
10
5
0
-5
-50
0
50
100
150
Ground
TAW Segments
SWEL
Final 2% Run-up
R2 iterations
Toe|SWEL-1.5*H0
Berm Segments

```
diary on         % begin recording

% FEMA appeal for The Town of Harpswell, Cumberland county, Maine
% TRANSECT ID: CM-142
% 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-142sta_ele_include.csv';   % file with station, elevation, include
                                    % third colunm is 0 for excluded points
imgname='logfiles/CM-142-runup';
SWEL=8.7833;  % 100-yr still water level including wave setup.
H0=8.0408;    % significant wave height at toe of structure
Tp=13.8504;    % peak period, 1/fma,
T0=Tp/1.1;

gamma_berm=0.90215;   % this may get changed automatically below
gamma_rough=0.8;
gamma_beta=1;
gamma_perm=1;

setupAtToe=0.58856;
maxSetup=1.3427;   % only used in case of berm/shallow foreshore weighted average

plotTitle='Iterative TAW for CM-142'

plotTitle =

Iterative TAW for CM-142



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

SWEL=SWEL+setupAtToe

SWEL =

    9.37186

SWEL_fore=SWEL+maxSetup

SWEL_fore =

   10.71456



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

L0 =

  811.223215249059


% Find Hb (Munk, 1949)
%Hb=H0/(3.3*(H0/L0)^(1/3))
%Db=-Hb/.78+SWEL;  % depth at breaking

% The toe elevation here is only used to determine the average
% structure slope, it is not used to depth limit the wave height.
% Any depth limiting or other modification of the wave height
```

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

Ztoe =

                  -2.68934


% 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 =

                  21.43306


% 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 =

         -18.9523421588595

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

top_sta =

          91.5936320218331


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

top_sta =

          91.5936320218331

toe_sta

toe_sta =

         -18.9523421588595




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

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

ans =

-!!- Location of SWEL-1.5*H0 is 106.2 ft landward of toe of slope


ans =

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


ans =

-!!-       setup is adjusted to 0.71 feet


ans =

-!!-       SWEL is adjusted to 9.49 feet


k =

     1
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18



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

    R2=R2_new
    Z2=R2+SWEL
    % determine slope for this iteration
    top_sta=-999;
    for kk=1:length(sta)-1
```

```
   if ((Z2 > dep(kk)) & (Z2 <= dep(kk+1)))    % here is the intersection of z2 with profile
      top_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Z2)
      break;
   end
end
if top_sta==-999
   dy=Z2-dep(end);
   top_sta=sta(end)+dy/S(end)
end

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

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

% check validity
TAW_VALID=1;
if (Irb*gamma_berm < 0.5 | Irb*gamma_berm > 10 )
   sprintf('!!! - - Iribaren number: %6.2f is outside the valid range (0.5-10), TAW NOT VALID - - !!!\n', Irb*gam
   TAW_VALID=0;
else
   sprintf('!!! - - Iribaren number: %6.2f is in the valid range (0.5-10), TAW RECOMMENDED - - !!!\n', Irb*gamma_
end
islope=1/slope;
if (slope < 1/8 | slope > 1)
   sprintf('!!! - - slope: 1:%3.1f V:H is outside the valid range (1:8 - 1:1), TAW NOT VALID - - !!!\n', islope)
   TAW_VALID=0;
else
   sprintf('!!! - - slope: 1:%3.1f V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!\n', islope)
end
if TAW_VALID == 0
   TAW_ALWAYS_VALID=0;
end
```

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


    % check to see if we need to evaluate a shallow foreshore
    if berm_width > 0.25 * L0;
       disp ('!   Berm_width is greater than 1/4 wave length')
       disp ('!   Runup will be weighted average with foreshore calculation assuming depth limited wave height on ber
       % do the foreshore calculation
       fore_H0=0.78*(SWEL_fore-min(Berm_Heights))
       % get upper slope
       fore_toe_sta=-999;
       fore_toe_dep=-999;
       for kk=length(dep)-1:-1:1
          ddep=dep(kk+1)-dep(kk);
          dsta=sta(kk+1)-sta(kk);
          s=ddep/dsta;
          if s < 1/15
             break
          end
          fore_toe_sta=sta(kk);
          fore_toe_dep=dep(kk);
          upper_slope=(Z2-fore_toe_dep)/(top_sta-fore_toe_sta)
       end
       fore_Irb=upper_slope/(sqrt(fore_H0/L0));
       fore_gamma=gamma_perm*gamma_beta*gamma_rough;
       if (fore_Irb < 1.8)
          fore_R2=fore_gamma*fore_H0*1.77*fore_Irb;
       else
          fore_R2=fore_gamma*fore_H0*(4.3-(1.6/sqrt(fore_Irb)));
       end
       if berm_width >= L0
          R2_new=fore_R2
          disp ('berm is wider than one wavelength, use full shallow foreshore solution');
       else
          w2=(berm_width-0.25*L0)/(0.75*L0)
          w1=1-w2
          R2_new=w2*fore_R2 + w1*R2_new
       end
    end % end berm width check
    % convergence criterion
    R2del=abs(R2-R2_new)
    R2_all(iter)=R2_new;
    % get the new top station (for plot purposes)
    Z2=R2_new+SWEL
    top_sta=-999;
    for kk=1:length(sta)-1
       if ((Z2 > dep(kk)) & (Z2 <= dep(kk+1)))    % here is the intersection of z2 with profile
          top_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Z2)
          break;
       end
    end
    if top_sta==-999
       dy=Z2-dep(end);
       top_sta=sta(end)+dy/S(end);
    end
    topStaAll(iter)=top_sta;
end
ans =
!----------------- STARTING ITERATION 1 -----------------!
Ztoe =
                  -2.68934
toe_sta =
         -18.9523421588595
top_sta =
          91.5936320218331
Z2 =
                  21.43306
H0 =
                    8.0408
Tp =
                   13.8504
T0 =
          12.5912727272727
R2 =
                   24.1224
Z2 =
          33.6153671005273
top_sta =
          147.005536049704
Lslope =
          165.957878208564
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 13
dh =
          9.35401710052734
```

```
rdh_sum =
         0.626867496108824
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 14
dh =
           9.32971710052734
rdh_sum =
           1.25143770852729
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 15
dh =
           9.34396710052734
rdh_sum =
           1.87735543721336
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 16
dh =
           9.39676710052734
rdh_sum =
            2.5082574801935
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 17
dh =
           9.43884210052734
rdh_sum =
           3.14312145350596
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 18
dh =
           9.47019210052734
rdh_sum =
            3.7809315445062
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 27
dh =
           8.66031710052734
rdh_sum =
            4.3412955591624
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 28
dh =
           8.60601710052734
rdh_sum =
           4.89639123472475
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 29
dh =
           8.56414210052734
rdh_sum =
           5.44741981491542
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 30
dh =
           8.53469210052734
rdh_sum =
           5.99558601231171
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 31
dh =
           8.50246710052734
rdh_sum =
           6.54061828849441
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 32
dh =
           8.46746710052734
rdh_sum =
            7.0822447535423
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 33
dh =
           8.43249210052734
rdh_sum =
           7.62046589621709
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 34
dh =
           8.39754210052734
rdh_sum =
           8.15528236824623
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 35
dh =
           8.39409210052734
rdh_sum =
           8.68976266630815
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 36
dh =
           8.42214210052734
```

```
rdh_sum =
          9.22697573742243
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 37
dh =
          8.44511710052734
rdh_sum =
          9.76642632065177
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 38
dh =
          8.46301710052734
rdh_sum =
          10.3076196183813
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 39
dh =
          8.47954210052734
rdh_sum =
          10.8504213162126
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 40
dh =
          8.49469210052734
rdh_sum =
          11.3946971920631
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 41
dh =
          8.47591710052734
rdh_sum =
          11.9371461014593
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 42
dh =
          8.42321710052734
rdh_sum =
          12.4744638828089
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 43
dh =
          8.37051710052734
rdh_sum =
          13.0066465808639
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 44
dh =
          8.31781710052734
rdh_sum =
          13.5336907846351
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 45
dh =
          8.30064210052734
rdh_sum =
          14.0590597005471
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 46
dh =
          8.31899210052734
rdh_sum =
          14.5862185055301
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 47
dh =
          8.35379210052734
rdh_sum =
          15.1167707821441
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 48
dh =
          8.40504210052734
rdh_sum =
          15.6523180123798
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 49
dh =
          8.46329210052734
rdh_sum =
           16.193538079782
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 50
dh =
          8.52854210052734
rdh_sum =
          16.7411063256301
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 51
dh =
          8.57861710052734
```

```
rdh_sum =
          17.2935411853473
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 52
dh =
          8.61351710052734
rdh_sum =
           17.849364914453
ans =
!------- End Berm Factor Calculation, Iter: 1 ---------!
berm_width =
    32
rB =
          0.192820011592247
rdh_mean =
          0.557792653576656
gamma_berm =
          0.914733574336474
slope =
          0.271015841591663
Irb =
           2.72216993178579
gamma_berm =
          0.914733574336474
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.8
gamma =
          0.731786859469179
ans =
!!! - - Iribaren number:   2.49 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:3.7 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
           19.595662590759
R2del =
          4.52673740924102
Z2 =
          29.0886296912863
ans =
!----------------- STARTING ITERATION 2 -----------------!
Ztoe =
                    -2.68934
toe_sta =
         -18.9523421588595
top_sta =
          126.415418200075
Z2 =
          29.0886296912863
H0 =
                     8.0408
Tp =
                    13.8504
T0 =
          12.5912727272727
R2 =
           19.595662590759
Z2 =
          29.0886296912863
top_sta =
          126.415418200075
Lslope =
          145.367760358934
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 13
dh =
          9.35401710052734
rdh_sum =
          0.626867496108824
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 14
dh =
          9.32971710052734
rdh_sum =
          1.25143770852729
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 15
dh =
          9.34396710052734
rdh_sum =
          1.87735543721336
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 16
dh =
          9.39676710052734
rdh_sum =
           2.5082574801935
```

```
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 17
dh =
          9.43884210052734
rdh_sum =
          3.14312145350596
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 18
dh =
          9.47019210052734
rdh_sum =
           3.7809315445062
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 27
dh =
          8.66031710052734
rdh_sum =
           4.3412955591624
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 28
dh =
          8.60601710052734
rdh_sum =
          4.89639123472475
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 29
dh =
          8.56414210052734
rdh_sum =
          5.44741981491542
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 30
dh =
          8.53469210052734
rdh_sum =
          5.99558601231171
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 31
dh =
          8.50246710052734
rdh_sum =
          6.54061828849441
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 32
dh =
          8.46746710052734
rdh_sum =
           7.0822447535423
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 33
dh =
          8.43249210052734
rdh_sum =
          7.62046589621709
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 34
dh =
          8.39754210052734
rdh_sum =
          8.15528236824623
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 35
dh =
          8.39409210052734
rdh_sum =
          8.68976266630815
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 36
dh =
          8.42214210052734
rdh_sum =
          9.22697573742243
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 37
dh =
          8.44511710052734
rdh_sum =
          9.76642632065177
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 38
dh =
          8.46301710052734
rdh_sum =
          10.3076196183813
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 39
dh =
          8.47954210052734
rdh_sum =
          10.8504213162126
```

```
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 40
dh =
          8.49469210052734
rdh_sum =
          11.3946971920631
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 41
dh =
          8.47591710052734
rdh_sum =
          11.9371461014593
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 42
dh =
          8.42321710052734
rdh_sum =
          12.4744638828089
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 43
dh =
          8.37051710052734
rdh_sum =
          13.0066465808639
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 44
dh =
          8.31781710052734
rdh_sum =
          13.5336907846351
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 45
dh =
          8.30064210052734
rdh_sum =
          14.0590597005471
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 46
dh =
          8.31899210052734
rdh_sum =
          14.5862185055301
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 47
dh =
          8.35379210052734
rdh_sum =
          15.1167707821441
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 48
dh =
          8.40504210052734
rdh_sum =
          15.6523180123798
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 49
dh =
          8.46329210052734
rdh_sum =
           16.193538079782
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 50
dh =
          8.52854210052734
rdh_sum =
          16.7411063256301
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 51
dh =
          8.57861710052734
rdh_sum =
          17.2935411853473
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 52
dh =
          8.61351710052734
rdh_sum =
           17.849364914453
ans =
!------- End Berm Factor Calculation, Iter: 2 ---------!
berm_width =
    32
rB =
         0.220131340821289
rdh_mean =
         0.557792653576656
gamma_berm =
         0.902656303910805
slope =
         0.280308701439227
```

```
Irb =
          2.81551039302515
gamma_berm =
         0.902656303910805
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.8
gamma =
         0.722125043128644
ans =
!!! - - Iribaren number:   2.54 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:3.6 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          19.4310644647483
R2del =
         0.164598126010709
Z2 =
          28.9240315652756
ans =
!----------------- STARTING ITERATION 3 -----------------!
Ztoe =
                   -2.68934
toe_sta =
         -18.9523421588595
top_sta =
          125.666734433822
Z2 =
          28.9240315652756
H0 =
                     8.0408
Tp =
                    13.8504
T0 =
          12.5912727272727
R2 =
          19.4310644647483
Z2 =
          28.9240315652756
top_sta =
          125.666734433822
Lslope =
          144.619076592681
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 13
dh =
          9.35401710052734
rdh_sum =
         0.626867496108824
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 14
dh =
          9.32971710052734
rdh_sum =
          1.25143770852729
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 15
dh =
          9.34396710052734
rdh_sum =
          1.87735543721336
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 16
dh =
          9.39676710052734
rdh_sum =
           2.5082574801935
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 17
dh =
          9.43884210052734
rdh_sum =
          3.14312145350596
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 18
dh =
          9.47019210052734
rdh_sum =
           3.7809315445062
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 27
dh =
          8.66031710052734
rdh_sum =
           4.3412955591624
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 28
```

```
dh =
          8.60601710052734
rdh_sum =
          4.89639123472475
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 29
dh =
          8.56414210052734
rdh_sum =
          5.44741981491542
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 30
dh =
          8.53469210052734
rdh_sum =
          5.99558601231171
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 31
dh =
          8.50246710052734
rdh_sum =
          6.54061828849441
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 32
dh =
          8.46746710052734
rdh_sum =
           7.0822447535423
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 33
dh =
          8.43249210052734
rdh_sum =
          7.62046589621709
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 34
dh =
          8.39754210052734
rdh_sum =
          8.15528236824623
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 35
dh =
          8.39409210052734
rdh_sum =
          8.68976266630815
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 36
dh =
          8.42214210052734
rdh_sum =
          9.22697573742243
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 37
dh =
          8.44511710052734
rdh_sum =
          9.76642632065177
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 38
dh =
          8.46301710052734
rdh_sum =
          10.3076196183813
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 39
dh =
          8.47954210052734
rdh_sum =
          10.8504213162126
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 40
dh =
          8.49469210052734
rdh_sum =
          11.3946971920631
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 41
dh =
          8.47591710052734
rdh_sum =
          11.9371461014593
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 42
dh =
          8.42321710052734
rdh_sum =
          12.4744638828089
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 43
```

```
dh =
          8.37051710052734
rdh_sum =
          13.0066465808639
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 44
dh =
          8.31781710052734
rdh_sum =
          13.5336907846351
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 45
dh =
          8.30064210052734
rdh_sum =
          14.0590597005471
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 46
dh =
          8.31899210052734
rdh_sum =
          14.5862185055301
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 47
dh =
          8.35379210052734
rdh_sum =
          15.1167707821441
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 48
dh =
          8.40504210052734
rdh_sum =
          15.6523180123798
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 49
dh =
          8.46329210052734
rdh_sum =
           16.193538079782
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 50
dh =
          8.52854210052734
rdh_sum =
          16.7411063256301
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 51
dh =
          8.57861710052734
rdh_sum =
          17.2935411853473
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 52
dh =
          8.61351710052734
rdh_sum =
           17.849364914453
ans =
!------- End Berm Factor Calculation, Iter: 3 ---------!
berm_width =
    32
rB =
         0.221270946779226
rdh_mean =
         0.557792653576656
gamma_berm =
         0.902152361784177
slope =
         0.280710626669532
Irb =
          2.81954745879347
gamma_berm =
         0.902152361784177
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                      0.8
gamma =
         0.721721889427342
ans =
!!! - - Iribaren number:   2.54 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:3.6 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          19.4241793216082
R2del =
       0.00688514314008515
```

```
Z2 =
          28.9171464221355
% final 2% runup elevation
Z2=R2_new+SWEL
Z2 =
          28.9171464221355
diary off
-1.000000e+00
-1.000000e+00
```

PART 5: RUNUP2

for transect: CM-142

Station locations shifted by: -6.91 feet from their
original location to set the shoreline to
elevation 0 for RUNUP2 input

RUNUP2 INPUT CONVERSIONS
for transect: CM-142

Incident significant wave height: 13.20 feet

Peak wave period: 14.06 seconds

Mean wave height: 8.26 feet

Local Depth below SWEL: 39.24 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 = 39.24
Period, T = 11.95
Waveheight, H = 8.26
Deep water wavelength, L0 (ft)
L0 = g*T*T/twopi
L0 = 32.17*11.95*11.95/6.28 = 731.14
Deep water wave celerity, C0 (ft/s)
C0 = L0/T
C0 = 731.14/11.95 = 61.19
Angular frequency, sigma (rad/s)
sigma = twopi/T
sigma = 6.28/11.95 = 0.53
Hunts (1979) approximation for Celerity C1H (ft/s) at Depth D (ft)
y = sigma.*sigma.*D./g
y = 0.53*0.53*39.24/32.17 = 0.34
C1H = sqrt(g.*D./(y+1./(1 + 0.6522.*y + 0.4622.*y.^2 + 0.0864.*y.^4 +0.0675.*y.^5)))
C1H = 33.54
Shoaling Coefficient KsH
KsH = sqrt(C0/C1H)
KsH = sqrt(61.19/33.54) = 1.35
Deepwater Wave Height H0_H (ft)
H0_H = H/KsH
H0_H = 8.26/1.35 = 6.12

Deepwater mean wave height: 6.12 feet

END RUNUP2 CONVERSIONS

RUNUP2 RESULTS
for transect: CM-142

RUNUP2 SWEL:
8.80
8.80
8.80
8.80

8.80
8.80
8.80
8.80
8.80

RUNUP2 deepwater mean wave heights:
5.81
5.81
5.81
6.12
6.12
6.12
6.42
6.42
6.42

RUNUP2 mean wave periods:
11.35
11.95
12.55
11.35
11.95
12.55
11.35
11.95
12.55

RUNUP2 runup above SWEL:
13.69
13.90
14.25
13.64
13.66
13.78
12.94
12.99
13.05

RUNUP2 Mean runup height above SWEL: 13.54 feet

RUNUP2 2-percent runup height above SWEL: 29.80 feet

RUNUP2 2-percent runup elevation: 38.60 feet-NAVD88

RUNUP2 Messages:
No Messages

_____END RUNUP2 RESULTS_____

_____ACES BEACH RUNUP_____

Incident significant wave height: 13.20 feet

Significant wave height deshoaled using Hunt equation

Deepwater significant wave height: 8.56 feet

Peak wave period: 14.06 seconds

Average beach Slope: 1:13.58 (H:V)

ACES RUNUP CALCULATED USING 'Aces_Beach_Runup.m'

ACES Beach 2-percent runup height above SWEL: 13.60 feet

ACES Beach 2-percent runup elevation: 22.40 feet-NAVD88

ACES BEACH RUNUP is valid

_____________END ACES BEACH RESULTS____________________

PART 5 COMPLETE____

```
  FEMA                                                  sjh            job 2
  RUNUP2 transect: CM-142                                                  1
3.00
  -30.46 -603.1 0.8
  -29.37 -529.1 0.8
  -27.03 -493.1 0.8
  -21.91 -433.1 0.8
  -15.32 -325.1 0.8
  -15.32 -221.1 0.8
  -13.87 -209.1 0.8
  -5.11 -207.1 0.8
  -5.06 -127.1 0.8
  -4.68 -97.1  0.8
  -3.03 -85.1  0.8
  -2.55 -71.1  0.8
  -2.44 -11.1  0.8
  0.13  0.9    0.8
  1.11  22.9   0.8
  1.20  42.9   0.8
  2.51  52.9   0.8
  5.79  68.9   0.8
  18.67 88.9   0.8
1 21.08 96.9   0.8
 8.8   5.81  11.35
 8.8   5.81  11.95
 8.8   5.81  12.55
 8.8   6.12  11.35
 8.8   6.12  11.95
 8.8   6.12  12.55
 8.8   6.42  11.35
 8.8   6.42  11.95
 8.8   6.42  12.55
```

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CROSS SECTION PROFILE

	LENGTH	ELEV.	SLOPE	ROUGHNESS
1	-603.0	-30.4		
2	-529.0	-29.3	.00	.80
3	-493.0	-27.0	15.65	.80
4	-433.0	-21.9	11.76	.80
5	-325.0	-15.3	16.36	.80
6	-221.0	-15.3	FLAT	.80
7	-209.0	-13.8	8.00	.80
8	-207.1	-5.1	.22	.80
9	-127.1	-5.1	FLAT	.80
10	-97.1	-4.7	78.95	.80
11	-85.1	-3.0	7.27	.80
12	-71.1	-2.5	29.17	.80
13	-11.1	-2.4	545.45	.80
14	.9	.1	4.67	.80
15	22.9	1.1	22.45	.80
16	42.9	1.2	222.22	.80
17	52.9	2.5	7.63	.80
18	68.9	5.8	4.88	.80
19	88.9	18.7	1.55	.80
20	96.9	21.1	3.32	.80

LAST SLOPE 3.00 LAST ROUGHNESS .80

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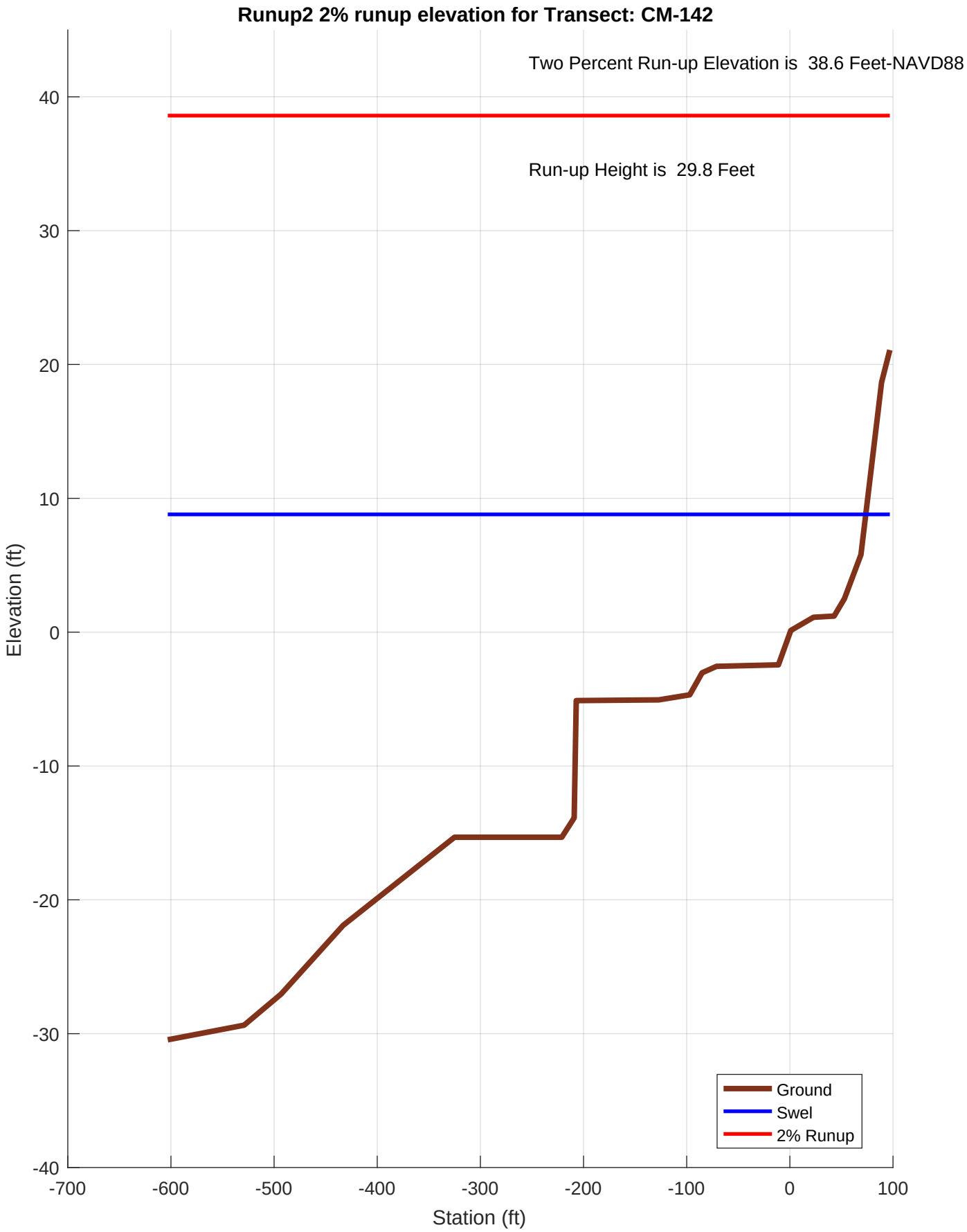
OUTPUT TABLE

INPUT PARAMETERS			RUNUP RESULTS			
WATER LEVEL ABOVE DATUM (FT.)	DEEP WATER WAVE HEIGHT (FT.)	WAVE PERIOD (SEC.)	BREAKING SLOPE NUMBER	RUNUP SLOPE NUMBER	RUNUP ABOVE WATER LEVEL (FT.)	BREAKER DEPTH (FT.)
8.80	5.81	11.35	11	20	13.69	8.55
8.80	5.81	11.95	11	20	13.90	8.72
8.80	5.81	12.55	11	20	14.25	8.88
8.80	6.12	11.35	11	20	13.64	8.93
8.80	6.12	11.95	11	20	13.66	9.09
8.80	6.12	12.55	11	20	13.78	9.26
8.80	6.42	11.35	11	20	12.94	9.29
8.80	6.42	11.95	11	20	12.99	9.46
8.80	6.42	12.55	11	20	13.05	9.63


Runup2 2% runup elevation for Transect: CM-142
Two Percent Run-up Elevation is 38.6 Feet-NAVD88
Run-up Height is 29.8 Feet
Elevation (ft)
Station (ft)
40
30
20
10
0
-10
-20
-30
-40
-700
-600
-500
-400
-300
-200
-100
0
100
Ground
Swel
2% Runup