APPEAL TO PRELIMINARY FLOOD INSURANCE RATE MAPS
COASTAL HYDRAULICS
KITTERY, MAINE

Prepared for:

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Project 171.06084
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The flood hazard analysis and mapping described in this appeal of the preliminary flood mapping for Kittery, Maine has been prepared by or under the direction of Nathan L. Dill, P.E. #14142.

Nathan L. Dill P.E. #14142 Date
Project Manager/Coastal Engineer
Ransom Consulting, Inc.

1.0 INTRODUCTION

This is an appeal to a portion of the Federal Emergency Management Agency (FEMA) Preliminary Flood Insurance Rate Map (FIRM) for York County, Maine, as released on April 14, 2017, and as documented by Flood Insurance Study (FIS) Number 23005CV001A, supplemented by additional back-up coastal engineering that was provided to the communities from FEMA by electronic download on May 19, 2017, and additional revisions provided on March 28, 2018. This appeal has been prepared by Ransom Consulting, Inc. on the behalf of the town of Kittery, Maine, community number 230171. This study deals only with the 1% annual chance flood as determined by detailed studies.

As a participating community in the National Flood Insurance program, the Town of Kittery recognizes the importance of sound floodplain management practices. Having an accurate understanding of the flood hazard is a critical component of sound floodplain management. As such, the Town seeks to continue working with FEMA through this appeal process to ensure the community's FIRM is as accurate as possible. The improved coastal flood hazard analysis provided with this appeal demonstrates the community's commitment to accurate flood hazard information and sound floodplain management. The Town requests that FEMA incorporate the corrected information presented in this appeal into the proposed FIRMS for the community. The Town also asks FEMA to understand that time limitations posed by the statutory 90-day appeal period limit the feasibility of a consistent and comprehensive revision of all proposed flood hazard zones throughout the Town, and that FEMA consider making additional broader revisions consistent with the corrected information presented in this appeal.

2.0 CRITERIA FOR APPEAL

The Code of Federal Regulations Title 44, Part 67.6 provides that the sole basis of appeal of flood maps proposed by FEMA shall be the possession of knowledge or information indicating that the flood elevation determination proposed by FEMA is either scientifically or technically incorrect. Because scientific and technical correctness is often a matter of degree rather than absolute, an appeal must demonstrate that alternative methods and their application yield more correct estimates of the flood elevation determination, thus demonstrating that FEMA's estimates are incorrect.

This appeal is based upon the community's possession of coastal flood hazard information that is scientifically more correct than the information utilized by FEMA in development of the preliminary FIRM and FIS. More specifically, the communities possess scientifically more correct coastal hydrologic information, including estimates of the Total stillWater Level[1] (TWL) and incident wave conditions associated with the 1% annual chance flood event. The scientific basis for appeal is described in greater detail in the accompanying report: *Extreme Storm Coastal Hydrology & Numerical Modeling, York and Cumberland Counties, Maine.*[2]

[1] For the purpose of this appeal, and to be consistent with the use of the acronym "TWL" the FEMA Region I preliminary engineering data submittal, we define the Total stillWater level (TWL) as the sum of the Still Water Level (SWL) and the static wave setup, but not including dynamic wave setup or wave run-up. We note that the preliminary FIS for York and Cumberland Counties refers to this the "Total Stillwater Elevation". However previous FEMA Guidelines and Specifications (e.g., 2005 G&S for the Pacific Coast) have defined the TWL to be the total water level including storm surge, wave setup, and wave run-up; and have used the term STatic Water Level (STWL) to mean the TWL as we have defined it here.

[2] Ransom Consulting, Inc. 2018. Extreme Storm Coastal Hydrology & Numerical Modeling York and Cumberland Counties, Maine, Report prepared for the Town of Kittery, Town of Wells, Town of Kennebunkport, City of Biddeford, Town of Old Orchard Beach, City of Portland, and Town of Harpswell. Prepared by Ransom Consulting, Inc. October 17, 2018.

According to FEMA guidance[3,4], appeals based upon the use of more correct hydrologic information must also provide updated hydraulic or coastal analyses, as well as revised Special Flood Hazard Areas (SFHA) and Base Flood Elevations (BFE) based upon new analyses where applicable. To meet these criteria, this report describes the hydraulic analysis of the overland wave heights and wave runup based upon the revised TWL and incident wave conditions from the corrected coastal hydrologic analysis. It also provides proposed revised mapping of the SFHA and BFE based upon the revised hydraulic analyses. Technical bases for appeal also exist that result from the availability of more correct hydrologic data. These are discussed below with respect to specific hydraulic analysis methods.

3.0 HYDROLOGIC ANALYSIS METHODS

Coastal hydrologic analyses using contemporary methods were performed to provide more correct estimates of the TWL and incident wave conditions associated with the 1% annual chance coastal flood for the region including all of York and Cumberland Counties. These analyses and their results are described in the accompanying report, which provides regional coastal hydrology for York and Cumberland Counties, Maine: *Extreme Storm Coastal Hydrology & Numerical Modeling, York and Cumberland Counties, Maine.*[2]

4.0 HYDRAULIC ANALYSIS METHODS

Standard engineering methods following FEMA guidelines[5] and employing FEMA approved models[6] have been used to estimate coastal flood hazard zones based on the updated hydrologic information. These include calculations of overland wave crest elevations and wave run-up to determine the BFE and SHFA zone delineation. FEMA did not perform wave overtopping analyses in their preliminary study, but instead extended high-velocity (VE) zones to incorporate wave splash where appropriate. We have followed the same approach here and have not performed any wave overtopping evaluations.

Hydraulic calculations have been carried out at individual wave transect locations that were defined by FEMA in the preliminary FIS. In some cases, additional wave transects locations have been evaluated to provide a finer grained evaluation of the flood hazard. Where FEMA has provided topographic profiles for wave transects, FEMA's topographic data have been used. For new transects, or where FEMA did not provide suitable transect elevation profiles, elevation profiles have been derived from available bathymetric data or LiDAR data. The source of elevation data for specific transect profile points is provided in the computer files included with this appeal. All elevations refer to the NAVD-88 vertical datum unless otherwise specified.

The following models and methods have been employed in the analysis:

4.1 SWAN 1-D

FEMA coastal flood mapping methodology is typically based on one-dimensional analyses of the overland wave propagation and wave runup. The methodology focuses on the evaluation of a discrete flood event that is assumed to be representative of flooding that would occur from 1% annual chance storm conditions. In contrast, the updated hydrologic information that forms the basis of this appeal is

[3] FEMA, 2018. Guidance for Flood Risk Mapping and Analysis, Appeal and Comment Processing, Guidance Document 26, February 2018.
[4] FEMA, 2011, Criteria of Appeals of Flood Insurance Rate Maps, November 30, 2011.
[5] E.g. FEMA, 2007. Guidelines and Specifications for Flood Hazard Mapping Partners, Appendix D, Atlantic Ocean and Gulf of Mexico Coastal Guidelines Update, Final Draft. February 2007.
[6] https://www.fema.gov/coastal-numerical-models-meeting-minimum-requirement-national-flood-insurance-program

two-dimensional, and it provides statistical estimates of the 1% annual chance TWL and associated 1% annual chance wave conditions would be expected considering many possible storm conditions. To perform the hydraulic calculations, it is necessary to transition from the two-dimensional analysis to a one-dimensional analysis. This transition point also marks a conceptual transition from hazard statistics representative of many possible storm events, to water levels and wave conditions that are representative of single representative 1% annual chance flood event. Furthermore, the hydrologic data derived from two-dimensional numerical modeling with the coupled ADCIRC+SWAN model is limited to approximately 30-meter (100 feet) resolution at the shoreline. This resolution is not sufficient to fully capture detailed wave processes such as additional wave setup on steep slopes needed for input to the transect based coastal analysis.

The Simulating WAves Nearshore (SWAN) wave model has been used in one-dimensional mode (SWAN 1-D) to make this transition to one-dimensional analysis, and to provide greater resolution of the wave process at the shoreline. A SWAN 1-D model has been developed for each wave transect analyzed in this appeal. The SWAN 1-D model uses 1-meter spatial resolution following the wave transect elevation profile. Boundary conditions used for SWAN 1-D are the 1% annual chance TWL and directional 1% annual chance wave height and associated wave period extracted from the updated hydrologic data. A constant windspeed of 56 miles per hour is also applied to the SWAN 1-D model, consistent with the 1% annual chance wind speed used by FEMA in the preliminary FIS. To determine the location of the offshore boundary of the SWAN 1-D model, the two-dimensional TWL and wave data from the hydrologic analysis were interpolated onto the wave transect, and a point was selected based on inspection of the water level and wave conditions to ensure that the transition point was seaward of the wave breaking zone, but near enough to shore to accurately represent local wave conditions that account for effects such as wave refraction and wind sheltering. SWAN 1-D is then run to determine wave setup, significant wave height, and peak wave period along the wave transect from the offshore boundary to the point where the wave transect first intersects the shoreline at the 1% annual chance TWL. The output from SWAN 1-D within this nearshore zone is then used to provide boundary conditions for the runup and overland wave height calculations as appropriate.

Figures comparing the SWAN 1-D output with the TWL and wave conditions from the 2-D ADCIRC+SWAN statistics are provided in Appendix A. SWAN 1-D input and output files are also provided in Appendix A.

4.2 WHAFIS

The Wave Height Analysis for Flood Insurance Studies (WHAFIS) model has been used to determine the 1% annual chance overland wave crest elevation for each wave transect. A WHAFIS model for each transect was developed by interpolating the transect elevation profile with down to 1 ft horizontal card spacing. The same offshore boundary location and boundary conditions used for SWAN 1-D were applied in WHAFIS, except that the input wave height was converted from the significant wave height to the 1% controlling wave height appropriate for WHAFIS input. TWL used in WHAFIS was interpolated at each station from either the 2-D ADCIRC+SWAN TWL or the SWAN 1-D TWL, with SWAN 1-D TWL taking precedence. In general, the SWAN 1-D TWL is applied in the nearshore area where the 2-D ADCIRC+SWAN model has limited spatial resolution.

Please note that FEMA's analysis assumed a constant TWL across the entire wave transect that included maximum wave setup calculated at the open coast shoreline. In contrast, the approach used in this appeal uses variable TWL data derived from validated 2-D numerical modeling of wave setup processes. This approach is technically more correct than FEMA's approach because it more correctly accounts for the variation in wave setup that occurs throughout nearshore area up to the point of inundation with the TWL, and throughout the estuaries and sheltered areas behind barrier beaches and other barriers.

Figures depicting the WHAFIS results, and the WHAFIS input and output data for each transect are included in Appendix A.

4.3 Wave Runup

Multiple methods were used to calculate the 2% wave runup height. These include the Technical Advisory Committee for Water Retaining Structures (TAW) method[7], FEMA's RUNUP2 model[5], and the Automated Coastal Engineering System (ACES) Beach methodology[8] for gently sloping shorelines. All three methods were applied to each transect and the appropriate runup result was selected to inform the mapping by considering the range of applicability of each method. In general, the TAW method applies most broadly and is used for most transects. Where the TAW method is invalid due to shoreline slope or Iribarren number limitations, results from RUNUP2 or ACES Beach are used. For vertical or near-vertical shoreline slopes the Shore Protection Manual (SPM) method[5] was applied.

Details of runup calculations are provided in Appendix A.

4.3.1 TAW

For the TAW method, the toe of slope and top of slope locations were carefully selected by examining the elevation profile, water level, and wave conditions at the shoreline for each transect. Consistent with the TAW guidance wave and water level conditions at the toe of the slope were extracted from the SWAN 1-D model results and used as boundary conditions for the TAW calculation. A Matlab™ script was developed to perform iterative TAW calculations required to determine the shoreline slope up to the 2% runup elevation. The script also includes calculation of a berm factor to account for slope segments flatter than 1:15 (H:V) as recommended in the TAW guidance. Roughness factors were selected for each transect based on the shoreline characteristics at the site. Wave setup, to the extent that it occurs at the toe of the slope was included in determination of the 2% runup elevation.

4.3.2 RUNUP2

The RUNUP2 model was applied to calculate 2% runup for each transect. The elevation profile used in RUNUP2 was developed by simplifying the transect profile used for WHAFIS to meet the requirements for RUNUP2 input. The wave height and wave period used for RUNUP2 was taken to be the same wave conditions used for WHAFIS, except that the wave height and wave period were converted to mean values and the mean wave height was transformed to deepwater conditions using Hunt's equation to estimate the wave length at the start of the transect and assuming wave energy is conserved between deep water and the location of the start of the transect. A roughness factor of 1.0 was used for all RUNUP2 calculations. RUNUP2 results were converted from mean runup values to 2% runup values and used to inform the mapping decisions in cases where other runup methods are not applicable.

4.3.3 ACES Beach

The runup equation and coefficients described in Mase (1989)[8] were used to estimate the 2% wave runup elevation on beach transects with slopes flatter than 1:8 (V:H). Input wave

[7] Van der Meer, J.W. 2002, Technical Report Wave Run-up and Wave Overtopping at Dikes. Technical Advisory Committee on Flood Defence. The Netherlands.
[8] Mase, H. 1989. Random Wave Runup Height on Gentle Slope. Journal of Waterway, Port, Coastal, and Ocean Engineering. Vol. 115. Issue 5 (September 1989).

conditions for the ACES Beach method were the same as those used for RUNUP2, except that they were converted to the deep-water significant wave height and peak wave period.

4.3.4 SPM vertical wall method

The SPM vertical wall method was applied to estimate the 2% wave runup on vertical or near vertical slopes. Input wave conditions include the wave height, wave period, and depth at the base of the slope extracted from the SWAN 1-D output.

5.0 INDIVIDUAL TRANSECT MAPPING SUMMARIES

This section provides a brief discussion of the dominant hazard and mapping decisions at each transect evaluated in this appeal. Details showing transect locations and elevation profiles are provided in Appendix A along with all transect calculations. Topographic workmaps showing the transect locations, WHAFIS results, 2-foot elevation contours from the Maine Office of GIS (MEGIS), and proposed flood zones are provided in Appendix B. Maps illustrating the difference between FEMA proposed mapping and the mapping proposed by this appeal are provided in Appendix C. A Transect Data Table summarizing the transect calculation results is provided in Appendix D.

5.1 YK-05

Transect YK-05 is located on a natural rocky shoreline. Wave runup is the dominant hazard. The TAW runup calculation is valid and yields a 2% runup elevation of 17.4 feet. The mapping decision is to draw a VE zone with a BFE of 17 feet. The VE zone transitions to an AE zone with a BFE of 17 feet at the 14' contour and extends to the 17' contour.

5.2 YK-06

Transect YK-06 is located on a relatively smooth beach and crosses a riprap armored seawall. Wave runup is the dominant hazard and failure of the seawall is considered. The TAW runup calculation is valid for both intact and failed cases, and in both cases yields runup elevations that are greater than 3 feet above the top of the slope, which is at an elevation of 12 feet. The maximum TWL of 9.7 feet is below the top of the slope. The mapping decision is to draw a VE zone with a BFE of 15 feet based on capped runup, and that extends 30 feet landward of the top of the slope to include wave splash.

5.3 YK-07

Transect YK-07 is located on a rocky shoreline. Wave runup is the dominant hazard. The TAW calculation is valid and yields a runup elevation of 19.49 feet. The mapping decision is to draw a VE zone with a BFE of 19 feet that extends to the 19' contour. The maximum TWL computed at YK-07 is 9.3 feet and is used to delineate an AE zone with a minimum BFE of 9 feet in the sheltered area to the east of the transect.

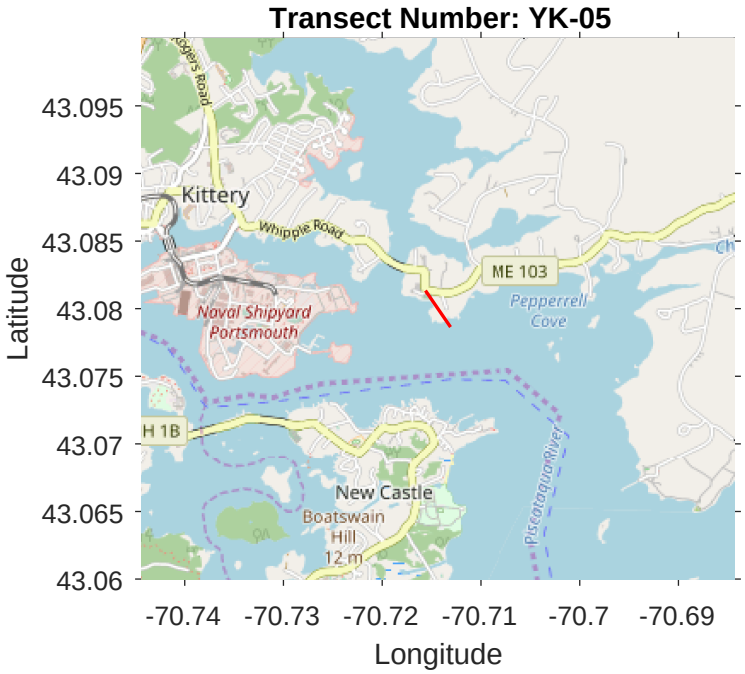
5.4 YK-14

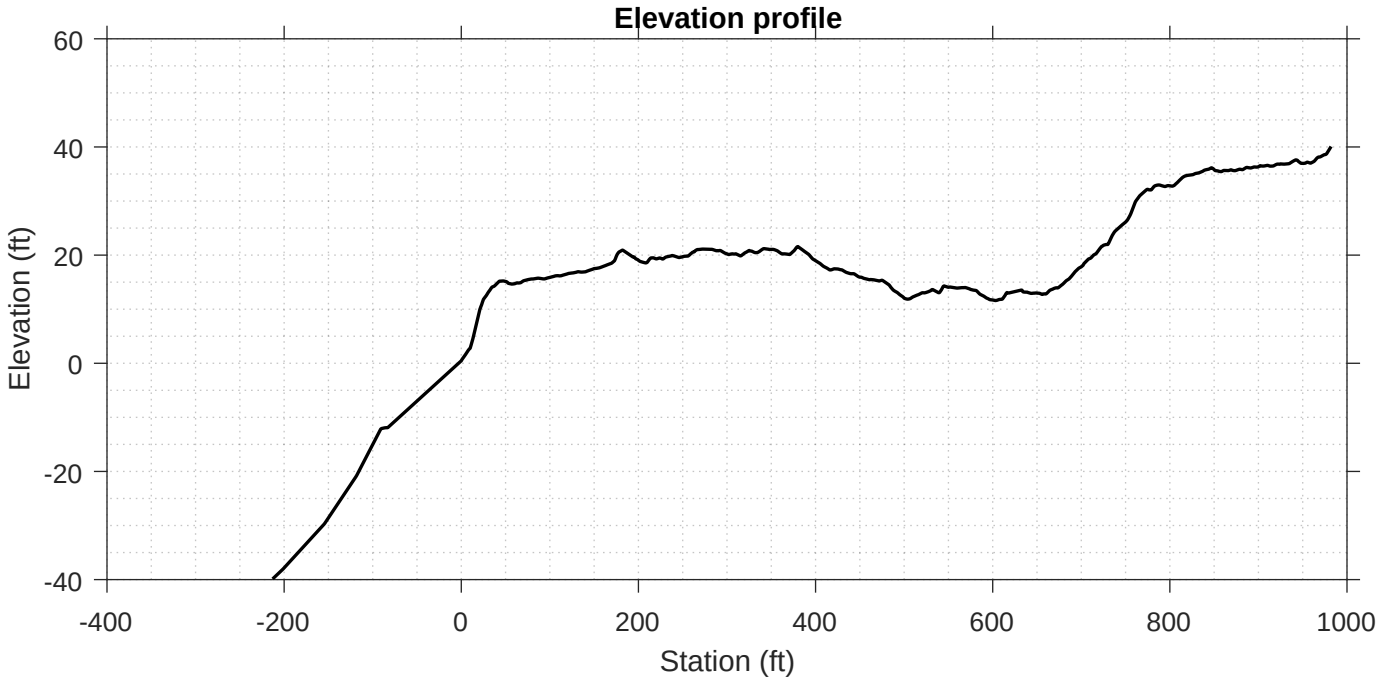
Transect YK-14 is located on a rocky beach and extends over a sheltered area that is below the TWL. Wave runup is the dominant hazard on the open coast and the overland wave action is the dominant hazard over the sheltered area. The TAW calculation is valid and yields a runup elevation that is more than 3 feet above the shoreline crest of 15.45 feet. The mapping decision is to draw a VE zone with a BFE of 18 feet extending 30 feet landward of primary ridge along the shoreline. In the sheltered area,

WHAFIS results are used to delineate AE zones with a BFE of 9 feet that increases to a BFE of 10 feet after approximately 300 feet of fetch.

5.5 YK-15

Transect YK-15 is located on a cobble beach with a relatively low crest. Wave runup is the dominant hazard on the open coast, while overland wave action is the dominant hazard in the estuary behind the beach. RUNUP2 is used for the wave runup hazard because TAW is invalid. The RUNUP2 runup elevation is more than three feet greater than beach crest elevation of 15.6 feet. The mapping decision to draw a VE zone with the BFE capped at 19 feet including a 30 foot splash zone landward of the beach crest. Landward of the VE zone, AE zones are drawn with BFEs of 9 feet, 10, feet, and 11 feet based on WHAFIS results.


Transect Number: YK-05
Latitude
Longitude
43.095
43.09
43.085
43.08
43.075
43.07
43.065
43.06
-70.74
-70.73
-70.72
-70.71
-70.7
-70.69
Kittery
Whipple Road
ME 103
Pepperrell Cove
Naval Shipyard Portsmouth
New Castle
Boatswain Hill
12 m
Piscataqua River


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

DATA LOG FOR TRANSECT ID: YK-05

PART 1: USER INPUT

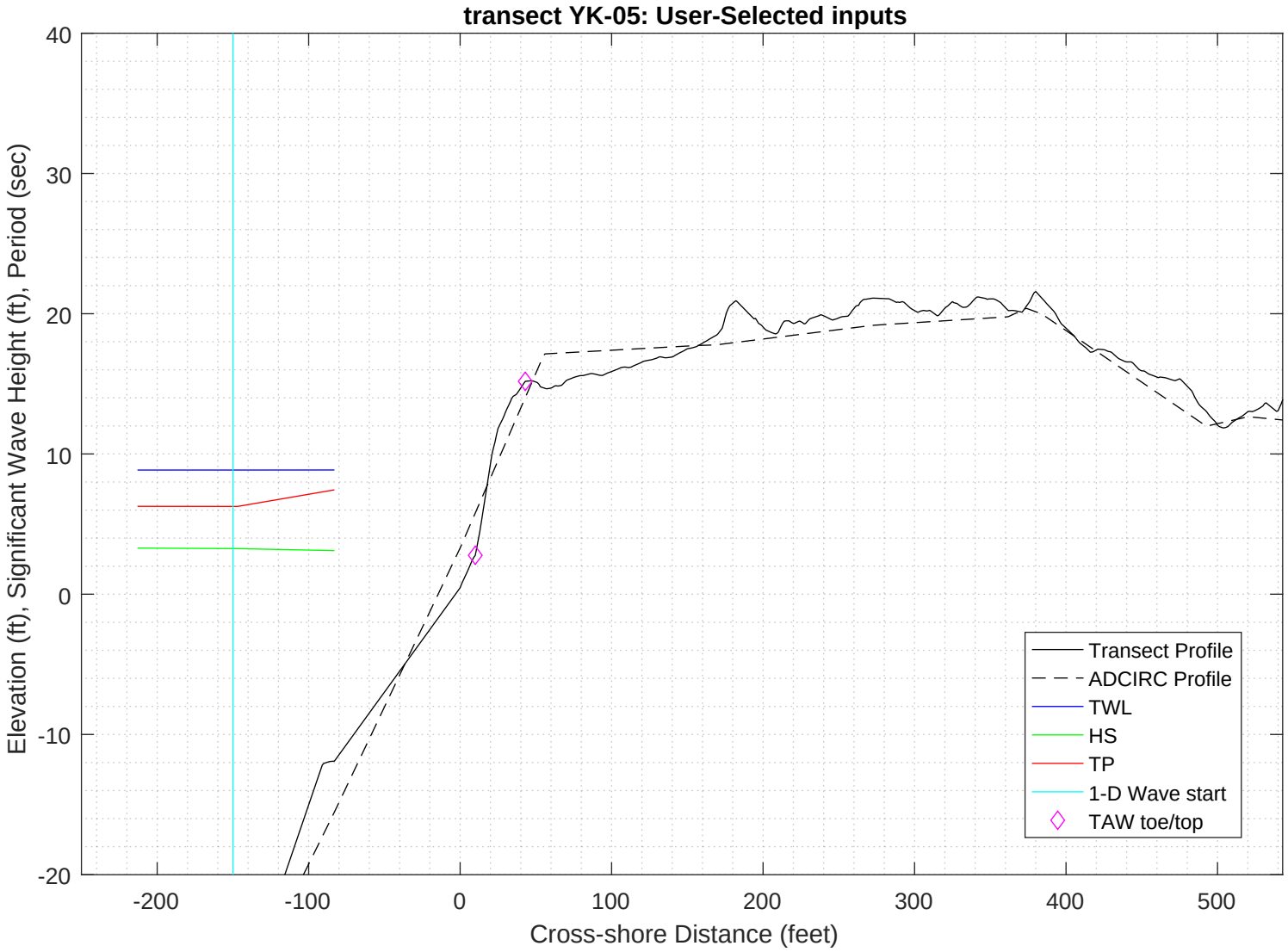
SWAN 1-D / WHAFIS input

station: -150 ft
LON: -70.7132 deg E
LAT: 43.0788 deg N
Bottom ELEV: -28.5839 ft-NAVD88
TWL: 8.8541 ft-NAVD88
HS: 3.2534 ft
TP: 6.2616 sec
Wave Direction bin: 135 deg CCW from East (90 deg sector)
Transect Direction: 133.2629 deg CCW from East

TAW/RUNUP input

toe sta: 10 ft
toe elev: 2.774 ft-NAVD88
top sta: 43 ft
top elev: 15.1782 ft-NAVD88
Wave and water level conditions at toe to be calculated in SWAN 1-D

PART 1 COMPLETE


transect YK-05: User-Selected inputs
Elevation (ft), Significant Wave Height (ft), Period (sec)
Cross-shore Distance (feet)
40
30
20
10
0
-10
-20
-200
-100
0
100
200
300
400
500
Transect Profile
ADCIRC Profile
TWL
HS
TP
1-D Wave start
TAW toe/top

```
_____________________________________________________________________
PART 2: SWAN 1-D

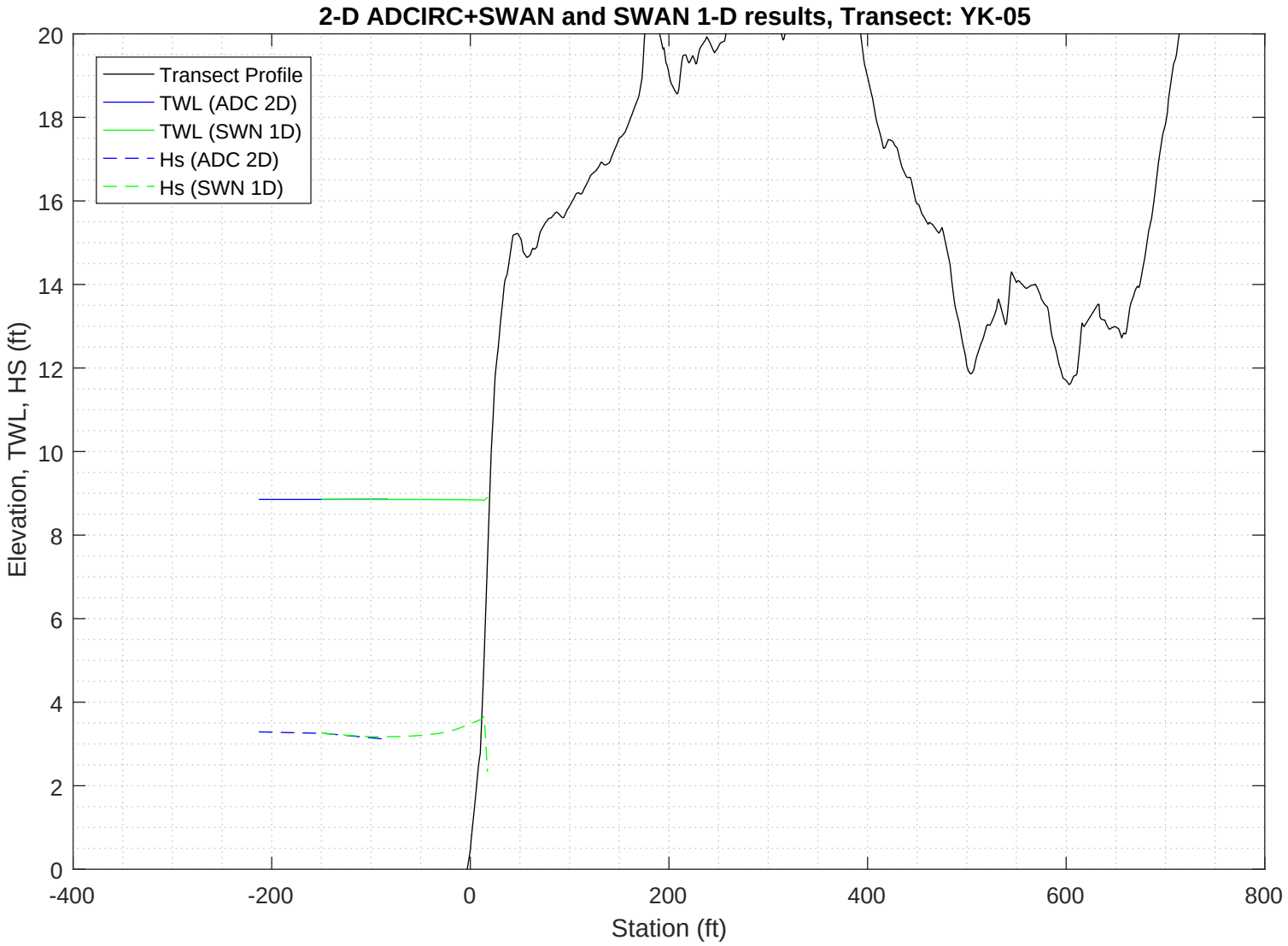
swan input grid name: 2_swan/gridfiles/YK-05zmeters_xmeters.grd
swan file name:       2_swan/swanfiles/YK-05.swn
swan output name:     2_swan/swanfiles/YK-05.dat

Boundary Conditions:
    TWL- 2.6987 meters
    HS-  0.99163 meters
    PER- 6.2616 seconds

Batch File: 2_swan/swanfiles/runswan.dat

SWAN maximum additional wave setup: 0.16758 feet
SWAN output at toe:
    SETUP- -0.046014 feet
    HS-    3.5878 feet
    PER-   6.3396 seconds

PART 2 COMPLETE_____________________________________________
```


2-D ADCIRC+SWAN and SWAN 1-D results, Transect: YK-05
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
-400
-200
0
200
400
600
800

```
1

                    Execution started at 20181016.143018


                    ---------------------------------------
                                  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      51       0.   51     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      51   0      1       1

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

  READ    BOTTOM   -1. '../gridfiles/YK-05zmeters_xmeters.grd'    1      0       FREE

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

 ! -- WIND [vel] [dir]

 WIND      25.1  0

 ! -- BOUnd SHAPespec

 BOUND SHAPE JONSWAP 3.3  PEAK DSPR POWER

 ! -- BOUndspec

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

 BOUN SIDE W CCW CONSTANT PAR   0.99163     6.2616     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      51  51    0

 !TABLe 'sname' < HEADer|NOHEADer|INDexed > 'fname' <output parameters> (output time)

  Table 'curve'   HEADER 'YK-05.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              52 MYC              1
                      : MCGRD            53
                      : 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  88.47 % 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   1.93 % 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  88.47 % 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  98.08 % 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  98.08 % 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)

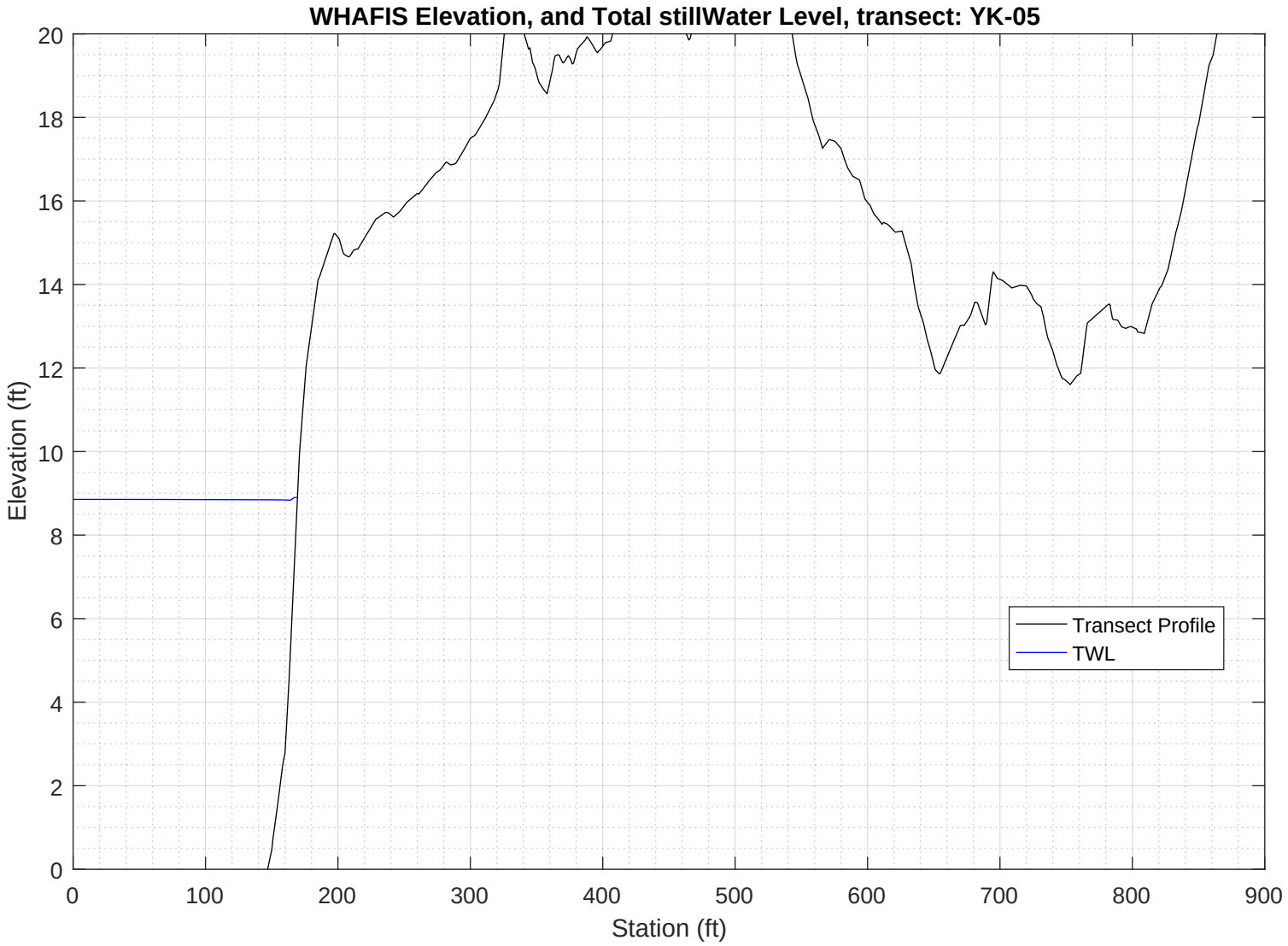

STOP
```

```
%
%
% 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.       0.99383       6.2866        6.4550        5.6588         0.000        31.5058       11.4100       0.000000
          1.            0.       0.99152       6.2871        6.4550        5.6569         0.000        31.1945       11.1700      -0.000035
          2.            0.       0.98925       6.2876        6.4550        5.6554         0.000        30.9259       10.9199      -0.000072
          3.            0.       0.98710       6.2881        6.4550        5.6540         0.000        30.6747       10.6799      -0.000110
          4.            0.       0.98501       6.2887        6.4550        5.6529         0.000        30.4199       10.4298      -0.000152
          5.            0.       0.98302       6.2893        6.4550        5.6521         0.000        30.1586       10.1898      -0.000195
          6.            0.       0.98111       6.2900        6.4550        5.6516       360.000        29.8919        9.9398      -0.000243
          7.            0.       0.97931       6.2907        6.4550        5.6512       360.000        29.6191        9.6997      -0.000292
          8.            0.       0.97760       6.2915        6.4550        5.6513       360.000        29.3402        9.4497      -0.000348
          9.            0.       0.97596       6.2923        6.4550        5.6516       360.000        29.0483        9.2096      -0.000405
         10.            0.       0.97424       6.2932        6.4550        5.6524         0.000        28.7341        8.9295      -0.000476
         11.            0.       0.97252       6.2943        6.4550        5.6540         0.000        28.3967        8.6194      -0.000561
         12.            0.       0.97095       6.2954        6.4550        5.6562         0.000        28.0427        8.2993      -0.000657
         13.            0.       0.96957       6.2965        6.4550        5.6586         0.000        27.6707        7.9892      -0.000760
         14.            0.       0.96838       6.2976        6.4550        5.6618         0.000        27.2763        7.6691      -0.000878
         15.            0.       0.96746       6.2989        6.4550        5.6656         0.000        26.8631        7.3490      -0.001010
         16.            0.       0.96682       6.3001        6.4550        5.6698         0.000        26.4344        7.0388      -0.001152
         17.            0.       0.96655       6.3014        6.4550        5.6749         0.000        25.9878        6.7187      -0.001317
         18.            0.       0.96714       6.3026        6.4550        5.6807         0.000        25.6532        6.4085      -0.001494
         19.            0.       0.96710       6.3029        6.4550        5.6808         0.000        25.5117        6.3485      -0.001533
         20.            0.       0.96699       6.3030        6.4550        5.6800         0.000        25.4131        6.3285      -0.001548
         21.            0.       0.96718       6.3033        6.4550        5.6809         0.000        25.2631        6.2384      -0.001607
         22.            0.       0.96768       6.3039        6.4550        5.6835         0.000        25.0629        6.0883      -0.001709
         23.            0.       0.96822       6.3046        6.4550        5.6862         0.000        24.8494        5.9382      -0.001816
         24.            0.       0.96886       6.3052        6.4550        5.6891         0.000        24.6241        5.7881      -0.001931
         25.            0.       0.96964       6.3058        6.4550        5.6921         0.000        24.3952        5.6379      -0.002054
         26.            0.       0.97045       6.3064        6.4550        5.6949         0.000        24.1614        5.4978      -0.002177
         27.            0.       0.97149       6.3071        6.4550        5.6981         0.000        23.9181        5.3477      -0.002317
         28.            0.       0.97272       6.3077        6.4550        5.7012         0.000        23.6649        5.1975      -0.002468
         29.            0.       0.97417       6.3083        6.4550        5.7039         0.000        23.4031        5.0474      -0.002630
         30.            0.       0.97586       6.3090        6.4550        5.7061         0.000        23.1318        4.8972      -0.002805
         31.            0.       0.97778       6.3097        6.4550        5.7082         0.000        22.8524        4.7470      -0.002994
         32.            0.       0.97997       6.3103        6.4550        5.7097       360.000        22.5665        4.5968      -0.003199
         33.            0.       0.98248       6.3110        6.4550        5.7105       360.000        22.2723        4.4466      -0.003421
         34.            0.       0.98533       6.3117        6.4550        5.7106       360.000        21.9779        4.2963      -0.003663
         35.            0.       0.98832       6.3124        6.4550        5.7092       360.000        21.6791        4.1561      -0.003910
         36.            0.       0.99193       6.3131        6.4550        5.7068       360.000        21.3775        4.0058      -0.004196
         37.            0.       0.99606       6.3138        6.4550        5.7019       360.000        21.0674        3.8555      -0.004511
         38.            0.       1.00075       6.3146        6.4550        5.6943       359.999        20.7526        3.7051      -0.004858
         39.            0.       1.00608       6.3154        6.4550        5.6832       359.999        20.4284        3.5548      -0.005242
         40.            0.       1.01215       6.3164        6.4550        5.6675       359.999        20.0907        3.4043      -0.005671
         41.            0.       1.01904       6.3174        6.4550        5.6465       359.999        19.7465        3.2539      -0.006149
         42.            0.       1.02682       6.3186        6.4550        5.6190         0.000        19.3892        3.1033      -0.006688
         43.            0.       1.03561       6.3200        6.4550        5.5838         0.002        19.0158        2.9527      -0.007297
         44.            0.       1.04485       6.3216        6.4550        5.5428       359.998        18.6488        2.8020      -0.007962
         45.            0.       1.05310       6.3235        6.4550        5.4980       359.979        18.2548        2.6614      -0.008606
         46.            0.       1.06355       6.3261        6.4550        5.4489       359.945        17.7562        2.4704      -0.009568
         47.            0.       1.07327       6.3295        6.4550        5.3987       359.906        17.1702        2.2393      -0.010738
         48.            0.       1.08414       6.3340        6.4550        5.3238       359.831        16.4719        1.9878      -0.012213
         49.            0.       1.09355       6.3396        6.4550        5.2169       359.787        15.2172        1.7160      -0.014025
         50.            0.       1.11421       6.3478        6.4550        5.0412       359.756        12.9425        1.0996      -0.020442
         51.            0.       0.71064       6.3665        6.4550        5.2461       357.344        14.4689        0.4811       0.051078
```

```
PART 3: WHAFIS

WHAFIS input:  YK-05.dat
WHAFIS output: YK-05.out

PART 3 COMPLETE
```


WHAFIS Elevation, and Total stillWater Level, transect: YK-05
Elevation (ft)
Station (ft)
0
2
4
6
8
10
12
14
16
18
20
0
100
200
300
400
500
600
700
800
900
Transect Profile
TWL

```
WAVE HEIGHT COMPUTATIONS FOR FLOOD INSURANCE STUDIES (WHAFIS VERSION 4.0G, 08_2007)
Executed on: Tue Oct 16 14:32:50 2018
Input file:  C:\0_PROJECTS\171.06084-Kittery-2017-FEMA\modeling\transect_analysis\3_whafis\whafis4\YK-05.dat
Output file: C:\0_PROJECTS\171.06084-Kittery-2017-FEMA\modeling\transect_analysis\3_whafis\whafis4\YK-05.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    -28.583      1.000      1.000      8.854      5.205      6.262     56.140      0.245      0.000
        OF      1.000    -28.338      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF      2.000    -28.093      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF      3.000    -27.848      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF      4.000    -27.603      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF      5.000    -27.358      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF      6.000    -27.113      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF      7.000    -26.868      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF      8.000    -26.623      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF      9.000    -26.378      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     10.000    -26.132      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     11.000    -25.887      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     12.000    -25.642      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     13.000    -25.397      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     14.000    -25.152      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     15.000    -24.907      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     16.000    -24.662      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     17.000    -24.417      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     18.000    -24.172      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     19.000    -23.927      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     20.000    -23.681      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     21.000    -23.436      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     22.000    -23.191      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     23.000    -22.946      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     24.000    -22.701      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     25.000    -22.456      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     26.000    -22.211      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     27.000    -21.966      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     28.000    -21.721      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     29.000    -21.476      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     30.000    -21.230      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
        OF     31.000    -20.985      0.000      8.854      0.000      0.000      0.000      0.000      0.258      0.000
        OF     32.000    -20.714      0.000      8.854      0.000      0.000      0.000      0.000      0.294      0.000
        OF     33.000    -20.397      0.000      8.854      0.000      0.000      0.000      0.000      0.317      0.000
        OF     34.000    -20.081      0.000      8.854      0.000      0.000      0.000      0.000      0.316      0.000
        OF     35.000    -19.765      0.000      8.854      0.000      0.000      0.000      0.000      0.316      0.000
        OF     36.000    -19.449      0.000      8.854      0.000      0.000      0.000      0.000      0.316      0.000
        OF     37.000    -19.133      0.000      8.854      0.000      0.000      0.000      0.000      0.316      0.000
        OF     38.000    -18.817      0.000      8.854      0.000      0.000      0.000      0.000      0.316      0.000
        OF     39.000    -18.501      0.000      8.853      0.000      0.000      0.000      0.000      0.316      0.000
        OF     40.000    -18.185      0.000      8.853      0.000      0.000      0.000      0.000      0.316      0.000
        OF     41.000    -17.869      0.000      8.853      0.000      0.000      0.000      0.000      0.316      0.000
        OF     42.000    -17.553      0.000      8.853      0.000      0.000      0.000      0.000      0.316      0.000
        OF     43.000    -17.237      0.000      8.853      0.000      0.000      0.000      0.000      0.317      0.000
        OF     44.000    -16.920      0.000      8.853      0.000      0.000      0.000      0.000      0.317      0.000
        OF     45.000    -16.604      0.000      8.853      0.000      0.000      0.000      0.000      0.316      0.000
        OF     46.000    -16.288      0.000      8.853      0.000      0.000      0.000      0.000      0.316      0.000
        OF     47.000    -15.972      0.000      8.853      0.000      0.000      0.000      0.000      0.316      0.000
        OF     48.000    -15.656      0.000      8.853      0.000      0.000      0.000      0.000      0.316      0.000
        OF     49.000    -15.340      0.000      8.853      0.000      0.000      0.000      0.000      0.316      0.000
        OF     50.000    -15.024      0.000      8.853      0.000      0.000      0.000      0.000      0.316      0.000
        OF     51.000    -14.708      0.000      8.853      0.000      0.000      0.000      0.000      0.316      0.000
        OF     52.000    -14.392      0.000      8.853      0.000      0.000      0.000      0.000      0.316      0.000
        OF     53.000    -14.076      0.000      8.853      0.000      0.000      0.000      0.000      0.316      0.000
        OF     54.000    -13.760      0.000      8.853      0.000      0.000      0.000      0.000      0.317      0.000
        OF     55.000    -13.443      0.000      8.853      0.000      0.000      0.000      0.000      0.317      0.000
        OF     56.000    -13.127      0.000      8.853      0.000      0.000      0.000      0.000      0.316      0.000
        OF     57.000    -12.811      0.000      8.853      0.000      0.000      0.000      0.000      0.316      0.000
        OF     58.000    -12.495      0.000      8.853      0.000      0.000      0.000      0.000      0.316      0.000
        OF     59.000    -12.179      0.000      8.853      0.000      0.000      0.000      0.000      0.215      0.000
        OF     60.000    -12.064      0.000      8.853      0.000      0.000      0.000      0.000      0.075      0.000
        OF     61.000    -12.029      0.000      8.853      0.000      0.000      0.000      0.000      0.036      0.000
        OF     62.000    -11.993      0.000      8.852      0.000      0.000      0.000      0.000      0.036      0.000
        OF     63.000    -11.958      0.000      8.852      0.000      0.000      0.000      0.000      0.032      0.000
        OF     64.000    -11.928      0.000      8.852      0.000      0.000      0.000      0.000      0.020      0.000
        OF     65.000    -11.918      0.000      8.852      0.000      0.000      0.000      0.000      0.009      0.000
        OF     66.000    -11.909      0.000      8.852      0.000      0.000      0.000      0.000      0.009      0.000
        OF     67.000    -11.900      0.000      8.852      0.000      0.000      0.000      0.000      0.147      0.000
        IF    150.000      0.459      0.000      8.845      0.000      0.000      0.000      0.000      0.150      0.000
        IF    151.000      0.746      0.000      8.844      0.000      0.000      0.000      0.000      0.258      0.000
        IF    152.000      0.975      0.000      8.844      0.000      0.000      0.000      0.000      0.230      0.000
        IF    153.000      1.205      0.000      8.844      0.000      0.000      0.000      0.000      0.230      0.000
        IF    154.000      1.435      0.000      8.843      0.000      0.000      0.000      0.000      0.234      0.000
        IF    155.000      1.673      0.000      8.843      0.000      0.000      0.000      0.000      0.244      0.000
        IF    156.000      1.924      0.000      8.842      0.000      0.000      0.000      0.000      0.251      0.000
        IF    157.000      2.174      0.000      8.842      0.000      0.000      0.000      0.000      0.251      0.000
        IF    158.000      2.425      0.000      8.842      0.000      0.000      0.000      0.000      0.226      0.000
        IF    159.000      2.626      0.000      8.841      0.000      0.000      0.000      0.000      0.174      0.000
        IF    160.000      2.774      0.000      8.840      0.000      0.000      0.000      0.000      0.346      0.000
        IF    161.000      3.318      0.000      8.840      0.000      0.000      0.000      0.000      0.563      0.000
        IF    162.000      3.899      0.000      8.838      0.000      0.000      0.000      0.000      0.581      0.000
        IF    163.000      4.481      0.000      8.836      0.000      0.000      0.000      0.000      0.624      0.000
        IF    164.000      5.147      0.000      8.834      0.000      0.000      0.000      0.000      0.678      0.000
        IF    165.000      5.836      0.000      8.854      0.000      0.000      0.000      0.000      0.690      0.000
        IF    166.000      6.526      0.000      8.876      0.000      0.000      0.000      0.000      0.690      0.000
        IF    167.000      7.216      0.000      8.898      0.000      0.000      0.000      0.000      0.690      0.000
        IF    168.000      7.906      0.000      8.898      0.000      0.000      0.000      0.000      0.701      0.000
        IF    169.400      8.898      0.000      8.898      0.000      0.000      0.000      0.000      0.709      0.000
        AS    891.000      8.898      0.000      8.898      0.000      0.000      0.000      0.000      0.709      0.000
        ET      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
1
          END        END      FETCH SURGE ELEV SURGE ELEV    INITIAL    INITIAL                BOTTOM     AVERAGE
      STATION  ELEVATION     LENGTH    10-YEAR   100-YEAR WAVE HEIGHT  W. PERIOD                 SLOPE    A-ZONES
  IE    0.000    -28.583      1.000      1.000      8.854      5.205      6.262     56.140      0.245      0.000
          END        END  NEW SURGE  NEW SURGE                                                BOTTOM     AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
  OF    1.000    -28.338      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
          END        END  NEW SURGE  NEW SURGE                                                BOTTOM     AVERAGE
      STATION  ELEVATION    10-YEAR   100-YEAR                                                  SLOPE    A-ZONES
  OF    2.000    -28.093      0.000      8.854      0.000      0.000      0.000      0.000      0.245      0.000
          END        END  NEW SURGE  NEW SURGE                                                BOTTOM     AVERAGE
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	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	3.000	-27.848	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	4.000	-27.603	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	5.000	-27.358	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	6.000	-27.113	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	7.000	-26.868	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	8.000	-26.623	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	9.000	-26.378	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	10.000	-26.132	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	11.000	-25.887	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	12.000	-25.642	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	13.000	-25.397	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	14.000	-25.152	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	15.000	-24.907	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	16.000	-24.662	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	17.000	-24.417	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	18.000	-24.172	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	19.000	-23.927	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	20.000	-23.681	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	21.000	-23.436	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	22.000	-23.191	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	23.000	-22.946	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	24.000	-22.701	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	25.000	-22.456	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	26.000	-22.211	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	27.000	-21.966	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	28.000	-21.721	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	29.000	-21.476	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	30.000	-21.230	0.000	8.854	0.000	0.000	0.000	0.000	0.245	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	31.000	-20.985	0.000	8.854	0.000	0.000	0.000	0.000	0.258	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	32.000	-20.714	0.000	8.854	0.000	0.000	0.000	0.000	0.294	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	33.000	-20.397	0.000	8.854	0.000	0.000	0.000	0.000	0.317	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	34.000	-20.081	0.000	8.854	0.000	0.000	0.000	0.000	0.316	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	35.000	-19.765	0.000	8.854	0.000	0.000	0.000	0.000	0.316	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	36.000	-19.449	0.000	8.854	0.000	0.000	0.000	0.000	0.316	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	37.000	-19.133	0.000	8.854	0.000	0.000	0.000	0.000	0.316	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	38.000	-18.817	0.000	8.854	0.000	0.000	0.000	0.000	0.316	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	39.000	-18.501	0.000	8.853	0.000	0.000	0.000	0.000	0.316	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	40.000	-18.185	0.000	8.853	0.000	0.000	0.000	0.000	0.316	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	41.000	-17.869	0.000	8.853	0.000	0.000	0.000	0.000	0.316	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	42.000	-17.553	0.000	8.853	0.000	0.000	0.000	0.000	0.316	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	43.000	-17.237	0.000	8.853	0.000	0.000	0.000	0.000	0.317	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	44.000	-16.920	0.000	8.853	0.000	0.000	0.000	0.000	0.317	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	45.000	-16.604	0.000	8.853	0.000	0.000	0.000	0.000	0.316	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	46.000	-16.288	0.000	8.853	0.000	0.000	0.000	0.000	0.316	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	47.000	-15.972	0.000	8.853	0.000	0.000	0.000	0.000	0.316	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	48.000	-15.656	0.000	8.853	0.000	0.000	0.000	0.000	0.316	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	49.000	-15.340	0.000	8.853	0.000	0.000	0.000	0.000	0.316	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	50.000	-15.024	0.000	8.853	0.000	0.000	0.000	0.000	0.316	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	51.000	-14.708	0.000	8.853	0.000	0.000	0.000	0.000	0.316	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	52.000	-14.392	0.000	8.853	0.000	0.000	0.000	0.000	0.316	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	53.000	-14.076	0.000	8.853	0.000	0.000	0.000	0.000	0.316	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	54.000	-13.760	0.000	8.853	0.000	0.000	0.000	0.000	0.317	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	55.000	-13.443	0.000	8.853	0.000	0.000	0.000	0.000	0.317	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	56.000	-13.127	0.000	8.853	0.000	0.000	0.000	0.000	0.316	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	57.000	-12.811	0.000	8.853	0.000	0.000	0.000	0.000	0.316	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	58.000	-12.495	0.000	8.853	0.000	0.000	0.000	0.000	0.316	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	59.000	-12.179	0.000	8.853	0.000	0.000	0.000	0.000	0.215	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	60.000	-12.064	0.000	8.853	0.000	0.000	0.000	0.000	0.075	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	61.000	-12.029	0.000	8.853	0.000	0.000	0.000	0.000	0.036	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	62.000	-11.993	0.000	8.852	0.000	0.000	0.000	0.000	0.036	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	63.000	-11.958	0.000	8.852	0.000	0.000	0.000	0.000	0.032	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	64.000	-11.928	0.000	8.852	0.000	0.000	0.000	0.000	0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	65.000	-11.918	0.000	8.852	0.000	0.000	0.000	0.000	0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	66.000	-11.909	0.000	8.852	0.000	0.000	0.000	0.000	0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	67.000	-11.900	0.000	8.852	0.000	0.000	0.000	0.000	0.147	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	150.000	0.459	0.000	8.845	0.000	0.000	0.000	0.000	0.150	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	151.000	0.746	0.000	8.844	0.000	0.000	0.000	0.000	0.258	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	152.000	0.975	0.000	8.844	0.000	0.000	0.000	0.000	0.230	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	153.000	1.205	0.000	8.844	0.000	0.000	0.000	0.000	0.230	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	154.000	1.435	0.000	8.843	0.000	0.000	0.000	0.000	0.234	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	155.000	1.673	0.000	8.843	0.000	0.000	0.000	0.000	0.244	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	156.000	1.924	0.000	8.842	0.000	0.000	0.000	0.000	0.251	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	157.000	2.174	0.000	8.842	0.000	0.000	0.000	0.000	0.251	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES

IF	158.000	2.425	0.000	8.842	0.000	0.000	0.000	0.000	0.226	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	159.000	2.626	0.000	8.841	0.000	0.000	0.000	0.000	0.174	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	160.000	2.774	0.000	8.840	0.000	0.000	0.000	0.000	0.346	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	161.000	3.318	0.000	8.840	0.000	0.000	0.000	0.000	0.563	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	162.000	3.899	0.000	8.838	0.000	0.000	0.000	0.000	0.581	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	163.000	4.481	0.000	8.836	0.000	0.000	0.000	0.000	0.624	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	164.000	5.147	0.000	8.834	0.000	0.000	0.000	0.000	0.678	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	165.000	5.836	0.000	8.854	0.000	0.000	0.000	0.000	0.690	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	166.000	6.526	0.000	8.876	0.000	0.000	0.000	0.000	0.690	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	167.000	7.216	0.000	8.898	0.000	0.000	0.000	0.000	0.690	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	168.000	7.906	0.000	8.898	0.000	0.000	0.000	0.000	0.701	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	169.400	8.898	0.000	8.898	0.000	0.000	0.000	0.000	0.709	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
AS	891.000	8.898	0.000	8.898	0.000	0.000	0.000	0.000	0.709	0.000

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

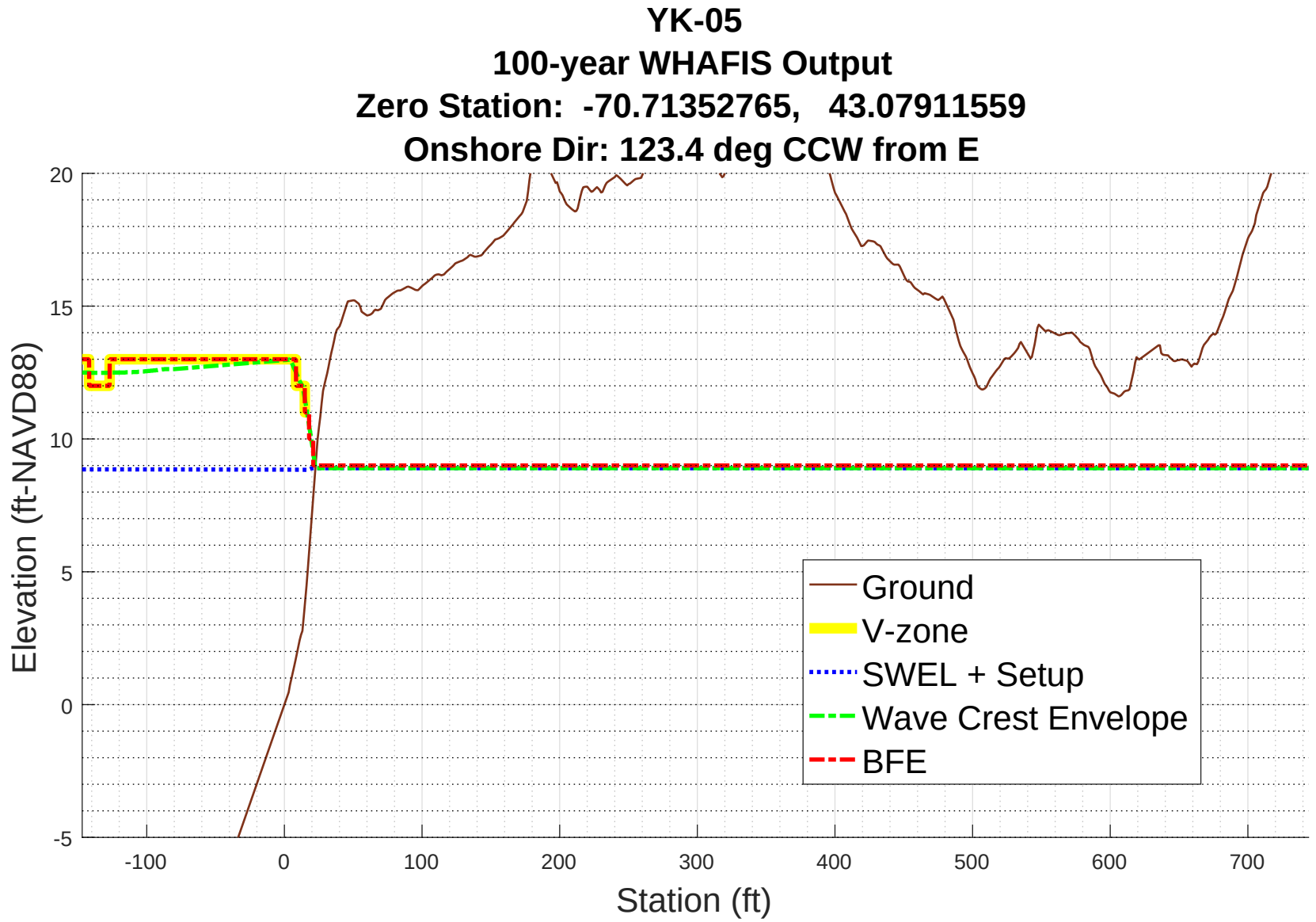
NOTE:
SURGE ELEVATION INCLUDES CONTRIBUTIONS FROM ASTRONOMICAL AND STORM TIDES.

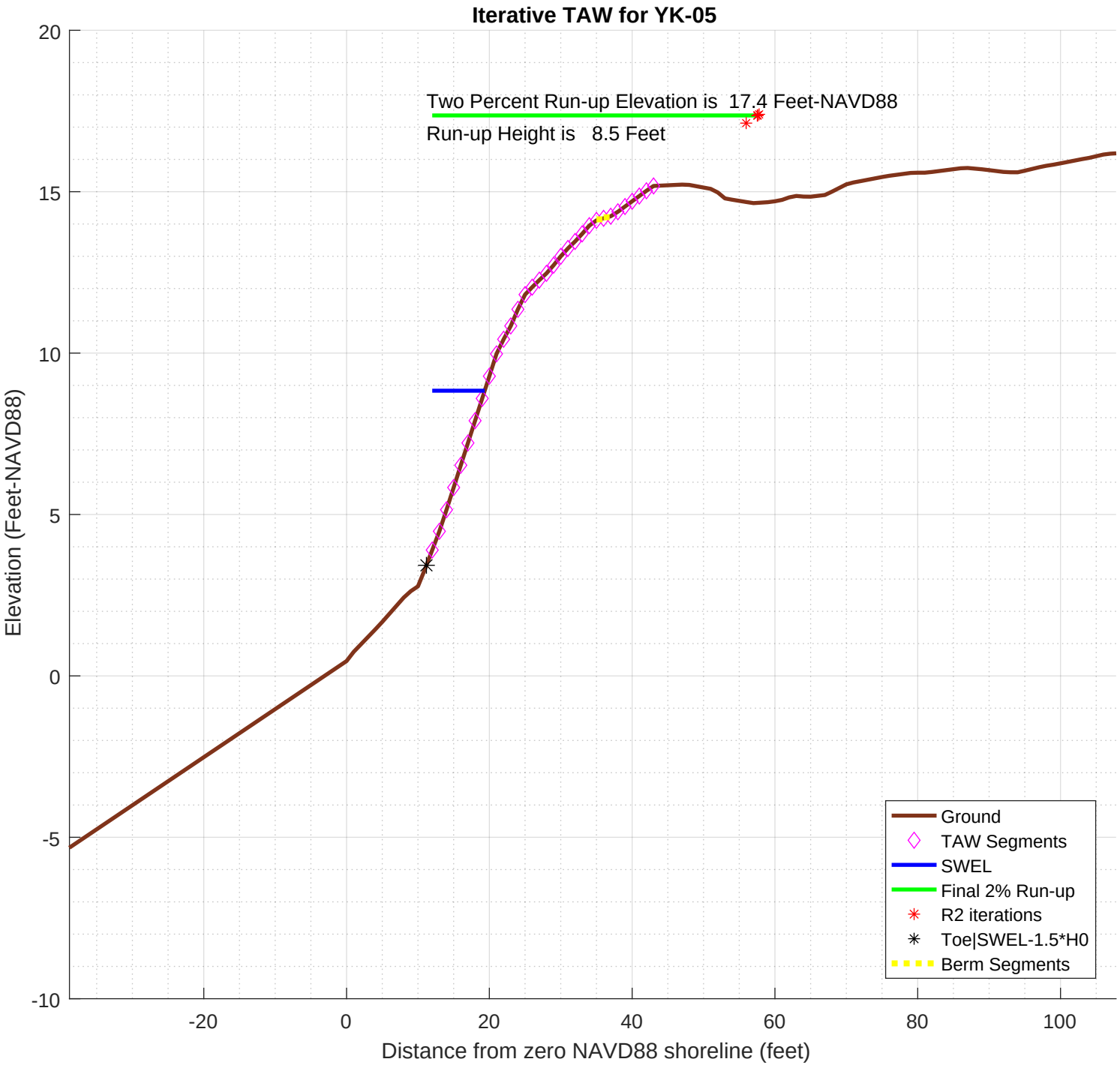
1

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

	LOCATION	CONTROLLING WAVE HEIGHT	SPECTRAL PEAK WAVE PERIOD	WAVE CREST ELEVATION
IE	0.00	5.20	6.26	12.50
OF	1.00	5.20	6.26	12.50
OF	2.00	5.20	6.26	12.50
OF	3.00	5.20	6.26	12.50
OF	4.00	5.20	6.26	12.50
OF	5.00	5.20	6.26	12.50
OF	6.00	5.20	6.26	12.49
OF	7.00	5.20	6.26	12.49
OF	8.00	5.20	6.26	12.49
OF	9.00	5.20	6.26	12.49
OF	10.00	5.20	6.26	12.49
OF	11.00	5.20	6.26	12.49
OF	12.00	5.20	6.26	12.49
OF	13.00	5.20	6.26	12.49
OF	14.00	5.20	6.26	12.49
OF	15.00	5.20	6.26	12.49
OF	16.00	5.20	6.26	12.49
OF	17.00	5.20	6.26	12.49
OF	18.00	5.20	6.26	12.49
OF	19.00	5.20	6.26	12.49
OF	20.00	5.20	6.26	12.50
OF	21.00	5.20	6.26	12.50
OF	22.00	5.20	6.26	12.50
OF	23.00	5.20	6.26	12.50
OF	24.00	5.21	6.26	12.50
OF	25.00	5.21	6.26	12.50
OF	26.00	5.21	6.26	12.50
OF	27.00	5.21	6.26	12.50
OF	28.00	5.21	6.26	12.50
OF	29.00	5.21	6.26	12.50
OF	30.00	5.21	6.26	12.50
OF	31.00	5.22	6.26	12.50
OF	32.00	5.22	6.26	12.51
OF	33.00	5.22	6.26	12.51
OF	34.00	5.22	6.26	12.51
OF	35.00	5.23	6.26	12.51
OF	36.00	5.23	6.26	12.51
OF	37.00	5.23	6.26	12.52
OF	38.00	5.24	6.26	12.52
OF	39.00	5.24	6.26	12.52
OF	40.00	5.24	6.26	12.52
OF	41.00	5.25	6.26	12.53
OF	42.00	5.25	6.26	12.53
OF	43.00	5.26	6.26	12.53
OF	44.00	5.26	6.26	12.54
OF	45.00	5.27	6.26	12.54
OF	46.00	5.28	6.26	12.55
OF	47.00	5.28	6.26	12.55
OF	48.00	5.29	6.26	12.56
OF	49.00	5.30	6.26	12.56
OF	50.00	5.30	6.26	12.57
OF	51.00	5.31	6.26	12.57
OF	52.00	5.32	6.26	12.58
OF	53.00	5.33	6.26	12.58
OF	54.00	5.34	6.26	12.59
OF	55.00	5.34	6.26	12.59
OF	56.00	5.35	6.26	12.60
OF	57.00	5.36	6.26	12.61
OF	58.00	5.37	6.26	12.62
OF	59.00	5.39	6.26	12.62
OF	60.00	5.39	6.26	12.63
OF	61.00	5.39	6.26	12.63
OF	62.00	5.39	6.26	12.63
OF	63.00	5.39	6.26	12.63
OF	64.00	5.40	6.26	12.63

```
OF      65.00         5.40         6.26        12.63
OF      66.00         5.40         6.26        12.63
OF      67.00         5.40         6.26        12.63
IF     150.00         5.90         6.26        12.98
IF     151.00         5.94         6.26        13.00
IF     152.00         5.78         6.26        12.89
IF     153.00         5.62         6.26        12.78
IF     154.00         5.46         6.26        12.66
IF     155.00         5.29         6.26        12.55
IF     156.00         5.12         6.26        12.42
IF     157.00         4.94         6.26        12.30
IF     158.00         4.76         6.26        12.18
IF     159.00         4.62         6.26        12.08
IF     160.00         4.52         6.26        12.00
IF     161.00         4.13         6.26        11.73
IF     162.00         3.71         6.26        11.43
IF     163.00         3.28         6.26        11.14
IF     164.00         2.79         6.26        10.79
IF     165.00         2.30         6.26        10.46
IF     166.00         1.80         6.26        10.14
IF     167.00         1.29         6.26         9.80
IF     168.00         0.77         6.26         9.44
IF     169.40         0.01         6.26         8.90
AS     891.00         0.00         0.00         8.90
PART3 LOCATION OF AREAS ABOVE 100-YEAR SURGE
     BETWEEN    169.40 AND    891.00
          PART4 LOCATION OF SURGE CHANGES
STATION          10-YEAR SURGE          100-YEAR SURGE
 39.00                1.00                8.85
 62.00                1.00                8.85
150.00                1.00                8.85
151.00                1.00                8.84
154.00                1.00                8.84
156.00                1.00                8.84
159.00                1.00                8.84
160.00                1.00                8.84
162.00                1.00                8.84
163.00                1.00                8.84
164.00                1.00                8.83
165.00                1.00                8.85
166.00                1.00                8.88
167.00                1.00                8.90
               PART5  LOCATION OF V ZONES
     STATION OF GUTTER          LOCATION OF ZONE
             163.58                WINDWARD
          PART6 NUMBERED A ZONES AND V ZONES
STATION OF GUTTER  ELEVATION  ZONE DESIGNATION   FHF
       0.00          12.50
                                 V22  EL=12     120
      26.54          12.50
                                 V22  EL=13     120
      38.00          12.52
                                 V22  EL=13     120
      39.00          12.52
                                 V22  EL=13     120
      61.00          12.63
                                 V22  EL=13     120
      62.00          12.63
                                 V22  EL=13     120
      67.00          12.63
                                 V22  EL=13     120
     150.00          12.98
                                 V22  EL=13     120
     151.00          13.00
                                 V22  EL=13     120
     153.00          12.78
                                 V22  EL=13     120
     154.00          12.66
                                 V22  EL=13     120
     155.00          12.55
                                 V22  EL=13     120
     155.38          12.50
                                 V22  EL=12     120
     156.00          12.42
                                 V22  EL=12     120
     158.00          12.18
                                 V22  EL=12     120
     159.00          12.08
                                 V22  EL=12     120
     160.00          12.00
                                 V22  EL=12     120
     161.00          11.73
                                 V22  EL=12     120
     161.78          11.50
                                 V22  EL=11     120
     162.00          11.43
                                 V22  EL=11     120
     163.00          11.14
                                 V22  EL=11     120
     163.58          10.93
                                 A16  EL=11      80
     164.00          10.79
                                 A16  EL=11      80
     164.89          10.50
                                 A16  EL=10      80
     165.00          10.46
                                 A16  EL=10      80
     166.00          10.14
                                 A16  EL=10      80
     167.00           9.80
                                 A16  EL=10      80
     167.83           9.50
                                 A16  EL= 9      80
     169.40           8.90
     891.00           8.90
          ZONE TERMINATED AT END OF TRANSECT
          PART 7   POSTSCRIPT NOTES
PS#  1   START(360535.7536,4770987.9783)
PS#  2   END(360385.9926,4771214.8466)
-1.000000e+00
```


YK-05
100-year WHAFIS Output
Zero Station: -70.71352765, 43.07911559
Onshore Dir: 123.4 deg CCW from E
Elevation (ft-NAVD88)
Station (ft)
20
15
10
5
0
-5
-100
0
100
200
300
400
500
600
700
Ground
V-zone
SWEL + Setup
Wave Crest Envelope
BFE


Iterative TAW for YK-05
Two Percent Run-up Elevation is 17.4 Feet-NAVD88
Run-up Height is 8.5 Feet
Elevation (Feet-NAVD88)
Distance from zero NAVD88 shoreline (feet)
20
15
10
5
0
-5
-10
-20
0
20
40
60
80
100
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 Kittery, York county, Maine
% TRANSECT ID: YK-05
% calculation by SJH, Ransom Consulting, Inc. 16-Oct-2018
% 100-year wave runup using TAW methodology
% including berm and weighted average with foreshore if necessary
%
% chk nld 20181015
%
% This script assumes that the incident wave conditions provided
% as input in the configuration section below are the
% appropriate values located at the end of the foreshore
% or toe of the slope on which the run-up is being calculated
% the script does not attempt to apply a depth limit or any other
% transformation to the incident wave conditions other than
% conversion of the peak wave period to the spectral mean wave
% as recommended in the references below
%
%
% references:
%
% Van der Meer, J.W., 2002. Technical Report Wave Run-up and
% Wave Overtopping at Dikes. TAW Technical Advisory Committee on
% Flood Defence, The Netherlands.
%
% FEMA. 2007,  Atlantic Ocean and Gulf of Mexico Coastal Guidelines Update
%
%
%

%-------------------------------------------------------------------------
% CONFIG
%-------------------------------------------------------------------------
fname='inpfiles/YK-05sta_ele_include.csv';   % file with station, elevation, include
                                        % third colunm is 0 for excluded points
imgname='logfiles/YK-05-runup';
SWEL=8.8541;  % 100-yr still water level including wave setup.
H0=3.5878;    % significant wave height at toe of structure
Tp=6.3396;    % peak period, 1/fma,
T0=Tp/1.1;

gamma_berm=0.98678;   % this may get changed automatically below
gamma_rough=0.75;
gamma_beta=1;
gamma_perm=1;

setupAtToe=-0.046014;
maxSetup=0.16758;   % only used in case of berm/shallow foreshore weighted average

plotTitle='Iterative TAW for YK-05'

plotTitle =

Iterative TAW for YK-05



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

SWEL=SWEL+setupAtToe

SWEL =

                  8.808086

SWEL_fore=SWEL+maxSetup

SWEL_fore =

                  8.975666



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

L0 =

           169.95715478656


% 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 =
```

```
                  3.426386


% 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 =

                 14.189786


% 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 =

          11.1865944272446


top_sta =

          36.2206220839814

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

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

top_sta =

          36.2206220839814

toe_sta

toe_sta =

          11.1865944272446




% check for case where the toe of slope is below SWL-1.5*H0
% in this case interpolate setup from the setupAtToe(really setup as first station), and the max setup
% also un-include points seaward of SWL-1.5*H0
if Ztoe > dep(1)
   dd=SWEL_fore-dep;
   k=find(dd<0,1); % k is index of first land point
   staAtSWL=interp1(dep(k-1:k),sta(k-1:k),SWEL_fore);
   dsta=staAtSWL-sta(1);
   dsetup=maxSetup-setupAtToe;
   dsetdsta=dsetup/dsta;
   setup=setupAtToe+dsetdsta*(toe_sta-sta(1));
   sprintf('-!!- Location of SWEL-1.5*H0 is %4.1f ft landward of toe of slope',dsta)
   sprintf('-!!- Setup is interpolated between setup at toe of slope and max setup')
   sprintf('-!!-       setup is adjusted to %4.2f feet',setup)
   SWEL=SWEL-setupAtToe+setup;
   sprintf('-!!-       SWEL is adjusted to %4.2f feet',SWEL)
   k=find(dep < SWEL-1.5*H0)
   sta(k)=[];
   dep(k)=[];
else
   sprintf('-!!- The User has selected a starting point that is %4.2f feet above the elevation of SWEL-1.5H0\n',de
   sprintf('-!!- This may be reasonable for some cases.  However the user may want to consider:\n')
   sprintf('-!!-   1) Selecting a starting point that is at or below %4.2f feet elevation, or\n', Ztoe)
   sprintf('-!!-   2) Reducing the incident wave height to a depth limited condition.\n')
```

```
end

ans =

-!!- Location of SWEL-1.5*H0 is  9.6 ft landward of toe of slope


ans =

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


ans =

-!!-       setup is adjusted to -0.02 feet


ans =

-!!-       SWEL is adjusted to 8.83 feet


k =

     1
     2



% now iterate converge on a runup elevation
tol=0.001;  % convergence criteria
R2del=999;
R2_new=3*H0; %initial guess
R2=R2_new;
iter=0;
R2_all=[];
topStaAll=[];
Berm_Segs=[];
TAW_ALWAYS_VALID=1;
while(abs(R2del) > tol && iter <= 25)
    iter=iter+1;
    sprintf ('!----------------- STARTING ITERATION %d -----------------!',iter)
    % elevation of toe of slope
    Ztoe
    % station of toe slope (relative to 0-NAVD88 shoreline
    toe_sta
    % station of top of slope/extent of 2% run-up
    top_sta
    % elevation of top of slope/extent of 2% run-up
    Z2
    % incident significant wave height
    H0
    % incident spectral peak wave period
    Tp
    % incident spectral mean wave period
    T0

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

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

    % loop over profile segments to determine berm factor
    % re-calculate influence of depth of berm based on this run-up elevation
    % check for berm, berm width, berm height
    berm_width=0;
    rdh_sum=0;
    Berm_Segs=[];
    Berm_Heights=[];
    for kk=1:length(sta)-1
       ddep=dep(kk+1)-dep(kk);
       dsta=sta(kk+1)-sta(kk);
       s=ddep/dsta;
       if  (s < 1/15)     % count it as a berm if slope is flatter than 1:15 (see TAW manual)
          sprintf ('Berm Factor Calculation: Iteration %d, Profile Segment: %d',iter,kk)
          berm_width=berm_width+dsta;   % tally the width of all berm segments
          % compute the rdh for this segment and weight it by the segment length
          dh=SWEL-(dep(kk)+dep(kk+1))/2
          if  dh < 0
              chi=R2;
          else
              chi=2* H0;
```

```
      end
      if (dh <= R2 & dh >=-2*H0)
         rdh=(0.5-0.5*cos(3.14159*dh/chi)) ;
      else
         rdh=1;
      end
      rdh_sum=rdh_sum + rdh * dsta
      Berm_Segs=[Berm_Segs, kk];
      Berm_Heights=[Berm_Heights, (dep(kk)+dep(kk+1))/2];
   end
   if dep(kk) >= Z2  % jump out of loop if we reached limit of run-up for this iteration
      break
   end
end
sprintf ('!------- End Berm Factor Calculation, Iter: %d ---------!',iter)
berm_width
rB=berm_width/Lslope
if (berm_width > 0)
   rdh_mean=rdh_sum/berm_width
else
   rdh_mean=1
end
gamma_berm=1- rB * (1-rdh_mean)
if gamma_berm > 1
   gamma_berm=1
end
if gamma_berm < 0.6
   gamma_berm =0.6
end
% Iribarren number
slope=(Z2-Ztoe)/(Lslope-berm_width)
Irb=(slope/(sqrt(H0/L0)))
% runup height
gamma_berm
gamma_perm
gamma_beta
gamma_rough
gamma=gamma_berm*gamma_perm*gamma_beta*gamma_rough

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

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


% check to see if we need to evaluate a shallow foreshore
if berm_width > 0.25 * L0;
   disp ('!   Berm_width is greater than 1/4 wave length')
   disp ('!   Runup will be weighted average with foreshore calculation assuming depth limited wave height on
   % do the foreshore calculation
   fore_H0=0.78*(SWEL_fore-min(Berm_Heights))
   % get upper slope
   fore_toe_sta=-999;
   fore_toe_dep=-999;
   for kk=length(dep)-1:-1:1
      ddep=dep(kk+1)-dep(kk);
      dsta=sta(kk+1)-sta(kk);
      s=ddep/dsta;
      if s < 1/15
         break
      end
      fore_toe_sta=sta(kk);
      fore_toe_dep=dep(kk);
      upper_slope=(Z2-fore_toe_dep)/(top_sta-fore_toe_sta)
   end
   fore_Irb=upper_slope/(sqrt(fore_H0/L0));
   fore_gamma=gamma_perm*gamma_beta*gamma_rough;
   if (fore_Irb < 1.8)
      fore_R2=fore_gamma*fore_H0*1.77*fore_Irb;
   else
      fore_R2=fore_gamma*fore_H0*(4.3-(1.6/sqrt(fore_Irb)));
   end
   if berm_width >= L0
      R2_new=fore_R_2(i)
      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 =
                  3.426386
toe_sta =
          11.1865944272446
top_sta =
          36.2206220839814
Z2 =
                 14.189786
H0 =
                    3.5878
Tp =
                    6.3396
T0 =
          5.76327272727273
R2 =
                   10.7634
Z2 =
           19.598022486334
top_sta =
          72.4654832422269
Lslope =
          61.2788888149823
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 24
dh =
         -5.30877751366595
rdh_sum =
          0.489357938274691
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 25
dh =
         -5.37312751366595
rdh_sum =
          0.988106219950516
ans =
!------- End Berm Factor Calculation, Iter: 1 ---------!
berm_width =
     2
rB =
        0.0326376675340596
rdh_mean =
          0.494053109975258
gamma_berm =
          0.983487073613481
slope =
          0.272805999059935
Irb =
           1.87762789861537
gamma_berm =
          0.983487073613481
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.75
gamma =
          0.737615305210111
ans =
!!! - - Iribaren number:   1.85 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 =
          8.28948372769009
R2del =
          2.47391627230991
Z2 =
          17.1241062140241
ans =
```

```
!----------------- STARTING ITERATION 2 -----------------!
Ztoe =
                3.426386
toe_sta =
          11.1865944272446
top_sta =
          55.9727080934942
Z2 =
          17.1241062140241
H0 =
                   3.5878
Tp =
                   6.3396
T0 =
          5.76327272727273
R2 =
          8.28948372769009
Z2 =
          17.1241062140241
top_sta =
          55.9727080934942
Lslope =
          44.7861136662496
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 24
dh =
         -5.30877751366595
rdh_sum =
         0.713490151720187
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 25
dh =
         -5.37312751366595
rdh_sum =
          1.43794214121485
ans =
!------- End Berm Factor Calculation, Iter: 2 ---------!
berm_width =
     2
rB =
        0.0446566990586455
rdh_mean =
          0.718971070607425
gamma_berm =
          0.987450175673342
slope =
          0.320144061712927
Irb =
          2.20343916160058
gamma_berm =
          0.987450175673342
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                     0.75
gamma =
          0.740587631755007
ans =
!!! - - Iribaren number:   2.18 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:3.1 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          8.56143794340582
R2del =
          0.271954215715732
Z2 =
          17.3960604297399
ans =
!----------------- STARTING ITERATION 3 -----------------!
Ztoe =
                3.426386
toe_sta =
          11.1865944272446
top_sta =
          57.7857361982658
Z2 =
          17.3960604297399
H0 =
                   3.5878
Tp =
                   6.3396
T0 =
          5.76327272727273
R2 =
          8.56143794340582
Z2 =
          17.3960604297399
top_sta =
          57.7857361982658
Lslope =
          46.5991417710212
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 24
dh =
```

```
         -5.30877751366595
rdh_sum =
         0.684178527964793
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 25
dh =
         -5.37312751366595
rdh_sum =
          1.37928101503713
ans =
!------- End Berm Factor Calculation, Iter: 3 ---------!
berm_width =
     2
rB =
        0.0429192453763977
rdh_mean =
         0.689640507518563
gamma_berm =
         0.986679604787295
slope =
         0.313227427143381
Irb =
          2.15583439456079
gamma_berm =
         0.986679604787295
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                      0.75
gamma =
         0.740009703590471
ans =
!!! - - Iribaren number:   2.13 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:3.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          8.5233328458543
R2del =
        0.0381050975515187
Z2 =
          17.3579553321884
ans =
!----------------- STARTING ITERATION 4 -----------------!
Ztoe =
                  3.426386
toe_sta =
         11.1865944272446
top_sta =
          57.531702214589
Z2 =
         17.3579553321884
H0 =
                    3.5878
Tp =
                    6.3396
T0 =
         5.76327272727273
R2 =
          8.5233328458543
Z2 =
         17.3579553321884
top_sta =
          57.531702214589
Lslope =
          46.3451077873444
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 24
dh =
         -5.30877751366595
rdh_sum =
         0.688219827553822
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 25
dh =
         -5.37312751366595
rdh_sum =
          1.38737261619135
ans =
!------- End Berm Factor Calculation, Iter: 4 ---------!
berm_width =
     2
rB =
        0.0431545009923603
rdh_mean =
         0.693686308095673
gamma_berm =
         0.986781185478741
slope =
         0.314162486626411
Irb =
          2.16227008064633
gamma_berm =
         0.986781185478741
gamma_perm =
```

```
     1
gamma_beta =
     1
gamma_rough =
                    0.75
gamma =
        0.740085889109056
ans =
!!! - - Iribaren number:   2.13 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:3.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
         8.52851958428289
R2del =
      0.00518673842858597
Z2 =
         17.3631420706169
ans =
!----------------- STARTING ITERATION 5 -----------------!
Ztoe =
                3.426386
toe_sta =
         11.1865944272446
top_sta =
         57.5662804707795
Z2 =
         17.3631420706169
H0 =
                  3.5878
Tp =
                  6.3396
T0 =
         5.76327272727273
R2 =
         8.52851958428289
Z2 =
         17.3631420706169
top_sta =
         57.5662804707795
Lslope =
          46.379686043535
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 24
dh =
        -5.30877751366595
rdh_sum =
         0.687668451375588
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 25
dh =
        -5.37312751366595
rdh_sum =
         1.38626870424862
ans =
!------- End Berm Factor Calculation, Iter: 5 ---------!
berm_width =
     2
rB =
       0.0431223272646277
rdh_mean =
         0.693134352124312
gamma_berm =
         0.986767239106033
slope =
         0.314034580076692
Irb =
          2.16138974477763
gamma_berm =
         0.986767239106033
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                    0.75
gamma =
         0.740075429329524
ans =
!!! - - Iribaren number:   2.13 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:3.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
         8.52781073349167
R2del =
     0.000708850791223625
Z2 =
         17.3624332198257
% final 2% runup elevation
Z2=R2_new+SWEL
Z2 =
         17.3624332198257
diary off
-1.000000e+00
```

PART 5: RUNUP2

for transect: YK-05

Station locations shifted by: -3.09 feet from their
original location to set the shoreline to
elevation 0 for RUNUP2 input

RUNUP2 INPUT CONVERSIONS
for transect: YK-05

Incident significant wave height: 3.25 feet

Peak wave period: 6.26 seconds

Mean wave height: 2.04 feet

Local Depth below SWEL: 37.44 feet

Mean wave height deshoaled using Hunt equation
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

Deepwater mean wave height: 1.97 feet

END RUNUP2 CONVERSIONS

RUNUP2 RESULTS
for transect: YK-05

RUNUP2 SWEL:
8.90
8.90
8.90
8.90
8.90
8.90
8.90
8.90
8.90

RUNUP2 deepwater mean wave heights:
1.88
1.88
1.88
1.97
1.97
1.97
2.07
2.07
2.07

RUNUP2 mean wave periods:
5.06
5.32
5.59
5.06
5.32
5.59
5.06
5.32
5.59

RUNUP2 runup above SWEL:
3.56
3.65

```
3.75
3.75
3.93
4.03
4.04
4.15
4.25

RUNUP2 Mean runup height above SWEL: 3.90 feet

RUNUP2 2-percent runup height above SWEL: 8.58 feet

RUNUP2 2-percent runup elevation: 17.48 feet-NAVD88

RUNUP2 Messages:
No Messages

_______________END RUNUP2 RESULTS_____________________


_________________ACES BEACH RUNUP_____________________

Incident significant wave height: 3.25 feet

Significant wave height deshoaled using Hunt equation

Deepwater significant wave height: 2.76 feet

Peak wave period: 6.26 seconds

Average beach Slope: 1:4.41 (H:V)

ACES RUNUP CALCULATED USING 'Aces_Beach_Runup.m'

ACES Beach 2-percent runup height above SWEL: 8.21 feet

ACES Beach 2-percent runup elevation: 17.11 feet-NAVD88

!!!ACES BEACH RUNUP is NOT valid

_____________END ACES BEACH RESULTS___________________

PART 5 COMPLETE_____________________________________________
```

```
  FEMA                                                    sjh           job 2
  RUNUP2 transect: YK-05                                                  1
7.00
  -28.58 -146.9 0.8
  -20.99 -115.9 0.8
  -20.71 -114.9 0.8
  -12.18 -87.9  0.8
  -12.06 -86.9  0.8
  -11.93 -82.9  0.8
  -11.90 -79.9  0.8
  0.46  3.1    0.8
  0.75  4.1    0.8
  1.67  8.1    0.8
  2.43  11.1   0.8
  2.77  13.1   0.8
  4.48  16.1   0.8
  9.98  24.1   0.8
  10.84 26.1   0.8
  11.81 28.1   0.8
  12.47 31.1   0.8
  13.95 37.1   0.8
  14.24 40.1   0.8
1 15.18 46.1   0.8
 8.9   1.88  5.06
 8.9   1.88  5.32
 8.9   1.88  5.59
 8.9   1.97  5.06
 8.9   1.97  5.32
 8.9   1.97  5.59
 8.9   2.07  5.06
 8.9   2.07  5.32
 8.9   2.07  5.59
```

CLIENT- FEMA ** WAVE RUNUP-VERSION 2.0 ** ENGINEERED BY sjh JOB job 2
PROJECT-RUNUP2 transect: YK-05 RUN 1 PAGE 1

****

CROSS SECTION PROFILE

	LENGTH	ELEV.	SLOPE	ROUGHNESS
1	-146.0	-28.5		
			.00	.80
2	-115.0	-20.9		
			5.00	.80
3	-114.0	-20.7		
			3.03	.80
4	-87.9	-12.1		
			10.00	.80
5	-86.9	-12.0		
			40.00	.80
6	-82.9	-11.9		
			FLAT	.80
7	-79.9	-11.9		
			6.72	.80
8	3.1	.5		
			3.45	.80
9	4.1	.8		
			4.35	.80
10	8.1	1.7		
			3.95	.80
11	11.1	2.4		
			5.88	.80
12	13.1	2.8		
			1.75	.80
13	16.1	4.5		
			1.45	.80
14	24.1	10.0		
			2.33	.80
15	26.1	10.9		
			2.06	.80
16	28.1	11.8		
			4.55	.80
17	31.1	12.5		
			4.05	.80
18	37.1	14.0		
			10.34	.80
19	40.1	14.3		
			6.38	.80
20	46.1	15.2		

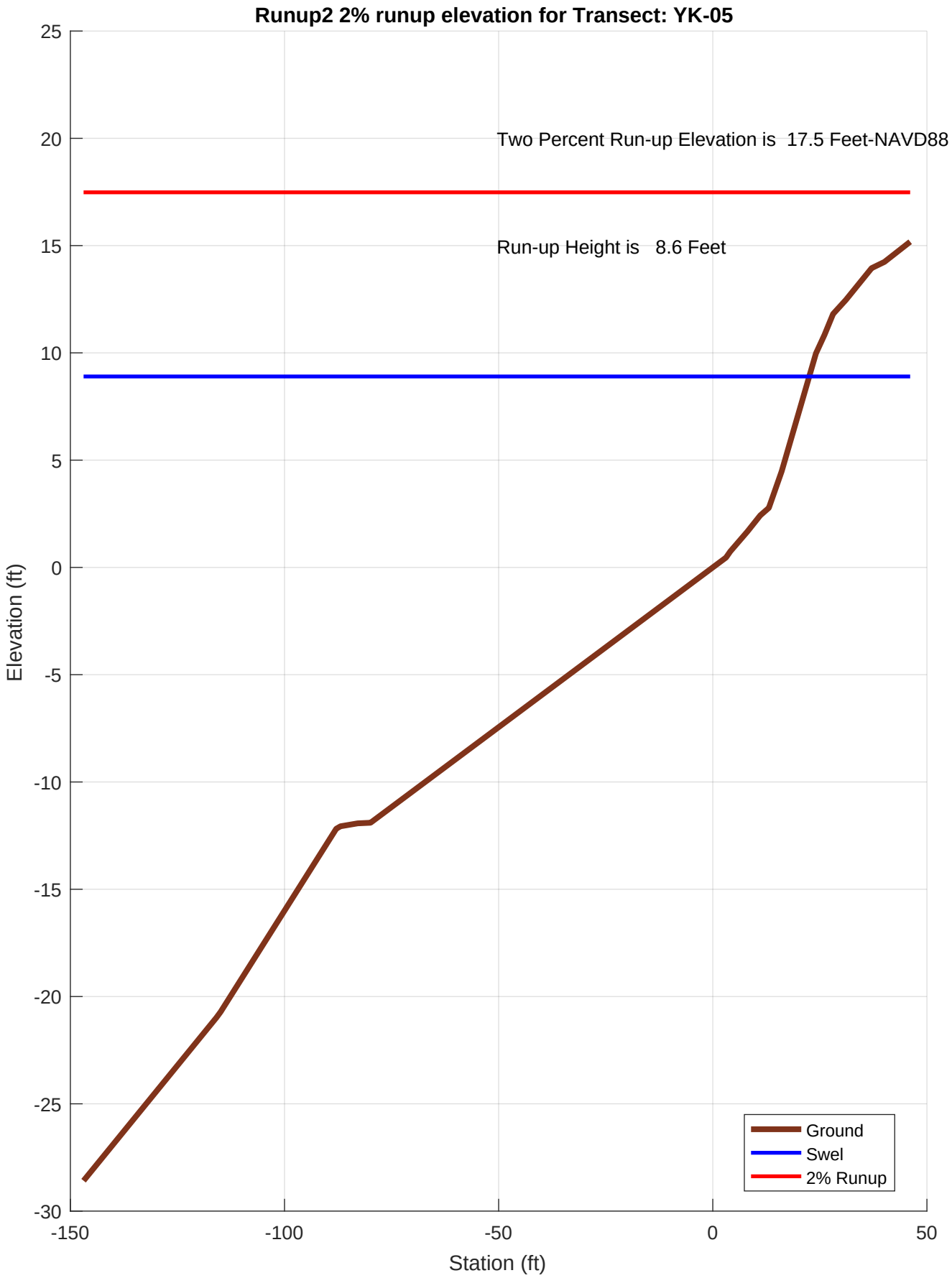
LAST SLOPE 7.00 LAST ROUGHNESS .80

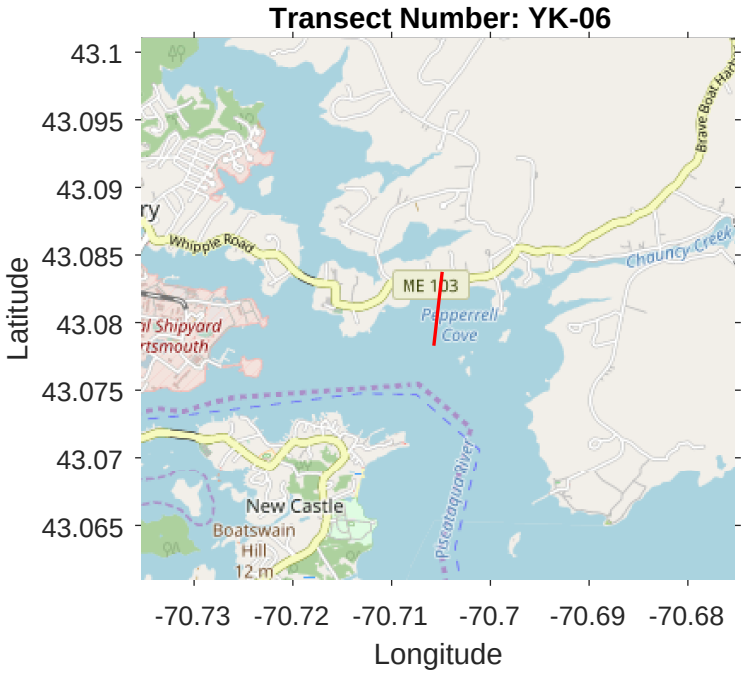
CLIENT- FEMA ** WAVE RUNUP-VERSION 2.0 ** ENGINEERED BY sjh JOB job 2
PROJECT-RUNUP2 transect: YK-05 RUN 1 PAGE 2

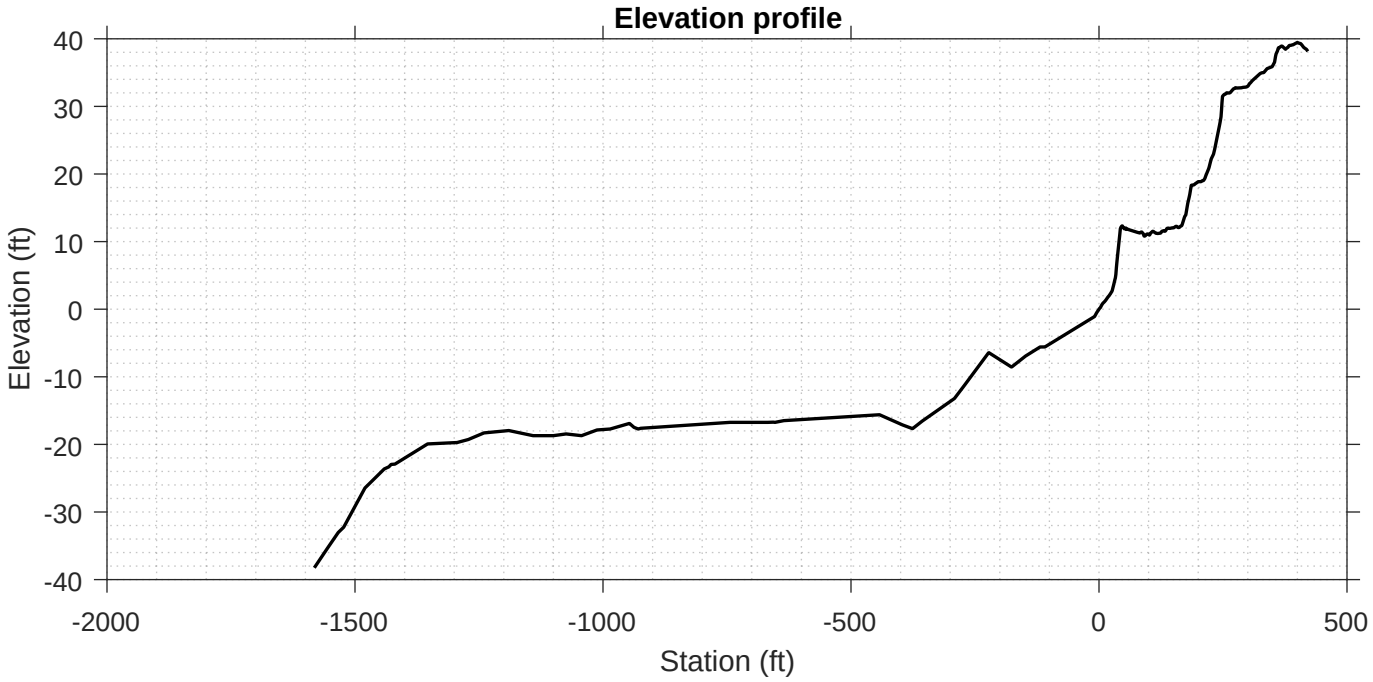
****

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.)
8.90	1.88	5.06	11	16	3.56	2.56
8.90	1.88	5.32	11	16	3.65	2.60
8.90	1.88	5.59	11	17	3.75	2.64
8.90	1.97	5.06	11	17	3.75	2.67
8.90	1.97	5.32	11	17	3.93	2.70
8.90	1.97	5.59	11	17	4.03	2.74
8.90	2.07	5.06	11	17	4.04	2.78
8.90	2.07	5.32	11	17	4.15	2.82
8.90	2.07	5.59	11	17	4.25	2.86


Runup2 2% runup elevation for Transect: YK-05
Two Percent Run-up Elevation is 17.5 Feet-NAVD88
Run-up Height is 8.6 Feet
Elevation (ft)
Station (ft)
Ground
Swel
2% Runup
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-150
-100
-50
0
50


Transect Number: YK-06
Latitude
Longitude
43.1
43.095
43.09
43.085
43.08
43.075
43.07
43.065
-70.73
-70.72
-70.71
-70.7
-70.69
-70.68
Whipple Road
ME 103
Chauncy Creek
Pepperrell Cove
New Castle
Boatswain Hill
12 m
Piscataqua River


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

DATA LOG FOR TRANSECT ID: YK-06

PART 1: USER INPUT

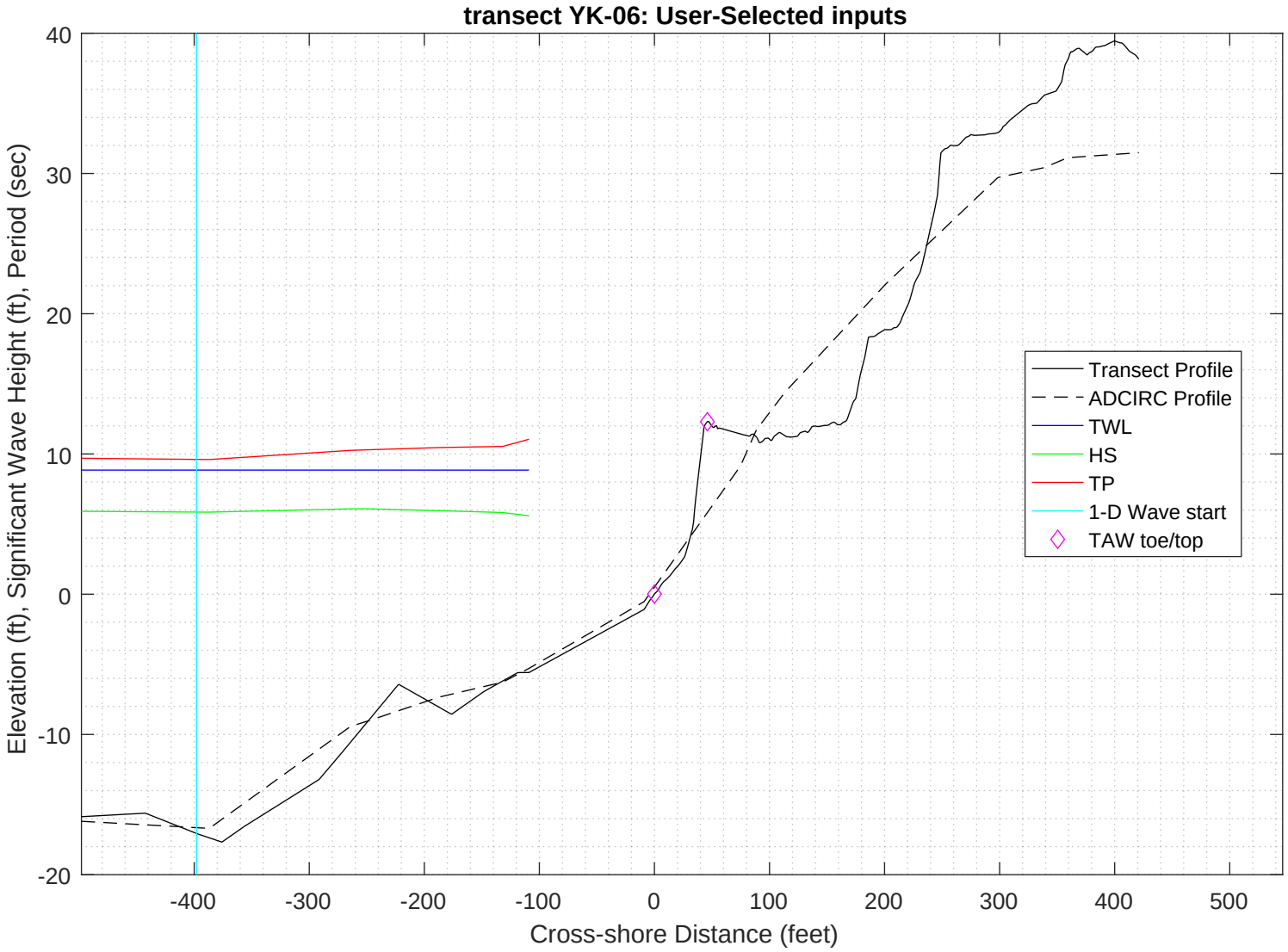
SWAN 1-D / WHAFIS input

station: -398 ft
LON: -70.7052 deg E
LAT: 43.0815 deg N
Bottom ELEV: -17.0569 ft-NAVD88
TWL: 8.8508 ft-NAVD88
HS: 5.8554 ft
TP: 9.6117 sec
Wave Direction bin: 90 deg CCW from East (90 deg sector)
Transect Direction: 81.1993 deg CCW from East

TAW/RUNUP input

toe sta: 0 ft
toe elev: 0.0068 ft-NAVD88
top sta: 46 ft
top elev: 12.3021 ft-NAVD88
Wave and water level conditions at toe to be calculated in SWAN 1-D

PART 1 COMPLETE


transect YK-06: User-Selected inputs
Elevation (ft), Significant Wave Height (ft), Period (sec)
Cross-shore Distance (feet)
40
30
20
10
0
-10
-20
-400
-300
-200
-100
0
100
200
300
400
500
Transect Profile
ADCIRC Profile
TWL
HS
TP
1-D Wave start
TAW toe/top

```
_____________________________________________________________________
PART 2: SWAN 1-D

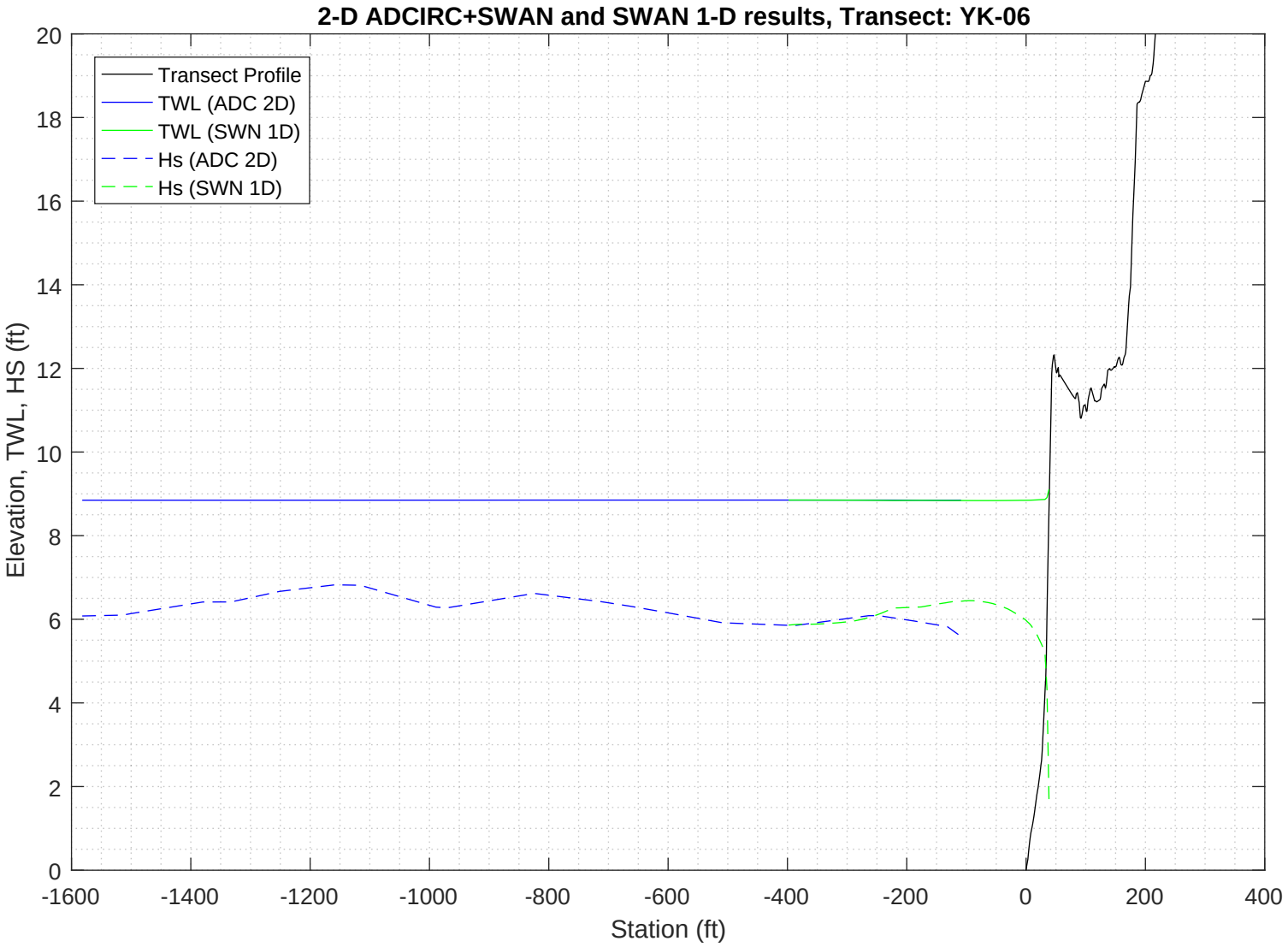
swan input grid name: 2_swan/gridfiles/YK-06zmeters_xmeters.grd
swan file name:       2_swan/swanfiles/YK-06.swn
swan output name:     2_swan/swanfiles/YK-06.dat

Boundary Conditions:
    TWL- 2.6977 meters
    HS-  1.7847 meters
    PER- 9.6117 seconds

Batch File: 2_swan/swanfiles/runswan.dat

SWAN maximum additional wave setup: 0.84221 feet
SWAN output at toe:
    SETUP- -0.015745 feet
    HS-    5.9872 feet
    PER-   9.7128 seconds

PART 2 COMPLETE_____________________________________________
```


2-D ADCIRC+SWAN and SWAN 1-D results, Transect: YK-06
Transect Profile
TWL (ADC 2D)
TWL (SWN 1D)
Hs (ADC 2D)
Hs (SWN 1D)
Elevation, TWL, HS (ft)
Station (ft)
20
18
16
14
12
10
8
6
4
2
0
-1600
-1400
-1200
-1000
-800
-600
-400
-200
0
200
400

```
1

                    Execution started at 20181016.143018


                    ---------------------------------------
                                    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      133       0.   133     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      133   0      1       1

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

  READ    BOTTOM   -1. '../gridfiles/YK-06zmeters_xmeters.grd'    1      0       FREE

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

 ! -- WIND [vel] [dir]

 WIND      25.1  0

 ! -- BOUnd SHAPespec

 BOUND SHAPE JONSWAP 3.3  PEAK DSPR POWER

 ! -- BOUndspec

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

 BOUN SIDE W CCW CONSTANT PAR   1.7847     9.6117     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      133  133    0

 !TABLe 'sname' < HEADer|NOHEADer|INDexed > 'fname' <output parameters> (output time)

  Table 'curve'   HEADER 'YK-06.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             134 MYC              1
                      : MCGRD           135
                      : 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  37.32 % 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   0.75 % of wet grid points ( 99.50 % required)

iteration    4; sweep 1
iteration    4; sweep 2
iteration    4; sweep 3
iteration    4; sweep 4
accuracy OK in  35.83 % 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  84.33 % 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  99.26 % of wet grid points ( 99.50 % required)

iteration    7; sweep 1
iteration    7; sweep 2
iteration    7; sweep 3
iteration    7; sweep 4
accuracy OK in  99.26 % of wet grid points ( 99.50 % required)

iteration    8; sweep 1
iteration    8; sweep 2
iteration    8; sweep 3
iteration    8; sweep 4
accuracy OK in 100.00 % of wet grid points ( 99.50 % required)


STOP
```

% Run:1 Table:curve SWAN version:41.20A

Xp [m]	Yp [m]	Hsig [m]	TPsmoo [sec]	RTpeak [sec]	Tm_10 [sec]	Dir [degr]	Dspr [degr]	Depth [m]	Setup [m]
0.	0.	1.78651	9.6388	10.0005	8.6841	0.000	31.6599	7.8998	-0.000231
1.	0.	1.78763	9.6389	10.0005	8.6762	0.000	31.7910	7.9298	-0.000192
2.	0.	1.78887	9.6390	10.0005	8.6686	0.000	31.9052	7.9498	-0.000167
3.	0.	1.78993	9.6391	10.0005	8.6609	0.000	32.0286	7.9799	-0.000126
4.	0.	1.79094	9.6392	10.0005	8.6534	0.000	32.1479	8.0099	-0.000086
5.	0.	1.79175	9.6392	10.0005	8.6460	0.000	32.2482	8.0400	-0.000044
6.	0.	1.79249	9.6393	10.0005	8.6389	0.000	32.3154	8.0600	-0.000017
7.	0.	1.79228	9.6394	10.0005	8.6319	0.000	32.2679	8.0700	0.000000
8.	0.	1.79273	9.6397	10.0005	8.6267	0.000	32.1028	8.0099	-0.000083
9.	0.	1.79294	9.6401	10.0005	8.6212	0.000	31.9092	7.9498	-0.000167
10.	0.	1.79285	9.6403	10.0005	8.6153	359.999	31.7087	7.8998	-0.000237
11.	0.	1.79293	9.6406	10.0005	8.6093	359.995	31.4925	7.8397	-0.000323
12.	0.	1.79314	9.6406	10.0005	8.6032	0.007	31.2842	7.7796	-0.000412
13.	0.	1.79339	9.6409	10.0005	8.5968	0.007	31.1132	7.7295	-0.000486
14.	0.	1.79369	9.6412	10.0005	8.5902	0.006	30.9456	7.6794	-0.000561
15.	0.	1.79435	9.6416	10.0005	8.5837	0.006	30.7994	7.6193	-0.000651
16.	0.	1.79490	9.6420	10.0005	8.5766	0.006	30.6657	7.5693	-0.000726
17.	0.	1.79555	9.6424	10.0005	8.5693	0.006	30.5350	7.5192	-0.000804
18.	0.	1.79628	9.6428	10.0005	8.5617	0.006	30.4051	7.4691	-0.000884
19.	0.	1.79708	9.6432	10.0005	8.5539	0.006	30.2756	7.4190	-0.000966
20.	0.	1.79795	9.6437	10.0005	8.5459	0.006	30.1470	7.3689	-0.001050
21.	0.	1.79878	9.6441	10.0005	8.5376	0.006	30.0101	7.3189	-0.001136
22.	0.	1.79997	9.6446	10.0005	8.5294	0.006	29.8702	7.2588	-0.001244
23.	0.	1.80101	9.6451	10.0005	8.5205	0.006	29.7381	7.2087	-0.001335
24.	0.	1.80213	9.6456	10.0005	8.5114	0.006	29.6098	7.1586	-0.001429
25.	0.	1.80334	9.6461	10.0005	8.5019	0.006	29.4825	7.1085	-0.001525
26.	0.	1.80461	9.6467	10.0005	8.4922	0.006	29.3556	7.0584	-0.001623
27.	0.	1.80586	9.6472	10.0005	8.4822	0.006	29.2202	7.0083	-0.001724
28.	0.	1.80748	9.6478	10.0005	8.4723	0.006	29.0824	6.9482	-0.001849
29.	0.	1.80893	9.6484	10.0005	8.4616	0.006	28.9523	6.8980	-0.001955
30.	0.	1.81046	9.6490	10.0005	8.4506	0.006	28.8250	6.8479	-0.002065
31.	0.	1.81207	9.6496	10.0005	8.4393	0.006	28.6985	6.7978	-0.002177
32.	0.	1.81351	9.6502	10.0005	8.4276	0.006	28.5472	6.7477	-0.002291
33.	0.	1.81574	9.6510	10.0005	8.4167	0.006	28.3611	6.6675	-0.002477
34.	0.	1.81821	9.6518	10.0005	8.4052	0.006	28.1600	6.5773	-0.002690
35.	0.	1.82108	9.6527	10.0005	8.3930	0.006	27.9429	6.4771	-0.002936
36.	0.	1.82416	9.6536	10.0005	8.3798	0.006	27.7279	6.3768	-0.003192
37.	0.	1.82707	9.6546	10.0005	8.3651	0.006	27.5133	6.2866	-0.003432
38.	0.	1.83053	9.6556	10.0005	8.3494	0.006	27.2899	6.1863	-0.003711
39.	0.	1.83418	9.6567	10.0005	8.3325	0.005	27.0621	6.0860	-0.004002
40.	0.	1.83805	9.6579	10.0005	8.3144	0.005	26.8335	5.9857	-0.004307
41.	0.	1.84221	9.6591	10.0005	8.2951	0.005	26.6105	5.8854	-0.004626
42.	0.	1.84618	9.6603	10.0005	8.2740	0.005	26.3900	5.7951	-0.004926
43.	0.	1.85076	9.6617	10.0005	8.2521	0.005	26.1631	5.6947	-0.005274
44.	0.	1.85553	9.6631	10.0005	8.2291	0.006	25.9327	5.5944	-0.005640
45.	0.	1.86054	9.6645	10.0005	8.2047	0.006	25.7002	5.4940	-0.006023
46.	0.	1.86577	9.6661	10.0005	8.1791	0.006	25.4670	5.3936	-0.006425
47.	0.	1.87123	9.6677	10.0005	8.1521	0.006	25.2334	5.2932	-0.006846
48.	0.	1.87691	9.6693	10.0005	8.1239	0.007	25.0006	5.1927	-0.007288
49.	0.	1.88281	9.6711	10.0005	8.0943	0.007	24.7790	5.0923	-0.007746
50.	0.	1.88897	9.6729	10.0005	8.0633	0.007	24.5727	4.9918	-0.008222
51.	0.	1.89479	9.6747	10.0005	8.0305	0.007	24.3709	4.9013	-0.008670
52.	0.	1.90120	9.6766	10.0005	7.9975	0.007	24.1639	4.8008	-0.009186
53.	0.	1.90783	9.6786	10.0005	7.9644	0.005	24.0091	4.7003	-0.009706
54.	0.	1.91142	9.6803	10.0005	7.9261	0.004	23.9722	4.6702	-0.009844
55.	0.	1.91181	9.6816	10.0005	7.8849	0.004	24.0550	4.7104	-0.009587
56.	0.	1.91200	9.6827	10.0005	7.8461	0.004	24.1902	4.7607	-0.009283
57.	0.	1.91234	9.6836	10.0005	7.8098	0.004	24.3349	4.8110	-0.008990

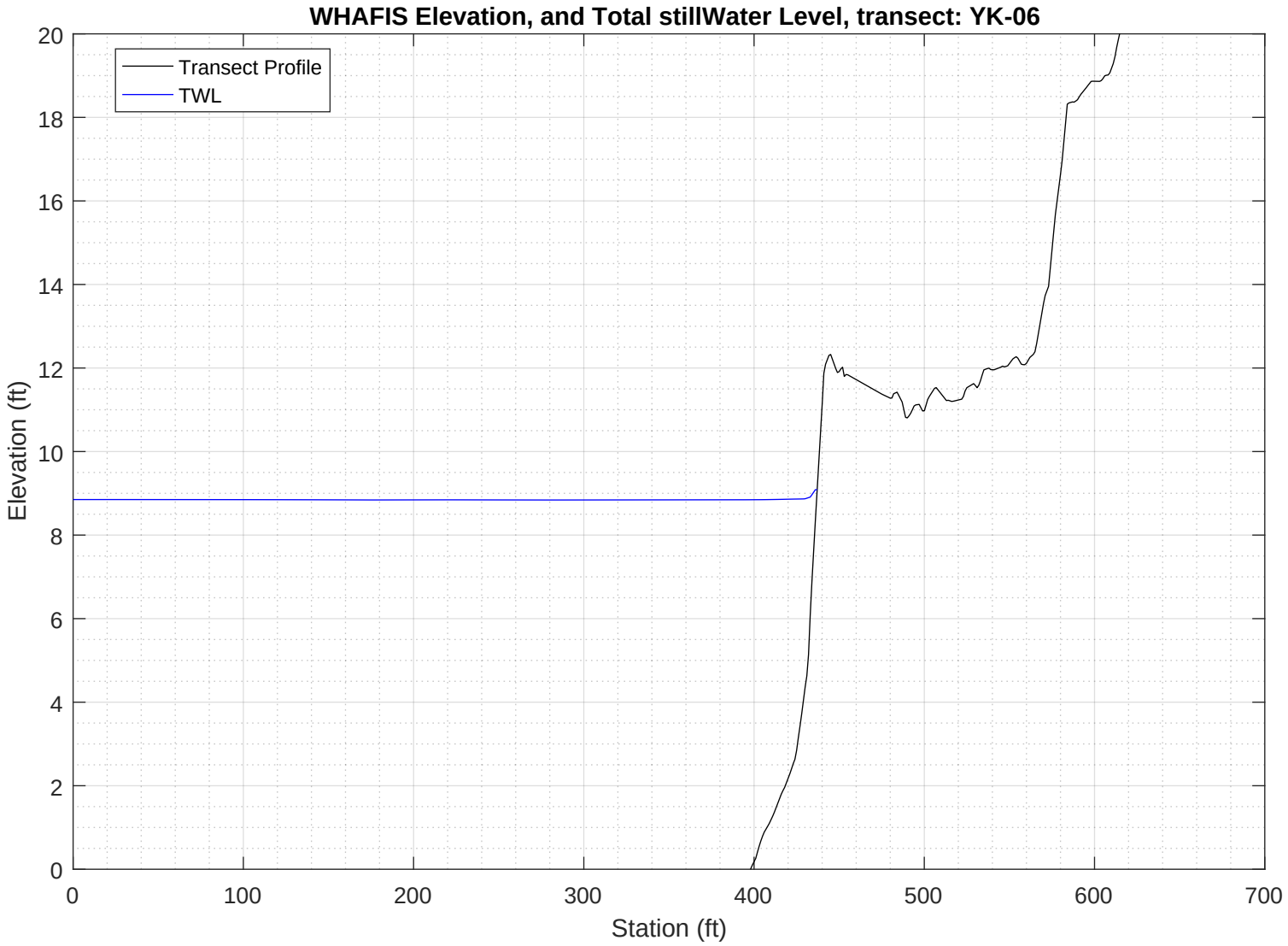
58.	0.	1.91325	9.6844	10.0005	7.7768	0.004	24.4843	4.8512	-0.008760
59.	0.	1.91374	9.6851	10.0005	7.7454	0.004	24.6485	4.9015	-0.008487
60.	0.	1.91416	9.6856	10.0005	7.7163	0.005	24.8070	4.9518	-0.008225
61.	0.	1.91507	9.6861	10.0005	7.6899	0.005	24.9637	4.9920	-0.008018
62.	0.	1.91556	9.6865	10.0005	7.6645	0.006	25.1326	5.0422	-0.007771
63.	0.	1.91598	9.6868	10.0005	7.6406	0.007	25.2926	5.0925	-0.007532
64.	0.	1.91685	9.6871	10.0005	7.6190	0.008	25.4490	5.1327	-0.007344
65.	0.	1.91724	9.6873	10.0005	7.5977	0.009	25.6038	5.1829	-0.007117
66.	0.	1.91808	9.6874	10.0005	7.5783	0.010	25.7571	5.2231	-0.006940
67.	0.	1.91809	9.6875	10.0005	7.5588	0.011	25.8622	5.2733	-0.006725
68.	0.	1.91924	9.6878	10.0005	7.5438	0.012	25.8449	5.2733	-0.006725
69.	0.	1.92177	9.6882	10.0005	7.5328	0.013	25.7335	5.2231	-0.006939
70.	0.	1.92440	9.6887	10.0005	7.5222	0.015	25.5801	5.1628	-0.007200
71.	0.	1.92691	9.6892	10.0005	7.5115	0.016	25.4164	5.1025	-0.007465
72.	0.	1.92946	9.6897	10.0005	7.5004	0.018	25.2520	5.0423	-0.007736
73.	0.	1.93211	9.6902	10.0005	7.4892	0.021	25.0995	4.9820	-0.008012
74.	0.	1.93436	9.6907	10.0005	7.4767	0.025	24.9549	4.9318	-0.008246
75.	0.	1.93704	9.6913	10.0005	7.4649	0.028	24.8096	4.8715	-0.008531
76.	0.	1.93980	9.6918	10.0005	7.4527	0.032	24.6721	4.8112	-0.008820
77.	0.	1.94218	9.6924	10.0005	7.4394	0.034	24.5567	4.7609	-0.009058
78.	0.	1.94411	9.6929	10.0005	7.4251	0.036	24.4479	4.7208	-0.009246
79.	0.	1.94652	9.6934	10.0005	7.4116	0.037	24.3405	4.6705	-0.009488
80.	0.	1.94839	9.6939	10.0005	7.3970	0.039	24.2329	4.6303	-0.009676
81.	0.	1.95092	9.6945	10.0005	7.3814	0.040	24.1152	4.5801	-0.009923
82.	0.	1.95351	9.6950	10.0005	7.3651	0.040	24.0011	4.5298	-0.010171
83.	0.	1.95549	9.6955	10.0005	7.3478	0.039	23.8875	4.4896	-0.010357
84.	0.	1.95795	9.6961	10.0005	7.3311	0.038	23.7713	4.4394	-0.010601
85.	0.	1.96004	9.6966	10.0005	7.3132	0.036	23.6882	4.3992	-0.010777
86.	0.	1.96067	9.6970	10.0005	7.2928	0.034	23.6516	4.3892	-0.010751
87.	0.	1.96066	9.6973	10.0005	7.2729	0.031	23.6397	4.3893	-0.010653
88.	0.	1.96037	9.6976	10.0005	7.2537	0.027	23.6012	4.3894	-0.010555
89.	0.	1.96171	9.6980	10.0005	7.2393	0.026	23.5094	4.3493	-0.010712
90.	0.	1.96324	9.6985	10.0005	7.2263	0.027	23.3986	4.2991	-0.010927
91.	0.	1.96367	9.6989	10.0005	7.2137	0.026	23.2828	4.2589	-0.011059
92.	0.	1.96463	9.6993	10.0005	7.2012	0.019	23.1609	4.2087	-0.011255
93.	0.	1.96456	9.6997	10.0005	7.1885	0.010	23.0381	4.1686	-0.011363
94.	0.	1.96456	9.7002	10.0005	7.1782	0.007	22.9134	4.1185	-0.011521
95.	0.	1.96357	9.7006	10.0005	7.1674	0.004	22.7884	4.0784	-0.011587
96.	0.	1.96286	9.7011	10.0005	7.1578	0.002	22.6616	4.0283	-0.011710
97.	0.	1.96118	9.7015	10.0005	7.1472	360.000	22.5344	3.9883	-0.011736
98.	0.	1.95970	9.7019	10.0005	7.1382	359.996	22.4089	3.9382	-0.011815
99.	0.	1.95716	9.7024	10.0005	7.1284	359.991	22.2836	3.8982	-0.011787
100.	0.	1.95545	9.7028	10.0005	7.1171	359.998	22.1567	3.8482	-0.011834
101.	0.	1.95282	9.7032	10.0005	7.1040	359.986	22.0305	3.8082	-0.011773
102.	0.	1.95058	9.7037	10.0005	7.0913	359.966	21.9018	3.7582	-0.011773
103.	0.	1.94732	9.7041	10.0005	7.0770	359.943	21.7721	3.7183	-0.011657
104.	0.	1.94432	9.7045	10.0005	7.0636	359.918	21.6404	3.6684	-0.011598
105.	0.	1.94004	9.7049	10.0005	7.0496	359.893	21.5120	3.6286	-0.011406
106.	0.	1.93590	9.7054	10.0005	7.0369	359.871	21.3822	3.5787	-0.011268
107.	0.	1.93069	9.7058	10.0005	7.0224	359.849	21.2511	3.5390	-0.010997
108.	0.	1.92637	9.7062	10.0005	7.0055	359.835	21.1199	3.4892	-0.010806
109.	0.	1.92110	9.7066	10.0005	6.9857	359.826	20.9899	3.4495	-0.010479
110.	0.	1.91613	9.7071	10.0005	6.9663	359.819	20.8590	3.3998	-0.010211
111.	0.	1.90998	9.7075	10.0005	6.9448	359.815	20.7296	3.3602	-0.009793
112.	0.	1.90402	9.7080	10.0005	6.9242	359.814	20.5996	3.3106	-0.009430
113.	0.	1.89647	9.7085	10.0005	6.9031	359.818	20.4714	3.2711	-0.008895
114.	0.	1.88875	9.7090	10.0005	6.8847	359.821	20.3426	3.2216	-0.008403
115.	0.	1.87970	9.7095	10.0005	6.8645	359.822	20.2104	3.1823	-0.007743
116.	0.	1.87160	9.7100	10.0005	6.8405	359.840	20.0752	3.1328	-0.007155
117.	0.	1.86219	9.7105	10.0005	6.8131	359.856	19.9452	3.0936	-0.006371
118.	0.	1.85163	9.7111	10.0005	6.7928	359.880	19.7839	3.0444	-0.005613
119.	0.	1.84224	9.7116	10.0005	6.7760	359.910	19.5297	2.9648	-0.005167
120.	0.	1.83513	9.7123	10.0005	6.7642	359.960	19.2082	2.8348	-0.005232
121.	0.	1.82489	9.7128	10.0005	6.7408	359.992	18.8981	2.7252	-0.004799
122.	0.	1.81049	9.7130	10.0005	6.7111	0.013	18.5688	2.6362	-0.003812

123.	0.	1.79790	9.7131	10.0005	6.6818	0.052	18.2012	2.5068	-0.003242
124.	0.	1.78036	9.7129	10.0005	6.6410	0.121	17.8700	2.4082	-0.001848
125.	0.	1.75975	9.7124	10.0005	6.5848	0.235	17.5534	2.3302	0.000213
126.	0.	1.73697	9.7120	10.0005	6.5376	0.362	17.2232	2.2323	0.002322
127.	0.	1.71213	9.7118	10.0005	6.4816	0.523	16.8823	2.1348	0.004811
128.	0.	1.68268	9.7105	10.0005	6.4228	0.698	16.5170	2.0480	0.007999
129.	0.	1.65324	9.7110	10.0005	6.3715	0.897	15.9829	1.9309	0.010857
130.	0.	1.62103	9.7138	10.0005	6.3504	0.996	15.1756	1.7029	0.012906
131.	0.	1.57597	9.7184	10.0005	6.3522	0.920	13.8872	1.4060	0.015996
132.	0.	1.31349	9.7618	10.0005	6.7610	359.452	12.4365	0.8899	0.059861
133.	0.	0.51817	12.3681	12.4477	8.5336	357.940	16.0315	0.3367	0.256706

```
PART 3: WHAFIS

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

PART 3 COMPLETE
```


WHAFIS Elevation, and Total stillWater Level, transect: YK-06
Transect Profile
TWL
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: Tue Oct 16 14:32:50 2018
Input file:  C:\0_PROJECTS\171.06084-Kittery-2017-FEMA\modeling\transect_analysis\3_whafis\whafis4\YK-06.dat
Output file: C:\0_PROJECTS\171.06084-Kittery-2017-FEMA\modeling\transect_analysis\3_whafis\whafis4\YK-06.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	-17.056	1.000	1.000	8.851	9.369	9.612	56.140	-0.033	0.000
OF	1.000	-17.089	0.000	8.851	0.000	0.000	0.000	0.000	-0.032	0.000
OF	2.000	-17.120	0.000	8.851	0.000	0.000	0.000	0.000	-0.030	0.000
OF	3.000	-17.148	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	4.000	-17.175	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	5.000	-17.203	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	6.000	-17.230	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	7.000	-17.258	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	8.000	-17.285	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	9.000	-17.313	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	10.000	-17.340	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	11.000	-17.368	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	12.000	-17.395	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	13.000	-17.423	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	14.000	-17.450	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	15.000	-17.478	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	16.000	-17.505	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	17.000	-17.533	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	18.000	-17.560	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	19.000	-17.588	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	20.000	-17.615	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	21.000	-17.643	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	22.000	-17.670	0.000	8.851	0.000	0.000	0.000	0.000	0.011	0.000
OF	23.000	-17.621	0.000	8.851	0.000	0.000	0.000	0.000	0.053	0.000
OF	24.000	-17.564	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	25.000	-17.506	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	26.000	-17.449	0.000	8.851	0.000	0.000	0.000	0.000	0.057	0.000
OF	27.000	-17.392	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	28.000	-17.334	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	29.000	-17.277	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	30.000	-17.219	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	31.000	-17.162	0.000	8.851	0.000	0.000	0.000	0.000	0.057	0.000
OF	32.000	-17.105	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	33.000	-17.047	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	34.000	-16.990	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	35.000	-16.932	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	36.000	-16.875	0.000	8.851	0.000	0.000	0.000	0.000	0.057	0.000
OF	37.000	-16.818	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	38.000	-16.760	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	39.000	-16.703	0.000	8.850	0.000	0.000	0.000	0.000	0.058	0.000
OF	40.000	-16.645	0.000	8.850	0.000	0.000	0.000	0.000	0.058	0.000
OF	41.000	-16.588	0.000	8.850	0.000	0.000	0.000	0.000	0.056	0.000
OF	42.000	-16.533	0.000	8.850	0.000	0.000	0.000	0.000	0.054	0.000
OF	43.000	-16.481	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	44.000	-16.430	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	45.000	-16.378	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	46.000	-16.327	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	47.000	-16.275	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	48.000	-16.224	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	49.000	-16.172	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	50.000	-16.121	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	51.000	-16.069	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	52.000	-16.018	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	53.000	-15.966	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	54.000	-15.915	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	55.000	-15.863	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	56.000	-15.812	0.000	8.850	0.000	0.000	0.000	0.000	0.051	0.000
OF	57.000	-15.761	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	58.000	-15.709	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	59.000	-15.658	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	60.000	-15.606	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	61.000	-15.555	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	62.000	-15.503	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	63.000	-15.452	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	64.000	-15.400	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	65.000	-15.349	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	66.000	-15.297	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	67.000	-15.246	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	68.000	-15.194	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	69.000	-15.143	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	70.000	-15.091	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	71.000	-15.040	0.000	8.850	0.000	0.000	0.000	0.000	0.051	0.000
OF	72.000	-14.989	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	73.000	-14.937	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	74.000	-14.886	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	75.000	-14.834	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	76.000	-14.783	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	77.000	-14.731	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	78.000	-14.680	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	79.000	-14.628	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	80.000	-14.577	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	81.000	-14.525	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	82.000	-14.474	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	83.000	-14.422	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	84.000	-14.371	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	85.000	-14.319	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	86.000	-14.268	0.000	8.849	0.000	0.000	0.000	0.000	0.051	0.000
OF	87.000	-14.217	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	88.000	-14.165	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	89.000	-14.114	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	90.000	-14.062	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	91.000	-14.011	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	92.000	-13.959	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	93.000	-13.908	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	94.000	-13.856	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	95.000	-13.805	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	96.000	-13.753	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	97.000	-13.702	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	98.000	-13.650	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	99.000	-13.599	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	100.000	-13.547	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000

OF	101.000	-13.496	0.000	8.849	0.000	0.000	0.000	0.000	0.051	0.000
OF	102.000	-13.445	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	103.000	-13.393	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	104.000	-13.342	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	105.000	-13.290	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	106.000	-13.239	0.000	8.849	0.000	0.000	0.000	0.000	0.062	0.000
OF	107.000	-13.167	0.000	8.848	0.000	0.000	0.000	0.000	0.084	0.000
OF	108.000	-13.071	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	109.000	-12.974	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	110.000	-12.877	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	111.000	-12.780	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	112.000	-12.684	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	113.000	-12.587	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	114.000	-12.490	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	115.000	-12.393	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	116.000	-12.297	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	117.000	-12.200	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	118.000	-12.103	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	119.000	-12.007	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	120.000	-11.910	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
OF	121.000	-11.813	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
OF	122.000	-11.716	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
OF	123.000	-11.620	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
OF	124.000	-11.523	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
OF	125.000	-11.426	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
OF	126.000	-11.329	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
OF	127.000	-11.232	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
OF	128.000	-11.134	0.000	8.847	0.000	0.000	0.000	0.000	0.098	0.000
OF	129.000	-11.035	0.000	8.847	0.000	0.000	0.000	0.000	0.099	0.000
OF	130.000	-10.936	0.000	8.847	0.000	0.000	0.000	0.000	0.099	0.000
OF	131.000	-10.837	0.000	8.847	0.000	0.000	0.000	0.000	0.099	0.000
OF	132.000	-10.738	0.000	8.847	0.000	0.000	0.000	0.000	0.099	0.000
OF	133.000	-10.639	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
OF	134.000	-10.540	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
OF	135.000	-10.441	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
OF	136.000	-10.342	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
OF	137.000	-10.243	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
OF	138.000	-10.144	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
OF	139.000	-10.045	0.000	8.846	0.000	0.000	0.000	0.000	0.098	0.000
OF	140.000	-9.947	0.000	8.846	0.000	0.000	0.000	0.000	0.098	0.000
OF	141.000	-9.848	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
OF	142.000	-9.749	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
OF	143.000	-9.650	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
OF	144.000	-9.551	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
OF	145.000	-9.452	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
OF	146.000	-9.353	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
OF	147.000	-9.254	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
OF	148.000	-9.156	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
OF	149.000	-9.057	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
OF	150.000	-8.958	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
OF	151.000	-8.859	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
OF	152.000	-8.760	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
OF	153.000	-8.661	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
OF	154.000	-8.562	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
OF	155.000	-8.463	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
OF	156.000	-8.364	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
OF	157.000	-8.265	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
OF	158.000	-8.166	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
OF	159.000	-8.067	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
OF	160.000	-7.968	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
OF	161.000	-7.870	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
OF	162.000	-7.771	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
OF	163.000	-7.672	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
OF	164.000	-7.573	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
OF	165.000	-7.474	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
OF	166.000	-7.375	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
OF	167.000	-7.276	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
OF	168.000	-7.177	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
OF	169.000	-7.078	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
OF	170.000	-6.979	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
OF	171.000	-6.880	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
OF	172.000	-6.781	0.000	8.841	0.000	0.000	0.000	0.000	0.099	0.000
OF	173.000	-6.682	0.000	8.841	0.000	0.000	0.000	0.000	0.099	0.000
OF	174.000	-6.583	0.000	8.841	0.000	0.000	0.000	0.000	0.099	0.000
OF	175.000	-6.485	0.000	8.841	0.000	0.000	0.000	0.000	0.073	0.000
OF	176.000	-6.437	0.000	8.841	0.000	0.000	0.000	0.000	0.001	0.000
OF	177.000	-6.483	0.000	8.841	0.000	0.000	0.000	0.000	-0.047	0.000
OF	178.000	-6.530	0.000	8.841	0.000	0.000	0.000	0.000	-0.047	0.000
OF	179.000	-6.576	0.000	8.841	0.000	0.000	0.000	0.000	-0.047	0.000
OF	180.000	-6.623	0.000	8.841	0.000	0.000	0.000	0.000	-0.047	0.000
OF	181.000	-6.669	0.000	8.841	0.000	0.000	0.000	0.000	-0.047	0.000
OF	182.000	-6.716	0.000	8.841	0.000	0.000	0.000	0.000	-0.047	0.000
OF	183.000	-6.763	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	184.000	-6.809	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	185.000	-6.856	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	186.000	-6.902	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	187.000	-6.949	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	188.000	-6.995	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	189.000	-7.042	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	190.000	-7.089	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	191.000	-7.135	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	192.000	-7.182	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	193.000	-7.228	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	194.000	-7.275	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	195.000	-7.321	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	196.000	-7.368	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	197.000	-7.414	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	198.000	-7.461	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	199.000	-7.508	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	200.000	-7.554	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	201.000	-7.601	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	202.000	-7.647	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	203.000	-7.694	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	204.000	-7.740	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	205.000	-7.787	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	206.000	-7.833	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	207.000	-7.880	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	208.000	-7.926	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	209.000	-7.973	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	210.000	-8.020	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000

OF	211.000	-8.066	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
OF	212.000	-8.113	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
OF	213.000	-8.159	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
OF	214.000	-8.206	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
OF	215.000	-8.252	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
OF	216.000	-8.299	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
OF	217.000	-8.345	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
OF	218.000	-8.392	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
OF	219.000	-8.439	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
OF	220.000	-8.485	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
OF	221.000	-8.532	0.000	8.844	0.000	0.000	0.000	0.000	-0.030	0.000
OF	222.000	-8.545	0.000	8.844	0.000	0.000	0.000	0.000	0.022	0.000
OF	223.000	-8.488	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
OF	224.000	-8.430	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
OF	225.000	-8.372	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
OF	226.000	-8.314	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
OF	227.000	-8.257	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
OF	228.000	-8.199	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
OF	229.000	-8.141	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
OF	230.000	-8.083	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
OF	231.000	-8.025	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
OF	232.000	-7.968	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
OF	233.000	-7.910	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	234.000	-7.852	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	235.000	-7.794	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	236.000	-7.736	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	237.000	-7.678	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	238.000	-7.621	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	239.000	-7.563	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	240.000	-7.505	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	241.000	-7.447	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	242.000	-7.389	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	243.000	-7.332	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	244.000	-7.274	0.000	8.842	0.000	0.000	0.000	0.000	0.058	0.000
OF	245.000	-7.216	0.000	8.842	0.000	0.000	0.000	0.000	0.058	0.000
OF	246.000	-7.158	0.000	8.842	0.000	0.000	0.000	0.000	0.058	0.000
OF	247.000	-7.100	0.000	8.842	0.000	0.000	0.000	0.000	0.058	0.000
OF	248.000	-7.043	0.000	8.842	0.000	0.000	0.000	0.000	0.058	0.000
OF	249.000	-6.985	0.000	8.842	0.000	0.000	0.000	0.000	0.057	0.000
OF	250.000	-6.928	0.000	8.842	0.000	0.000	0.000	0.000	0.051	0.000
OF	251.000	-6.882	0.000	8.842	0.000	0.000	0.000	0.000	0.046	0.000
OF	252.000	-6.836	0.000	8.842	0.000	0.000	0.000	0.000	0.046	0.000
OF	253.000	-6.790	0.000	8.842	0.000	0.000	0.000	0.000	0.046	0.000
OF	254.000	-6.745	0.000	8.842	0.000	0.000	0.000	0.000	0.046	0.000
OF	255.000	-6.699	0.000	8.842	0.000	0.000	0.000	0.000	0.046	0.000
OF	256.000	-6.653	0.000	8.842	0.000	0.000	0.000	0.000	0.046	0.000
OF	257.000	-6.607	0.000	8.842	0.000	0.000	0.000	0.000	0.046	0.000
OF	258.000	-6.561	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	259.000	-6.515	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	260.000	-6.470	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	261.000	-6.424	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	262.000	-6.378	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	263.000	-6.332	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	264.000	-6.286	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	265.000	-6.240	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	266.000	-6.194	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	267.000	-6.149	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	268.000	-6.103	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	269.000	-6.057	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	270.000	-6.011	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	271.000	-5.965	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	272.000	-5.920	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
OF	273.000	-5.874	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
OF	274.000	-5.828	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
OF	275.000	-5.782	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
OF	276.000	-5.736	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
OF	277.000	-5.690	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
OF	278.000	-5.645	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
OF	279.000	-5.599	0.000	8.840	0.000	0.000	0.000	0.000	0.028	0.000
OF	280.000	-5.588	0.000	8.840	0.000	0.000	0.000	0.000	0.005	0.000
OF	281.000	-5.588	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
OF	282.000	-5.587	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
OF	283.000	-5.587	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
OF	284.000	-5.586	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
OF	285.000	-5.586	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
OF	286.000	-5.585	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
OF	287.000	-5.584	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
OF	288.000	-5.584	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
OF	289.000	-5.583	0.000	8.840	0.000	0.000	0.000	0.000	0.045	0.000
OF	389.000	-1.087	0.000	8.845	0.000	0.000	0.000	0.000	0.046	0.000
OF	390.000	-0.962	0.000	8.846	0.000	0.000	0.000	0.000	0.130	0.000
OF	391.000	-0.827	0.000	8.846	0.000	0.000	0.000	0.000	0.135	0.000
OF	392.000	-0.692	0.000	8.846	0.000	0.000	0.000	0.000	0.134	0.000
OF	393.000	-0.560	0.000	8.846	0.000	0.000	0.000	0.000	0.127	0.000
OF	394.000	-0.438	0.000	8.846	0.000	0.000	0.000	0.000	0.115	0.000
OF	395.000	-0.329	0.000	8.846	0.000	0.000	0.000	0.000	0.108	0.000
OF	396.000	-0.223	0.000	8.846	0.000	0.000	0.000	0.000	0.107	0.000
OF	397.000	-0.116	0.000	8.846	0.000	0.000	0.000	0.000	0.115	0.000
IF	398.000	0.007	0.000	8.846	0.000	0.000	0.000	0.000	0.108	0.000
IF	399.000	0.101	0.000	8.847	0.000	0.000	0.000	0.000	0.087	0.000
IF	400.000	0.181	0.000	8.847	0.000	0.000	0.000	0.000	0.080	0.000
IF	401.000	0.261	0.000	8.847	0.000	0.000	0.000	0.000	0.115	0.000
IF	402.000	0.410	0.000	8.847	0.000	0.000	0.000	0.000	0.145	0.000
IF	403.000	0.551	0.000	8.847	0.000	0.000	0.000	0.000	0.135	0.000
IF	404.000	0.680	0.000	8.848	0.000	0.000	0.000	0.000	0.121	0.000
IF	405.000	0.793	0.000	8.848	0.000	0.000	0.000	0.000	0.105	0.000
IF	406.000	0.890	0.000	8.849	0.000	0.000	0.000	0.000	0.083	0.000
IF	407.000	0.960	0.000	8.849	0.000	0.000	0.000	0.000	0.070	0.000
IF	408.000	1.029	0.000	8.850	0.000	0.000	0.000	0.000	0.071	0.000
IF	409.000	1.102	0.000	8.850	0.000	0.000	0.000	0.000	0.080	0.000
IF	410.000	1.189	0.000	8.851	0.000	0.000	0.000	0.000	0.087	0.000
IF	411.000	1.276	0.000	8.852	0.000	0.000	0.000	0.000	0.092	0.000
IF	412.000	1.373	0.000	8.852	0.000	0.000	0.000	0.000	0.102	0.000
IF	413.000	1.480	0.000	8.853	0.000	0.000	0.000	0.000	0.106	0.000
IF	414.000	1.586	0.000	8.854	0.000	0.000	0.000	0.000	0.106	0.000
IF	415.000	1.692	0.000	8.854	0.000	0.000	0.000	0.000	0.106	0.000
IF	416.000	1.799	0.000	8.855	0.000	0.000	0.000	0.000	0.096	0.000
IF	417.000	1.885	0.000	8.856	0.000	0.000	0.000	0.000	0.082	0.000
IF	418.000	1.963	0.000	8.857	0.000	0.000	0.000	0.000	0.092	0.000
IF	419.000	2.069	0.000	8.858	0.000	0.000	0.000	0.000	0.107	0.000

IF	420.000	2.176	0.000	8.859	0.000	0.000	0.000	0.000	0.107	0.000
IF	421.000	2.283	0.000	8.860	0.000	0.000	0.000	0.000	0.113	0.000
IF	422.000	2.403	0.000	8.861	0.000	0.000	0.000	0.000	0.122	0.000
IF	423.000	2.527	0.000	8.861	0.000	0.000	0.000	0.000	0.114	0.000
IF	424.000	2.632	0.000	8.862	0.000	0.000	0.000	0.000	0.159	0.000
IF	425.000	2.845	0.000	8.863	0.000	0.000	0.000	0.000	0.257	0.000
IF	426.000	3.147	0.000	8.863	0.000	0.000	0.000	0.000	0.292	0.000
IF	427.000	3.429	0.000	8.864	0.000	0.000	0.000	0.000	0.289	0.000
IF	428.000	3.725	0.000	8.865	0.000	0.000	0.000	0.000	0.306	0.000
IF	429.000	4.042	0.000	8.866	0.000	0.000	0.000	0.000	0.316	0.000
IF	430.000	4.357	0.000	8.870	0.000	0.000	0.000	0.000	0.293	0.000
IF	431.000	4.628	0.000	8.883	0.000	0.000	0.000	0.000	0.391	0.000
IF	432.000	5.140	0.000	8.896	0.000	0.000	0.000	0.000	0.730	0.000
IF	433.000	6.088	0.000	8.910	0.000	0.000	0.000	0.000	0.876	0.000
IF	434.000	6.891	0.000	8.967	0.000	0.000	0.000	0.000	0.765	0.000
IF	435.000	7.618	0.000	9.026	0.000	0.000	0.000	0.000	0.722	0.000
IF	436.000	8.336	0.000	9.087	0.000	0.000	0.000	0.000	0.699	0.000
IF	437.100	9.087	0.000	9.087	0.000	0.000	0.000	0.000	0.682	0.000
AS	633.000	9.087	0.000	9.087	0.000	0.000	0.000	0.000	0.682	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	-17.056	1.000	1.000	8.851	9.369	9.612	56.140	-0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	1.000	-17.089	0.000	8.851	0.000	0.000	0.000	0.000	-0.032	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2.000	-17.120	0.000	8.851	0.000	0.000	0.000	0.000	-0.030	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3.000	-17.148	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	4.000	-17.175	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	5.000	-17.203	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	6.000	-17.230	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	7.000	-17.258	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	8.000	-17.285	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	9.000	-17.313	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	10.000	-17.340	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	11.000	-17.368	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	12.000	-17.395	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	13.000	-17.423	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	14.000	-17.450	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	15.000	-17.478	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	16.000	-17.505	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	17.000	-17.533	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	18.000	-17.560	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	19.000	-17.588	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	20.000	-17.615	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	21.000	-17.643	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	22.000	-17.670	0.000	8.851	0.000	0.000	0.000	0.000	0.011	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	23.000	-17.621	0.000	8.851	0.000	0.000	0.000	0.000	0.053	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	24.000	-17.564	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	25.000	-17.506	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	26.000	-17.449	0.000	8.851	0.000	0.000	0.000	0.000	0.057	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	27.000	-17.392	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	28.000	-17.334	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES

OF	29.000	-17.277	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	30.000	-17.219	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	31.000	-17.162	0.000	8.851	0.000	0.000	0.000	0.000	0.057	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	32.000	-17.105	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	33.000	-17.047	0.000	8.851	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	34.000	-16.990	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	35.000	-16.932	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	36.000	-16.875	0.000	8.851	0.000	0.000	0.000	0.000	0.057	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	37.000	-16.818	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	38.000	-16.760	0.000	8.851	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	39.000	-16.703	0.000	8.850	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	40.000	-16.645	0.000	8.850	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	41.000	-16.588	0.000	8.850	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	42.000	-16.533	0.000	8.850	0.000	0.000	0.000	0.000	0.054	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	43.000	-16.481	0.000	8.850	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	44.000	-16.430	0.000	8.850	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	45.000	-16.378	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	46.000	-16.327	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	47.000	-16.275	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	48.000	-16.224	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	49.000	-16.172	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	50.000	-16.121	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	51.000	-16.069	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	52.000	-16.018	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	53.000	-15.966	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	54.000	-15.915	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	55.000	-15.863	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	56.000	-15.812	0.000	8.850	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	57.000	-15.761	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	58.000	-15.709	0.000	8.850	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	59.000	-15.658	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	60.000	-15.606	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	61.000	-15.555	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	62.000	-15.503	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	63.000	-15.452	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	64.000	-15.400	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	65.000	-15.349	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE

	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	66.000	-15.297	0.000	8.850	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	67.000	-15.246	0.000	8.850	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	68.000	-15.194	0.000	8.850	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	69.000	-15.143	0.000	8.850	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	70.000	-15.091	0.000	8.850	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	71.000	-15.040	0.000	8.850	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	72.000	-14.989	0.000	8.850	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	73.000	-14.937	0.000	8.850	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	74.000	-14.886	0.000	8.850	0.000	0.000	0.000	0.000		0.052	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	75.000	-14.834	0.000	8.849	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	76.000	-14.783	0.000	8.849	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	77.000	-14.731	0.000	8.849	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	78.000	-14.680	0.000	8.849	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	79.000	-14.628	0.000	8.849	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	80.000	-14.577	0.000	8.849	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	81.000	-14.525	0.000	8.849	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	82.000	-14.474	0.000	8.849	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	83.000	-14.422	0.000	8.849	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	84.000	-14.371	0.000	8.849	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	85.000	-14.319	0.000	8.849	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	86.000	-14.268	0.000	8.849	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	87.000	-14.217	0.000	8.849	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	88.000	-14.165	0.000	8.849	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	89.000	-14.114	0.000	8.849	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	90.000	-14.062	0.000	8.849	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	91.000	-14.011	0.000	8.849	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	92.000	-13.959	0.000	8.849	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	93.000	-13.908	0.000	8.849	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	94.000	-13.856	0.000	8.849	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	95.000	-13.805	0.000	8.849	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	96.000	-13.753	0.000	8.849	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	97.000	-13.702	0.000	8.849	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	98.000	-13.650	0.000	8.849	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	99.000	-13.599	0.000	8.849	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	100.000	-13.547	0.000	8.849	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	101.000	-13.496	0.000	8.849	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	102.000	-13.445	0.000	8.849	0.000	0.000	0.000	0.000		0.052	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	103.000	-13.393	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	104.000	-13.342	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	105.000	-13.290	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	106.000	-13.239	0.000	8.849	0.000	0.000	0.000	0.000	0.062	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	107.000	-13.167	0.000	8.848	0.000	0.000	0.000	0.000	0.084	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	108.000	-13.071	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	109.000	-12.974	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	110.000	-12.877	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	111.000	-12.780	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	112.000	-12.684	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	113.000	-12.587	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	114.000	-12.490	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	115.000	-12.393	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	116.000	-12.297	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	117.000	-12.200	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	118.000	-12.103	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	119.000	-12.007	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	120.000	-11.910	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	121.000	-11.813	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	122.000	-11.716	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	123.000	-11.620	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	124.000	-11.523	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	125.000	-11.426	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	126.000	-11.329	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	127.000	-11.232	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	128.000	-11.134	0.000	8.847	0.000	0.000	0.000	0.000	0.098	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	129.000	-11.035	0.000	8.847	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	130.000	-10.936	0.000	8.847	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	131.000	-10.837	0.000	8.847	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	132.000	-10.738	0.000	8.847	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	133.000	-10.639	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	134.000	-10.540	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	135.000	-10.441	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	136.000	-10.342	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	137.000	-10.243	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	138.000	-10.144	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES

OF	139.000	-10.045	0.000	8.846	0.000	0.000	0.000	0.000	0.098	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	140.000	-9.947	0.000	8.846	0.000	0.000	0.000	0.000	0.098	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	141.000	-9.848	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	142.000	-9.749	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	143.000	-9.650	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	144.000	-9.551	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	145.000	-9.452	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	146.000	-9.353	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	147.000	-9.254	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	148.000	-9.156	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	149.000	-9.057	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	150.000	-8.958	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	151.000	-8.859	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	152.000	-8.760	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	153.000	-8.661	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	154.000	-8.562	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	155.000	-8.463	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	156.000	-8.364	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	157.000	-8.265	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	158.000	-8.166	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	159.000	-8.067	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	160.000	-7.968	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	161.000	-7.870	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	162.000	-7.771	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	163.000	-7.672	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	164.000	-7.573	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	165.000	-7.474	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	166.000	-7.375	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	167.000	-7.276	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	168.000	-7.177	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	169.000	-7.078	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	170.000	-6.979	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	171.000	-6.880	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	172.000	-6.781	0.000	8.841	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	173.000	-6.682	0.000	8.841	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	174.000	-6.583	0.000	8.841	0.000	0.000	0.000	0.000	0.099	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	175.000	-6.485	0.000	8.841	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	176.000	-6.437	0.000	8.841	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	177.000	-6.483	0.000	8.841	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	-6.530	0.000	8.841	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	179.000	-6.576	0.000	8.841	0.000	0.000	0.000	0.000		-0.047	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	180.000	-6.623	0.000	8.841	0.000	0.000	0.000	0.000		-0.047	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	181.000	-6.669	0.000	8.841	0.000	0.000	0.000	0.000		-0.047	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	182.000	-6.716	0.000	8.841	0.000	0.000	0.000	0.000		-0.047	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	183.000	-6.763	0.000	8.842	0.000	0.000	0.000	0.000		-0.047	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	184.000	-6.809	0.000	8.842	0.000	0.000	0.000	0.000		-0.047	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	185.000	-6.856	0.000	8.842	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	186.000	-6.902	0.000	8.842	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	187.000	-6.949	0.000	8.842	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	188.000	-6.995	0.000	8.842	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	189.000	-7.042	0.000	8.842	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	190.000	-7.089	0.000	8.842	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	191.000	-7.135	0.000	8.842	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	192.000	-7.182	0.000	8.842	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	193.000	-7.228	0.000	8.842	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	194.000	-7.275	0.000	8.842	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	195.000	-7.321	0.000	8.842	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	196.000	-7.368	0.000	8.843	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	197.000	-7.414	0.000	8.843	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	198.000	-7.461	0.000	8.843	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	199.000	-7.508	0.000	8.843	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	200.000	-7.554	0.000	8.843	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	201.000	-7.601	0.000	8.843	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	202.000	-7.647	0.000	8.843	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	203.000	-7.694	0.000	8.843	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	204.000	-7.740	0.000	8.843	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	205.000	-7.787	0.000	8.843	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	206.000	-7.833	0.000	8.843	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	207.000	-7.880	0.000	8.843	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	208.000	-7.926	0.000	8.843	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	209.000	-7.973	0.000	8.843	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	210.000	-8.020	0.000	8.844	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	211.000	-8.066	0.000	8.844	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	212.000	-8.113	0.000	8.844	0.000	0.000	0.000	0.000		-0.047	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	213.000	-8.159	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	214.000	-8.206	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	215.000	-8.252	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	216.000	-8.299	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	217.000	-8.345	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	218.000	-8.392	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	219.000	-8.439	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	220.000	-8.485	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	221.000	-8.532	0.000	8.844	0.000	0.000	0.000	0.000	-0.030	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	222.000	-8.545	0.000	8.844	0.000	0.000	0.000	0.000	0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	223.000	-8.488	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	224.000	-8.430	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	225.000	-8.372	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	226.000	-8.314	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	227.000	-8.257	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	228.000	-8.199	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	229.000	-8.141	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	230.000	-8.083	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	231.000	-8.025	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	232.000	-7.968	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	233.000	-7.910	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	234.000	-7.852	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	235.000	-7.794	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	236.000	-7.736	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	237.000	-7.678	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	238.000	-7.621	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	239.000	-7.563	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	240.000	-7.505	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	241.000	-7.447	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	242.000	-7.389	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	243.000	-7.332	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	244.000	-7.274	0.000	8.842	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	245.000	-7.216	0.000	8.842	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	246.000	-7.158	0.000	8.842	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	247.000	-7.100	0.000	8.842	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	248.000	-7.043	0.000	8.842	0.000	0.000	0.000	0.000	0.058	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES

OF	249.000	-6.985	0.000	8.842	0.000	0.000	0.000	0.000	0.057	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	250.000	-6.928	0.000	8.842	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	251.000	-6.882	0.000	8.842	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	252.000	-6.836	0.000	8.842	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	253.000	-6.790	0.000	8.842	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	254.000	-6.745	0.000	8.842	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	255.000	-6.699	0.000	8.842	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	256.000	-6.653	0.000	8.842	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	257.000	-6.607	0.000	8.842	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	258.000	-6.561	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	259.000	-6.515	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	260.000	-6.470	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	261.000	-6.424	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	262.000	-6.378	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	263.000	-6.332	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	264.000	-6.286	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	265.000	-6.240	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	266.000	-6.194	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	267.000	-6.149	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	268.000	-6.103	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	269.000	-6.057	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	270.000	-6.011	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	271.000	-5.965	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	272.000	-5.920	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	273.000	-5.874	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	274.000	-5.828	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	275.000	-5.782	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	276.000	-5.736	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	277.000	-5.690	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	278.000	-5.645	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	279.000	-5.599	0.000	8.840	0.000	0.000	0.000	0.000	0.028	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	280.000	-5.588	0.000	8.840	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	281.000	-5.588	0.000	8.840	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	282.000	-5.587	0.000	8.840	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	283.000	-5.587	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	284.000	-5.586	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	285.000	-5.586	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE

	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	286.000	-5.585	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	287.000	-5.584	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	288.000	-5.584	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	289.000	-5.583	0.000	8.840	0.000	0.000	0.000	0.000	0.045	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	389.000	-1.087	0.000	8.845	0.000	0.000	0.000	0.000	0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	390.000	-0.962	0.000	8.846	0.000	0.000	0.000	0.000	0.130	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	391.000	-0.827	0.000	8.846	0.000	0.000	0.000	0.000	0.135	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	392.000	-0.692	0.000	8.846	0.000	0.000	0.000	0.000	0.134	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	393.000	-0.560	0.000	8.846	0.000	0.000	0.000	0.000	0.127	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	394.000	-0.438	0.000	8.846	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
OF	395.000	-0.329	0.000	8.846	0.000	0.000	0.000	0.000	0.108	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	396.000	-0.223	0.000	8.846	0.000	0.000	0.000	0.000	0.107	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	397.000	-0.116	0.000	8.846	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	398.000	0.007	0.000	8.846	0.000	0.000	0.000	0.000	0.108	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	399.000	0.101	0.000	8.847	0.000	0.000	0.000	0.000	0.087	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	400.000	0.181	0.000	8.847	0.000	0.000	0.000	0.000	0.080	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	401.000	0.261	0.000	8.847	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	402.000	0.410	0.000	8.847	0.000	0.000	0.000	0.000	0.145	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	403.000	0.551	0.000	8.847	0.000	0.000	0.000	0.000	0.135	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	404.000	0.680	0.000	8.848	0.000	0.000	0.000	0.000	0.121	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	405.000	0.793	0.000	8.848	0.000	0.000	0.000	0.000	0.105	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	406.000	0.890	0.000	8.849	0.000	0.000	0.000	0.000	0.083	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	407.000	0.960	0.000	8.849	0.000	0.000	0.000	0.000	0.070	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	408.000	1.029	0.000	8.850	0.000	0.000	0.000	0.000	0.071	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	409.000	1.102	0.000	8.850	0.000	0.000	0.000	0.000	0.080	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	410.000	1.189	0.000	8.851	0.000	0.000	0.000	0.000	0.087	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	411.000	1.276	0.000	8.852	0.000	0.000	0.000	0.000	0.092	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	412.000	1.373	0.000	8.852	0.000	0.000	0.000	0.000	0.102	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	413.000	1.480	0.000	8.853	0.000	0.000	0.000	0.000	0.106	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	414.000	1.586	0.000	8.854	0.000	0.000	0.000	0.000	0.106	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	415.000	1.692	0.000	8.854	0.000	0.000	0.000	0.000	0.106	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	416.000	1.799	0.000	8.855	0.000	0.000	0.000	0.000	0.096	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	417.000	1.885	0.000	8.856	0.000	0.000	0.000	0.000	0.082	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	418.000	1.963	0.000	8.857	0.000	0.000	0.000	0.000	0.092	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	419.000	2.069	0.000	8.858	0.000	0.000	0.000	0.000	0.107	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	420.000	2.176	0.000	8.859	0.000	0.000	0.000	0.000	0.107	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	421.000	2.283	0.000	8.860	0.000	0.000	0.000	0.000	0.113	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	422.000	2.403	0.000	8.861	0.000	0.000	0.000	0.000	0.122	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	423.000	2.527	0.000	8.861	0.000	0.000	0.000	0.000	0.114	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	424.000	2.632	0.000	8.862	0.000	0.000	0.000	0.000	0.159	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	425.000	2.845	0.000	8.863	0.000	0.000	0.000	0.000	0.257	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	426.000	3.147	0.000	8.863	0.000	0.000	0.000	0.000	0.292	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	427.000	3.429	0.000	8.864	0.000	0.000	0.000	0.000	0.289	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	428.000	3.725	0.000	8.865	0.000	0.000	0.000	0.000	0.306	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	429.000	4.042	0.000	8.866	0.000	0.000	0.000	0.000	0.316	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	430.000	4.357	0.000	8.870	0.000	0.000	0.000	0.000	0.293	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	431.000	4.628	0.000	8.883	0.000	0.000	0.000	0.000	0.391	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	432.000	5.140	0.000	8.896	0.000	0.000	0.000	0.000	0.730	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	433.000	6.088	0.000	8.910	0.000	0.000	0.000	0.000	0.876	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	434.000	6.891	0.000	8.967	0.000	0.000	0.000	0.000	0.765	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	435.000	7.618	0.000	9.026	0.000	0.000	0.000	0.000	0.722	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	436.000	8.336	0.000	9.087	0.000	0.000	0.000	0.000	0.699	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	437.100	9.087	0.000	9.087	0.000	0.000	0.000	0.000	0.682	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
AS	633.000	9.087	0.000	9.087	0.000	0.000	0.000	0.000	0.682	0.000

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

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

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

	LOCATION	CONTROLLING WAVE HEIGHT	SPECTRAL PEAK WAVE PERIOD	WAVE CREST ELEVATION
IE	0.00	9.37	9.61	15.41
OF	1.00	9.37	9.61	15.41
OF	2.00	9.36	9.61	15.41
OF	3.00	9.36	9.61	15.40
OF	4.00	9.36	9.61	15.40
OF	5.00	9.36	9.61	15.40
OF	6.00	9.35	9.61	15.40
OF	7.00	9.35	9.61	15.40
OF	8.00	9.35	9.61	15.40
OF	9.00	9.35	9.61	15.39
OF	10.00	9.34	9.61	15.39
OF	11.00	9.34	9.61	15.39
OF	12.00	9.34	9.61	15.39
OF	13.00	9.34	9.61	15.39
OF	14.00	9.33	9.61	15.39
OF	15.00	9.33	9.61	15.38
OF	16.00	9.33	9.61	15.38
OF	17.00	9.33	9.61	15.38
OF	18.00	9.33	9.61	15.38
OF	19.00	9.32	9.61	15.38
OF	20.00	9.32	9.61	15.38
OF	21.00	9.32	9.61	15.37
OF	22.00	9.32	9.61	15.37
OF	23.00	9.32	9.61	15.38
OF	24.00	9.33	9.61	15.38
OF	25.00	9.33	9.61	15.38
OF	26.00	9.34	9.61	15.39
OF	27.00	9.34	9.61	15.39
OF	28.00	9.35	9.61	15.39
OF	29.00	9.35	9.61	15.40
OF	30.00	9.36	9.61	15.40
OF	31.00	9.36	9.61	15.40
OF	32.00	9.37	9.61	15.41
OF	33.00	9.37	9.61	15.41
OF	34.00	9.38	9.61	15.42
OF	35.00	9.38	9.61	15.42
OF	36.00	9.39	9.61	15.42
OF	37.00	9.40	9.61	15.43
OF	38.00	9.40	9.61	15.43
OF	39.00	9.41	9.61	15.43
OF	40.00	9.41	9.61	15.44
OF	41.00	9.42	9.61	15.44
OF	42.00	9.42	9.61	15.45
OF	43.00	9.43	9.61	15.45
OF	44.00	9.43	9.61	15.45
OF	45.00	9.44	9.61	15.46
OF	46.00	9.44	9.61	15.46
OF	47.00	9.45	9.61	15.46
OF	48.00	9.45	9.61	15.47
OF	49.00	9.46	9.61	15.47
OF	50.00	9.46	9.61	15.47

OF	51.00	9.47	9.61	15.48
OF	52.00	9.47	9.61	15.48
OF	53.00	9.48	9.61	15.49
OF	54.00	9.48	9.61	15.49
OF	55.00	9.49	9.61	15.49
OF	56.00	9.50	9.61	15.50
OF	57.00	9.50	9.61	15.50
OF	58.00	9.51	9.61	15.50
OF	59.00	9.51	9.61	15.51
OF	60.00	9.52	9.61	15.51
OF	61.00	9.52	9.61	15.52
OF	62.00	9.53	9.61	15.52
OF	63.00	9.53	9.61	15.52
OF	64.00	9.54	9.61	15.53
OF	65.00	9.54	9.61	15.53
OF	66.00	9.55	9.61	15.53
OF	67.00	9.55	9.61	15.54
OF	68.00	9.56	9.61	15.54
OF	69.00	9.57	9.61	15.55
OF	70.00	9.57	9.61	15.55
OF	71.00	9.58	9.61	15.55
OF	72.00	9.58	9.61	15.56
OF	73.00	9.59	9.61	15.56
OF	74.00	9.59	9.61	15.57
OF	75.00	9.60	9.61	15.57
OF	76.00	9.61	9.61	15.57
OF	77.00	9.61	9.61	15.58
OF	78.00	9.62	9.61	15.58
OF	79.00	9.62	9.61	15.58
OF	80.00	9.63	9.61	15.59
OF	81.00	9.63	9.61	15.59
OF	82.00	9.64	9.61	15.60
OF	83.00	9.65	9.61	15.60
OF	84.00	9.65	9.61	15.61
OF	85.00	9.66	9.61	15.61
OF	86.00	9.66	9.61	15.61
OF	87.00	9.67	9.61	15.62
OF	88.00	9.68	9.61	15.62
OF	89.00	9.68	9.61	15.63
OF	90.00	9.69	9.61	15.63
OF	91.00	9.69	9.61	15.63
OF	92.00	9.70	9.61	15.64
OF	93.00	9.71	9.61	15.64
OF	94.00	9.71	9.61	15.65
OF	95.00	9.72	9.61	15.65
OF	96.00	9.72	9.61	15.66
OF	97.00	9.73	9.61	15.66
OF	98.00	9.74	9.61	15.66
OF	99.00	9.74	9.61	15.67
OF	100.00	9.75	9.61	15.67
OF	101.00	9.75	9.61	15.68
OF	102.00	9.76	9.61	15.68
OF	103.00	9.77	9.61	15.69
OF	104.00	9.77	9.61	15.69
OF	105.00	9.78	9.61	15.70
OF	106.00	9.79	9.61	15.70
OF	107.00	9.80	9.61	15.71
OF	108.00	9.81	9.61	15.71
OF	109.00	9.82	9.61	15.72
OF	110.00	9.83	9.61	15.73
OF	111.00	9.84	9.61	15.74
OF	112.00	9.86	9.61	15.75
OF	113.00	9.87	9.61	15.76
OF	114.00	9.88	9.61	15.77
OF	115.00	9.90	9.61	15.77
OF	116.00	9.91	9.61	15.78
OF	117.00	9.92	9.61	15.79
OF	118.00	9.93	9.61	15.80
OF	119.00	9.95	9.61	15.81
OF	120.00	9.96	9.61	15.82
OF	121.00	9.97	9.61	15.83
OF	122.00	9.99	9.61	15.84
OF	123.00	10.00	9.61	15.85
OF	124.00	10.01	9.61	15.86
OF	125.00	10.03	9.61	15.87
OF	126.00	10.04	9.61	15.88
OF	127.00	10.06	9.61	15.89
OF	128.00	10.07	9.61	15.90
OF	129.00	10.09	9.61	15.91
OF	130.00	10.10	9.61	15.92
OF	131.00	10.12	9.61	15.93
OF	132.00	10.13	9.61	15.94
OF	133.00	10.15	9.61	15.95
OF	134.00	10.16	9.61	15.96
OF	135.00	10.18	9.61	15.97
OF	136.00	10.19	9.61	15.98
OF	137.00	10.21	9.61	15.99
OF	138.00	10.22	9.61	16.00
OF	139.00	10.24	9.61	16.01
OF	140.00	10.26	9.61	16.02
OF	141.00	10.27	9.61	16.04
OF	142.00	10.29	9.61	16.05
OF	143.00	10.30	9.61	16.06
OF	144.00	10.32	9.61	16.07
OF	145.00	10.34	9.61	16.08
OF	146.00	10.36	9.61	16.09
OF	147.00	10.37	9.61	16.11
OF	148.00	10.39	9.61	16.12
OF	149.00	10.41	9.61	16.13
OF	150.00	10.43	9.61	16.14
OF	151.00	10.44	9.61	16.15
OF	152.00	10.46	9.61	16.17
OF	153.00	10.46	9.61	16.17
OF	154.00	10.45	9.61	16.16
OF	155.00	10.44	9.61	16.15
OF	156.00	10.42	9.61	16.14
OF	157.00	10.41	9.61	16.13
OF	158.00	10.40	9.61	16.12
OF	159.00	10.39	9.61	16.12
OF	160.00	10.38	9.61	16.11

OF	161.00	10.36	9.61	16.10
OF	162.00	10.35	9.61	16.09
OF	163.00	10.34	9.61	16.08
OF	164.00	10.33	9.61	16.07
OF	165.00	10.31	9.61	16.06
OF	166.00	10.30	9.61	16.05
OF	167.00	10.29	9.61	16.04
OF	168.00	10.27	9.61	16.03
OF	169.00	10.26	9.61	16.02
OF	170.00	10.25	9.61	16.02
OF	171.00	10.23	9.61	16.01
OF	172.00	10.22	9.61	15.99
OF	173.00	10.21	9.61	15.99
OF	174.00	10.19	9.61	15.98
OF	175.00	10.18	9.61	15.97
OF	176.00	10.17	9.61	15.96
OF	177.00	10.18	9.61	15.97
OF	178.00	10.19	9.61	15.97
OF	179.00	10.20	9.61	15.98
OF	180.00	10.21	9.61	15.99
OF	181.00	10.22	9.61	16.00
OF	182.00	10.23	9.61	16.00
OF	183.00	10.24	9.61	16.01
OF	184.00	10.25	9.61	16.02
OF	185.00	10.26	9.61	16.02
OF	186.00	10.27	9.61	16.03
OF	187.00	10.28	9.61	16.04
OF	188.00	10.29	9.61	16.04
OF	189.00	10.30	9.61	16.05
OF	190.00	10.31	9.61	16.06
OF	191.00	10.32	9.61	16.06
OF	192.00	10.33	9.61	16.07
OF	193.00	10.34	9.61	16.08
OF	194.00	10.35	9.61	16.08
OF	195.00	10.35	9.61	16.09
OF	196.00	10.36	9.61	16.10
OF	197.00	10.37	9.61	16.10
OF	198.00	10.38	9.61	16.11
OF	199.00	10.39	9.61	16.12
OF	200.00	10.40	9.61	16.12
OF	201.00	10.41	9.61	16.13
OF	202.00	10.42	9.61	16.14
OF	203.00	10.43	9.61	16.14
OF	204.00	10.44	9.61	16.15
OF	205.00	10.45	9.61	16.16
OF	206.00	10.46	9.61	16.16
OF	207.00	10.46	9.61	16.17
OF	208.00	10.47	9.61	16.17
OF	209.00	10.48	9.61	16.18
OF	210.00	10.49	9.61	16.19
OF	211.00	10.50	9.61	16.19
OF	212.00	10.51	9.61	16.20
OF	213.00	10.52	9.61	16.21
OF	214.00	10.53	9.61	16.21
OF	215.00	10.54	9.61	16.22
OF	216.00	10.55	9.61	16.23
OF	217.00	10.55	9.61	16.23
OF	218.00	10.56	9.61	16.24
OF	219.00	10.57	9.61	16.24
OF	220.00	10.58	9.61	16.25
OF	221.00	10.59	9.61	16.26
OF	222.00	10.59	9.61	16.26
OF	223.00	10.59	9.61	16.25
OF	224.00	10.58	9.61	16.25
OF	225.00	10.57	9.61	16.25
OF	226.00	10.57	9.61	16.24
OF	227.00	10.56	9.61	16.24
OF	228.00	10.56	9.61	16.23
OF	229.00	10.55	9.61	16.23
OF	230.00	10.54	9.61	16.22
OF	231.00	10.54	9.61	16.22
OF	232.00	10.53	9.61	16.22
OF	233.00	10.52	9.61	16.21
OF	234.00	10.52	9.61	16.21
OF	235.00	10.51	9.61	16.20
OF	236.00	10.50	9.61	16.20
OF	237.00	10.50	9.61	16.19
OF	238.00	10.49	9.61	16.19
OF	239.00	10.48	9.61	16.18
OF	240.00	10.48	9.61	16.18
OF	241.00	10.47	9.61	16.17
OF	242.00	10.46	9.61	16.17
OF	243.00	10.46	9.61	16.16
OF	244.00	10.45	9.61	16.16
OF	245.00	10.44	9.61	16.15
OF	246.00	10.43	9.61	16.15
OF	247.00	10.43	9.61	16.14
OF	248.00	10.42	9.61	16.14
OF	249.00	10.41	9.61	16.13
OF	250.00	10.41	9.61	16.13
OF	251.00	10.40	9.61	16.12
OF	252.00	10.39	9.61	16.12
OF	253.00	10.39	9.61	16.11
OF	254.00	10.38	9.61	16.11
OF	255.00	10.38	9.61	16.11
OF	256.00	10.37	9.61	16.10
OF	257.00	10.37	9.61	16.10
OF	258.00	10.36	9.61	16.09
OF	259.00	10.35	9.61	16.09
OF	260.00	10.35	9.61	16.09
OF	261.00	10.34	9.61	16.08
OF	262.00	10.34	9.61	16.08
OF	263.00	10.33	9.61	16.07
OF	264.00	10.33	9.61	16.07
OF	265.00	10.32	9.61	16.06
OF	266.00	10.31	9.61	16.06
OF	267.00	10.31	9.61	16.06
OF	268.00	10.30	9.61	16.05
OF	269.00	10.29	9.61	16.05
OF	270.00	10.29	9.61	16.04

OF	271.00	10.28	9.61	16.04
OF	272.00	10.28	9.61	16.03
OF	273.00	10.27	9.61	16.03
OF	274.00	10.26	9.61	16.02
OF	275.00	10.26	9.61	16.02
OF	276.00	10.25	9.61	16.02
OF	277.00	10.24	9.61	16.01
OF	278.00	10.24	9.61	16.01
OF	279.00	10.23	9.61	16.00
OF	280.00	10.23	9.61	16.00
OF	281.00	10.23	9.61	16.00
OF	282.00	10.23	9.61	16.00
OF	283.00	10.24	9.61	16.01
OF	284.00	10.24	9.61	16.01
OF	285.00	10.24	9.61	16.01
OF	286.00	10.24	9.61	16.01
OF	287.00	10.24	9.61	16.01
OF	288.00	10.25	9.61	16.01
OF	289.00	10.25	9.61	16.01
OF	389.00	7.50	9.61	14.09
OF	390.00	7.41	9.61	14.03
OF	391.00	7.31	9.61	13.96
OF	392.00	7.21	9.61	13.89
OF	393.00	7.11	9.61	13.83
OF	394.00	7.02	9.61	13.76
OF	395.00	6.94	9.61	13.71
OF	396.00	6.87	9.61	13.65
OF	397.00	6.79	9.61	13.60
IF	398.00	6.70	9.61	13.53
IF	399.00	6.63	9.61	13.49
IF	400.00	6.57	9.61	13.45
IF	401.00	6.51	9.61	13.40
IF	402.00	6.40	9.61	13.33
IF	403.00	6.30	9.61	13.25
IF	404.00	6.20	9.61	13.19
IF	405.00	6.12	9.61	13.13
IF	406.00	6.05	9.61	13.08
IF	407.00	6.00	9.61	13.05
IF	408.00	5.95	9.61	13.01
IF	409.00	5.89	9.61	12.97
IF	410.00	5.83	9.61	12.93
IF	411.00	5.76	9.61	12.89
IF	412.00	5.69	9.61	12.84
IF	413.00	5.61	9.61	12.78
IF	414.00	5.53	9.61	12.73
IF	415.00	5.46	9.61	12.67
IF	416.00	5.38	9.61	12.62
IF	417.00	5.31	9.61	12.58
IF	418.00	5.26	9.61	12.54
IF	419.00	5.18	9.61	12.48
IF	420.00	5.10	9.61	12.43
IF	421.00	5.02	9.61	12.37
IF	422.00	4.93	9.61	12.31
IF	423.00	4.84	9.61	12.25
IF	424.00	4.76	9.61	12.19
IF	425.00	4.60	9.61	12.08
IF	426.00	4.38	9.61	11.93
IF	427.00	4.16	9.61	11.78
IF	428.00	3.94	9.61	11.62
IF	429.00	3.70	9.61	11.46
IF	430.00	3.47	9.61	11.30
IF	431.00	3.27	9.61	11.17
IF	432.00	2.89	9.61	10.92
IF	433.00	2.18	9.61	10.44
IF	434.00	1.61	9.61	10.09
IF	435.00	1.09	9.61	9.79
IF	436.00	0.58	9.61	9.50
IF	437.10	0.01	9.61	9.09
AS	633.00	0.00	0.00	9.09

PART3 LOCATION OF AREAS ABOVE 100-YEAR SURGE
BETWEEN 437.10 AND 633.00

PART4 LOCATION OF SURGE CHANGES

STATION	10-YEAR SURGE	100-YEAR SURGE
39.00	1.00	8.85
75.00	1.00	8.85
107.00	1.00	8.85
120.00	1.00	8.85
133.00	1.00	8.85
142.00	1.00	8.85
150.00	1.00	8.84
159.00	1.00	8.84
165.00	1.00	8.84
172.00	1.00	8.84
183.00	1.00	8.84
196.00	1.00	8.84
210.00	1.00	8.84
233.00	1.00	8.84
244.00	1.00	8.84
258.00	1.00	8.84
272.00	1.00	8.84
389.00	1.00	8.84
390.00	1.00	8.85
399.00	1.00	8.85
404.00	1.00	8.85
406.00	1.00	8.85
408.00	1.00	8.85
410.00	1.00	8.85
411.00	1.00	8.85
413.00	1.00	8.85
414.00	1.00	8.85
416.00	1.00	8.85
417.00	1.00	8.86
418.00	1.00	8.86
419.00	1.00	8.86
420.00	1.00	8.86
421.00	1.00	8.86
422.00	1.00	8.86
424.00	1.00	8.86
425.00	1.00	8.86
427.00	1.00	8.86

428.00	1.00	8.86
429.00	1.00	8.87
430.00	1.00	8.87
431.00	1.00	8.88
432.00	1.00	8.90
433.00	1.00	8.91
434.00	1.00	8.97
435.00	1.00	9.03
436.00	1.00	9.09

PART5 LOCATION OF V ZONES

STATION OF GUTTER	LOCATION OF ZONE
431.72	WINDWARD

PART6 NUMBERED A ZONES AND V ZONES

STATION OF GUTTER	ELEVATION	ZONE DESIGNATION		FHF
0.00	15.41	V22	EL=15	120
38.00	15.43	V22	EL=15	120
39.00	15.43	V22	EL=15	120
56.89	15.50	V22	EL=16	120
74.00	15.57	V22	EL=16	120
75.00	15.57	V22	EL=16	120
106.00	15.70	V22	EL=16	120
107.00	15.71	V22	EL=16	120
119.00	15.81	V22	EL=16	120
120.00	15.82	V22	EL=16	120
132.00	15.94	V22	EL=16	120
133.00	15.95	V22	EL=16	120
141.00	16.04	V22	EL=16	120
142.00	16.05	V22	EL=16	120
149.00	16.13	V22	EL=16	120
150.00	16.14	V22	EL=16	120
158.00	16.12	V22	EL=16	120
159.00	16.12	V22	EL=16	120
164.00	16.07	V22	EL=16	120
165.00	16.06	V22	EL=16	120
171.00	16.01	V22	EL=16	120
172.00	15.99	V22	EL=16	120
182.00	16.00	V22	EL=16	120
183.00	16.01	V22	EL=16	120
195.00	16.09	V22	EL=16	120
196.00	16.10	V22	EL=16	120
209.00	16.18	V22	EL=16	120
210.00	16.19	V22	EL=16	120
232.00	16.22	V22	EL=16	120
233.00	16.21	V22	EL=16	120
243.00	16.16	V22	EL=16	120
244.00	16.16	V22	EL=16	120
257.00	16.10	V22	EL=16	120
258.00	16.09	V22	EL=16	120
271.00	16.04	V22	EL=16	120
272.00	16.03	V22	EL=16	120
289.00	16.01	V22	EL=16	120
315.79	15.50	V22	EL=15	120
367.86	14.50	V22	EL=14	120
389.00	14.09	V22	EL=14	120
390.00	14.03	V22	EL=14	120
398.00	13.53	V22	EL=14	120
398.72	13.50	V22	EL=13	120
399.00	13.49	V22	EL=13	120
403.00	13.25	V22	EL=13	120
404.00	13.19	V22	EL=13	120
405.00	13.13	V22	EL=13	120
406.00	13.08	V22	EL=13	120

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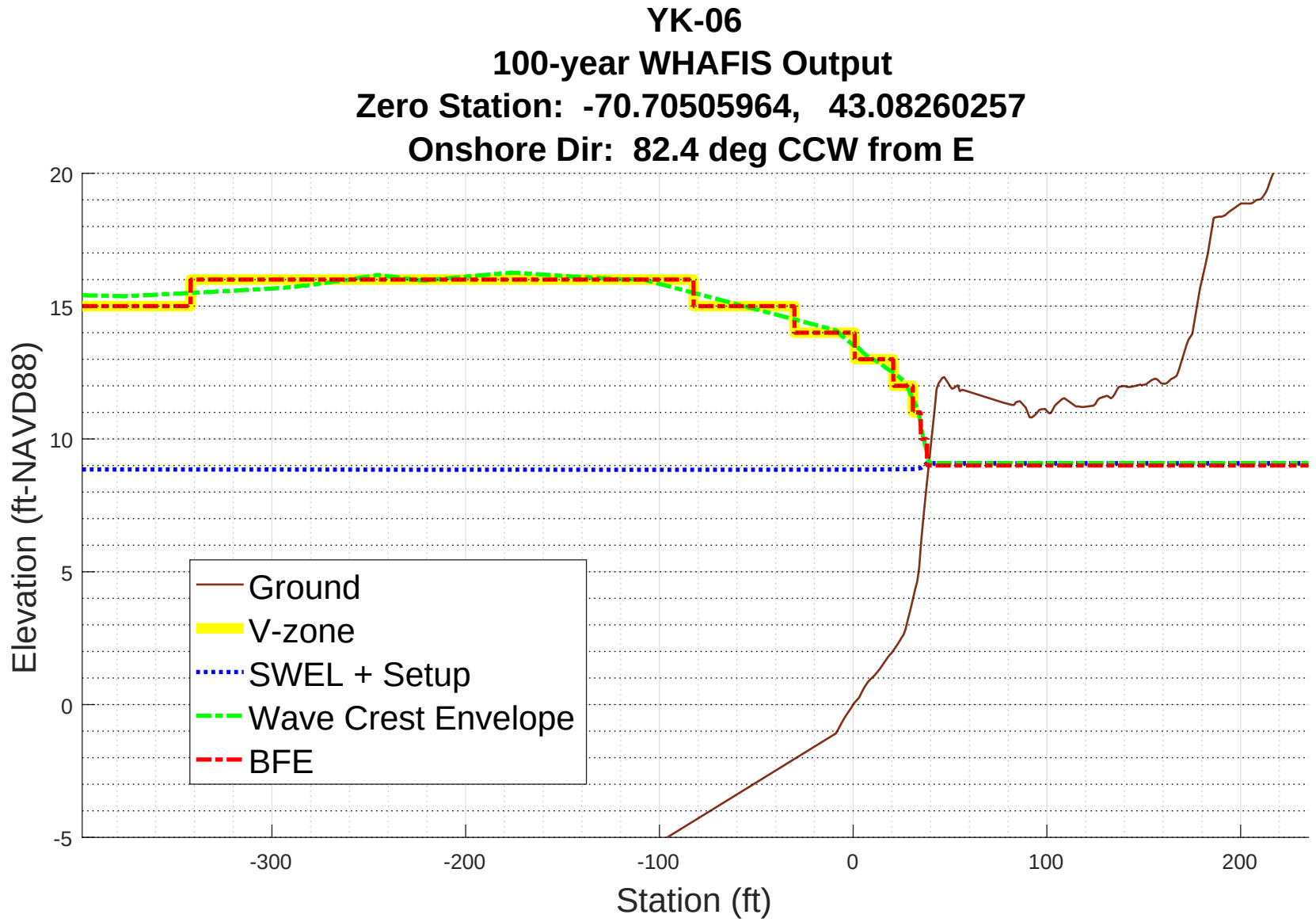
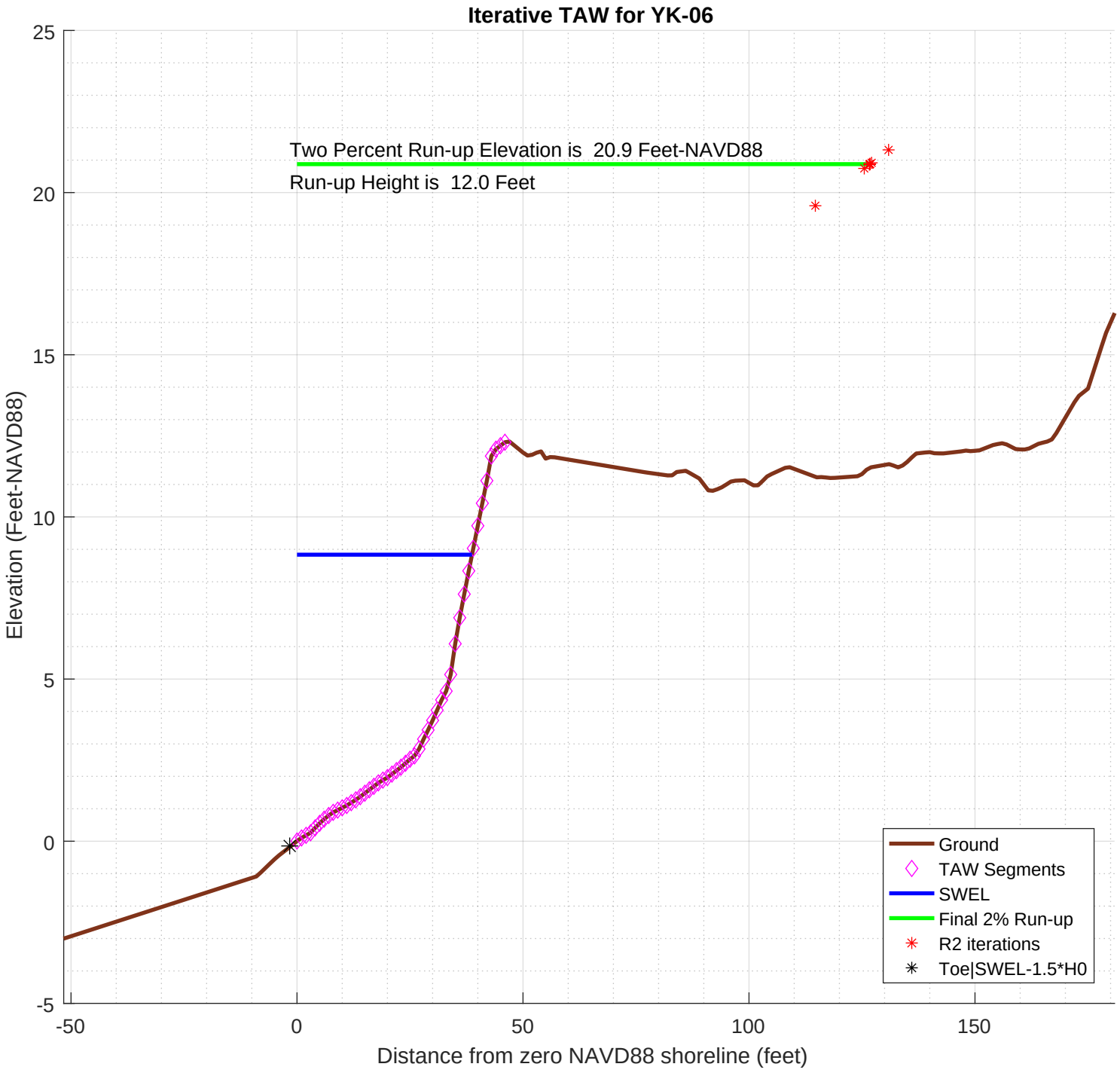
                    407.00          13.05
                                                V22  EL=13     120
                    408.00          13.01
                                                V22  EL=13     120
                    409.00          12.97
                                                V22  EL=13     120
                    410.00          12.93
                                                V22  EL=13     120
                    411.00          12.89
                                                V22  EL=13     120
                    412.00          12.84
                                                V22  EL=13     120
                    413.00          12.78
                                                V22  EL=13     120
                    414.00          12.73
                                                V22  EL=13     120
                    415.00          12.67
                                                V22  EL=13     120
                    416.00          12.62
                                                V22  EL=13     120
                    417.00          12.58
                                                V22  EL=13     120
                    418.00          12.54
                                                V22  EL=13     120
                    418.68          12.50
                                                V22  EL=12     120
                    419.00          12.48
                                                V22  EL=12     120
                    420.00          12.43
                                                V22  EL=12     120
                    421.00          12.37
                                                V22  EL=12     120
                    422.00          12.31
                                                V22  EL=12     120
                    423.00          12.25
                                                V22  EL=12     120
                    424.00          12.19
                                                V22  EL=12     120
                    425.00          12.08
                                                V22  EL=12     120
                    426.00          11.93
                                                V22  EL=12     120
                    427.00          11.78
                                                V22  EL=12     120
                    428.00          11.62
                                                V22  EL=12     120
                    428.75          11.50
                                                V22  EL=11     120
                    429.00          11.46
                                                V22  EL=11     120
                    430.00          11.30
                                                V22  EL=11     120
                    431.00          11.17
                                                V22  EL=11     120
                    431.72          10.99
                                                A16  EL=11      80
                    432.00          10.92
                                                A16  EL=11      80
                    432.87          10.50
                                                A16  EL=10      80
                    433.00          10.44
                                                A16  EL=10      80
                    434.00          10.09
                                                A16  EL=10      80
                    435.00           9.79
                                                A16  EL=10      80
                    435.99           9.50
                                                A16  EL= 9      80
                    436.00           9.50
                                                A16  EL= 9      80
                    437.10           9.09
                    633.00           9.09
                         ZONE TERMINATED AT END OF TRANSECT
                         PART 7   POSTSCRIPT NOTES
               PS#  1   START(361192.1791,4771278.3243)
               PS#  2   END(361217.8661,4771469.8232)
-1.000000e+00
```


YK-06
100-year WHAFIS Output
Zero Station: -70.70505964, 43.08260257
Onshore Dir: 82.4 deg CCW from E
Elevation (ft-NAVD88)
Station (ft)
20
15
10
5
0
-5
-300
-200
-100
0
100
200
Ground
V-zone
SWEL + Setup
Wave Crest Envelope
BFE


Iterative TAW for YK-06
Two Percent Run-up Elevation is 20.9 Feet-NAVD88
Run-up Height is 12.0 Feet
Elevation (Feet-NAVD88)
Distance from zero NAVD88 shoreline (feet)
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

```
diary on         % begin recording

% FEMA appeal for The Town of Kittery, York county, Maine
% TRANSECT ID: YK-06
% calculation by SJH, Ransom Consulting, Inc. 16-Oct-2018
% 100-year wave runup using TAW methodology
% including berm and weighted average with foreshore if necessary
%
% chk nld 20181015
%
% This script assumes that the incident wave conditions provided
% as input in the configuration section below are the
% appropriate values located at the end of the foreshore
% or toe of the slope on which the run-up is being calculated
% the script does not attempt to apply a depth limit or any other
% transformation to the incident wave conditions other than
% conversion of the peak wave period to the spectral mean wave
% as recommended in the references below
%
%
% references:
%
% Van der Meer, J.W., 2002. Technical Report Wave Run-up and
% Wave Overtopping at Dikes. TAW Technical Advisory Committee on
% Flood Defence, The Netherlands.
%
% FEMA. 2007,  Atlantic Ocean and Gulf of Mexico Coastal Guidelines Update
%
%
%

%-------------------------------------------------------------------------
% CONFIG
%-------------------------------------------------------------------------
fname='inpfiles/YK-06sta_ele_include.csv';   % file with station, elevation, include
                                        % third colunm is 0 for excluded points
imgname='logfiles/YK-06-runup';
SWEL=8.8508;  % 100-yr still water level including wave setup.
H0=5.9872;    % significant wave height at toe of structure
Tp=9.7128;    % peak period, 1/fma,
T0=Tp/1.1;

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

setupAtToe=-0.015745;
maxSetup=0.84221;   % only used in case of berm/shallow foreshore weighted average

plotTitle='Iterative TAW for YK-06'

plotTitle =

Iterative TAW for YK-06



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

SWEL=SWEL+setupAtToe

SWEL =

                  8.835055

SWEL_fore=SWEL+maxSetup

SWEL_fore =

                  9.677265



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

L0 =

          398.937287822998


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

% The toe elevation here is only used to determine the average
% structure slope, it is not used to depth limit the wave height.
% Any depth limiting or other modification of the wave height
% to make it consitent with TAW guidance should be performed
% prior to the input of the significant wave height given above.
Ztoe=SWEL-1.5*H0

Ztoe =
```

```
                -0.145745


% read the transect
[sta,dep,inc] = textread(fname,'%n%n%n%*[^\n]','delimiter',',','headerlines',0);

% remove unselected points
k=find(inc==0);
sta(k)=[];
dep(k)=[];

sta_org=sta;  % used for plotting purposes
dep_org=dep;


% initial guess at maximum run-up elevation to estimate slope
Z2=SWEL+1.5*H0

Z2 =

                17.815855


% determine station at the max runup and -1.5*H0 (i.e. the toe)
top_sta=-999;
toe_sta=-999;
for kk=1:length(sta)-1
    if ((Z2 > dep(kk)) & (Z2 <= dep(kk+1)))    % here is the intersection of z2 with profile
       top_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Z2)
    end
    if  ((Ztoe > dep(kk)) & (Ztoe <= dep(kk+1)))    % here is the intersection of Ztoe with profile
       toe_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Ztoe)
    end
end
% check to make sure we got them, if not extend the end slopes outward
S=diff(dep)./diff(sta);
if toe_sta==-999
   dy=dep(1)-Ztoe;
   toe_sta=sta(1)-dy/S(1)
end

toe_sta =

         -1.61765641569459

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

top_sta =

          97.9185969868176


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

top_sta =

          97.9185969868176

toe_sta

toe_sta =

         -1.61765641569459



% check for case where the toe of slope is below SWL-1.5*H0
% in this case interpolate setup from the setupAtToe(really setup as first station), and the max setup
% also un-include points seaward of SWL-1.5*H0
if Ztoe > dep(1)
   dd=SWEL_fore-dep;
   k=find(dd<0,1); % k is index of first land point
   staAtSWL=interp1(dep(k-1:k),sta(k-1:k),SWEL_fore);
   dsta=staAtSWL-sta(1);
   dsetup=maxSetup-setupAtToe;
   dsetdsta=dsetup/dsta;
   setup=setupAtToe+dsetdsta*(toe_sta-sta(1));
   sprintf('-!!- Location of SWEL-1.5*H0 is %4.1f ft landward of toe of slope',dsta)
   sprintf('-!!- Setup is interpolated between setup at toe of slope and max setup')
   sprintf('-!!-       setup is adjusted to %4.2f feet',setup)
   SWEL=SWEL-setupAtToe+setup;
   sprintf('-!!-       SWEL is adjusted to %4.2f feet',SWEL)
   k=find(dep < SWEL-1.5*H0)
   sta(k)=[];
   dep(k)=[];
else
   sprintf('-!!- The User has selected a starting point that is %4.2f feet above the elevation of SWEL-1.5H0\n',de
   sprintf('-!!- This may be reasonable for some cases.  However the user may want to consider:\n')
   sprintf('-!!-   1) Selecting a starting point that is at or below %4.2f feet elevation, or\n', Ztoe)
   sprintf('-!!-   2) Reducing the incident wave height to a depth limited condition.\n')
```

```
end

ans =

-!!- The User has selected a starting point that is 0.15 feet above the elevation of SWEL-1.5H0


ans =

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


ans =

-!!-   1) Selecting a starting point that is at or below -0.15 feet elevation, or


ans =

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




% now iterate converge on a runup elevation
tol=0.001;  % convergence criteria
R2del=999;
R2_new=3*H0; %initial guess
R2=R2_new;
iter=0;
R2_all=[];
topStaAll=[];
Berm_Segs=[];
TAW_ALWAYS_VALID=1;
while(abs(R2del) > tol && iter <= 25)
    iter=iter+1;
    sprintf ('!----------------- STARTING ITERATION %d -----------------!',iter)
    % elevation of toe of slope
    Ztoe
    % station of toe slope (relative to 0-NAVD88 shoreline
    toe_sta
    % station of top of slope/extent of 2% run-up
    top_sta
    % elevation of top of slope/extent of 2% run-up
    Z2
    % incident significant wave height
    H0
    % incident spectral peak wave period
    Tp
    % incident spectral mean wave period
    T0

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

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

    % loop over profile segments to determine berm factor
    % re-calculate influence of depth of berm based on this run-up elevation
    % check for berm, berm width, berm height
    berm_width=0;
    rdh_sum=0;
    Berm_Segs=[];
    Berm_Heights=[];
    for kk=1:length(sta)-1
       ddep=dep(kk+1)-dep(kk);
       dsta=sta(kk+1)-sta(kk);
       s=ddep/dsta;
       if  (s < 1/15)     % count it as a berm if slope is flatter than 1:15 (see TAW manual)
          sprintf ('Berm Factor Calculation: Iteration %d, Profile Segment: %d',iter,kk)
          berm_width=berm_width+dsta;   % tally the width of all berm segments
          % compute the rdh for this segment and weight it by the segment length
          dh=SWEL-(dep(kk)+dep(kk+1))/2
          if  dh < 0
              chi=R2;
          else
              chi=2* H0;
          end
          if (dh <= R2 & dh >=-2*H0)
```

```
         rdh=(0.5-0.5*cos(3.14159*dh/chi)) ;
      else
         rdh=1;
      end
      rdh_sum=rdh_sum + rdh * dsta
      Berm_Segs=[Berm_Segs, kk];
      Berm_Heights=[Berm_Heights, (dep(kk)+dep(kk+1))/2];
   end
   if dep(kk) >= Z2  % jump out of loop if we reached limit of run-up for this iteration
      break
   end
end
sprintf ('!------- End Berm Factor Calculation, Iter: %d ---------!',iter)
berm_width
rB=berm_width/Lslope
if (berm_width > 0)
   rdh_mean=rdh_sum/berm_width
else
   rdh_mean=1
end
gamma_berm=1- rB * (1-rdh_mean)
if gamma_berm > 1
   gamma_berm=1
end
if gamma_berm < 0.6
   gamma_berm =0.6
end
% Iribarren number
slope=(Z2-Ztoe)/(Lslope-berm_width)
Irb=(slope/(sqrt(H0/L0)))
% runup height
gamma_berm
gamma_perm
gamma_beta
gamma_rough
gamma=gamma_berm*gamma_perm*gamma_beta*gamma_rough

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

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


% check to see if we need to evaluate a shallow foreshore
if berm_width > 0.25 * L0;
   disp ('!   Berm_width is greater than 1/4 wave length')
   disp ('!   Runup will be weighted average with foreshore calculation assuming depth limited wave height on
   % do the foreshore calculation
   fore_H0=0.78*(SWEL_fore-min(Berm_Heights))
   % get upper slope
   fore_toe_sta=-999;
   fore_toe_dep=-999;
   for kk=length(dep)-1:-1:1
      ddep=dep(kk+1)-dep(kk);
      dsta=sta(kk+1)-sta(kk);
      s=ddep/dsta;
      if s < 1/15
         break
      end
      fore_toe_sta=sta(kk);
      fore_toe_dep=dep(kk);
      upper_slope=(Z2-fore_toe_dep)/(top_sta-fore_toe_sta)
   end
   fore_Irb=upper_slope/(sqrt(fore_H0/L0));
   fore_gamma=gamma_perm*gamma_beta*gamma_rough;
   if (fore_Irb < 1.8)
      fore_R2=fore_gamma*fore_H0*1.77*fore_Irb;
   else
      fore_R2=fore_gamma*fore_H0*(4.3-(1.6/sqrt(fore_Irb)));
   end
   if berm_width >= L0
      R2_new=fore_R_2(i)
      disp ('berm is wider than one wavelength, use full shallow foreshore solution');
   else
      w2=(berm_width-0.25*L0)/(0.75*L0)
      w1=1-w2
```

```
            R2_new=w2*fore_R2 + w1*R2_new
         end
      end % end berm width check

      % convergence criterion
      R2del=abs(R2-R2_new)
      R2_all(iter)=R2_new;

      % get the new top station (for plot purposes)
      Z2=R2_new+SWEL
      top_sta=-999;
      for kk=1:length(sta)-1
         if ((Z2 > dep(kk)) & (Z2 <= dep(kk+1)))    % here is the intersection of z2 with profile
            top_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Z2)
            break;
         end
      end
      if top_sta==-999
         dy=Z2-dep(end);
         top_sta=sta(end)+dy/S(end);
      end
      topStaAll(iter)=top_sta;
end
ans =
!----------------- STARTING ITERATION 1 -----------------!
Ztoe =
                  -0.145745
toe_sta =
           -1.61765641569459
top_sta =
            97.9185969868176
Z2 =
                  17.815855
H0 =
                     5.9872
Tp =
                     9.7128
T0 =
            8.82981818181818
R2 =
                    17.9616
Z2 =
                  26.796655
top_sta =
             182.48356873823
Lslope =
            184.101225153925
ans =
!------- End Berm Factor Calculation, Iter: 1 ---------!
berm_width =
     0
rB =
     0
rdh_mean =
     1
gamma_berm =
     1
slope =
          0.146345576882901
Irb =
            1.194593186671
gamma_berm =
     1
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.85
gamma =
                       0.85
ans =
!!! - - Iribaren number:   1.19 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:6.8 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
            10.7605876983275
R2del =
            7.20101230167254
Z2 =
            19.5956426983275
ans =
!----------------- STARTING ITERATION 2 -----------------!
Ztoe =
                  -0.145745
toe_sta =
           -1.61765641569459
top_sta =
            114.677426537924
Z2 =
            19.5956426983275
H0 =
                     5.9872
Tp =
                     9.7128
T0 =
```

```
          8.82981818181818
R2 =
          10.7605876983275
Z2 =
          19.5956426983275
top_sta =
          114.677426537924
Lslope =
          116.295082953618
ans =
!------- End Berm Factor Calculation, Iter: 2 ---------!
berm_width =
     0
rB =
     0
rdh_mean =
     1
gamma_berm =
     1
slope =
         0.169752557003643
Irb =
          1.38566024567173
gamma_berm =
     1
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.85
gamma =
                       0.85
ans =
!!! - - Iribaren number:   1.39 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.9 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          12.4816705469317
R2del =
          1.72108284860422
Z2 =
          21.3167255469317
ans =
!----------------- STARTING ITERATION 3 -----------------!
Ztoe =
                -0.145745
toe_sta =
         -1.61765641569459
top_sta =
          130.883479726287
Z2 =
          21.3167255469317
H0 =
                    5.9872
Tp =
                    9.7128
T0 =
          8.82981818181818
R2 =
          12.4816705469317
Z2 =
          21.3167255469317
top_sta =
          130.883479726287
Lslope =
          132.501136141982
ans =
!------- End Berm Factor Calculation, Iter: 3 ---------!
berm_width =
     0
rB =
     0
rdh_mean =
     1
gamma_berm =
     1
slope =
         0.161979520869417
Irb =
          1.32221031979441
gamma_berm =
     1
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.85
gamma =
                       0.85
ans =
!!! - - Iribaren number:   1.32 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:6.2 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
```

```
          11.9101299593297
R2del =
         0.571540587601973
Z2 =
          20.7451849593297
ans =
!----------------- STARTING ITERATION 4 -----------------!
Ztoe =
                 -0.145745
toe_sta =
         -1.61765641569459
top_sta =
          125.501741613274
Z2 =
          20.7451849593297
H0 =
                    5.9872
Tp =
                    9.7128
T0 =
          8.82981818181818
R2 =
          11.9101299593297
Z2 =
          20.7451849593297
top_sta =
          125.501741613274
Lslope =
          127.119398028969
ans =
!------- End Berm Factor Calculation, Iter: 4 ---------!
berm_width =
     0
rB =
     0
rdh_mean =
     1
gamma_berm =
     1
slope =
         0.164341007613715
Irb =
          1.34148672045673
gamma_berm =
     1
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                     0.85
gamma =
                     0.85
ans =
!!! - - Iribaren number:   1.34 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:6.1 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
           12.083766810895
R2del =
         0.173636851565314
Z2 =
           20.918821810895
ans =
!----------------- STARTING ITERATION 5 -----------------!
Ztoe =
                 -0.145745
toe_sta =
         -1.61765641569459
top_sta =
          127.136740215584
Z2 =
           20.918821810895
H0 =
                    5.9872
Tp =
                    9.7128
T0 =
          8.82981818181818
R2 =
           12.083766810895
Z2 =
           20.918821810895
top_sta =
          127.136740215584
Lslope =
          128.754396631279
ans =
!------- End Berm Factor Calculation, Iter: 5 ---------!
berm_width =
     0
rB =
     0
rdh_mean =
     1
gamma_berm =
```

```
     1
slope =
         0.163602699107967
Irb =
          1.33546003806964
gamma_berm =
     1
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.85
gamma =
                       0.85
ans =
!!! - - Iribaren number:   1.34 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:6.1 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          12.0294800084256
R2del =
        0.0542868024694645
Z2 =
          20.8645350084255
ans =
!----------------- STARTING ITERATION 6 -----------------!
Ztoe =
                   -0.145745
toe_sta =
         -1.61765641569459
top_sta =
          126.625565051088
Z2 =
          20.8645350084255
H0 =
                     5.9872
Tp =
                     9.7128
T0 =
          8.82981818181818
R2 =
          12.0294800084256
Z2 =
          20.8645350084255
top_sta =
          126.625565051088
Lslope =
          128.243221466783
ans =
!------- End Berm Factor Calculation, Iter: 6 ---------!
berm_width =
     0
rB =
     0
rdh_mean =
     1
gamma_berm =
     1
slope =
          0.16383150522983
Irb =
          1.33732774217159
gamma_berm =
     1
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.85
gamma =
                       0.85
ans =
!!! - - Iribaren number:   1.34 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:6.1 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          12.0463038058553
R2del =
        0.0168237974297689
Z2 =
          20.8813588058553
ans =
!----------------- STARTING ITERATION 7 -----------------!
Ztoe =
                   -0.145745
toe_sta =
         -1.61765641569459
top_sta =
          126.783981222744
Z2 =
          20.8813588058553
H0 =
                     5.9872
Tp =
```

```
                    9.7128
T0 =
          8.82981818181818
R2 =
          12.0463038058553
Z2 =
          20.8813588058553
top_sta =
          126.783981222744
Lslope =
          128.401637638438
ans =
!------- End Berm Factor Calculation, Iter: 7 ---------!
berm_width =
     0
rB =
     0
rdh_mean =
     1
gamma_berm =
     1
slope =
         0.163760402067961
Irb =
          1.33674733957571
gamma_berm =
     1
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                    0.85
gamma =
                    0.85
ans =
!!! - - Iribaren number:   1.34 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:6.1 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          12.0410756887833
R2del =
       0.00522811707203275
Z2 =
          20.8761306887833
ans =
!----------------- STARTING ITERATION 8 -----------------!
Ztoe =
                -0.145745
toe_sta =
         -1.61765641569459
top_sta =
          126.734752248431
Z2 =
          20.8761306887833
H0 =
                    5.9872
Tp =
                    9.7128
T0 =
          8.82981818181818
R2 =
          12.0410756887833
Z2 =
          20.8761306887833
top_sta =
          126.734752248431
Lslope =
          128.352408664125
ans =
!------- End Berm Factor Calculation, Iter: 8 ---------!
berm_width =
     0
rB =
     0
rdh_mean =
     1
gamma_berm =
     1
slope =
         0.163782479094675
Irb =
          1.33692755045912
gamma_berm =
     1
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                    0.85
gamma =
                    0.85
ans =
!!! - - Iribaren number:   1.34 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
```

```
!!! - - slope: 1:6.1 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          12.0426989819988
R2del =
        0.0016232932154896
Z2 =
          20.8777539819988
ans =
!----------------- STARTING ITERATION 9 -----------------!
Ztoe =
                 -0.145745
toe_sta =
         -1.61765641569459
top_sta =
          126.750037495281
Z2 =
          20.8777539819988
H0 =
                    5.9872
Tp =
                    9.7128
T0 =
          8.82981818181818
R2 =
          12.0426989819988
Z2 =
          20.8777539819988
top_sta =
          126.750037495281
Lslope =
          128.367693910975
ans =
!------- End Berm Factor Calculation, Iter: 9 ---------!
berm_width =
     0
rB =
     0
rdh_mean =
     1
gamma_berm =
     1
slope =
         0.163775622522119
Irb =
          1.33687158146413
gamma_berm =
     1
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                     0.85
gamma =
                     0.85
ans =
!!! - - Iribaren number:   1.34 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:6.1 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          12.0421948277095
R2del =
       0.000504154289288294
Z2 =
          20.8772498277095
% final 2% runup elevation
Z2=R2_new+SWEL
Z2 =
          20.8772498277095
diary off
-1.000000e+00
```

PART 5: RUNUP2

for transect: YK-06

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

RUNUP2 INPUT CONVERSIONS
for transect: YK-06

Incident significant wave height: 5.86 feet

Peak wave period: 9.61 seconds

Mean wave height: 3.67 feet

Local Depth below SWEL: 25.91 feet

Mean wave height deshoaled using Hunt equation
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

Deepwater mean wave height: 2.92 feet

END RUNUP2 CONVERSIONS

RUNUP2 RESULTS
for transect: YK-06

RUNUP2 SWEL:
8.90
8.90
8.90
8.90
8.90
8.90
8.90
8.90
8.90

RUNUP2 deepwater mean wave heights:
2.78
2.78
2.78
2.92
2.92
2.92
3.07
3.07
3.07

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

RUNUP2 runup above SWEL:
6.66
6.73

6.78
6.75
6.79
6.88
6.84
6.93
7.05

RUNUP2 Mean runup height above SWEL: 6.82 feet

RUNUP2 2-percent runup height above SWEL: 15.01 feet

RUNUP2 2-percent runup elevation: 23.91 feet-NAVD88

RUNUP2 Messages:
No Messages

_____END RUNUP2 RESULTS_____

_____ACES BEACH RUNUP_____

Incident significant wave height: 5.86 feet

Significant wave height deshoaled using Hunt equation

Deepwater significant wave height: 4.09 feet

Peak wave period: 9.61 seconds

Average beach Slope: 1:15.12 (H:V)

ACES RUNUP CALCULATED USING 'Aces_Beach_Runup.m'

ACES Beach 2-percent runup height above SWEL: 5.97 feet

ACES Beach 2-percent runup elevation: 14.87 feet-NAVD88

ACES BEACH RUNUP is valid

_____END ACES BEACH RESULTS_____

PART 5 COMPLETE_____

```
  FEMA                                                    sjh           job 2
  RUNUP2 transect: YK-06                                                  1
9.00
  -17.06 -397.9 0.8
  -17.05 -364.9 0.8
  -16.53 -355.9 0.8
  -13.24 -291.9 0.8
  -11.23 -270.9 0.8
  -6.48 -222.9 0.8
  -6.44 -221.9 0.8
  -6.44 -137.9 0.8
  -5.60 -118.9 0.8
  -5.58 -108.9 0.8
  -1.09 -8.9   0.8
  -0.44 -3.9   0.8
  0.26  3.1    0.8
  0.89  8.1    0.8
  1.37  14.1   0.8
  2.63  26.1   0.8
  4.63  33.1   0.8
  6.89  36.1   0.8
  11.88 43.1   0.8
1 12.30 46.1   0.8
 8.9   2.78  7.76
 8.9   2.78  8.17
 8.9   2.78  8.58
 8.9   2.92  7.76
 8.9   2.92  8.17
 8.9   2.92  8.58
 8.9   3.07  7.76
 8.9   3.07  8.17
 8.9   3.07  8.58
```

CLIENT- FEMA ** WAVE RUNUP-VERSION 2.0 ** ENGINEERED BY sjh JOB job 2
PROJECT-RUNUP2 transect: YK-06 RUN 1 PAGE 1

****

CROSS SECTION PROFILE

	LENGTH	ELEV.	SLOPE	ROUGHNESS
1	-397.0	-17.0		
			.00	.80
2	-364.0	-17.0		
			18.00	.80
3	-355.0	-16.5		
			19.39	.80
4	-291.0	-13.2		
			10.50	.80
5	-270.0	-11.2		
			9.98	.80
6	-222.9	-6.5		
			25.00	.80
7	-221.9	-6.4		
			FLAT	.80
8	-137.9	-6.4		
			22.62	.80
9	-118.9	-5.6		
			500.00	.80
10	-108.9	-5.6		
			22.27	.80
11	-8.9	-1.1		
			7.69	.80
12	-3.9	-.4		
			10.00	.80
13	3.1	.3		
			7.94	.80
14	8.1	.9		
			12.50	.80
15	14.1	1.4		
			9.52	.80
16	26.1	2.6		
			3.50	.80
17	33.1	4.6		
			1.33	.80
18	36.1	6.9		
			1.40	.80
19	43.1	11.9		
			7.14	.80
20	46.1	12.3		

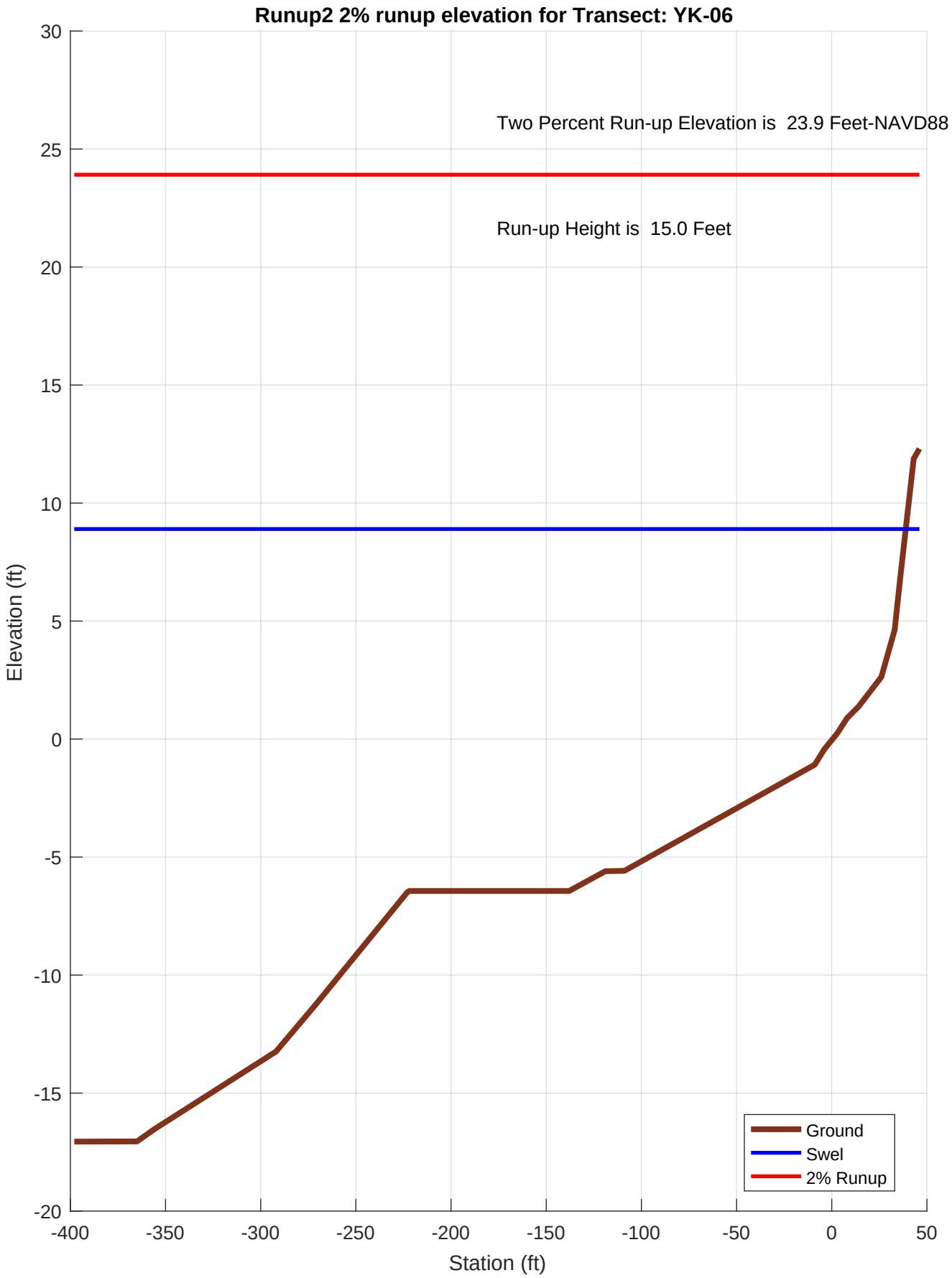
LAST SLOPE 9.00 LAST ROUGHNESS .80

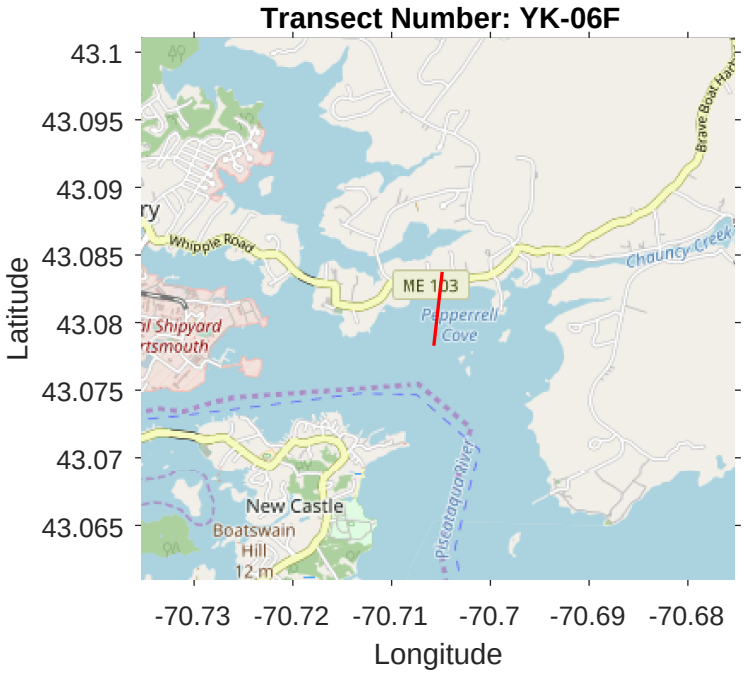
CLIENT- FEMA ** WAVE RUNUP-VERSION 2.0 ** ENGINEERED BY sjh JOB job 2
PROJECT-RUNUP2 transect: YK-06 RUN 1 PAGE 2

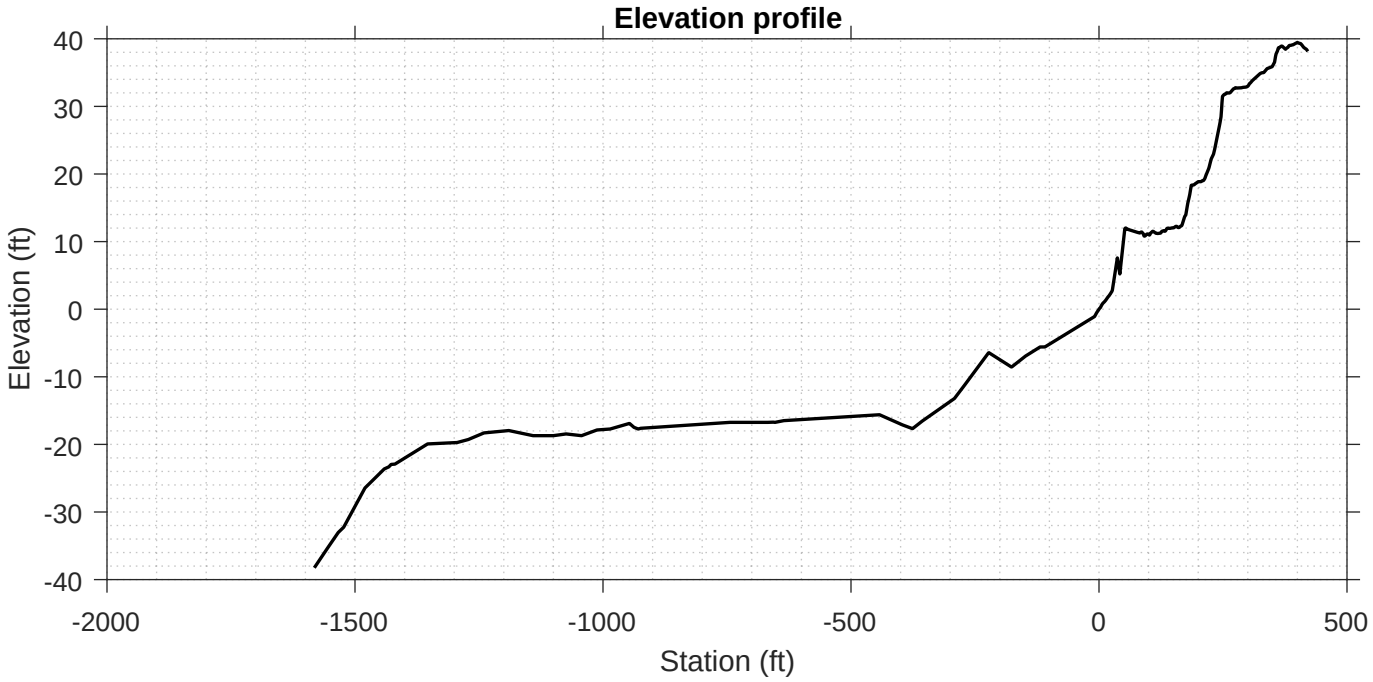
****

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.)
8.90	2.78	7.76	11	20	6.66	5.03
8.90	2.78	8.17	11	20	6.73	5.13
8.90	2.78	8.58	11	20	6.78	5.23
8.90	2.92	7.76	11	20	6.75	5.23
8.90	2.92	8.17	11	20	6.79	5.34
8.90	2.92	8.58	11	20	6.88	5.44
8.90	3.07	7.76	11	20	6.84	5.45
8.90	3.07	8.17	11	20	6.93	5.56
8.90	3.07	8.58	11	20	7.05	5.66


Runup2 2% runup elevation for Transect: YK-06
Two Percent Run-up Elevation is 23.9 Feet-NAVD88
Run-up Height is 15.0 Feet
Elevation (ft)
Station (ft)
30
25
20
15
10
5
0
-5
-10
-15
-20
-400
-350
-300
-250
-200
-150
-100
-50
0
50
Ground
Swel
2% Runup


Transect Number: YK-06F
Latitude
Longitude
43.1
43.095
43.09
43.085
43.08
43.075
43.07
43.065
-70.73
-70.72
-70.71
-70.7
-70.69
-70.68
ME 103
Whipple Road
Chauncy Creek
Pepperrell Cove
New Castle
Boatswain Hill
12 m
Piscataqua River


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

DATA LOG FOR TRANSECT ID: YK-06F

PART 1: USER INPUT

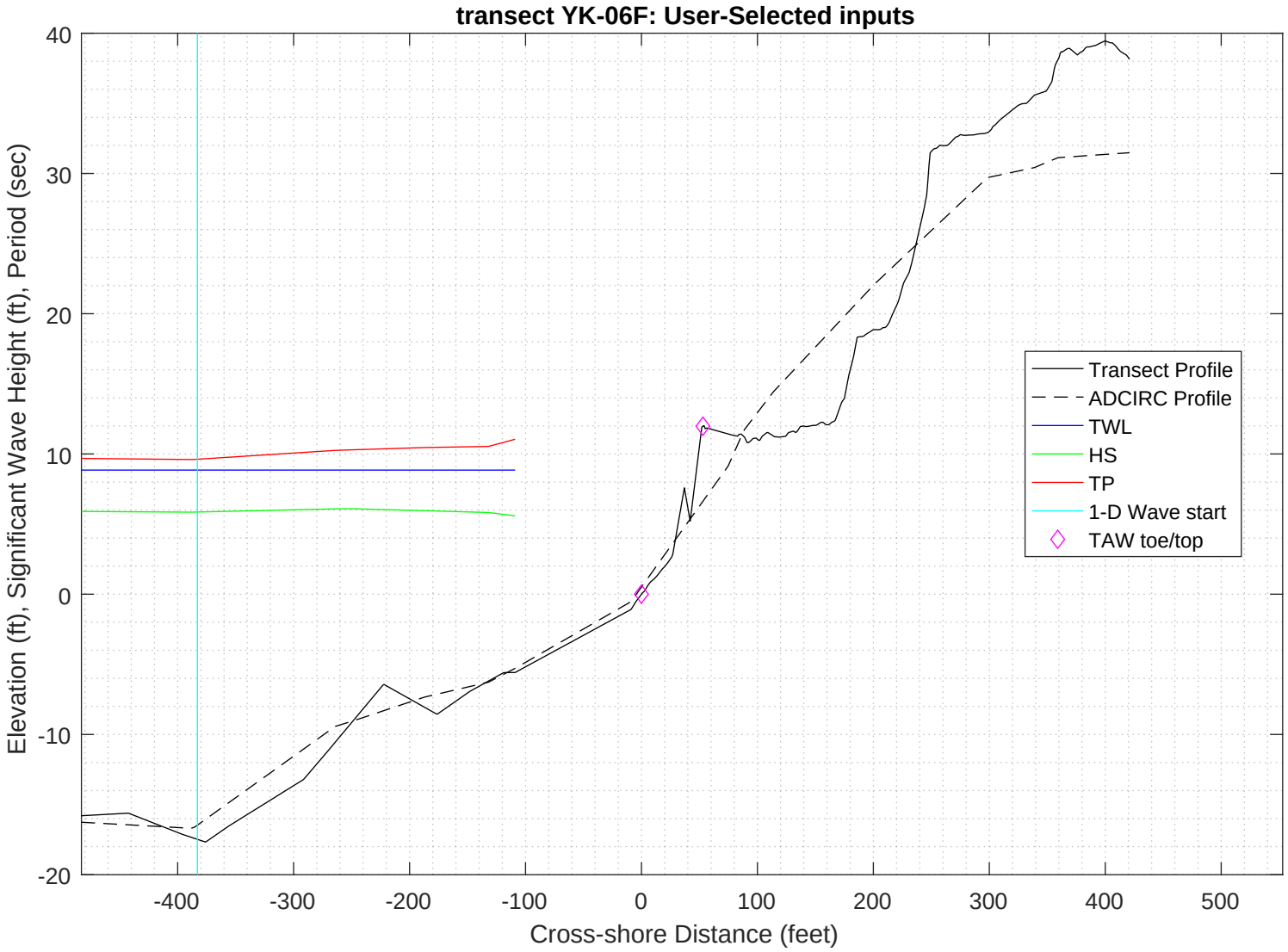
SWAN 1-D / WHAFIS input

station: -383 ft
LON: -70.7052 deg E
LAT: 43.0816 deg N
Bottom ELEV: -17.4781 ft-NAVD88
TWL: 8.8509 ft-NAVD88
HS: 5.8595 ft
TP: 9.6234 sec
Wave Direction bin: 90 deg CCW from East (90 deg sector)
Transect Direction: 81.1993 deg CCW from East

TAW/RUNUP input

toe sta: 0 ft
toe elev: 0.0068 ft-NAVD88
top sta: 53 ft
top elev: 11.9795 ft-NAVD88
Wave and water level conditions at toe to be calculated in SWAN 1-D

PART 1 COMPLETE


transect YK-06F: User-Selected inputs
Elevation (ft), Significant Wave Height (ft), Period (sec)
Cross-shore Distance (feet)
40
30
20
10
0
-10
-20
-400
-300
-200
-100
0
100
200
300
400
500
Transect Profile
ADCIRC Profile
TWL
HS
TP
1-D Wave start
TAW toe/top

```
_____________________________________________________________________
PART 2: SWAN 1-D

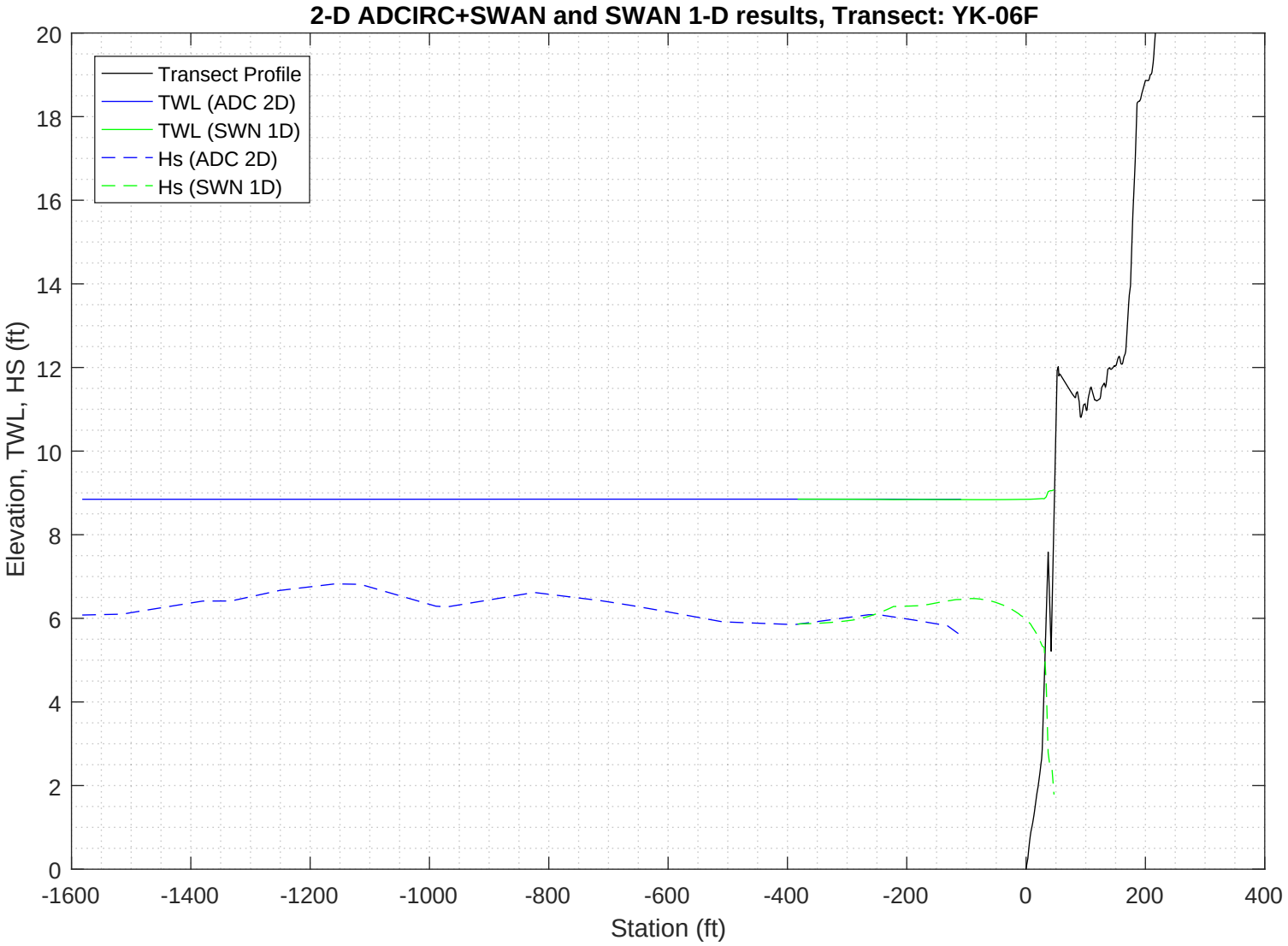
swan input grid name: 2_swan/gridfiles/YK-06Fzmeters_xmeters.grd
swan file name:       2_swan/swanfiles/YK-06F.swn
swan output name:     2_swan/swanfiles/YK-06F.dat

Boundary Conditions:
    TWL- 2.6977 meters
    HS-  1.786 meters
    PER- 9.6234 seconds

Batch File: 2_swan/swanfiles/runswan.dat

SWAN maximum additional wave setup: 0.74195 feet
SWAN output at toe:
    SETUP- -0.013245 feet
    HS-    5.967 feet
    PER-   9.7262 seconds

PART 2 COMPLETE_____________________________________________
```


2-D ADCIRC+SWAN and SWAN 1-D results, Transect: YK-06F
Transect Profile
TWL (ADC 2D)
TWL (SWN 1D)
Hs (ADC 2D)
Hs (SWN 1D)
Elevation, TWL, HS (ft)
Station (ft)
20
18
16
14
12
10
8
6
4
2
0
-1600
-1400
-1200
-1000
-800
-600
-400
-200
0
200
400

```
1

                    Execution started at 20181016.143019


                    ---------------------------------------
                                  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      131       0.   131     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      131   0      1       1

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

  READ    BOTTOM   -1. '../gridfiles/YK-06Fzmeters_xmeters.grd'    1      0       FREE

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

 ! -- WIND [vel] [dir]

 WIND      25.1  0

 ! -- BOUnd SHAPespec

 BOUND SHAPE JONSWAP 3.3  PEAK DSPR POWER

 ! -- BOUndspec

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

 BOUN SIDE W CCW CONSTANT PAR   1.786     9.6234     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      131  131    0

 !TABLe 'sname' < HEADer|NOHEADer|INDexed > 'fname' <output parameters> (output time)

  Table 'curve'   HEADER 'YK-06F.dat' XP YP HSIGN TPS RTP TMM10 DIR &
  DSPR DEPTH SETUP

 !QUANTITY XP hexp=99999

 !

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

 COMPUTE STATIONARY

------------------------------------------------------------------
                  COMPUTATIONAL PART OF SWAN
------------------------------------------------------------------

 One-dimensional mode of SWAN is activated
 Gridresolution       : MXC             132 MYC              1
                      : MCGRD           133
                      : 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  34.10 % 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   0.76 % 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  33.34 % 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  81.07 % of wet grid points ( 99.50 % required)

iteration    6; sweep 1
iteration    6; sweep 2
iteration    6; sweep 3
```

```
iteration    6; sweep 4
accuracy OK in  97.73 % 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  98.49 % of wet grid points ( 99.50 % required)

iteration    8; sweep 1
iteration    8; sweep 2
iteration    8; sweep 3
iteration    8; sweep 4
accuracy OK in  97.73 % of wet grid points ( 99.50 % required)

iteration    9; sweep 1
iteration    9; sweep 2
iteration    9; sweep 3
iteration    9; sweep 4
accuracy OK in  98.49 % of wet grid points ( 99.50 % required)

iteration   10; sweep 1
iteration   10; sweep 2
iteration   10; sweep 3
iteration   10; sweep 4
accuracy OK in 100.00 % of wet grid points ( 99.50 % required)


STOP
```

```
%
%
% Run:1     Table:curve             SWAN version:41.20A
%
%       Xp            Yp            Hsig          TPsmoo        RTpeak        Tm_10         Dir           Dspr          Depth         Setup
%      [m]           [m]            [m]           [sec]         [sec]         [sec]        [degr]        [degr]         [m]           [m]
%
          0.            0.       1.78695       9.6547       10.0005       8.6952         0.000       31.5214       8.0299     -0.000066
          1.            0.       1.78832       9.6548       10.0005       8.6883         0.000       31.6535       8.0500     -0.000043
          2.            0.       1.78833       9.6549       10.0005       8.6807         0.000       31.6777       8.0800      0.000000
          3.            0.       1.78890       9.6551       10.0005       8.6749         0.000       31.5718       8.0399     -0.000057
          4.            0.       1.78938       9.6555       10.0005       8.6694         0.000       31.3986       7.9799     -0.000142
          5.            0.       1.78971       9.6558       10.0005       8.6636         0.000       31.2062       7.9198     -0.000229
          6.            0.       1.79018       9.6562       10.0005       8.6576         0.000       31.0222       7.8597     -0.000318
          7.            0.       1.79048       9.6565       10.0005       8.6511         0.000       30.8753       7.8096     -0.000387
          8.            0.       1.79114       9.6569       10.0005       8.6446         0.000       30.7362       7.7495     -0.000474
          9.            0.       1.79170       9.6573       10.0005       8.6377         0.000       30.6056       7.6995     -0.000546
         10.            0.       1.79225       9.6576       10.0005       8.6305         0.000       30.4704       7.6494     -0.000621
         11.            0.       1.79315       9.6580       10.0005       8.6233         0.000       30.3330       7.5893     -0.000714
         12.            0.       1.79391       9.6584       10.0005       8.6156       360.000       30.2040       7.5392     -0.000794
         13.            0.       1.79477       9.6588       10.0005       8.6077       360.000       30.0781       7.4891     -0.000875
         14.            0.       1.79571       9.6593       10.0005       8.5995       360.000       29.9531       7.4390     -0.000959
         15.            0.       1.79671       9.6597       10.0005       8.5910       360.000       29.8286       7.3890     -0.001045
         16.            0.       1.79777       9.6602       10.0005       8.5823       360.000       29.7043       7.3389     -0.001133
         17.            0.       1.79881       9.6606       10.0005       8.5733       360.000       29.5717       7.2888     -0.001223
         18.            0.       1.80021       9.6611       10.0005       8.5644       360.000       29.4362       7.2287     -0.001335
         19.            0.       1.80144       9.6616       10.0005       8.5548       360.000       29.3083       7.1786     -0.001430
         20.            0.       1.80276       9.6621       10.0005       8.5449       360.000       29.1829       7.1285     -0.001528
         21.            0.       1.80415       9.6626       10.0005       8.5347       360.000       29.0586       7.0784     -0.001628
         22.            0.       1.80561       9.6632       10.0005       8.5242       360.000       28.9347       7.0283     -0.001731
         23.            0.       1.80713       9.6637       10.0005       8.5134       360.000       28.8109       6.9782     -0.001836
         24.            0.       1.80864       9.6643       10.0005       8.5023       360.000       28.6789       6.9281     -0.001943
         25.            0.       1.81053       9.6649       10.0005       8.4913       360.000       28.5443       6.8679     -0.002075
         26.            0.       1.81222       9.6655       10.0005       8.4795       360.000       28.4230       6.8178     -0.002187
         27.            0.       1.81392       9.6661       10.0005       8.4673       360.000       28.3037       6.7677     -0.002299
         28.            0.       1.81573       9.6668       10.0005       8.4551       360.000       28.1554       6.7076     -0.002436
         29.            0.       1.81833       9.6676       10.0005       8.4435       360.000       27.9680       6.6174     -0.002647
         30.            0.       1.82132       9.6685       10.0005       8.4314       360.000       27.7674       6.5171     -0.002891
         31.            0.       1.82408       9.6693       10.0005       8.4179       360.000       27.5613       6.4269     -0.003120
         32.            0.       1.82731       9.6703       10.0005       8.4038       360.000       27.3446       6.3266     -0.003384
         33.            0.       1.83071       9.6713       10.0005       8.3886       360.000       27.1244       6.2263     -0.003660
         34.            0.       1.83439       9.6724       10.0005       8.3722       360.000       26.9095       6.1261     -0.003948
         35.            0.       1.83787       9.6734       10.0005       8.3542       360.000       26.6965       6.0358     -0.004219
         36.            0.       1.84193       9.6746       10.0005       8.3354       360.000       26.4760       5.9355     -0.004534
         37.            0.       1.84620       9.6759       10.0005       8.3152       360.000       26.2513       5.8351     -0.004863
         38.            0.       1.85071       9.6771       10.0005       8.2935       360.000       26.0237       5.7348     -0.005208
         39.            0.       1.85548       9.6785       10.0005       8.2703       360.000       25.7946       5.6344     -0.005569
         40.            0.       1.86050       9.6799       10.0005       8.2456       359.999       25.5643       5.5341     -0.005948
         41.            0.       1.86574       9.6814       10.0005       8.2196       359.999       25.3327       5.4337     -0.006346
         42.            0.       1.87124       9.6829       10.0005       8.1921       359.999       25.1003       5.3332     -0.006763
         43.            0.       1.87703       9.6846       10.0005       8.1632       360.000       24.8822       5.2328     -0.007198
         44.            0.       1.88252       9.6862       10.0005       8.1326         0.000       24.6778       5.1424     -0.007603
         45.            0.       1.88864       9.6879       10.0005       8.1015         0.000       24.4689       5.0419     -0.008072
         46.            0.       1.89495       9.6897       10.0005       8.0691         0.001       24.2594       4.9414     -0.008563
         47.            0.       1.90140       9.6915       10.0005       8.0356         0.001       24.0495       4.8409     -0.009076
         48.            0.       1.90806       9.6934       10.0005       8.0010         0.002       23.8466       4.7404     -0.009612
         49.            0.       1.91504       9.6953       10.0005       7.9649         0.002       23.7448       4.6499     -0.010106
         50.            0.       1.91539       9.6966       10.0005       7.9216         0.003       23.8068       4.6901     -0.009850
         51.            0.       1.91555       9.6977       10.0005       7.8811         0.003       23.9311       4.7405     -0.009542
         52.            0.       1.91574       9.6986       10.0005       7.8441         0.003       24.0690       4.7908     -0.009244
         53.            0.       1.91648       9.6994       10.0005       7.8110         0.003       24.2130       4.8310     -0.009009
         54.            0.       1.91684       9.7001       10.0005       7.7790         0.004       24.3728       4.8813     -0.008730
         55.            0.       1.91716       9.7006       10.0005       7.7492         0.004       24.5272       4.9315     -0.008461
         56.            0.       1.91798       9.7011       10.0005       7.7222         0.004       24.6804       4.9718     -0.008249
         57.            0.       1.91837       9.7015       10.0005       7.6963         0.004       24.8458       5.0220     -0.007995
```

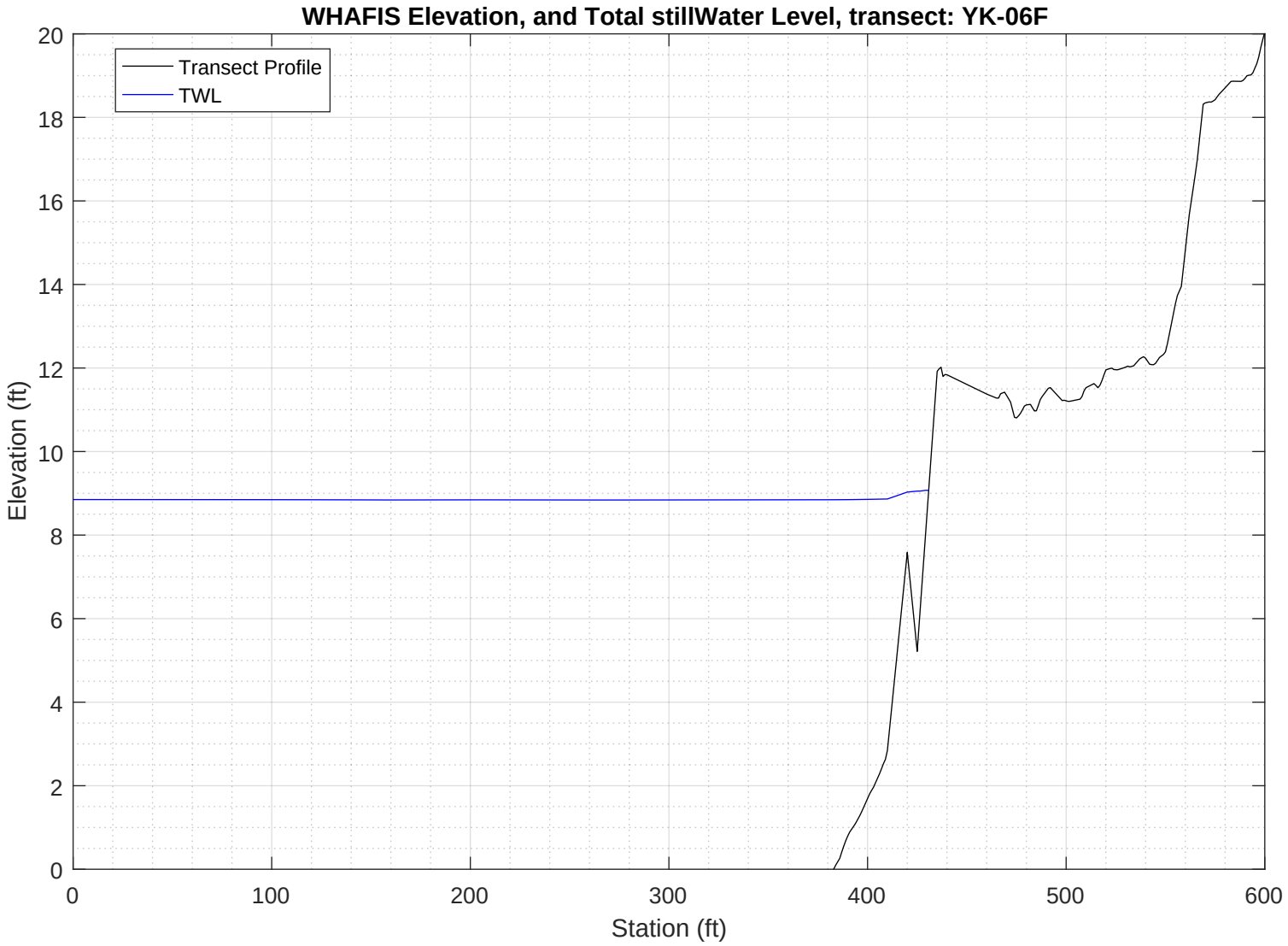
58.	0.	1.91869	9.7018	10.0005	7.6720	0.005	25.0021	5.0722	-0.007750
59.	0.	1.91945	9.7021	10.0005	7.6501	0.005	25.1549	5.1124	-0.007557
60.	0.	1.91973	9.7023	10.0005	7.6286	0.005	25.3058	5.1627	-0.007325
61.	0.	1.92045	9.7025	10.0005	7.6091	0.006	25.4545	5.2029	-0.007143
62.	0.	1.92071	9.7026	10.0005	7.5899	0.006	25.6031	5.2531	-0.006923
63.	0.	1.92044	9.7027	10.0005	7.5722	0.006	25.6330	5.2932	-0.006751
64.	0.	1.92301	9.7031	10.0005	7.5619	0.007	25.5372	5.2430	-0.006964
65.	0.	1.92562	9.7035	10.0005	7.5521	0.007	25.3855	5.1828	-0.007226
66.	0.	1.92825	9.7040	10.0005	7.5417	0.008	25.2272	5.1225	-0.007495
67.	0.	1.93048	9.7044	10.0005	7.5300	0.009	25.0692	5.0723	-0.007724
68.	0.	1.93318	9.7049	10.0005	7.5187	0.010	24.9034	5.0120	-0.008005
69.	0.	1.93593	9.7054	10.0005	7.5069	0.011	24.7372	4.9517	-0.008292
70.	0.	1.93883	9.7059	10.0005	7.4944	0.013	24.5865	4.8914	-0.008584
71.	0.	1.94131	9.7063	10.0005	7.4806	0.014	24.4422	4.8412	-0.008830
72.	0.	1.94442	9.7068	10.0005	7.4672	0.016	24.3090	4.7809	-0.009131
73.	0.	1.94658	9.7073	10.0005	7.4517	0.017	24.1918	4.7407	-0.009324
74.	0.	1.94918	9.7077	10.0005	7.4367	0.019	24.0714	4.6904	-0.009572
75.	0.	1.95184	9.7082	10.0005	7.4213	0.021	23.9592	4.6402	-0.009820
76.	0.	1.95397	9.7087	10.0005	7.4049	0.023	23.8513	4.6000	-0.010012
77.	0.	1.95651	9.7091	10.0005	7.3895	0.026	23.7453	4.5497	-0.010261
78.	0.	1.95839	9.7095	10.0005	7.3735	0.029	23.6408	4.5096	-0.010449
79.	0.	1.96107	9.7100	10.0005	7.3559	0.033	23.5369	4.4593	-0.010697
80.	0.	1.96336	9.7104	10.0005	7.3365	0.036	23.4506	4.4191	-0.010879
81.	0.	1.96531	9.7108	10.0005	7.3158	0.039	23.4041	4.3890	-0.010989
82.	0.	1.96573	9.7111	10.0005	7.2929	0.042	23.3972	4.3891	-0.010897
83.	0.	1.96603	9.7113	10.0005	7.2708	0.043	23.3849	4.3892	-0.010802
84.	0.	1.96699	9.7116	10.0005	7.2514	0.043	23.3270	4.3692	-0.010838
85.	0.	1.96924	9.7119	10.0005	7.2351	0.043	23.2339	4.3189	-0.011067
86.	0.	1.97063	9.7123	10.0005	7.2180	0.042	23.1289	4.2788	-0.011221
87.	0.	1.97214	9.7127	10.0005	7.2030	0.041	23.0188	4.2286	-0.011428
88.	0.	1.97247	9.7130	10.0005	7.1886	0.040	22.9081	4.1885	-0.011543
89.	0.	1.97322	9.7134	10.0005	7.1749	0.033	22.7917	4.1383	-0.011720
90.	0.	1.97279	9.7137	10.0005	7.1615	0.028	22.6755	4.0982	-0.011798
91.	0.	1.97248	9.7141	10.0005	7.1502	0.025	22.5564	4.0481	-0.011930
92.	0.	1.97113	9.7144	10.0005	7.1383	0.020	22.4351	4.0080	-0.011963
93.	0.	1.96991	9.7148	10.0005	7.1282	0.017	22.3104	3.9579	-0.012050
94.	0.	1.96763	9.7151	10.0005	7.1174	0.016	22.1866	3.9180	-0.012030
95.	0.	1.96551	9.7155	10.0005	7.1082	0.013	22.0638	3.8679	-0.012063
96.	0.	1.96287	9.7158	10.0005	7.0954	0.021	21.9397	3.8280	-0.012001
97.	0.	1.96060	9.7162	10.0005	7.0832	0.010	21.8135	3.7780	-0.012000
98.	0.	1.95738	9.7166	10.0005	7.0690	359.991	21.6856	3.7381	-0.011886
99.	0.	1.95442	9.7169	10.0005	7.0558	359.971	21.5558	3.6882	-0.011829
100.	0.	1.95031	9.7173	10.0005	7.0414	359.948	21.4271	3.6484	-0.011645
101.	0.	1.94615	9.7176	10.0005	7.0293	359.926	21.2987	3.5985	-0.011508
102.	0.	1.94098	9.7180	10.0005	7.0151	359.903	21.1689	3.5588	-0.011242
103.	0.	1.93603	9.7184	10.0005	7.0018	359.878	21.0373	3.5090	-0.011034
104.	0.	1.93047	9.7187	10.0005	6.9841	359.863	20.9057	3.4693	-0.010703
105.	0.	1.92532	9.7191	10.0005	6.9664	359.854	20.7729	3.4196	-0.010436
106.	0.	1.91903	9.7195	10.0005	6.9464	359.847	20.6413	3.3800	-0.010021
107.	0.	1.91297	9.7199	10.0005	6.9271	359.843	20.5091	3.3303	-0.009663
108.	0.	1.90566	9.7203	10.0005	6.9058	359.841	20.3783	3.2909	-0.009146
109.	0.	1.89791	9.7207	10.0005	6.8884	359.841	20.2509	3.2413	-0.008661
110.	0.	1.88903	9.7211	10.0005	6.8684	359.846	20.1210	3.2020	-0.008016
111.	0.	1.88039	9.7216	10.0005	6.8492	359.855	19.9892	3.1526	-0.007433
112.	0.	1.87120	9.7220	10.0005	6.8221	359.866	19.8624	3.1133	-0.006671
113.	0.	1.86182	9.7226	10.0005	6.7970	359.885	19.7394	3.0641	-0.005940
114.	0.	1.84946	9.7232	10.0005	6.7755	359.902	19.5553	3.0250	-0.004983
115.	0.	1.84181	9.7242	10.0005	6.7681	359.922	19.2602	2.8950	-0.004998
116.	0.	1.83109	9.7253	10.0005	6.7562	359.953	18.9398	2.7753	-0.004676
117.	0.	1.81875	9.7262	10.0005	6.7320	359.972	18.6155	2.6660	-0.004037
118.	0.	1.80268	9.7269	10.0005	6.7039	359.990	18.2736	2.5671	-0.002939
119.	0.	1.78710	9.7275	10.0005	6.6746	0.021	17.9328	2.4380	-0.002022
120.	0.	1.76387	9.7276	10.0005	6.6284	0.067	17.6316	2.3703	0.000263
121.	0.	1.74242	9.7276	10.0005	6.5730	0.177	17.3069	2.2824	0.002361
122.	0.	1.71861	9.7276	10.0005	6.5270	0.298	16.9747	2.1745	0.004524

123.	0.	1.69004	9.7277	10.0005	6.4696	0.441	16.6258	2.0876	0.007558
124.	0.	1.65964	9.7280	10.0005	6.4142	0.604	16.2025	1.9807	0.010682
125.	0.	1.62712	9.7290	10.0005	6.3623	0.775	15.3619	1.8336	0.013563
126.	0.	1.61691	9.7333	10.0005	6.3889	0.725	13.9421	1.3489	0.008882
127.	0.	1.36253	9.7673	10.0005	6.7644	359.567	13.0087	0.9245	0.054505
128.	0.	0.84935	9.9094	10.0005	7.5740	356.883	13.9458	0.5681	0.178057
129.	0.	0.74305	9.9255	10.0005	5.9128	352.678	11.1538	1.0513	0.201262
130.	0.	0.72965	9.8668	10.0005	5.6569	352.727	8.7512	1.0024	0.202354
131.	0.	0.54426	9.9632	10.0005	7.2094	352.286	11.3647	0.3661	0.226146

```
_____________________________________________________________________
PART 3: WHAFIS

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

PART 3 COMPLETE_____________________________________________________
```


WHAFIS Elevation, and Total stillWater Level, transect: YK-06F
Transect Profile
TWL
Elevation (ft)
Station (ft)
0
2
4
6
8
10
12
14
16
18
20
0
100
200
300
400
500
600

```
WAVE HEIGHT COMPUTATIONS FOR FLOOD INSURANCE STUDIES (WHAFIS VERSION 4.0G, 08_2007)
Executed on: Tue Oct 16 14:32:50 2018
Input file:  C:\0_PROJECTS\171.06084-Kittery-2017-FEMA\modeling\transect_analysis\3_whafis\whafis4\YK-06F.dat
Output file: C:\0_PROJECTS\171.06084-Kittery-2017-FEMA\modeling\transect_analysis\3_whafis\whafis4\YK-06F.out
                                        header
                                THIS IS A 100-YEAR CASE
                        THE FOLLOWING NON-DEFAULT WIND SPEEDS ARE BEING USED
                            WINDIF  56.14  WINDOF  56.14  WINDVH  60.00
                                        PART1 INPUT
```

IE	0.000	-17.478	1.000	1.000	8.851	9.375	9.623	56.140	-0.027	0.000
OF	1.000	-17.505	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	2.000	-17.533	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	3.000	-17.560	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	4.000	-17.588	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	5.000	-17.615	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	6.000	-17.643	0.000	8.851	0.000	0.000	0.000	0.000	-0.027	0.000
OF	7.000	-17.670	0.000	8.851	0.000	0.000	0.000	0.000	0.011	0.000
OF	8.000	-17.621	0.000	8.851	0.000	0.000	0.000	0.000	0.053	0.000
OF	9.000	-17.564	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	10.000	-17.506	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	11.000	-17.449	0.000	8.851	0.000	0.000	0.000	0.000	0.057	0.000
OF	12.000	-17.392	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	13.000	-17.334	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	14.000	-17.277	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	15.000	-17.219	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	16.000	-17.162	0.000	8.851	0.000	0.000	0.000	0.000	0.057	0.000
OF	17.000	-17.105	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	18.000	-17.047	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	19.000	-16.990	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	20.000	-16.932	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	21.000	-16.875	0.000	8.851	0.000	0.000	0.000	0.000	0.057	0.000
OF	22.000	-16.818	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	23.000	-16.760	0.000	8.851	0.000	0.000	0.000	0.000	0.058	0.000
OF	24.000	-16.703	0.000	8.850	0.000	0.000	0.000	0.000	0.058	0.000
OF	25.000	-16.645	0.000	8.850	0.000	0.000	0.000	0.000	0.058	0.000
OF	26.000	-16.588	0.000	8.850	0.000	0.000	0.000	0.000	0.056	0.000
OF	27.000	-16.533	0.000	8.850	0.000	0.000	0.000	0.000	0.054	0.000
OF	28.000	-16.481	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	29.000	-16.430	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	30.000	-16.378	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	31.000	-16.327	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	32.000	-16.275	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	33.000	-16.224	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	34.000	-16.172	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	35.000	-16.121	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	36.000	-16.069	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	37.000	-16.018	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	38.000	-15.966	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	39.000	-15.915	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	40.000	-15.863	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	41.000	-15.812	0.000	8.850	0.000	0.000	0.000	0.000	0.051	0.000
OF	42.000	-15.761	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	43.000	-15.709	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	44.000	-15.658	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	45.000	-15.606	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	46.000	-15.555	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	47.000	-15.503	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	48.000	-15.452	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	49.000	-15.400	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	50.000	-15.349	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	51.000	-15.297	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	52.000	-15.246	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	53.000	-15.194	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	54.000	-15.143	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	55.000	-15.091	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	56.000	-15.040	0.000	8.850	0.000	0.000	0.000	0.000	0.051	0.000
OF	57.000	-14.989	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	58.000	-14.937	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
OF	59.000	-14.886	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	60.000	-14.834	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	61.000	-14.783	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	62.000	-14.731	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	63.000	-14.680	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	64.000	-14.628	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	65.000	-14.577	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	66.000	-14.525	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	67.000	-14.474	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	68.000	-14.422	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	69.000	-14.371	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	70.000	-14.319	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	71.000	-14.268	0.000	8.849	0.000	0.000	0.000	0.000	0.051	0.000
OF	72.000	-14.217	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	73.000	-14.165	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	74.000	-14.114	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	75.000	-14.062	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	76.000	-14.011	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	77.000	-13.959	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	78.000	-13.908	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	79.000	-13.856	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	80.000	-13.805	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	81.000	-13.753	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	82.000	-13.702	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	83.000	-13.650	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	84.000	-13.599	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	85.000	-13.547	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	86.000	-13.496	0.000	8.849	0.000	0.000	0.000	0.000	0.051	0.000
OF	87.000	-13.445	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	88.000	-13.393	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	89.000	-13.342	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	90.000	-13.290	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
OF	91.000	-13.239	0.000	8.849	0.000	0.000	0.000	0.000	0.062	0.000
OF	92.000	-13.167	0.000	8.848	0.000	0.000	0.000	0.000	0.084	0.000
OF	93.000	-13.071	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	94.000	-12.974	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	95.000	-12.877	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	96.000	-12.780	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	97.000	-12.684	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	98.000	-12.587	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	99.000	-12.490	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	100.000	-12.393	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000

OF	101.000	-12.297	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	102.000	-12.200	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	103.000	-12.103	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
OF	104.000	-12.007	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
OF	105.000	-11.910	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
OF	106.000	-11.813	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
OF	107.000	-11.716	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
OF	108.000	-11.620	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
OF	109.000	-11.523	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
OF	110.000	-11.426	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
OF	111.000	-11.329	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
OF	112.000	-11.232	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
OF	113.000	-11.134	0.000	8.847	0.000	0.000	0.000	0.000	0.098	0.000
OF	114.000	-11.035	0.000	8.847	0.000	0.000	0.000	0.000	0.099	0.000
OF	115.000	-10.936	0.000	8.847	0.000	0.000	0.000	0.000	0.099	0.000
OF	116.000	-10.837	0.000	8.847	0.000	0.000	0.000	0.000	0.099	0.000
OF	117.000	-10.738	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
OF	118.000	-10.639	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
OF	119.000	-10.540	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
OF	120.000	-10.441	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
OF	121.000	-10.342	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
OF	122.000	-10.243	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
OF	123.000	-10.144	0.000	8.846	0.000	0.000	0.000	0.000	0.099	0.000
OF	124.000	-10.045	0.000	8.846	0.000	0.000	0.000	0.000	0.098	0.000
OF	125.000	-9.947	0.000	8.846	0.000	0.000	0.000	0.000	0.098	0.000
OF	126.000	-9.848	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
OF	127.000	-9.749	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
OF	128.000	-9.650	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
OF	129.000	-9.551	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
OF	130.000	-9.452	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
OF	131.000	-9.353	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
OF	132.000	-9.254	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
OF	133.000	-9.156	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
OF	134.000	-9.057	0.000	8.845	0.000	0.000	0.000	0.000	0.099	0.000
OF	135.000	-8.958	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
OF	136.000	-8.859	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
OF	137.000	-8.760	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
OF	138.000	-8.661	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
OF	139.000	-8.562	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
OF	140.000	-8.463	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
OF	141.000	-8.364	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
OF	142.000	-8.265	0.000	8.844	0.000	0.000	0.000	0.000	0.099	0.000
OF	143.000	-8.166	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
OF	144.000	-8.067	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
OF	145.000	-7.968	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
OF	146.000	-7.870	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
OF	147.000	-7.771	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
OF	148.000	-7.672	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
OF	149.000	-7.573	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
OF	150.000	-7.474	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
OF	151.000	-7.375	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
OF	152.000	-7.276	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
OF	153.000	-7.177	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
OF	154.000	-7.078	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
OF	155.000	-6.979	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
OF	156.000	-6.880	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
OF	157.000	-6.781	0.000	8.841	0.000	0.000	0.000	0.000	0.099	0.000
OF	158.000	-6.682	0.000	8.841	0.000	0.000	0.000	0.000	0.099	0.000
OF	159.000	-6.583	0.000	8.841	0.000	0.000	0.000	0.000	0.099	0.000
OF	160.000	-6.485	0.000	8.841	0.000	0.000	0.000	0.000	0.073	0.000
OF	161.000	-6.437	0.000	8.841	0.000	0.000	0.000	0.000	0.001	0.000
OF	162.000	-6.483	0.000	8.841	0.000	0.000	0.000	0.000	-0.047	0.000
OF	163.000	-6.530	0.000	8.841	0.000	0.000	0.000	0.000	-0.047	0.000
OF	164.000	-6.576	0.000	8.841	0.000	0.000	0.000	0.000	-0.047	0.000
OF	165.000	-6.623	0.000	8.841	0.000	0.000	0.000	0.000	-0.047	0.000
OF	166.000	-6.669	0.000	8.841	0.000	0.000	0.000	0.000	-0.047	0.000
OF	167.000	-6.716	0.000	8.841	0.000	0.000	0.000	0.000	-0.047	0.000
OF	168.000	-6.763	0.000	8.841	0.000	0.000	0.000	0.000	-0.047	0.000
OF	169.000	-6.809	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	170.000	-6.856	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	171.000	-6.902	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	172.000	-6.949	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	173.000	-6.995	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	174.000	-7.042	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	175.000	-7.089	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	176.000	-7.135	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	177.000	-7.182	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	178.000	-7.228	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	179.000	-7.275	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	180.000	-7.321	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	181.000	-7.368	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	182.000	-7.414	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
OF	183.000	-7.461	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	184.000	-7.508	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	185.000	-7.554	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	186.000	-7.601	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	187.000	-7.647	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	188.000	-7.694	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	189.000	-7.740	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	190.000	-7.787	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	191.000	-7.833	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	192.000	-7.880	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	193.000	-7.926	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	194.000	-7.973	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	195.000	-8.020	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
OF	196.000	-8.066	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
OF	197.000	-8.113	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
OF	198.000	-8.159	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
OF	199.000	-8.206	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
OF	200.000	-8.252	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
OF	201.000	-8.299	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
OF	202.000	-8.345	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
OF	203.000	-8.392	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
OF	204.000	-8.439	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
OF	205.000	-8.485	0.000	8.844	0.000	0.000	0.000	0.000	-0.047	0.000
OF	206.000	-8.532	0.000	8.844	0.000	0.000	0.000	0.000	-0.030	0.000
OF	207.000	-8.545	0.000	8.844	0.000	0.000	0.000	0.000	0.022	0.000
OF	208.000	-8.488	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
OF	209.000	-8.430	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
OF	210.000	-8.372	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000

OF	211.000	-8.314	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
OF	212.000	-8.257	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
OF	213.000	-8.199	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
OF	214.000	-8.141	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
OF	215.000	-8.083	0.000	8.844	0.000	0.000	0.000	0.000	0.058	0.000
OF	216.000	-8.025	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	217.000	-7.968	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	218.000	-7.910	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	219.000	-7.852	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	220.000	-7.794	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	221.000	-7.736	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	222.000	-7.678	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	223.000	-7.621	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	224.000	-7.563	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	225.000	-7.505	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	226.000	-7.447	0.000	8.843	0.000	0.000	0.000	0.000	0.058	0.000
OF	227.000	-7.389	0.000	8.842	0.000	0.000	0.000	0.000	0.058	0.000
OF	228.000	-7.332	0.000	8.842	0.000	0.000	0.000	0.000	0.058	0.000
OF	229.000	-7.274	0.000	8.842	0.000	0.000	0.000	0.000	0.058	0.000
OF	230.000	-7.216	0.000	8.842	0.000	0.000	0.000	0.000	0.058	0.000
OF	231.000	-7.158	0.000	8.842	0.000	0.000	0.000	0.000	0.058	0.000
OF	232.000	-7.100	0.000	8.842	0.000	0.000	0.000	0.000	0.058	0.000
OF	233.000	-7.043	0.000	8.842	0.000	0.000	0.000	0.000	0.058	0.000
OF	234.000	-6.985	0.000	8.842	0.000	0.000	0.000	0.000	0.057	0.000
OF	235.000	-6.928	0.000	8.842	0.000	0.000	0.000	0.000	0.051	0.000
OF	236.000	-6.882	0.000	8.842	0.000	0.000	0.000	0.000	0.046	0.000
OF	237.000	-6.836	0.000	8.842	0.000	0.000	0.000	0.000	0.046	0.000
OF	238.000	-6.790	0.000	8.842	0.000	0.000	0.000	0.000	0.046	0.000
OF	239.000	-6.745	0.000	8.842	0.000	0.000	0.000	0.000	0.046	0.000
OF	240.000	-6.699	0.000	8.842	0.000	0.000	0.000	0.000	0.046	0.000
OF	241.000	-6.653	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	242.000	-6.607	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	243.000	-6.561	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	244.000	-6.515	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	245.000	-6.470	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	246.000	-6.424	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	247.000	-6.378	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	248.000	-6.332	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	249.000	-6.286	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	250.000	-6.240	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	251.000	-6.194	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	252.000	-6.149	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	253.000	-6.103	0.000	8.841	0.000	0.000	0.000	0.000	0.046	0.000
OF	254.000	-6.057	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
OF	255.000	-6.011	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
OF	256.000	-5.965	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
OF	257.000	-5.920	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
OF	258.000	-5.874	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
OF	259.000	-5.828	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
OF	260.000	-5.782	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
OF	261.000	-5.736	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
OF	262.000	-5.690	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
OF	263.000	-5.645	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
OF	264.000	-5.599	0.000	8.840	0.000	0.000	0.000	0.000	0.028	0.000
OF	265.000	-5.588	0.000	8.840	0.000	0.000	0.000	0.000	0.005	0.000
OF	266.000	-5.588	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
OF	267.000	-5.587	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
OF	268.000	-5.587	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
OF	269.000	-5.586	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
OF	270.000	-5.586	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
OF	271.000	-5.585	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
OF	272.000	-5.584	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
OF	273.000	-5.584	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
OF	274.000	-5.583	0.000	8.840	0.000	0.000	0.000	0.000	0.045	0.000
OF	374.000	-1.087	0.000	8.846	0.000	0.000	0.000	0.000	0.046	0.000
OF	375.000	-0.962	0.000	8.846	0.000	0.000	0.000	0.000	0.130	0.000
OF	376.000	-0.827	0.000	8.846	0.000	0.000	0.000	0.000	0.135	0.000
OF	377.000	-0.692	0.000	8.846	0.000	0.000	0.000	0.000	0.134	0.000
OF	378.000	-0.560	0.000	8.846	0.000	0.000	0.000	0.000	0.127	0.000
OF	379.000	-0.438	0.000	8.846	0.000	0.000	0.000	0.000	0.115	0.000
OF	380.000	-0.329	0.000	8.846	0.000	0.000	0.000	0.000	0.108	0.000
OF	381.000	-0.223	0.000	8.846	0.000	0.000	0.000	0.000	0.107	0.000
OF	382.000	-0.116	0.000	8.847	0.000	0.000	0.000	0.000	0.115	0.000
IF	383.000	0.007	0.000	8.847	0.000	0.000	0.000	0.000	0.108	0.000
IF	384.000	0.101	0.000	8.847	0.000	0.000	0.000	0.000	0.087	0.000
IF	385.000	0.181	0.000	8.847	0.000	0.000	0.000	0.000	0.080	0.000
IF	386.000	0.261	0.000	8.847	0.000	0.000	0.000	0.000	0.115	0.000
IF	387.000	0.410	0.000	8.848	0.000	0.000	0.000	0.000	0.145	0.000
IF	388.000	0.551	0.000	8.848	0.000	0.000	0.000	0.000	0.135	0.000
IF	389.000	0.680	0.000	8.848	0.000	0.000	0.000	0.000	0.121	0.000
IF	390.000	0.793	0.000	8.849	0.000	0.000	0.000	0.000	0.105	0.000
IF	391.000	0.890	0.000	8.849	0.000	0.000	0.000	0.000	0.083	0.000
IF	392.000	0.960	0.000	8.850	0.000	0.000	0.000	0.000	0.070	0.000
IF	393.000	1.029	0.000	8.851	0.000	0.000	0.000	0.000	0.071	0.000
IF	394.000	1.102	0.000	8.851	0.000	0.000	0.000	0.000	0.080	0.000
IF	395.000	1.189	0.000	8.852	0.000	0.000	0.000	0.000	0.087	0.000
IF	396.000	1.276	0.000	8.853	0.000	0.000	0.000	0.000	0.092	0.000
IF	397.000	1.373	0.000	8.853	0.000	0.000	0.000	0.000	0.102	0.000
IF	398.000	1.480	0.000	8.854	0.000	0.000	0.000	0.000	0.106	0.000
IF	399.000	1.586	0.000	8.854	0.000	0.000	0.000	0.000	0.106	0.000
IF	400.000	1.692	0.000	8.855	0.000	0.000	0.000	0.000	0.106	0.000
IF	401.000	1.799	0.000	8.856	0.000	0.000	0.000	0.000	0.096	0.000
IF	402.000	1.885	0.000	8.857	0.000	0.000	0.000	0.000	0.082	0.000
IF	403.000	1.963	0.000	8.858	0.000	0.000	0.000	0.000	0.092	0.000
IF	404.000	2.069	0.000	8.859	0.000	0.000	0.000	0.000	0.107	0.000
IF	405.000	2.176	0.000	8.860	0.000	0.000	0.000	0.000	0.107	0.000
IF	406.000	2.283	0.000	8.861	0.000	0.000	0.000	0.000	0.113	0.000
IF	407.000	2.403	0.000	8.862	0.000	0.000	0.000	0.000	0.122	0.000
IF	408.000	2.527	0.000	8.863	0.000	0.000	0.000	0.000	0.114	0.000
IF	409.000	2.632	0.000	8.863	0.000	0.000	0.000	0.000	0.159	0.000
IF	410.000	2.845	0.000	8.864	0.000	0.000	0.000	0.000	0.450	0.000
IF	420.000	7.585	0.000	9.029	0.000	0.000	0.000	0.000	0.158	0.000
IF	425.000	5.215	0.000	9.053	0.000	0.000	0.000	0.000	-0.284	0.000
IF	426.000	5.882	0.000	9.053	0.000	0.000	0.000	0.000	0.667	0.000
IF	427.000	6.548	0.000	9.057	0.000	0.000	0.000	0.000	0.667	0.000
IF	428.000	7.215	0.000	9.064	0.000	0.000	0.000	0.000	0.667	0.000
IF	429.000	7.882	0.000	9.071	0.000	0.000	0.000	0.000	0.667	0.000
IF	430.000	8.548	0.000	9.071	0.000	0.000	0.000	0.000	0.661	0.000
IF	430.800	9.071	0.000	9.071	0.000	0.000	0.000	0.000	0.654	0.000
AS	618.000	9.071	0.000	9.071	0.000	0.000	0.000	0.000	0.654	0.000

	ET	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1											
	END	END	FETCH	SURGE ELEV	SURGE ELEV	INITIAL	INITIAL			BOTTOM	AVERAGE
	STATION	ELEVATION	LENGTH	10-YEAR	100-YEAR	WAVE HEIGHT	W. PERIOD			SLOPE	A-ZONES
IE	0.000	-17.478	1.000	1.000	8.851	9.375	9.623	56.140		-0.027	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	1.000	-17.505	0.000	8.851	0.000	0.000	0.000	0.000		-0.027	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	2.000	-17.533	0.000	8.851	0.000	0.000	0.000	0.000		-0.027	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	3.000	-17.560	0.000	8.851	0.000	0.000	0.000	0.000		-0.027	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	4.000	-17.588	0.000	8.851	0.000	0.000	0.000	0.000		-0.027	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	5.000	-17.615	0.000	8.851	0.000	0.000	0.000	0.000		-0.027	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	6.000	-17.643	0.000	8.851	0.000	0.000	0.000	0.000		-0.027	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	7.000	-17.670	0.000	8.851	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	8.000	-17.621	0.000	8.851	0.000	0.000	0.000	0.000		0.053	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	9.000	-17.564	0.000	8.851	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	10.000	-17.506	0.000	8.851	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	11.000	-17.449	0.000	8.851	0.000	0.000	0.000	0.000		0.057	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	12.000	-17.392	0.000	8.851	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	13.000	-17.334	0.000	8.851	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	14.000	-17.277	0.000	8.851	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	15.000	-17.219	0.000	8.851	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	16.000	-17.162	0.000	8.851	0.000	0.000	0.000	0.000		0.057	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	17.000	-17.105	0.000	8.851	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	18.000	-17.047	0.000	8.851	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	19.000	-16.990	0.000	8.851	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	20.000	-16.932	0.000	8.851	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	21.000	-16.875	0.000	8.851	0.000	0.000	0.000	0.000		0.057	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	22.000	-16.818	0.000	8.851	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	23.000	-16.760	0.000	8.851	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	24.000	-16.703	0.000	8.850	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	25.000	-16.645	0.000	8.850	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	26.000	-16.588	0.000	8.850	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	27.000	-16.533	0.000	8.850	0.000	0.000	0.000	0.000		0.054	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	28.000	-16.481	0.000	8.850	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	29.000	-16.430	0.000	8.850	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	30.000	-16.378	0.000	8.850	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	31.000	-16.327	0.000	8.850	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	32.000	-16.275	0.000	8.850	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	33.000	-16.224	0.000	8.850	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	34.000	-16.172	0.000	8.850	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	35.000	-16.121	0.000	8.850	0.000	0.000	0.000	0.000		0.052	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	36.000	-16.069	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	37.000	-16.018	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	38.000	-15.966	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	39.000	-15.915	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	40.000	-15.863	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	41.000	-15.812	0.000	8.850	0.000	0.000	0.000	0.000	0.051	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	42.000	-15.761	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	43.000	-15.709	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	44.000	-15.658	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	45.000	-15.606	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	46.000	-15.555	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	47.000	-15.503	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	48.000	-15.452	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	49.000	-15.400	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	50.000	-15.349	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	51.000	-15.297	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	52.000	-15.246	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	53.000	-15.194	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	54.000	-15.143	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	55.000	-15.091	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	56.000	-15.040	0.000	8.850	0.000	0.000	0.000	0.000	0.051	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	57.000	-14.989	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	58.000	-14.937	0.000	8.850	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	59.000	-14.886	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	60.000	-14.834	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	61.000	-14.783	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	62.000	-14.731	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	63.000	-14.680	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	64.000	-14.628	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	65.000	-14.577	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	66.000	-14.525	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	67.000	-14.474	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	68.000	-14.422	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	69.000	-14.371	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	70.000	-14.319	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	71.000	-14.268	0.000	8.849	0.000	0.000	0.000	0.000	0.051	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES

OF	72.000	-14.217	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	73.000	-14.165	0.000	8.849	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	74.000	-14.114	0.000	8.849	0.000	0.000	0.000	0.000	0.052	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	75.000	-14.062	0.000	8.849	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	76.000	-14.011	0.000	8.849	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	77.000	-13.959	0.000	8.849	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	78.000	-13.908	0.000	8.849	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	79.000	-13.856	0.000	8.849	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	80.000	-13.805	0.000	8.849	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	81.000	-13.753	0.000	8.849	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	82.000	-13.702	0.000	8.849	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	83.000	-13.650	0.000	8.849	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	84.000	-13.599	0.000	8.849	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	85.000	-13.547	0.000	8.849	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	86.000	-13.496	0.000	8.849	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	87.000	-13.445	0.000	8.849	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	88.000	-13.393	0.000	8.849	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	89.000	-13.342	0.000	8.849	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	90.000	-13.290	0.000	8.849	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	91.000	-13.239	0.000	8.849	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	92.000	-13.167	0.000	8.848	0.000	0.000	0.000	0.000	0.084	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	93.000	-13.071	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	94.000	-12.974	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	95.000	-12.877	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	96.000	-12.780	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	97.000	-12.684	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	98.000	-12.587	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	99.000	-12.490	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	100.000	-12.393	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	101.000	-12.297	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	102.000	-12.200	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	103.000	-12.103	0.000	8.848	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	104.000	-12.007	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	105.000	-11.910	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	106.000	-11.813	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	107.000	-11.716	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	108.000	-11.620	0.000	8.847	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE

	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	109.000	-11.523	0.000	8.847	0.000	0.000	0.000	0.000		0.097	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	110.000	-11.426	0.000	8.847	0.000	0.000	0.000	0.000		0.097	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	111.000	-11.329	0.000	8.847	0.000	0.000	0.000	0.000		0.097	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	112.000	-11.232	0.000	8.847	0.000	0.000	0.000	0.000		0.097	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	113.000	-11.134	0.000	8.847	0.000	0.000	0.000	0.000		0.098	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	114.000	-11.035	0.000	8.847	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	115.000	-10.936	0.000	8.847	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	116.000	-10.837	0.000	8.847	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	117.000	-10.738	0.000	8.846	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	118.000	-10.639	0.000	8.846	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	119.000	-10.540	0.000	8.846	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	120.000	-10.441	0.000	8.846	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	121.000	-10.342	0.000	8.846	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	122.000	-10.243	0.000	8.846	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	123.000	-10.144	0.000	8.846	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	124.000	-10.045	0.000	8.846	0.000	0.000	0.000	0.000		0.098	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	125.000	-9.947	0.000	8.846	0.000	0.000	0.000	0.000		0.098	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	126.000	-9.848	0.000	8.845	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	127.000	-9.749	0.000	8.845	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	128.000	-9.650	0.000	8.845	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	129.000	-9.551	0.000	8.845	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	130.000	-9.452	0.000	8.845	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	131.000	-9.353	0.000	8.845	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	132.000	-9.254	0.000	8.845	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	133.000	-9.156	0.000	8.845	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	134.000	-9.057	0.000	8.845	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	135.000	-8.958	0.000	8.844	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	136.000	-8.859	0.000	8.844	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	137.000	-8.760	0.000	8.844	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	138.000	-8.661	0.000	8.844	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	139.000	-8.562	0.000	8.844	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	140.000	-8.463	0.000	8.844	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	141.000	-8.364	0.000	8.844	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	142.000	-8.265	0.000	8.844	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	143.000	-8.166	0.000	8.843	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	144.000	-8.067	0.000	8.843	0.000	0.000	0.000	0.000		0.099	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	145.000	-7.968	0.000	8.843	0.000	0.000	0.000	0.000		0.099	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	146.000	-7.870	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	147.000	-7.771	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	148.000	-7.672	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	149.000	-7.573	0.000	8.843	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	150.000	-7.474	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	151.000	-7.375	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	152.000	-7.276	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	153.000	-7.177	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	154.000	-7.078	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	155.000	-6.979	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	156.000	-6.880	0.000	8.842	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	157.000	-6.781	0.000	8.841	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	158.000	-6.682	0.000	8.841	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	159.000	-6.583	0.000	8.841	0.000	0.000	0.000	0.000	0.099	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	160.000	-6.485	0.000	8.841	0.000	0.000	0.000	0.000	0.073	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	161.000	-6.437	0.000	8.841	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	162.000	-6.483	0.000	8.841	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	163.000	-6.530	0.000	8.841	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	164.000	-6.576	0.000	8.841	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	165.000	-6.623	0.000	8.841	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	166.000	-6.669	0.000	8.841	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	167.000	-6.716	0.000	8.841	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	168.000	-6.763	0.000	8.841	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	169.000	-6.809	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	170.000	-6.856	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	171.000	-6.902	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	172.000	-6.949	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	173.000	-6.995	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	174.000	-7.042	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	175.000	-7.089	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	176.000	-7.135	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	177.000	-7.182	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	178.000	-7.228	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	179.000	-7.275	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	180.000	-7.321	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	181.000	-7.368	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES

OF	182.000	-7.414	0.000	8.842	0.000	0.000	0.000	0.000	-0.047	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	183.000	-7.461	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	184.000	-7.508	0.000	8.843	0.000	0.000	0.000	0.000	-0.047	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	185.000	-7.554	0.000	8.843	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	186.000	-7.601	0.000	8.843	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	187.000	-7.647	0.000	8.843	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	188.000	-7.694	0.000	8.843	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	189.000	-7.740	0.000	8.843	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	190.000	-7.787	0.000	8.843	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	191.000	-7.833	0.000	8.843	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	192.000	-7.880	0.000	8.843	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	193.000	-7.926	0.000	8.843	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	194.000	-7.973	0.000	8.843	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	195.000	-8.020	0.000	8.843	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	196.000	-8.066	0.000	8.844	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	197.000	-8.113	0.000	8.844	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	198.000	-8.159	0.000	8.844	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	199.000	-8.206	0.000	8.844	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	200.000	-8.252	0.000	8.844	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	201.000	-8.299	0.000	8.844	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	202.000	-8.345	0.000	8.844	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	203.000	-8.392	0.000	8.844	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	204.000	-8.439	0.000	8.844	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	205.000	-8.485	0.000	8.844	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	206.000	-8.532	0.000	8.844	0.000	0.000	0.000	0.000	-0.030	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	207.000	-8.545	0.000	8.844	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	208.000	-8.488	0.000	8.844	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	209.000	-8.430	0.000	8.844	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	210.000	-8.372	0.000	8.844	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	211.000	-8.314	0.000	8.844	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	212.000	-8.257	0.000	8.844	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	213.000	-8.199	0.000	8.844	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	214.000	-8.141	0.000	8.844	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	215.000	-8.083	0.000	8.844	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	216.000	-8.025	0.000	8.843	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	217.000	-7.968	0.000	8.843	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	218.000	-7.910	0.000	8.843	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	219.000	-7.852	0.000	8.843	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	220.000	-7.794	0.000	8.843	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	221.000	-7.736	0.000	8.843	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	222.000	-7.678	0.000	8.843	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	223.000	-7.621	0.000	8.843	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	224.000	-7.563	0.000	8.843	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	225.000	-7.505	0.000	8.843	0.000	0.000	0.000	0.000		0.058	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	226.000	-7.447	0.000	8.843	0.000	0.000	0.000	0.000		0.058	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	227.000	-7.389	0.000	8.842	0.000	0.000	0.000	0.000		0.058	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	228.000	-7.332	0.000	8.842	0.000	0.000	0.000	0.000		0.058	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	229.000	-7.274	0.000	8.842	0.000	0.000	0.000	0.000		0.058	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	230.000	-7.216	0.000	8.842	0.000	0.000	0.000	0.000		0.058	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	231.000	-7.158	0.000	8.842	0.000	0.000	0.000	0.000		0.058	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	232.000	-7.100	0.000	8.842	0.000	0.000	0.000	0.000		0.058	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	233.000	-7.043	0.000	8.842	0.000	0.000	0.000	0.000		0.058	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	234.000	-6.985	0.000	8.842	0.000	0.000	0.000	0.000		0.057	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	235.000	-6.928	0.000	8.842	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	236.000	-6.882	0.000	8.842	0.000	0.000	0.000	0.000		0.046	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	237.000	-6.836	0.000	8.842	0.000	0.000	0.000	0.000		0.046	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	238.000	-6.790	0.000	8.842	0.000	0.000	0.000	0.000		0.046	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	239.000	-6.745	0.000	8.842	0.000	0.000	0.000	0.000		0.046	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	240.000	-6.699	0.000	8.842	0.000	0.000	0.000	0.000		0.046	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	241.000	-6.653	0.000	8.841	0.000	0.000	0.000	0.000		0.046	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	242.000	-6.607	0.000	8.841	0.000	0.000	0.000	0.000		0.046	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	243.000	-6.561	0.000	8.841	0.000	0.000	0.000	0.000		0.046	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	244.000	-6.515	0.000	8.841	0.000	0.000	0.000	0.000		0.046	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	245.000	-6.470	0.000	8.841	0.000	0.000	0.000	0.000		0.046	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	246.000	-6.424	0.000	8.841	0.000	0.000	0.000	0.000		0.046	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	247.000	-6.378	0.000	8.841	0.000	0.000	0.000	0.000		0.046	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	248.000	-6.332	0.000	8.841	0.000	0.000	0.000	0.000		0.046	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	249.000	-6.286	0.000	8.841	0.000	0.000	0.000	0.000		0.046	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	250.000	-6.240	0.000	8.841	0.000	0.000	0.000	0.000		0.046	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	251.000	-6.194	0.000	8.841	0.000	0.000	0.000	0.000		0.046	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	252.000	-6.149	0.000	8.841	0.000	0.000	0.000	0.000		0.046	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	253.000	-6.103	0.000	8.841	0.000	0.000	0.000	0.000		0.046	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	254.000	-6.057	0.000	8.840	0.000	0.000	0.000	0.000		0.046	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	255.000	-6.011	0.000	8.840	0.000	0.000	0.000	0.000		0.046	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	256.000	-5.965	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	257.000	-5.920	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	258.000	-5.874	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	259.000	-5.828	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	260.000	-5.782	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	261.000	-5.736	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	262.000	-5.690	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	263.000	-5.645	0.000	8.840	0.000	0.000	0.000	0.000	0.046	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	264.000	-5.599	0.000	8.840	0.000	0.000	0.000	0.000	0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	265.000	-5.588	0.000	8.840	0.000	0.000	0.000	0.000	0.005	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	266.000	-5.588	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	267.000	-5.587	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	268.000	-5.587	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	269.000	-5.586	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	270.000	-5.586	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	271.000	-5.585	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	272.000	-5.584	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	273.000	-5.584	0.000	8.840	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	274.000	-5.583	0.000	8.840	0.000	0.000	0.000	0.000	0.045	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	374.000	-1.087	0.000	8.846	0.000	0.000	0.000	0.000	0.046	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	375.000	-0.962	0.000	8.846	0.000	0.000	0.000	0.000	0.130	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	376.000	-0.827	0.000	8.846	0.000	0.000	0.000	0.000	0.135	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	377.000	-0.692	0.000	8.846	0.000	0.000	0.000	0.000	0.134	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	378.000	-0.560	0.000	8.846	0.000	0.000	0.000	0.000	0.127	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	379.000	-0.438	0.000	8.846	0.000	0.000	0.000	0.000	0.115	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	380.000	-0.329	0.000	8.846	0.000	0.000	0.000	0.000	0.108	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	381.000	-0.223	0.000	8.846	0.000	0.000	0.000	0.000	0.107	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	382.000	-0.116	0.000	8.847	0.000	0.000	0.000	0.000	0.115	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	383.000	0.007	0.000	8.847	0.000	0.000	0.000	0.000	0.108	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	384.000	0.101	0.000	8.847	0.000	0.000	0.000	0.000	0.087	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	385.000	0.181	0.000	8.847	0.000	0.000	0.000	0.000	0.080	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	386.000	0.261	0.000	8.847	0.000	0.000	0.000	0.000	0.115	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	387.000	0.410	0.000	8.848	0.000	0.000	0.000	0.000	0.145	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	388.000	0.551	0.000	8.848	0.000	0.000	0.000	0.000	0.135	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	389.000	0.680	0.000	8.848	0.000	0.000	0.000	0.000	0.121	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	390.000	0.793	0.000	8.849	0.000	0.000	0.000	0.000	0.105	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES

IF	391.000	0.890	0.000	8.849	0.000	0.000	0.000	0.000	0.083	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	392.000	0.960	0.000	8.850	0.000	0.000	0.000	0.000	0.070	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	393.000	1.029	0.000	8.851	0.000	0.000	0.000	0.000	0.071	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	394.000	1.102	0.000	8.851	0.000	0.000	0.000	0.000	0.080	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	395.000	1.189	0.000	8.852	0.000	0.000	0.000	0.000	0.087	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	396.000	1.276	0.000	8.853	0.000	0.000	0.000	0.000	0.092	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	397.000	1.373	0.000	8.853	0.000	0.000	0.000	0.000	0.102	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	398.000	1.480	0.000	8.854	0.000	0.000	0.000	0.000	0.106	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	399.000	1.586	0.000	8.854	0.000	0.000	0.000	0.000	0.106	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	400.000	1.692	0.000	8.855	0.000	0.000	0.000	0.000	0.106	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	401.000	1.799	0.000	8.856	0.000	0.000	0.000	0.000	0.096	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	402.000	1.885	0.000	8.857	0.000	0.000	0.000	0.000	0.082	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	403.000	1.963	0.000	8.858	0.000	0.000	0.000	0.000	0.092	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	404.000	2.069	0.000	8.859	0.000	0.000	0.000	0.000	0.107	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	405.000	2.176	0.000	8.860	0.000	0.000	0.000	0.000	0.107	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	406.000	2.283	0.000	8.861	0.000	0.000	0.000	0.000	0.113	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	407.000	2.403	0.000	8.862	0.000	0.000	0.000	0.000	0.122	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	408.000	2.527	0.000	8.863	0.000	0.000	0.000	0.000	0.114	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	409.000	2.632	0.000	8.863	0.000	0.000	0.000	0.000	0.159	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	410.000	2.845	0.000	8.864	0.000	0.000	0.000	0.000	0.450	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	420.000	7.585	0.000	9.029	0.000	0.000	0.000	0.000	0.158	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	425.000	5.215	0.000	9.053	0.000	0.000	0.000	0.000	-0.284	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	426.000	5.882	0.000	9.053	0.000	0.000	0.000	0.000	0.667	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	427.000	6.548	0.000	9.057	0.000	0.000	0.000	0.000	0.667	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	428.000	7.215	0.000	9.064	0.000	0.000	0.000	0.000	0.667	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	429.000	7.882	0.000	9.071	0.000	0.000	0.000	0.000	0.667	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	430.000	8.548	0.000	9.071	0.000	0.000	0.000	0.000	0.661	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	430.800	9.071	0.000	9.071	0.000	0.000	0.000	0.000	0.654	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
AS	618.000	9.071	0.000	9.071	0.000	0.000	0.000	0.000	0.654	0.000

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

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

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

	LOCATION	CONTROLLING WAVE HEIGHT	SPECTRAL PEAK WAVE PERIOD	WAVE CREST ELEVATION
IE	0.00	9.38	9.62	15.41
OF	1.00	9.37	9.62	15.41
OF	2.00	9.37	9.62	15.41
OF	3.00	9.37	9.62	15.41
OF	4.00	9.37	9.62	15.41
OF	5.00	9.36	9.62	15.41
OF	6.00	9.36	9.62	15.40
OF	7.00	9.36	9.62	15.40
OF	8.00	9.36	9.62	15.41
OF	9.00	9.37	9.62	15.41
OF	10.00	9.37	9.62	15.41
OF	11.00	9.38	9.62	15.42
OF	12.00	9.38	9.62	15.42
OF	13.00	9.39	9.62	15.42
OF	14.00	9.39	9.62	15.43
OF	15.00	9.40	9.62	15.43
OF	16.00	9.41	9.62	15.43

OF	17.00	9.41	9.62	15.44
OF	18.00	9.42	9.62	15.44
OF	19.00	9.42	9.62	15.45
OF	20.00	9.43	9.62	15.45
OF	21.00	9.43	9.62	15.45
OF	22.00	9.44	9.62	15.46
OF	23.00	9.44	9.62	15.46
OF	24.00	9.45	9.62	15.46
OF	25.00	9.46	9.62	15.47
OF	26.00	9.46	9.62	15.47
OF	27.00	9.47	9.62	15.48
OF	28.00	9.47	9.62	15.48
OF	29.00	9.48	9.62	15.48
OF	30.00	9.48	9.62	15.49
OF	31.00	9.49	9.62	15.49
OF	32.00	9.49	9.62	15.49
OF	33.00	9.50	9.62	15.50
OF	34.00	9.50	9.62	15.50
OF	35.00	9.51	9.62	15.51
OF	36.00	9.51	9.62	15.51
OF	37.00	9.52	9.62	15.51
OF	38.00	9.52	9.62	15.52
OF	39.00	9.53	9.62	15.52
OF	40.00	9.53	9.62	15.52
OF	41.00	9.54	9.62	15.53
OF	42.00	9.54	9.62	15.53
OF	43.00	9.55	9.62	15.53
OF	44.00	9.55	9.62	15.54
OF	45.00	9.56	9.62	15.54
OF	46.00	9.57	9.62	15.55
OF	47.00	9.57	9.62	15.55
OF	48.00	9.58	9.62	15.55
OF	49.00	9.58	9.62	15.56
OF	50.00	9.59	9.62	15.56
OF	51.00	9.59	9.62	15.57
OF	52.00	9.60	9.62	15.57
OF	53.00	9.60	9.62	15.57
OF	54.00	9.61	9.62	15.58
OF	55.00	9.62	9.62	15.58
OF	56.00	9.62	9.62	15.58
OF	57.00	9.63	9.62	15.59
OF	58.00	9.63	9.62	15.59
OF	59.00	9.64	9.62	15.60
OF	60.00	9.64	9.62	15.60
OF	61.00	9.65	9.62	15.60
OF	62.00	9.66	9.62	15.61
OF	63.00	9.66	9.62	15.61
OF	64.00	9.67	9.62	15.62
OF	65.00	9.67	9.62	15.62
OF	66.00	9.68	9.62	15.62
OF	67.00	9.68	9.62	15.63
OF	68.00	9.69	9.62	15.63
OF	69.00	9.70	9.62	15.64
OF	70.00	9.70	9.62	15.64
OF	71.00	9.71	9.62	15.64
OF	72.00	9.71	9.62	15.65
OF	73.00	9.72	9.62	15.65
OF	74.00	9.73	9.62	15.66
OF	75.00	9.73	9.62	15.66
OF	76.00	9.74	9.62	15.67
OF	77.00	9.74	9.62	15.67
OF	78.00	9.75	9.62	15.67
OF	79.00	9.76	9.62	15.68
OF	80.00	9.76	9.62	15.68
OF	81.00	9.77	9.62	15.69
OF	82.00	9.77	9.62	15.69
OF	83.00	9.78	9.62	15.70
OF	84.00	9.79	9.62	15.70
OF	85.00	9.79	9.62	15.70
OF	86.00	9.80	9.62	15.71
OF	87.00	9.81	9.62	15.71
OF	88.00	9.81	9.62	15.72
OF	89.00	9.82	9.62	15.72
OF	90.00	9.83	9.62	15.73
OF	91.00	9.83	9.62	15.73
OF	92.00	9.84	9.62	15.74
OF	93.00	9.85	9.62	15.75
OF	94.00	9.87	9.62	15.75
OF	95.00	9.88	9.62	15.76
OF	96.00	9.89	9.62	15.77
OF	97.00	9.90	9.62	15.78
OF	98.00	9.92	9.62	15.79
OF	99.00	9.93	9.62	15.80
OF	100.00	9.94	9.62	15.81
OF	101.00	9.95	9.62	15.82
OF	102.00	9.97	9.62	15.82
OF	103.00	9.98	9.62	15.83
OF	104.00	9.99	9.62	15.84
OF	105.00	10.01	9.62	15.85
OF	106.00	10.02	9.62	15.86
OF	107.00	10.03	9.62	15.87
OF	108.00	10.05	9.62	15.88
OF	109.00	10.06	9.62	15.89
OF	110.00	10.08	9.62	15.90
OF	111.00	10.09	9.62	15.91
OF	112.00	10.10	9.62	15.92
OF	113.00	10.12	9.62	15.93
OF	114.00	10.13	9.62	15.94
OF	115.00	10.15	9.62	15.95
OF	116.00	10.16	9.62	15.96
OF	117.00	10.18	9.62	15.97
OF	118.00	10.19	9.62	15.98
OF	119.00	10.21	9.62	15.99
OF	120.00	10.22	9.62	16.00
OF	121.00	10.24	9.62	16.01
OF	122.00	10.26	9.62	16.02
OF	123.00	10.27	9.62	16.04
OF	124.00	10.29	9.62	16.05
OF	125.00	10.30	9.62	16.06
OF	126.00	10.32	9.62	16.07

OF	127.00	10.34	9.62	16.08
OF	128.00	10.35	9.62	16.09
OF	129.00	10.37	9.62	16.10
OF	130.00	10.39	9.62	16.12
OF	131.00	10.40	9.62	16.13
OF	132.00	10.42	9.62	16.14
OF	133.00	10.44	9.62	16.15
OF	134.00	10.46	9.62	16.16
OF	135.00	10.47	9.62	16.18
OF	136.00	10.49	9.62	16.19
OF	137.00	10.50	9.62	16.20
OF	138.00	10.49	9.62	16.19
OF	139.00	10.48	9.62	16.18
OF	140.00	10.47	9.62	16.17
OF	141.00	10.46	9.62	16.16
OF	142.00	10.44	9.62	16.15
OF	143.00	10.43	9.62	16.15
OF	144.00	10.42	9.62	16.14
OF	145.00	10.41	9.62	16.13
OF	146.00	10.40	9.62	16.12
OF	147.00	10.38	9.62	16.11
OF	148.00	10.37	9.62	16.10
OF	149.00	10.36	9.62	16.09
OF	150.00	10.34	9.62	16.08
OF	151.00	10.33	9.62	16.07
OF	152.00	10.32	9.62	16.06
OF	153.00	10.30	9.62	16.06
OF	154.00	10.29	9.62	16.05
OF	155.00	10.28	9.62	16.04
OF	156.00	10.26	9.62	16.03
OF	157.00	10.25	9.62	16.02
OF	158.00	10.24	9.62	16.01
OF	159.00	10.22	9.62	16.00
OF	160.00	10.21	9.62	15.99
OF	161.00	10.20	9.62	15.98
OF	162.00	10.21	9.62	15.99
OF	163.00	10.22	9.62	16.00
OF	164.00	10.23	9.62	16.00
OF	165.00	10.24	9.62	16.01
OF	166.00	10.25	9.62	16.02
OF	167.00	10.26	9.62	16.02
OF	168.00	10.27	9.62	16.03
OF	169.00	10.28	9.62	16.04
OF	170.00	10.29	9.62	16.04
OF	171.00	10.30	9.62	16.05
OF	172.00	10.31	9.62	16.06
OF	173.00	10.32	9.62	16.06
OF	174.00	10.33	9.62	16.07
OF	175.00	10.34	9.62	16.08
OF	176.00	10.35	9.62	16.09
OF	177.00	10.36	9.62	16.09
OF	178.00	10.37	9.62	16.10
OF	179.00	10.38	9.62	16.11
OF	180.00	10.39	9.62	16.11
OF	181.00	10.39	9.62	16.12
OF	182.00	10.40	9.62	16.12
OF	183.00	10.41	9.62	16.13
OF	184.00	10.42	9.62	16.14
OF	185.00	10.43	9.62	16.15
OF	186.00	10.44	9.62	16.15
OF	187.00	10.45	9.62	16.16
OF	188.00	10.46	9.62	16.16
OF	189.00	10.47	9.62	16.17
OF	190.00	10.48	9.62	16.18
OF	191.00	10.49	9.62	16.18
OF	192.00	10.50	9.62	16.19
OF	193.00	10.51	9.62	16.20
OF	194.00	10.51	9.62	16.20
OF	195.00	10.52	9.62	16.21
OF	196.00	10.53	9.62	16.22
OF	197.00	10.54	9.62	16.22
OF	198.00	10.55	9.62	16.23
OF	199.00	10.56	9.62	16.24
OF	200.00	10.57	9.62	16.24
OF	201.00	10.58	9.62	16.25
OF	202.00	10.59	9.62	16.25
OF	203.00	10.59	9.62	16.26
OF	204.00	10.60	9.62	16.27
OF	205.00	10.61	9.62	16.27
OF	206.00	10.62	9.62	16.28
OF	207.00	10.62	9.62	16.28
OF	208.00	10.62	9.62	16.28
OF	209.00	10.61	9.62	16.27
OF	210.00	10.61	9.62	16.27
OF	211.00	10.60	9.62	16.26
OF	212.00	10.59	9.62	16.26
OF	213.00	10.59	9.62	16.26
OF	214.00	10.58	9.62	16.25
OF	215.00	10.57	9.62	16.25
OF	216.00	10.57	9.62	16.24
OF	217.00	10.56	9.62	16.24
OF	218.00	10.56	9.62	16.23
OF	219.00	10.55	9.62	16.23
OF	220.00	10.54	9.62	16.22
OF	221.00	10.54	9.62	16.22
OF	222.00	10.53	9.62	16.21
OF	223.00	10.52	9.62	16.21
OF	224.00	10.51	9.62	16.20
OF	225.00	10.51	9.62	16.20
OF	226.00	10.50	9.62	16.19
OF	227.00	10.49	9.62	16.19
OF	228.00	10.49	9.62	16.18
OF	229.00	10.48	9.62	16.18
OF	230.00	10.47	9.62	16.17
OF	231.00	10.47	9.62	16.17
OF	232.00	10.46	9.62	16.16
OF	233.00	10.45	9.62	16.16
OF	234.00	10.44	9.62	16.15
OF	235.00	10.44	9.62	16.15
OF	236.00	10.43	9.62	16.14

OF	237.00	10.42	9.62	16.14
OF	238.00	10.42	9.62	16.14
OF	239.00	10.41	9.62	16.13
OF	240.00	10.41	9.62	16.13
OF	241.00	10.40	9.62	16.12
OF	242.00	10.40	9.62	16.12
OF	243.00	10.39	9.62	16.11
OF	244.00	10.38	9.62	16.11
OF	245.00	10.38	9.62	16.11
OF	246.00	10.37	9.62	16.10
OF	247.00	10.37	9.62	16.10
OF	248.00	10.36	9.62	16.09
OF	249.00	10.36	9.62	16.09
OF	250.00	10.35	9.62	16.09
OF	251.00	10.34	9.62	16.08
OF	252.00	10.34	9.62	16.08
OF	253.00	10.33	9.62	16.07
OF	254.00	10.32	9.62	16.07
OF	255.00	10.32	9.62	16.06
OF	256.00	10.31	9.62	16.06
OF	257.00	10.31	9.62	16.05
OF	258.00	10.30	9.62	16.05
OF	259.00	10.29	9.62	16.04
OF	260.00	10.29	9.62	16.04
OF	261.00	10.28	9.62	16.04
OF	262.00	10.27	9.62	16.03
OF	263.00	10.27	9.62	16.03
OF	264.00	10.26	9.62	16.02
OF	265.00	10.26	9.62	16.02
OF	266.00	10.26	9.62	16.02
OF	267.00	10.26	9.62	16.02
OF	268.00	10.27	9.62	16.03
OF	269.00	10.27	9.62	16.03
OF	270.00	10.27	9.62	16.03
OF	271.00	10.27	9.62	16.03
OF	272.00	10.27	9.62	16.03
OF	273.00	10.28	9.62	16.03
OF	274.00	10.28	9.62	16.03
OF	374.00	7.50	9.62	14.10
OF	375.00	7.41	9.62	14.03
OF	376.00	7.31	9.62	13.96
OF	377.00	7.21	9.62	13.89
OF	378.00	7.11	9.62	13.83
OF	379.00	7.02	9.62	13.76
OF	380.00	6.94	9.62	13.71
OF	381.00	6.87	9.62	13.65
OF	382.00	6.79	9.62	13.60
IF	383.00	6.70	9.62	13.54
IF	384.00	6.63	9.62	13.49
IF	385.00	6.57	9.62	13.45
IF	386.00	6.51	9.62	13.40
IF	387.00	6.40	9.62	13.33
IF	388.00	6.30	9.62	13.26
IF	389.00	6.20	9.62	13.19
IF	390.00	6.12	9.62	13.13
IF	391.00	6.05	9.62	13.08
IF	392.00	6.00	9.62	13.05
IF	393.00	5.95	9.62	13.01
IF	394.00	5.89	9.62	12.98
IF	395.00	5.83	9.62	12.93
IF	396.00	5.76	9.62	12.89
IF	397.00	5.69	9.62	12.84
IF	398.00	5.61	9.62	12.78
IF	399.00	5.54	9.62	12.73
IF	400.00	5.46	9.62	12.67
IF	401.00	5.38	9.62	12.62
IF	402.00	5.31	9.62	12.58
IF	403.00	5.26	9.62	12.54
IF	404.00	5.18	9.62	12.48
IF	405.00	5.10	9.62	12.43
IF	406.00	5.02	9.62	12.38
IF	407.00	4.93	9.62	12.31
IF	408.00	4.84	9.62	12.25
IF	409.00	4.76	9.62	12.20
IF	410.00	4.60	9.62	12.09
IF	420.00	1.12	9.62	9.81
IF	425.00	1.05	9.62	9.79
IF	426.00	1.17	9.62	9.87
IF	427.00	1.27	9.62	9.94
IF	428.00	1.20	9.62	9.90
IF	429.00	0.92	9.62	9.72
IF	430.00	0.41	9.62	9.36
IF	430.80	0.01	9.62	9.08
AS	618.00	0.00	0.00	9.07

PART3 LOCATION OF AREAS ABOVE 100-YEAR SURGE
BETWEEN 430.80 AND 618.00

PART4 LOCATION OF SURGE CHANGES

STATION	10-YEAR SURGE	100-YEAR SURGE
24.00	1.00	8.85
59.00	1.00	8.85
92.00	1.00	8.85
104.00	1.00	8.85
117.00	1.00	8.85
126.00	1.00	8.85
135.00	1.00	8.84
143.00	1.00	8.84
150.00	1.00	8.84
157.00	1.00	8.84
169.00	1.00	8.84
183.00	1.00	8.84
196.00	1.00	8.84
216.00	1.00	8.84
227.00	1.00	8.84
241.00	1.00	8.84
254.00	1.00	8.84
374.00	1.00	8.85
375.00	1.00	8.85
382.00	1.00	8.85
387.00	1.00	8.85
390.00	1.00	8.85

392.00	1.00	8.85
393.00	1.00	8.85
395.00	1.00	8.85
396.00	1.00	8.85
398.00	1.00	8.85
400.00	1.00	8.85
401.00	1.00	8.86
402.00	1.00	8.86
403.00	1.00	8.86
404.00	1.00	8.86
405.00	1.00	8.86
406.00	1.00	8.86
407.00	1.00	8.86
408.00	1.00	8.86
410.00	1.00	8.86
420.00	1.00	9.03
425.00	1.00	9.05
427.00	1.00	9.06
428.00	1.00	9.06
429.00	1.00	9.07

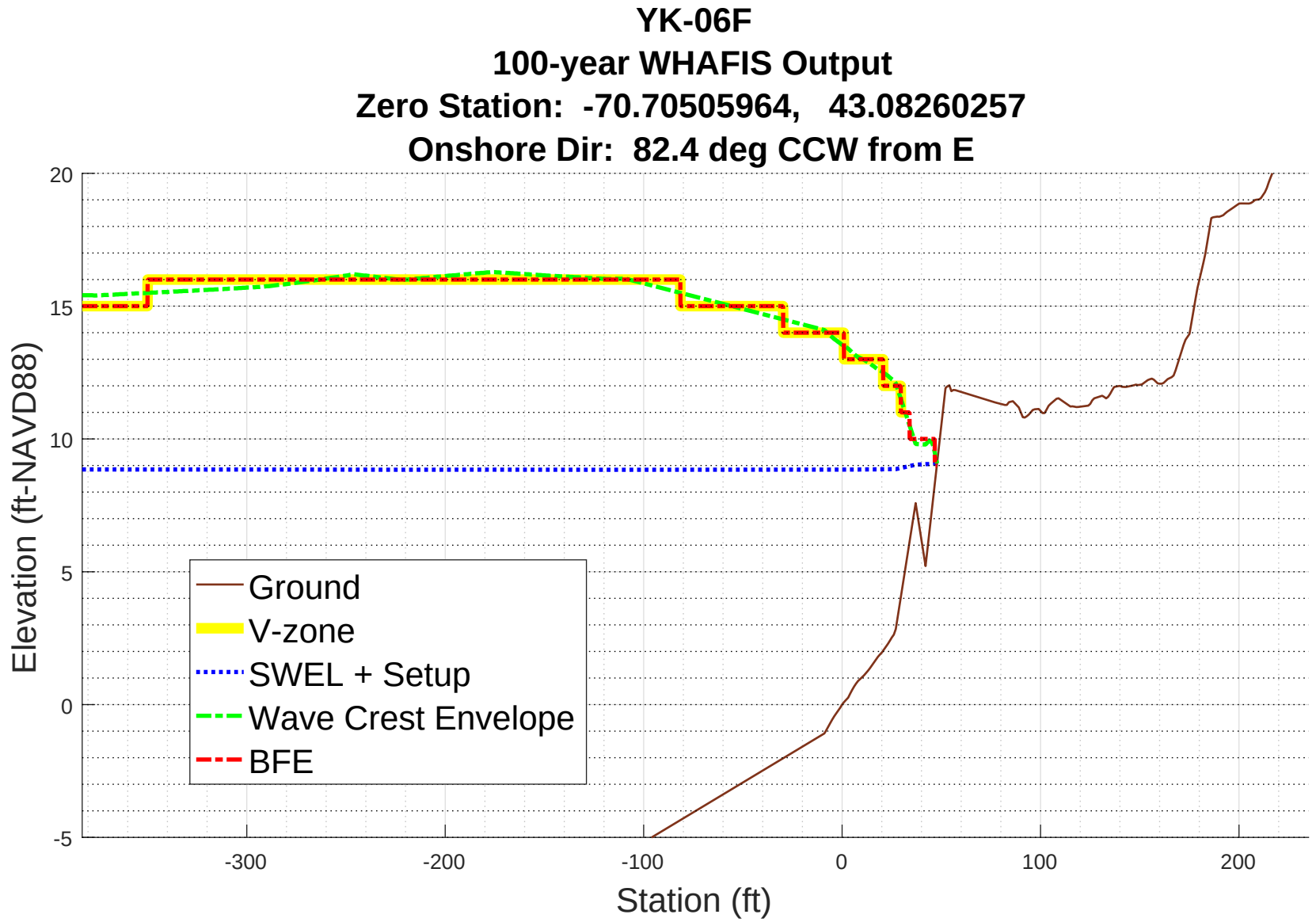
PART5 LOCATION OF V ZONES

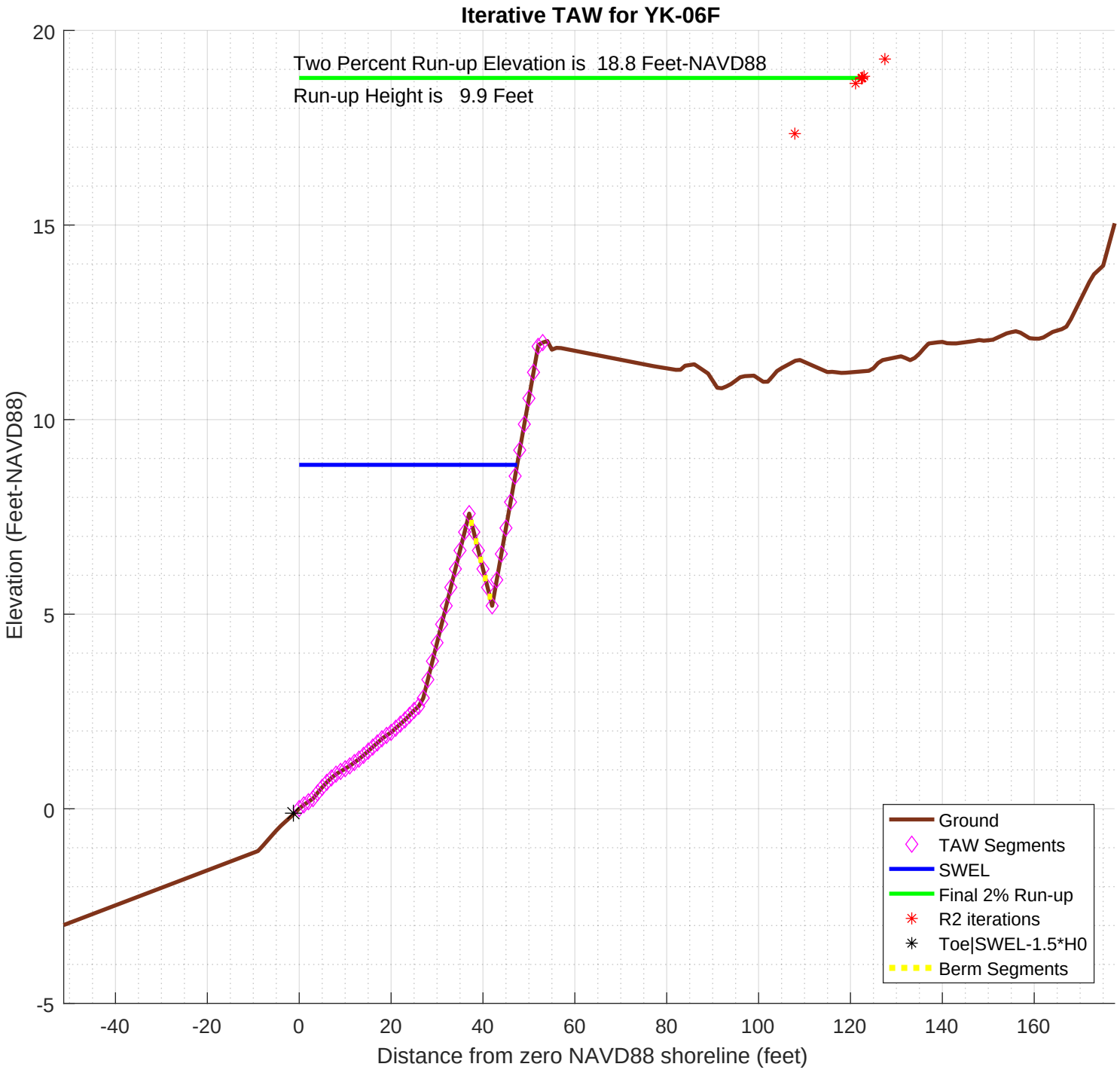
STATION OF GUTTER 414.60 LOCATION OF ZONE WINDWARD

PART6 NUMBERED A ZONES AND V ZONES

STATION OF GUTTER	ELEVATION	ZONE DESIGNATION	FHF
0.00	15.41	V22 EL=15	120
23.00	15.46	V22 EL=15	120
24.00	15.46	V22 EL=15	120
33.60	15.50	V22 EL=16	120
58.00	15.59	V22 EL=16	120
59.00	15.60	V22 EL=16	120
91.00	15.73	V22 EL=16	120
92.00	15.74	V22 EL=16	120
103.00	15.83	V22 EL=16	120
104.00	15.84	V22 EL=16	120
116.00	15.96	V22 EL=16	120
117.00	15.97	V22 EL=16	120
125.00	16.06	V22 EL=16	120
126.00	16.07	V22 EL=16	120
134.00	16.16	V22 EL=16	120
135.00	16.18	V22 EL=16	120
142.00	16.15	V22 EL=16	120
143.00	16.15	V22 EL=16	120
149.00	16.09	V22 EL=16	120
150.00	16.08	V22 EL=16	120
156.00	16.03	V22 EL=16	120
157.00	16.02	V22 EL=16	120
168.00	16.03	V22 EL=16	120
169.00	16.04	V22 EL=16	120
182.00	16.12	V22 EL=16	120
183.00	16.13	V22 EL=16	120
195.00	16.21	V22 EL=16	120
196.00	16.22	V22 EL=16	120
215.00	16.25	V22 EL=16	120
216.00	16.24	V22 EL=16	120
226.00	16.19	V22 EL=16	120
227.00	16.19	V22 EL=16	120
240.00	16.13	V22 EL=16	120
241.00	16.12	V22 EL=16	120
253.00	16.07	V22 EL=16	120
254.00	16.07	V22 EL=16	120
274.00	16.03	V22 EL=16	120
301.59	15.50	V22 EL=15	120
353.16	14.50	V22 EL=14	120
374.00	14.10	V22 EL=14	120
375.00	14.03	V22 EL=14	120
381.00	13.65	V22 EL=14	120
382.00	13.60		

```
                                                                V22  EL=14     120
                383.74          13.50
                                                                V22  EL=13     120
                386.00          13.40
                                                                V22  EL=13     120
                387.00          13.33
                                                                V22  EL=13     120
                389.00          13.19
                                                                V22  EL=13     120
                390.00          13.13
                                                                V22  EL=13     120
                391.00          13.08
                                                                V22  EL=13     120
                392.00          13.05
                                                                V22  EL=13     120
                393.00          13.01
                                                                V22  EL=13     120
                394.00          12.98
                                                                V22  EL=13     120
                395.00          12.93
                                                                V22  EL=13     120
                396.00          12.89
                                                                V22  EL=13     120
                397.00          12.84
                                                                V22  EL=13     120
                398.00          12.78
                                                                V22  EL=13     120
                399.00          12.73
                                                                V22  EL=13     120
                400.00          12.67
                                                                V22  EL=13     120
                401.00          12.62
                                                                V22  EL=13     120
                402.00          12.58
                                                                V22  EL=13     120
                403.00          12.54
                                                                V22  EL=13     120
                403.71          12.50
                                                                V22  EL=12     120
                404.00          12.48
                                                                V22  EL=12     120
                405.00          12.43
                                                                V22  EL=12     120
                406.00          12.38
                                                                V22  EL=12     120
                407.00          12.31
                                                                V22  EL=12     120
                408.00          12.25
                                                                V22  EL=12     120
                409.00          12.20
                                                                V22  EL=12     120
                410.00          12.09
                                                                V22  EL=12     120
                412.58          11.50
                                                                V22  EL=11     120
                414.60          11.05
                                                                A16  EL=11      80
                416.98          10.50
                                                                A16  EL=10      80
                420.00           9.81
                                                                A16  EL=10      80
                425.00           9.79
                                                                A16  EL=10      80
                426.00           9.87
                                                                A16  EL=10      80
                427.00           9.94
                                                                A16  EL=10      80
                428.00           9.90
                                                                A16  EL=10      80
                429.00           9.72
                                                                A16  EL=10      80
                429.60           9.50
                                                                A16  EL= 9      80
                430.80           9.08
                618.00           9.07
                     ZONE TERMINATED AT END OF TRANSECT
                     PART 7   POSTSCRIPT NOTES
           PS#  1   START(361192.7871,4771282.8551)
           PS#  2   END(361217.8661,4771469.8232)
-1.000000e+00
```


YK-06F
100-year WHAFIS Output
Zero Station: -70.70505964, 43.08260257
Onshore Dir: 82.4 deg CCW from E
Elevation (ft-NAVD88)
Station (ft)
20
15
10
5
0
-5
-300
-200
-100
0
100
200
Ground
V-zone
SWEL + Setup
Wave Crest Envelope
BFE


Iterative TAW for YK-06F
Two Percent Run-up Elevation is 18.8 Feet-NAVD88
Run-up Height is 9.9 Feet
Elevation (Feet-NAVD88)
Distance from zero NAVD88 shoreline (feet)
20
15
10
5
0
-5
-40
-20
0
20
40
60
80
100
120
140
160
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 Kittery, York county, Maine
% TRANSECT ID: YK-06F
% calculation by SJH, Ransom Consulting, Inc. 16-Oct-2018
% 100-year wave runup using TAW methodology
% including berm and weighted average with foreshore if necessary
%
% chk nld 20181015
%
% This script assumes that the incident wave conditions provided
% as input in the configuration section below are the
% appropriate values located at the end of the foreshore
% or toe of the slope on which the run-up is being calculated
% the script does not attempt to apply a depth limit or any other
% transformation to the incident wave conditions other than
% conversion of the peak wave period to the spectral mean wave
% as recommended in the references below
%
%
% references:
%
% Van der Meer, J.W., 2002. Technical Report Wave Run-up and
% Wave Overtopping at Dikes. TAW Technical Advisory Committee on
% Flood Defence, The Netherlands.
%
% FEMA. 2007,  Atlantic Ocean and Gulf of Mexico Coastal Guidelines Update
%
%
%

%-------------------------------------------------------------------------
% CONFIG
%-------------------------------------------------------------------------
fname='inpfiles/YK-06Fsta_ele_include.csv';   % file with station, elevation, include
                                    % third colunm is 0 for excluded points
imgname='logfiles/YK-06F-runup';
SWEL=8.8509;  % 100-yr still water level including wave setup.
H0=5.967;    % significant wave height at toe of structure
Tp=9.7262;    % peak period, 1/fma,
T0=Tp/1.1;

gamma_berm=0.96388;   % this may get changed automatically below
gamma_rough=0.75;
gamma_beta=1;
gamma_perm=1;

setupAtToe=-0.013245;
maxSetup=0.74195;   % only used in case of berm/shallow foreshore weighted average

plotTitle='Iterative TAW for YK-06F'

plotTitle =

Iterative TAW for YK-06F



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

SWEL=SWEL+setupAtToe

SWEL =

                  8.837655

SWEL_fore=SWEL+maxSetup

SWEL_fore =

                  9.579605



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

L0 =

          400.038813072708


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

% The toe elevation here is only used to determine the average
% structure slope, it is not used to depth limit the wave height.
% Any depth limiting or other modification of the wave height
% to make it consitent with TAW guidance should be performed
% prior to the input of the significant wave height given above.
Ztoe=SWEL-1.5*H0

Ztoe =
```

```
                -0.112845


% read the transect
[sta,dep,inc] = textread(fname,'%n%n%n%*[^\n]','delimiter',',','headerlines',0);

% remove unselected points
k=find(inc==0);
sta(k)=[];
dep(k)=[];

sta_org=sta;  % used for plotting purposes
dep_org=dep;


% initial guess at maximum run-up elevation to estimate slope
Z2=SWEL+1.5*H0

Z2 =

                17.788155


% determine station at the max runup and -1.5*H0 (i.e. the toe)
top_sta=-999;
toe_sta=-999;
for kk=1:length(sta)-1
    if ((Z2 > dep(kk)) & (Z2 <= dep(kk+1)))    % here is the intersection of z2 with profile
       top_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Z2)
    end
    if  ((Ztoe > dep(kk)) & (Ztoe <= dep(kk+1)))    % here is the intersection of Ztoe with profile
       toe_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Ztoe)
    end
end
% check to make sure we got them, if not extend the end slopes outward
S=diff(dep)./diff(sta);
if toe_sta==-999
   dy=dep(1)-Ztoe;
   toe_sta=sta(1)-dy/S(1)
end

toe_sta =

         -1.26876988335101

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

top_sta =

          112.393200408998


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

top_sta =

          112.393200408998

toe_sta

toe_sta =

         -1.26876988335101



% check for case where the toe of slope is below SWL-1.5*H0
% in this case interpolate setup from the setupAtToe(really setup as first station), and the max setup
% also un-include points seaward of SWL-1.5*H0
if Ztoe > dep(1)
   dd=SWEL_fore-dep;
   k=find(dd<0,1); % k is index of first land point
   staAtSWL=interp1(dep(k-1:k),sta(k-1:k),SWEL_fore);
   dsta=staAtSWL-sta(1);
   dsetup=maxSetup-setupAtToe;
   dsetdsta=dsetup/dsta;
   setup=setupAtToe+dsetdsta*(toe_sta-sta(1));
   sprintf('-!!- Location of SWEL-1.5*H0 is %4.1f ft landward of toe of slope',dsta)
   sprintf('-!!- Setup is interpolated between setup at toe of slope and max setup')
   sprintf('-!!-       setup is adjusted to %4.2f feet',setup)
   SWEL=SWEL-setupAtToe+setup;
   sprintf('-!!-       SWEL is adjusted to %4.2f feet',SWEL)
   k=find(dep < SWEL-1.5*H0)
   sta(k)=[];
   dep(k)=[];
else
   sprintf('-!!- The User has selected a starting point that is %4.2f feet above the elevation of SWEL-1.5H0\n',de
   sprintf('-!!- This may be reasonable for some cases.  However the user may want to consider:\n')
   sprintf('-!!-   1) Selecting a starting point that is at or below %4.2f feet elevation, or\n', Ztoe)
   sprintf('-!!-   2) Reducing the incident wave height to a depth limited condition.\n')
```

```
end

ans =

-!!- The User has selected a starting point that is 0.12 feet above the elevation of SWEL-1.5H0


ans =

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


ans =

-!!-   1) Selecting a starting point that is at or below -0.11 feet elevation, or


ans =

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




% now iterate converge on a runup elevation
tol=0.001;  % convergence criteria
R2del=999;
R2_new=3*H0; %initial guess
R2=R2_new;
iter=0;
R2_all=[];
topStaAll=[];
Berm_Segs=[];
TAW_ALWAYS_VALID=1;
while(abs(R2del) > tol && iter <= 25)
    iter=iter+1;
    sprintf ('!----------------- STARTING ITERATION %d -----------------!',iter)
    % elevation of toe of slope
    Ztoe
    % station of toe slope (relative to 0-NAVD88 shoreline
    toe_sta
    % station of top of slope/extent of 2% run-up
    top_sta
    % elevation of top of slope/extent of 2% run-up
    Z2
    % incident significant wave height
    H0
    % incident spectral peak wave period
    Tp
    % incident spectral mean wave period
    T0

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

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

    % loop over profile segments to determine berm factor
    % re-calculate influence of depth of berm based on this run-up elevation
    % check for berm, berm width, berm height
    berm_width=0;
    rdh_sum=0;
    Berm_Segs=[];
    Berm_Heights=[];
    for kk=1:length(sta)-1
       ddep=dep(kk+1)-dep(kk);
       dsta=sta(kk+1)-sta(kk);
       s=ddep/dsta;
       if  (s < 1/15)     % count it as a berm if slope is flatter than 1:15 (see TAW manual)
          sprintf ('Berm Factor Calculation: Iteration %d, Profile Segment: %d',iter,kk)
          berm_width=berm_width+dsta;   % tally the width of all berm segments
          % compute the rdh for this segment and weight it by the segment length
          dh=SWEL-(dep(kk)+dep(kk+1))/2
          if  dh < 0
              chi=R2;
          else
              chi=2* H0;
          end
          if (dh <= R2 & dh >=-2*H0)
```

```
         rdh=(0.5-0.5*cos(3.14159*dh/chi)) ;
      else
         rdh=1;
      end
      rdh_sum=rdh_sum + rdh * dsta
      Berm_Segs=[Berm_Segs, kk];
      Berm_Heights=[Berm_Heights, (dep(kk)+dep(kk+1))/2];
   end
   if dep(kk) >= Z2  % jump out of loop if we reached limit of run-up for this iteration
      break
   end
end
sprintf ('!------- End Berm Factor Calculation, Iter: %d ---------!',iter)
berm_width
rB=berm_width/Lslope
if (berm_width > 0)
   rdh_mean=rdh_sum/berm_width
else
   rdh_mean=1
end
gamma_berm=1- rB * (1-rdh_mean)
if gamma_berm > 1
   gamma_berm=1
end
if gamma_berm < 0.6
   gamma_berm =0.6
end
% Iribarren number
slope=(Z2-Ztoe)/(Lslope-berm_width)
Irb=(slope/(sqrt(H0/L0)))
% runup height
gamma_berm
gamma_perm
gamma_beta
gamma_rough
gamma=gamma_berm*gamma_perm*gamma_beta*gamma_rough

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

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


% check to see if we need to evaluate a shallow foreshore
if berm_width > 0.25 * L0;
   disp ('!   Berm_width is greater than 1/4 wave length')
   disp ('!   Runup will be weighted average with foreshore calculation assuming depth limited wave height on
   % do the foreshore calculation
   fore_H0=0.78*(SWEL_fore-min(Berm_Heights))
   % get upper slope
   fore_toe_sta=-999;
   fore_toe_dep=-999;
   for kk=length(dep)-1:-1:1
      ddep=dep(kk+1)-dep(kk);
      dsta=sta(kk+1)-sta(kk);
      s=ddep/dsta;
      if s < 1/15
         break
      end
      fore_toe_sta=sta(kk);
      fore_toe_dep=dep(kk);
      upper_slope=(Z2-fore_toe_dep)/(top_sta-fore_toe_sta)
   end
   fore_Irb=upper_slope/(sqrt(fore_H0/L0));
   fore_gamma=gamma_perm*gamma_beta*gamma_rough;
   if (fore_Irb < 1.8)
      fore_R2=fore_gamma*fore_H0*1.77*fore_Irb;
   else
      fore_R2=fore_gamma*fore_H0*(4.3-(1.6/sqrt(fore_Irb)));
   end
   if berm_width >= L0
      R2_new=fore_R_2(i)
      disp ('berm is wider than one wavelength, use full shallow foreshore solution');
   else
      w2=(berm_width-0.25*L0)/(0.75*L0)
      w1=1-w2
```

```
          R2_new=w2*fore_R2 + w1*R2_new
       end
    end % end berm width check

    % convergence criterion
    R2del=abs(R2-R2_new)
    R2_all(iter)=R2_new;

    % get the new top station (for plot purposes)
    Z2=R2_new+SWEL
    top_sta=-999;
    for kk=1:length(sta)-1
       if ((Z2 > dep(kk)) & (Z2 <= dep(kk+1)))    % here is the intersection of z2 with profile
          top_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Z2)
          break;
       end
    end
    if top_sta==-999
       dy=Z2-dep(end);
       top_sta=sta(end)+dy/S(end);
    end
    topStaAll(iter)=top_sta;
end
ans =
!----------------- STARTING ITERATION 1 -----------------!
Ztoe =
                  -0.112845
toe_sta =
         -1.26876988335101
top_sta =
          112.393200408998
Z2 =
                  17.788155
H0 =
                      5.967
Tp =
                     9.7262
T0 =
                      8.842
R2 =
                     17.901
Z2 =
                  26.738655
top_sta =
          203.911605316974
Lslope =
          205.180375200325
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 38
dh =
                   1.489745
rdh_sum =
        0.0379592425807011
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 39
dh =
                   1.963725
rdh_sum =
         0.103292636226105
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 40
dh =
                   2.437705
rdh_sum =
         0.202758516292872
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 41
dh =
                   2.911685
rdh_sum =
         0.342584515326773
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 42
dh =
                   3.385665
rdh_sum =
         0.528370733840921
ans =
!------- End Berm Factor Calculation, Iter: 1 ---------!
berm_width =
     5
rB =
        0.0243688023044032
rdh_mean =
         0.105674146768184
gamma_berm =
         0.978206350086877
slope =
         0.134136525486722
Irb =
           1.0982977624043
gamma_berm =
         0.978206350086877
gamma_perm =
     1
gamma_beta =
```

```
     1
gamma_rough =
                    0.75
gamma =
         0.733654762565158
ans =
!!! - - Iribaren number:   1.07 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:7.5 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          8.51022699262384
R2del =
          9.39077300737616
Z2 =
          17.3478819926238
ans =
!----------------- STARTING ITERATION 2 ----------------!
Ztoe =
                -0.112845
toe_sta =
         -1.26876988335101
top_sta =
          107.891431417422
Z2 =
          17.3478819926238
H0 =
                     5.967
Tp =
                    9.7262
T0 =
                     8.842
R2 =
          8.51022699262384
Z2 =
          17.3478819926238
top_sta =
          107.891431417422
Lslope =
          109.160201300773
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 38
dh =
                  1.489745
rdh_sum =
         0.0379592425807011
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 39
dh =
                  1.963725
rdh_sum =
          0.103292636226105
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 40
dh =
                  2.437705
rdh_sum =
          0.202758516292872
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 41
dh =
                  2.911685
rdh_sum =
          0.342584515326773
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 42
dh =
                  3.385665
rdh_sum =
          0.528370733840921
ans =
!------- End Berm Factor Calculation, Iter: 2 ---------!
berm_width =
     5
rB =
         0.0458042394610772
rdh_mean =
          0.105674146768184
gamma_berm =
          0.959036084462338
slope =
          0.167633383716341
Irb =
           1.37256701388276
gamma_berm =
          0.959036084462338
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                    0.75
gamma =
          0.719277063346753
ans =
!!! - - Iribaren number:   1.32 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
```

```
!!! - - slope: 1:6.0 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          10.4269927906716
R2del =
           1.9167657980478
Z2 =
          19.2646477906716
ans =
!----------------- STARTING ITERATION 3 -----------------!
Ztoe =
                 -0.112845
toe_sta =
         -1.26876988335101
top_sta =
          127.490263708299
Z2 =
          19.2646477906716
H0 =
                     5.967
Tp =
                    9.7262
T0 =
                     8.842
R2 =
          10.4269927906716
Z2 =
          19.2646477906716
top_sta =
          127.490263708299
Lslope =
           128.75903359165
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 38
dh =
                   1.489745
rdh_sum =
        0.0379592425807011
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 39
dh =
                   1.963725
rdh_sum =
         0.103292636226105
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 40
dh =
                   2.437705
rdh_sum =
         0.202758516292872
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 41
dh =
                   2.911685
rdh_sum =
         0.342584515326773
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 42
dh =
                   3.385665
rdh_sum =
         0.528370733840921
ans =
!------- End Berm Factor Calculation, Iter: 3 ---------!
berm_width =
     5
rB =
        0.0388322268389892
rdh_mean =
         0.105674146768184
gamma_berm =
           0.96527133559933
slope =
         0.156574370599957
Irb =
           1.28201681276452
gamma_berm =
           0.96527133559933
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                     0.75
gamma =
         0.723953501699497
ans =
!!! - - Iribaren number:   1.24 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:6.4 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          9.80242883414633
R2del =
          0.62456395652532
Z2 =
          18.6400838341463
ans =
```

```
!----------------- STARTING ITERATION 4 -----------------!
Ztoe =
                -0.112845
toe_sta =
       -1.26876988335101
top_sta =
        121.104129183501
Z2 =
        18.6400838341463
H0 =
                    5.967
Tp =
                   9.7262
T0 =
                    8.842
R2 =
        9.80242883414633
Z2 =
        18.6400838341463
top_sta =
        121.104129183501
Lslope =
        122.372899066852
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 38
dh =
                1.489745
rdh_sum =
       0.0379592425807011
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 39
dh =
                1.963725
rdh_sum =
        0.103292636226105
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 40
dh =
                2.437705
rdh_sum =
        0.202758516292872
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 41
dh =
                2.911685
rdh_sum =
        0.342584515326773
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 42
dh =
                3.385665
rdh_sum =
        0.528370733840921
ans =
!------- End Berm Factor Calculation, Iter: 4 ---------!
berm_width =
     5
rB =
       0.0408587198483263
rdh_mean =
        0.105674146768184
gamma_berm =
        0.963458990509686
slope =
        0.159772221554017
Irb =
         1.30820052771168
gamma_berm =
        0.963458990509686
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                     0.75
gamma =
        0.722594242882264
ans =
!!! - - Iribaren number:   1.26 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:6.3 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
         9.98385169781167
R2del =
        0.18142286366534
Z2 =
        18.8215066978117
ans =
!----------------- STARTING ITERATION 5 -----------------!
Ztoe =
                -0.112845
toe_sta =
       -1.26876988335101
top_sta =
        122.959168689281
Z2 =
```

```
          18.8215066978117
H0 =
                     5.967
Tp =
                    9.7262
T0 =
                     8.842
R2 =
          9.98385169781167
Z2 =
          18.8215066978117
top_sta =
          122.959168689281
Lslope =
          124.227938572632
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 38
dh =
                  1.489745
rdh_sum =
         0.0379592425807011
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 39
dh =
                  1.963725
rdh_sum =
          0.103292636226105
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 40
dh =
                  2.437705
rdh_sum =
          0.202758516292872
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 41
dh =
                  2.911685
rdh_sum =
          0.342584515326773
ans =
Berm Factor Calculation: Iteration 5, Profile Segment: 42
dh =
                  3.385665
rdh_sum =
          0.528370733840921
ans =
!------- End Berm Factor Calculation, Iter: 5 ---------!
berm_width =
      5
rB =
         0.0402485951022737
rdh_mean =
          0.105674146768184
gamma_berm =
          0.964004640843777
slope =
          0.158808010307727
Irb =
            1.3003056530648
gamma_berm =
          0.964004640843777
gamma_perm =
      1
gamma_beta =
      1
gamma_rough =
                       0.75
gamma =
          0.723003480632833
ans =
!!! - - Iribaren number:   1.25 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:6.3 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
            9.9292202173991
R2del =
          0.0546314804125636
Z2 =
            18.7668752173991
ans =
!------------------ STARTING ITERATION 6 -----------------!
Ztoe =
                   -0.112845
toe_sta =
          -1.26876988335101
top_sta =
            122.400564595083
Z2 =
          18.7668752173991
H0 =
                     5.967
Tp =
                    9.7262
T0 =
                     8.842
R2 =
```

```
           9.9292202173991
Z2 =
          18.7668752173991
top_sta =
          122.400564595083
Lslope =
          123.669334478434
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 38
dh =
                   1.489745
rdh_sum =
        0.0379592425807011
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 39
dh =
                   1.963725
rdh_sum =
         0.103292636226105
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 40
dh =
                   2.437705
rdh_sum =
         0.202758516292872
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 41
dh =
                   2.911685
rdh_sum =
         0.342584515326773
ans =
Berm Factor Calculation: Iteration 6, Profile Segment: 42
dh =
                   3.385665
rdh_sum =
         0.528370733840921
ans =
!------- End Berm Factor Calculation, Iter: 6 ---------!
berm_width =
     5
rB =
        0.0404303946575528
rdh_mean =
         0.105674146768184
gamma_berm =
         0.963842052801385
slope =
         0.159095189168943
Irb =
          1.30265704765728
gamma_berm =
         0.963842052801385
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                      0.75
gamma =
         0.722881539601039
ans =
!!! - - Iribaren number:   1.26 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:6.3 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          9.94549794195283
R2del =
        0.0162777245537242
Z2 =
          18.7831529419528
ans =
!----------------- STARTING ITERATION 7 -----------------!
Ztoe =
                  -0.112845
toe_sta =
         -1.26876988335101
top_sta =
          122.567003496451
Z2 =
          18.7831529419528
H0 =
                     5.967
Tp =
                    9.7262
T0 =
                     8.842
R2 =
         9.94549794195283
Z2 =
          18.7831529419528
top_sta =
          122.567003496451
Lslope =
          123.835773379802
ans =
```

```
Berm Factor Calculation: Iteration 7, Profile Segment: 38
dh =
                  1.489745
rdh_sum =
        0.0379592425807011
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 39
dh =
                  1.963725
rdh_sum =
         0.103292636226105
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 40
dh =
                  2.437705
rdh_sum =
         0.202758516292872
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 41
dh =
                  2.911685
rdh_sum =
         0.342584515326773
ans =
Berm Factor Calculation: Iteration 7, Profile Segment: 42
dh =
                  3.385665
rdh_sum =
         0.528370733840921
ans =
!------- End Berm Factor Calculation, Iter: 7 ---------!
berm_width =
     5
rB =
        0.0403760550246261
rdh_mean =
         0.105674146768184
gamma_berm =
         0.963890650139966
slope =
          0.15900934040763
Irb =
          1.30195412574907
gamma_berm =
         0.963890650139966
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.75
gamma =
         0.722917987604975
ans =
!!! - - Iribaren number:   1.25 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:6.3 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
           9.9406324746977
R2del =
       0.00486546725512227
Z2 =
          18.7782874746977
ans =
!----------------- STARTING ITERATION 8 -----------------!
Ztoe =
                  -0.112845
toe_sta =
         -1.26876988335101
top_sta =
          122.517254342513
Z2 =
          18.7782874746977
H0 =
                      5.967
Tp =
                     9.7262
T0 =
                      8.842
R2 =
          9.9406324746977
Z2 =
          18.7782874746977
top_sta =
          122.517254342513
Lslope =
          123.786024225864
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 38
dh =
                  1.489745
rdh_sum =
        0.0379592425807011
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 39
dh =
```

```
                  1.963725
rdh_sum =
         0.103292636226105
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 40
dh =
                  2.437705
rdh_sum =
         0.202758516292872
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 41
dh =
                  2.911685
rdh_sum =
         0.342584515326773
ans =
Berm Factor Calculation: Iteration 8, Profile Segment: 42
dh =
                  3.385665
rdh_sum =
         0.528370733840921
ans =
!------- End Berm Factor Calculation, Iter: 8 ---------!
berm_width =
     5
rB =
        0.0403922820146227
rdh_mean =
         0.105674146768184
gamma_berm =
         0.963876137923293
slope =
         0.159034975686849
Irb =
          1.30216402510126
gamma_berm =
         0.963876137923293
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.75
gamma =
         0.722907103442469
ans =
!!! - - Iribaren number:   1.26 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:6.3 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          9.94208540150297
R2del =
       0.00145292680526588
Z2 =
          18.779740401503
ans =
!----------------- STARTING ITERATION 9 -----------------!
Ztoe =
                 -0.112845
toe_sta =
         -1.26876988335101
top_sta =
          122.532110444816
Z2 =
          18.779740401503
H0 =
                     5.967
Tp =
                    9.7262
T0 =
                     8.842
R2 =
         9.94208540150297
Z2 =
          18.779740401503
top_sta =
          122.532110444816
Lslope =
          123.800880328167
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 38
dh =
                  1.489745
rdh_sum =
        0.0379592425807011
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 39
dh =
                  1.963725
rdh_sum =
         0.103292636226105
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 40
dh =
                  2.437705
rdh_sum =
```

```
        0.202758516292872
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 41
dh =
                  2.911685
rdh_sum =
        0.342584515326773
ans =
Berm Factor Calculation: Iteration 9, Profile Segment: 42
dh =
                  3.385665
rdh_sum =
        0.528370733840921
ans =
!------- End Berm Factor Calculation, Iter: 9 ---------!
berm_width =
     5
rB =
       0.0403874349418694
rdh_mean =
        0.105674146768184
gamma_berm =
        0.963880472785768
slope =
        0.159027318226224
Irb =
         1.30210132650489
gamma_berm =
        0.963880472785768
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                     0.75
gamma =
        0.722910354589326
ans =
!!! - - Iribaren number:   1.26 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:6.3 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
         9.94165140530089
R2del =
      0.000433996202080067
Z2 =
         18.7793064053009
% final 2% runup elevation
Z2=R2_new+SWEL
Z2 =
         18.7793064053009
diary off
-1.000000e+00
```

PART 5: RUNUP2

for transect: YK-06F

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

RUNUP2 INPUT CONVERSIONS
for transect: YK-06F

Incident significant wave height: 5.86 feet

Peak wave period: 9.62 seconds

Mean wave height: 3.67 feet

Local Depth below SWEL: 26.33 feet

Mean wave height deshoaled using Hunt equation
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

Deepwater mean wave height: 2.93 feet

END RUNUP2 CONVERSIONS

RUNUP2 RESULTS
for transect: YK-06F

RUNUP2 SWEL:
8.90
8.90
8.90
8.90
8.90
8.90
8.90
8.90
8.90

RUNUP2 deepwater mean wave heights:
2.79
2.79
2.79
2.93
2.93
2.93
3.08
3.08
3.08

RUNUP2 mean wave periods:
7.77
8.18
8.59
7.77
8.18
8.59
7.77
8.18
8.59

RUNUP2 runup above SWEL:
8.17
8.48

```
8.82
8.32
8.65
9.00
8.48
8.85
9.19

RUNUP2 Mean runup height above SWEL: 8.66 feet

RUNUP2 2-percent runup height above SWEL: 19.06 feet

RUNUP2 2-percent runup elevation: 27.96 feet-NAVD88

RUNUP2 Messages:
Nonfatal Error, Check Output

_______________END RUNUP2 RESULTS_____________________


_________________ACES BEACH RUNUP_____________________

Incident significant wave height: 5.86 feet

Significant wave height deshoaled using Hunt equation

Deepwater significant wave height: 4.10 feet

Peak wave period: 9.62 seconds

Average beach Slope: 1:14.80 (H:V)

ACES RUNUP CALCULATED USING 'Aces_Beach_Runup.m'

ACES Beach 2-percent runup height above SWEL: 6.08 feet

ACES Beach 2-percent runup elevation: 14.98 feet-NAVD88

ACES BEACH RUNUP is valid

_____________END ACES BEACH RESULTS___________________

PART 5 COMPLETE_____________________________________________
```

```
  FEMA                                                    sjh            job 2
  RUNUP2 transect: YK-06F                                                1
31.0
  -17.48 -382.9 0.8
  -17.45 -371.9 0.8
  -16.53 -355.9 0.8
  -13.24 -291.9 0.8
  -11.23 -270.9 0.8
  -6.48 -222.9 0.8
  -6.44 -221.9 0.8
  -6.44 -137.9 0.8
  -5.60 -118.9 0.8
  -5.58 -108.9 0.8
  -1.09 -8.9   0.8
  0.89  8.1    0.8
  1.37  14.1   0.8
  2.63  26.1   0.8
  2.85  27.1   0.8
  7.58  37.1   0.8
  7.58  45.1   0.8
  7.88  46.1   0.8
  11.92 52.1   0.8
1 11.98 53.1   0.8
 8.9   2.79  7.77
 8.9   2.79  8.18
 8.9   2.79  8.59
 8.9   2.93  7.77
 8.9   2.93  8.18
 8.9   2.93  8.59
 8.9   3.08  7.77
 8.9   3.08  8.18
 8.9   3.08  8.59
```

CLIENT- FEMA ** WAVE RUNUP-VERSION 2.0 ** ENGINEERED BY sjh JOB job 2
PROJECT-RUNUP2 transect: YK-06F RUN 1 PAGE 1

****

CROSS SECTION PROFILE

	LENGTH	ELEV.	SLOPE	ROUGHNESS
1	-382.0	-17.4		
			.00	.80
2	-371.0	-17.4		
			17.78	.80
3	-355.0	-16.5		
			19.39	.80
4	-291.0	-13.2		
			10.50	.80
5	-270.0	-11.2		
			9.98	.80
6	-222.9	-6.5		
			25.00	.80
7	-221.9	-6.4		
			FLAT	.80
8	-137.9	-6.4		
			22.62	.80
9	-118.9	-5.6		
			500.00	.80
10	-108.9	-5.6		
			22.27	.80
11	-8.9	-1.1		
			8.59	.80
12	8.1	.9		
			12.50	.80
13	14.1	1.4		
			9.52	.80
14	26.1	2.6		
			4.55	.80
15	27.1	2.9		
			2.11	.80
16	37.1	7.6		
			FLAT	.80
17	45.1	7.6		
			3.33	.80
18	46.1	7.9		
			1.49	.80
19	52.1	11.9		
			16.67	.80
20	53.1	12.0		

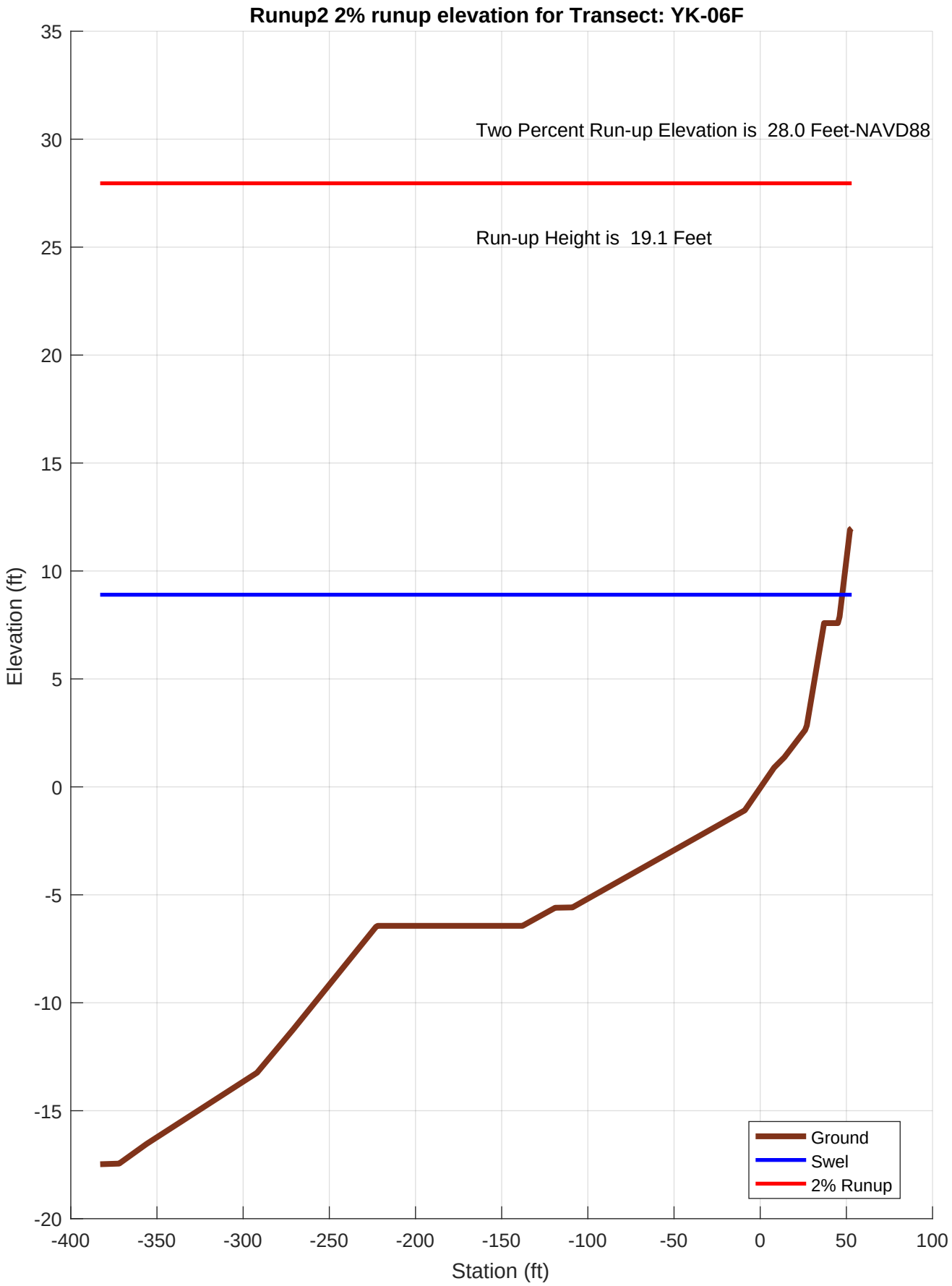
LAST SLOPE 31.00 LAST ROUGHNESS .80

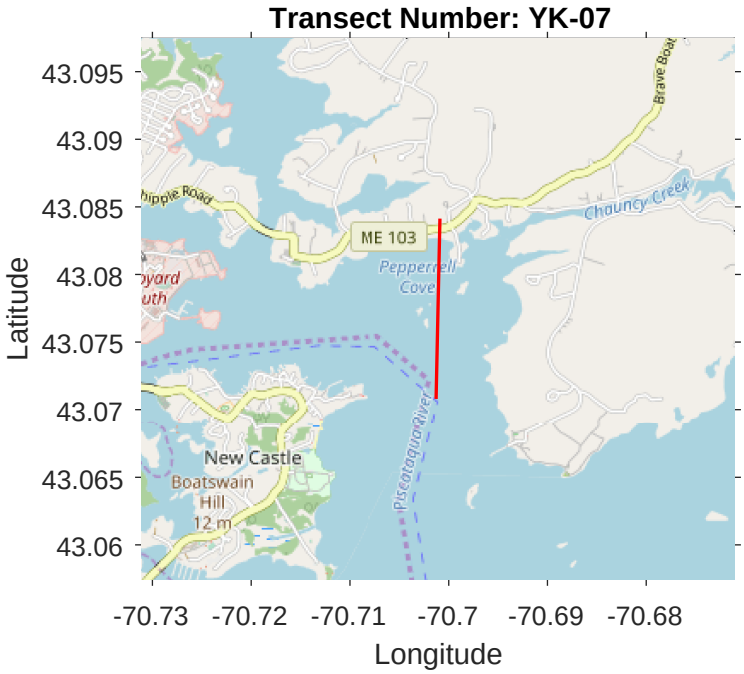
CLIENT- FEMA ** WAVE RUNUP-VERSION 2.0 ** ENGINEERED BY sjh JOB job 2
PROJECT-RUNUP2 transect: YK-06F RUN 1 PAGE 2

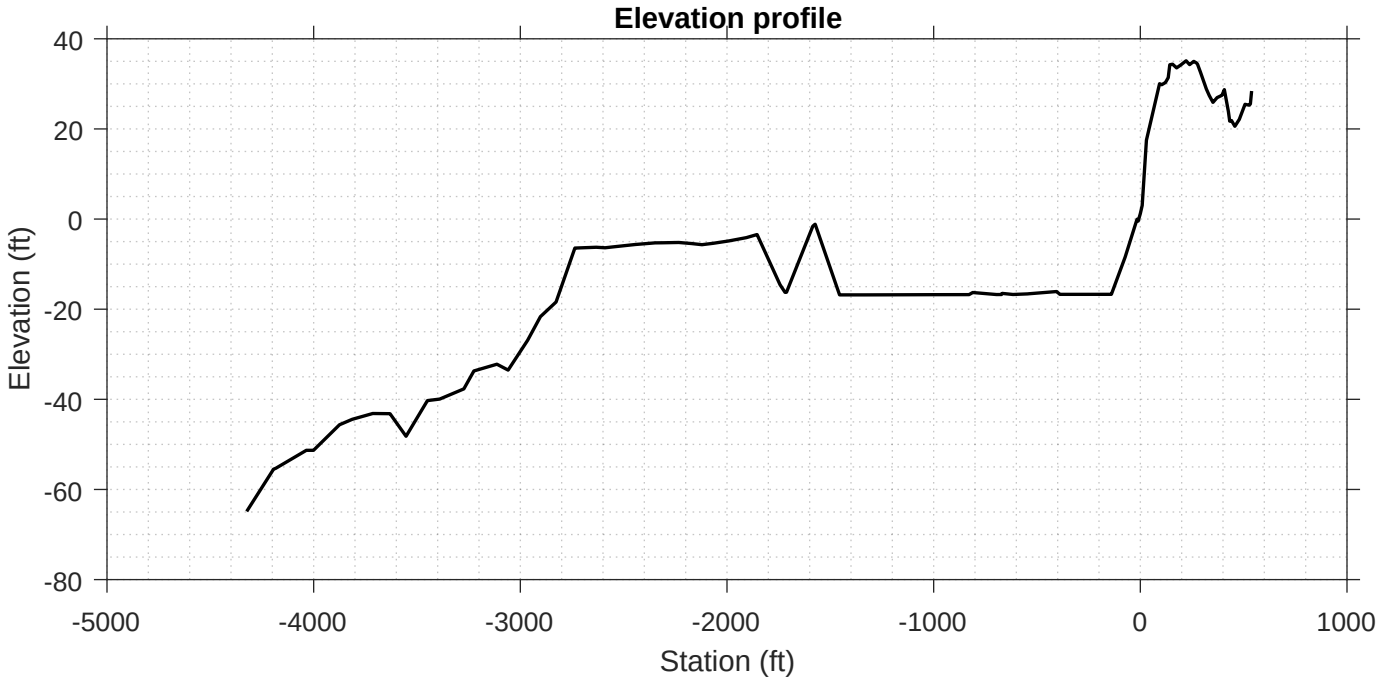
****

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.)
8.90	2.79	7.77	11	20	8.17 1.27 SOLUTION DOES NOT CONVERGE	5.05
8.90	2.79	8.18	11	20	8.48 1.32 SOLUTION DOES NOT CONVERGE	5.14
8.90	2.79	8.59	11	20	8.82 1.32 SOLUTION DOES NOT CONVERGE	5.24
8.90	2.93	7.77	11	20	8.32 1.31 SOLUTION DOES NOT CONVERGE	5.25
8.90	2.93	8.18	11	20	8.65 1.31 SOLUTION DOES NOT CONVERGE	5.35
8.90	2.93	8.59	11	20	9.00 1.36 SOLUTION DOES NOT CONVERGE	5.45
8.90	3.08	7.77	11	20	8.48 1.31 SOLUTION DOES NOT CONVERGE	5.47
8.90	3.08	8.18	11	20	8.85 1.33 SOLUTION DOES NOT CONVERGE	5.57
8.90	3.08	8.59	11	20	9.19 1.38 SOLUTION DOES NOT CONVERGE	5.68


Runup2 2% runup elevation for Transect: YK-06F
Two Percent Run-up Elevation is 28.0 Feet-NAVD88
Run-up Height is 19.1 Feet
Elevation (ft)
Station (ft)
Ground
Swel
2% Runup
35
30
25
20
15
10
5
0
-5
-10
-15
-20
-400
-350
-300
-250
-200
-150
-100
-50
0
50
100


Transect Number: YK-07
Latitude
Longitude
43.095
43.09
43.085
43.08
43.075
43.07
43.065
43.06
-70.73
-70.72
-70.71
-70.7
-70.69
-70.68
ME 103
Chauncy Creek
Peppercell Cove
New Castle
Boatswain Hill
12 m
Piscataqua River


Elevation profile
Elevation (ft)
Station (ft)
40
20
0
-20
-40
-60
-80
-5000
-4000
-3000
-2000
-1000
0
1000

DATA LOG FOR TRANSECT ID: YK-07

PART 1: USER INPUT

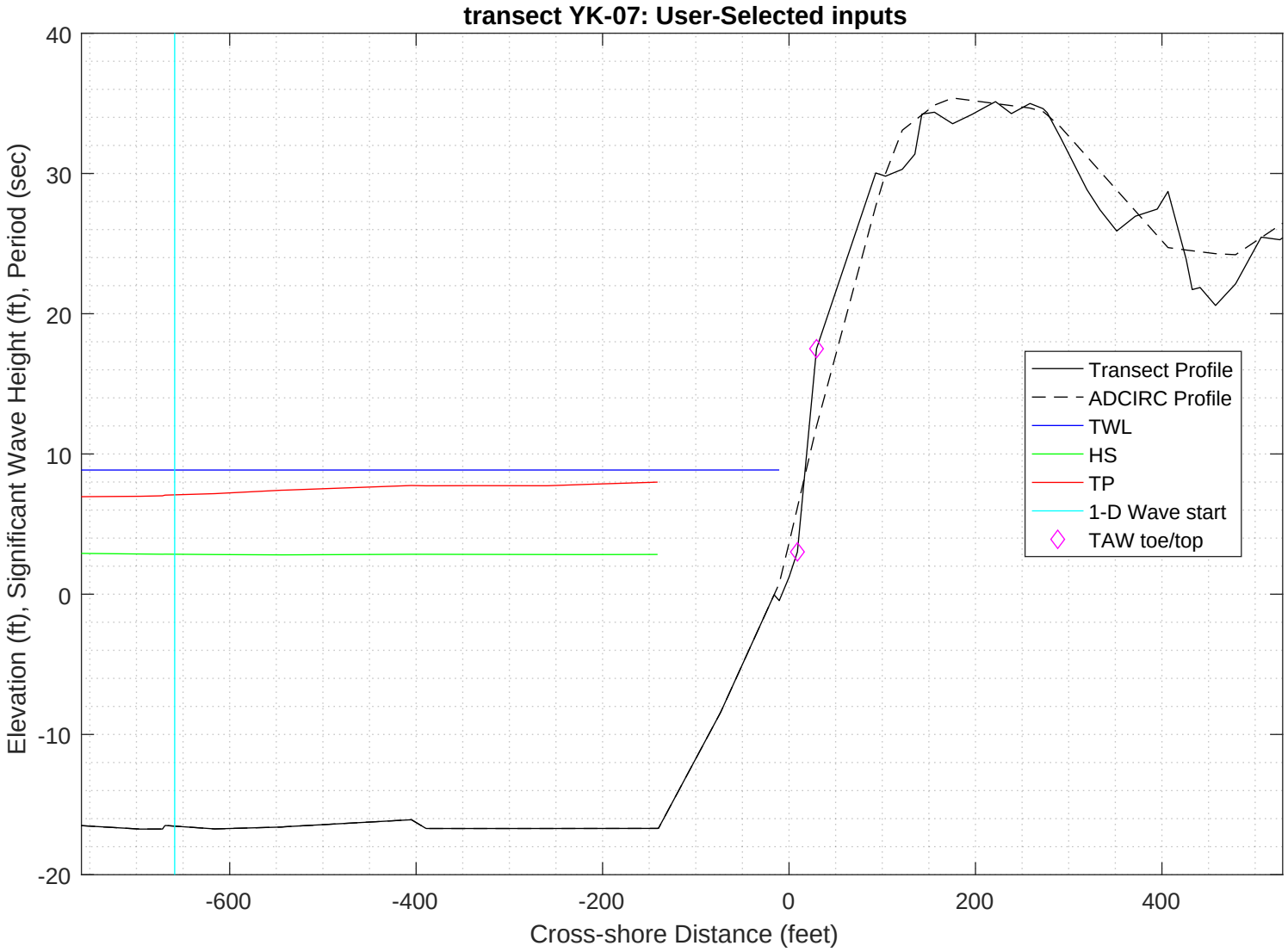
SWAN 1-D / WHAFIS input

station: -659 ft
LON: -70.701 deg E
LAT: 43.0808 deg N
Bottom ELEV: -16.5375 ft-NAVD88
TWL: 8.8546 ft-NAVD88
HS: 2.8503 ft
TP: 7.0854 sec
Wave Direction bin: 90 deg CCW from East (90 deg sector)
Transect Direction: 88.3457 deg CCW from East

TAW/RUNUP input

toe sta: 9 ft
toe elev: 3.0184 ft-NAVD88
top sta: 29.5 ft
top elev: 17.5033 ft-NAVD88
Wave and water level conditions at toe to be calculated in SWAN 1-D

PART 1 COMPLETE


transect YK-07: 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

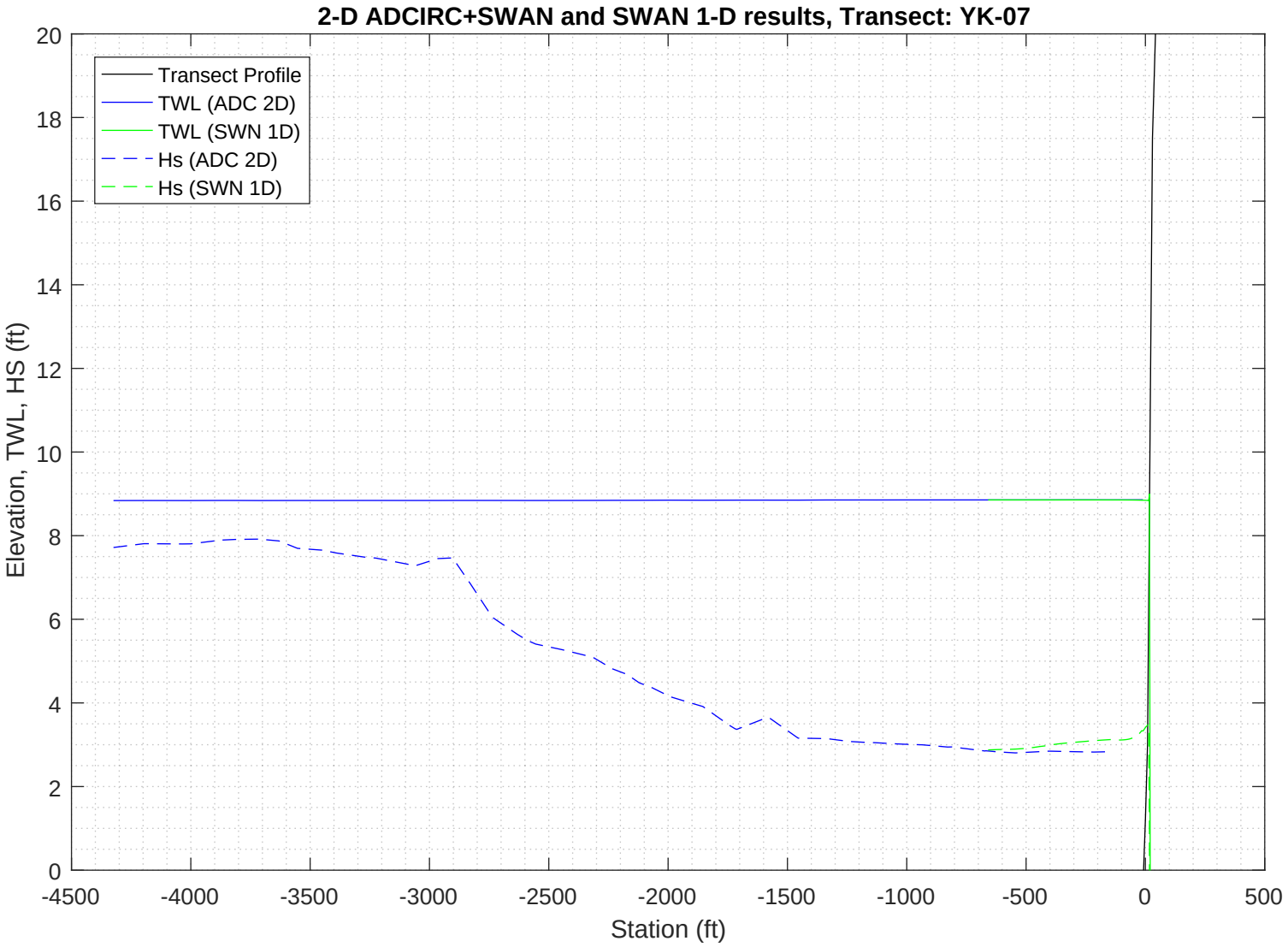
swan input grid name: 2_swan/gridfiles/YK-07zmeters_xmeters.grd
swan file name:       2_swan/swanfiles/YK-07.swn
swan output name:     2_swan/swanfiles/YK-07.dat

Boundary Conditions:
    TWL- 2.6989 meters
    HS-  0.86879 meters
    PER- 7.0854 seconds

Batch File: 2_swan/swanfiles/runswan.dat

SWAN maximum additional wave setup: 0.45734 feet
SWAN output at toe:
    SETUP- -0.047323 feet
    HS-    3.4842 feet
    PER-   7.1158 seconds

PART 2 COMPLETE_____________________________________________
```


2-D ADCIRC+SWAN and SWAN 1-D results, Transect: YK-07
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
-4500
-4000
-3500
-3000
-2500
-2000
-1500
-1000
-500
0
500

```
1

                    Execution started at 20181016.143019


                    ---------------------------------------
                                  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      209       0.   209     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      209   0      1       1

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

  READ    BOTTOM   -1. '../gridfiles/YK-07zmeters_xmeters.grd'    1      0       FREE

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

 ! -- WIND [vel] [dir]

 WIND      25.1  0

 ! -- BOUnd SHAPespec

 BOUND SHAPE JONSWAP 3.3  PEAK DSPR POWER

 ! -- BOUndspec

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

 BOUN SIDE W CCW CONSTANT PAR   0.86879     7.0854     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      209  209    0

 !TABLe 'sname' < HEADer|NOHEADer|INDexed > 'fname' <output parameters> (output time)

  Table 'curve'   HEADER 'YK-07.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             210 MYC              1
                      : MCGRD           211
                      : 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  22.23 % 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  22.71 % of wet grid points ( 99.50 % required)

iteration    5; sweep 1
iteration    5; sweep 2
iteration    5; sweep 3
iteration    5; sweep 4
accuracy OK in  99.04 % 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  99.52 % of wet grid points ( 99.50 % required)


STOP
```

```
%
%
% Run:1     Table:curve             SWAN version:41.20A
%
%       Xp            Yp            Hsig          TPsmoo        RTpeak        Tm_10         Dir           Dspr          Depth         Setup
%      [m]           [m]            [m]           [sec]         [sec]         [sec]         [degr]        [degr]        [m]           [m]
%
          0.            0.       0.87676       7.0830        7.2016        6.3673        0.101        32.4387       7.7400     -0.000007
          1.            0.       0.87699       7.0830        7.2016        6.3666        0.101        32.4606       7.7400     -0.000008
          2.            0.       0.87715       7.0829        7.2016        6.3656        0.101        32.4811       7.7500     -0.000005
          3.            0.       0.87737       7.0829        7.2016        6.3649        0.101        32.5012       7.7500     -0.000006
          4.            0.       0.87754       7.0829        7.2016        6.3639        0.101        32.5213       7.7600     -0.000004
          5.            0.       0.87776       7.0829        7.2016        6.3631        0.101        32.5411       7.7600     -0.000005
          6.            0.       0.87793       7.0828        7.2016        6.3621        0.102        32.5607       7.7700     -0.000003
          7.            0.       0.87815       7.0828        7.2016        6.3613        0.102        32.5801       7.7700     -0.000004
          8.            0.       0.87832       7.0828        7.2016        6.3602        0.102        32.5994       7.7800     -0.000002
          9.            0.       0.87854       7.0828        7.2016        6.3594        0.102        32.6184       7.7800     -0.000003
         10.            0.       0.87870       7.0828        7.2016        6.3584        0.102        32.6375       7.7900     -0.000000
         11.            0.       0.87886       7.0828        7.2016        6.3575        0.102        32.6433       7.7900     -0.000001
         12.            0.       0.87906       7.0828        7.2016        6.3567        0.102        32.6594       7.7900     -0.000002
         13.            0.       0.87922       7.0827        7.2016        6.3556        0.102        32.6768       7.8000      0.000000
         14.            0.       0.87938       7.0827        7.2016        6.3547        0.103        32.6823       7.8000     -0.000001
         15.            0.       0.87947       7.0827        7.2016        6.3537        0.103        32.6763       7.8000     -0.000002
         16.            0.       0.87960       7.0827        7.2016        6.3529        0.103        32.6667       7.7900     -0.000006
         17.            0.       0.87972       7.0827        7.2016        6.3519        0.103        32.6650       7.7900     -0.000007
         18.            0.       0.87984       7.0827        7.2016        6.3509        0.103        32.6649       7.7900     -0.000007
         19.            0.       0.87998       7.0827        7.2016        6.3499        0.103        32.6658       7.7900     -0.000008
         20.            0.       0.88011       7.0827        7.2016        6.3490        0.103        32.6671       7.7900     -0.000009
         21.            0.       0.88020       7.0827        7.2016        6.3479        0.103        32.6592       7.7900     -0.000010
         22.            0.       0.88033       7.0827        7.2016        6.3471        0.104        32.6490       7.7800     -0.000014
         23.            0.       0.88045       7.0827        7.2016        6.3460        0.104        32.6472       7.7800     -0.000015
         24.            0.       0.88059       7.0827        7.2016        6.3450        0.104        32.6472       7.7800     -0.000016
         25.            0.       0.88073       7.0827        7.2016        6.3439        0.104        32.6483       7.7800     -0.000017
         26.            0.       0.88082       7.0826        7.2016        6.3428        0.104        32.6404       7.7800     -0.000017
         27.            0.       0.88096       7.0827        7.2016        6.3419        0.104        32.6304       7.7700     -0.000022
         28.            0.       0.88109       7.0826        7.2016        6.3408        0.104        32.6285       7.7700     -0.000022
         29.            0.       0.88125       7.0826        7.2016        6.3394        0.104        32.6278       7.7700     -0.000023
         30.            0.       0.88144       7.0826        7.2016        6.3376        0.105        32.6271       7.7700     -0.000024
         31.            0.       0.88164       7.0826        7.2016        6.3352        0.105        32.6163       7.7700     -0.000025
         32.            0.       0.88189       7.0826        7.2016        6.3330        0.105        32.6031       7.7600     -0.000030
         33.            0.       0.88214       7.0826        7.2016        6.3304        0.105        32.5979       7.7600     -0.000031
         34.            0.       0.88244       7.0826        7.2016        6.3273        0.105        32.5939       7.7600     -0.000032
         35.            0.       0.88271       7.0826        7.2016        6.3240        0.105        32.5816       7.7600     -0.000033
         36.            0.       0.88304       7.0826        7.2016        6.3208        0.105        32.5672       7.7500     -0.000038
         37.            0.       0.88336       7.0826        7.2016        6.3173        0.105        32.5609       7.7500     -0.000039
         38.            0.       0.88366       7.0826        7.2016        6.3136        0.105        32.5473       7.7500     -0.000040
         39.            0.       0.88406       7.0826        7.2016        6.3095        0.105        32.5324       7.7400     -0.000045
         40.            0.       0.88441       7.0826        7.2016        6.3051        0.105        32.5168       7.7400     -0.000046
         41.            0.       0.88482       7.0826        7.2016        6.3007        0.105        32.5005       7.7299     -0.000051
         42.            0.       0.88525       7.0826        7.2016        6.2960        0.105        32.4931       7.7299     -0.000052
         43.            0.       0.88565       7.0826        7.2016        6.2910        0.105        32.4787       7.7299     -0.000054
         44.            0.       0.88612       7.0826        7.2016        6.2861        0.106        32.4629       7.7199     -0.000058
         45.            0.       0.88660       7.0826        7.2016        6.2807        0.106        32.4553       7.7199     -0.000060
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         53.            0.       0.89130       7.0826        7.2016        6.2277        0.111        32.3518       7.6899     -0.000085
         54.            0.       0.89190       7.0826        7.2016        6.2205        0.113        32.3401       7.6899     -0.000087
         55.            0.       0.89258       7.0826        7.2016        6.2134        0.114        32.3275       7.6799     -0.000093
         56.            0.       0.89326       7.0826        7.2016        6.2059        0.115        32.3232       7.6799     -0.000095
         57.            0.       0.89392       7.0826        7.2016        6.1981        0.115        32.3127       7.6799     -0.000097
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58.	0.	0.89466	7.0826	7.2016	6.1904	0.116	32.3013	7.6699	-0.000103
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62.	0.	0.89781	7.0826	7.2016	6.1549	0.121	32.2722	7.6599	-0.000116
63.	0.	0.89871	7.0826	7.2016	6.1454	0.121	32.2644	7.6499	-0.000122
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66.	0.	0.90128	7.0826	7.2016	6.1175	0.131	32.2615	7.6399	-0.000133
67.	0.	0.90201	7.0826	7.2016	6.1097	0.137	32.2723	7.6399	-0.000135
68.	0.	0.90265	7.0825	7.2016	6.1026	0.144	32.2796	7.6399	-0.000138
69.	0.	0.90337	7.0826	7.2016	6.0955	0.152	32.2870	7.6299	-0.000144
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71.	0.	0.90479	7.0826	7.2016	6.0804	0.167	32.3049	7.6198	-0.000152
72.	0.	0.90550	7.0826	7.2016	6.0730	0.172	32.3248	7.6198	-0.000154
73.	0.	0.90616	7.0825	7.2016	6.0658	0.182	32.3395	7.6198	-0.000157
74.	0.	0.90687	7.0826	7.2016	6.0590	0.193	32.3543	7.6098	-0.000163
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76.	0.	0.90819	7.0825	7.2016	6.0452	0.209	32.3965	7.6098	-0.000168
77.	0.	0.90902	7.0826	7.2016	6.0383	0.218	32.4352	7.5998	-0.000174
78.	0.	0.91005	7.0825	7.2016	6.0310	0.228	32.5409	7.6198	-0.000170
79.	0.	0.91121	7.0824	7.2016	6.0233	0.239	32.6873	7.6598	-0.000160
80.	0.	0.91242	7.0823	7.2016	6.0154	0.251	32.8407	7.6998	-0.000150
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88.	0.	0.91934	7.0821	7.2016	5.9569	0.300	33.3418	7.7899	-0.000144
89.	0.	0.92004	7.0820	7.2016	5.9504	0.304	33.3661	7.7899	-0.000147
90.	0.	0.92073	7.0820	7.2016	5.9440	0.308	33.3904	7.7899	-0.000149
91.	0.	0.92140	7.0820	7.2016	5.9377	0.311	33.4135	7.7898	-0.000152
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93.	0.	0.92272	7.0820	7.2016	5.9257	0.312	33.4593	7.7898	-0.000157
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95.	0.	0.92397	7.0820	7.2016	5.9144	0.309	33.5035	7.7898	-0.000163
96.	0.	0.92455	7.0820	7.2016	5.9092	0.312	33.5225	7.7898	-0.000165
97.	0.	0.92513	7.0820	7.2016	5.9041	0.316	33.5405	7.7898	-0.000167
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99.	0.	0.92626	7.0820	7.2016	5.8943	0.320	33.5720	7.7898	-0.000172
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104.	0.	0.92894	7.0819	7.2016	5.8714	0.329	33.6366	7.7898	-0.000185
105.	0.	0.92947	7.0819	7.2016	5.8669	0.329	33.6472	7.7898	-0.000187
106.	0.	0.92998	7.0819	7.2016	5.8626	0.330	33.6572	7.7898	-0.000190
107.	0.	0.93047	7.0819	7.2016	5.8585	0.331	33.6664	7.7898	-0.000192
108.	0.	0.93096	7.0819	7.2016	5.8545	0.333	33.6744	7.7898	-0.000195
109.	0.	0.93145	7.0819	7.2016	5.8505	0.336	33.6815	7.7898	-0.000197
110.	0.	0.93194	7.0818	7.2016	5.8465	0.340	33.6874	7.7898	-0.000200
111.	0.	0.93243	7.0818	7.2016	5.8425	0.344	33.6930	7.7898	-0.000202
112.	0.	0.93292	7.0818	7.2016	5.8385	0.349	33.6980	7.7898	-0.000205
113.	0.	0.93339	7.0818	7.2016	5.8347	0.351	33.7026	7.7898	-0.000208
114.	0.	0.93387	7.0818	7.2016	5.8308	0.354	33.7071	7.7898	-0.000210
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116.	0.	0.93484	7.0818	7.2016	5.8230	0.360	33.7163	7.7898	-0.000215
117.	0.	0.93533	7.0818	7.2016	5.8191	0.362	33.7210	7.7898	-0.000218
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125.	0.	0.93923	7.0817	7.2016	5.7883	0.382	33.7473	7.7898	-0.000240
126.	0.	0.93971	7.0817	7.2016	5.7845	0.383	33.7484	7.7898	-0.000242
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134.	0.	0.94347	7.0816	7.2016	5.7559	0.389	33.7486	7.7897	-0.000265
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188.	0.	0.97356	7.0920	7.2016	5.7993	0.269	26.2494	3.8765	-0.003493
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205.	0.	1.04380	7.1305	7.2016	5.4080	359.862	13.4621	0.7719	-0.018149
206.	0.	0.34897	7.2664	7.2016	6.1402	355.952	17.6342	0.2294	0.139399
207.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000
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209.	0.	-9.00000	-9.0000	-9.0000	-9.0000	-999.000	-9.0000	-99.0000	-9.000000

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PART 3: WHAFIS

WHAFIS input:  YK-07.dat
WHAFIS output: YK-07.out

PART 3 COMPLETE_____________________________________________________
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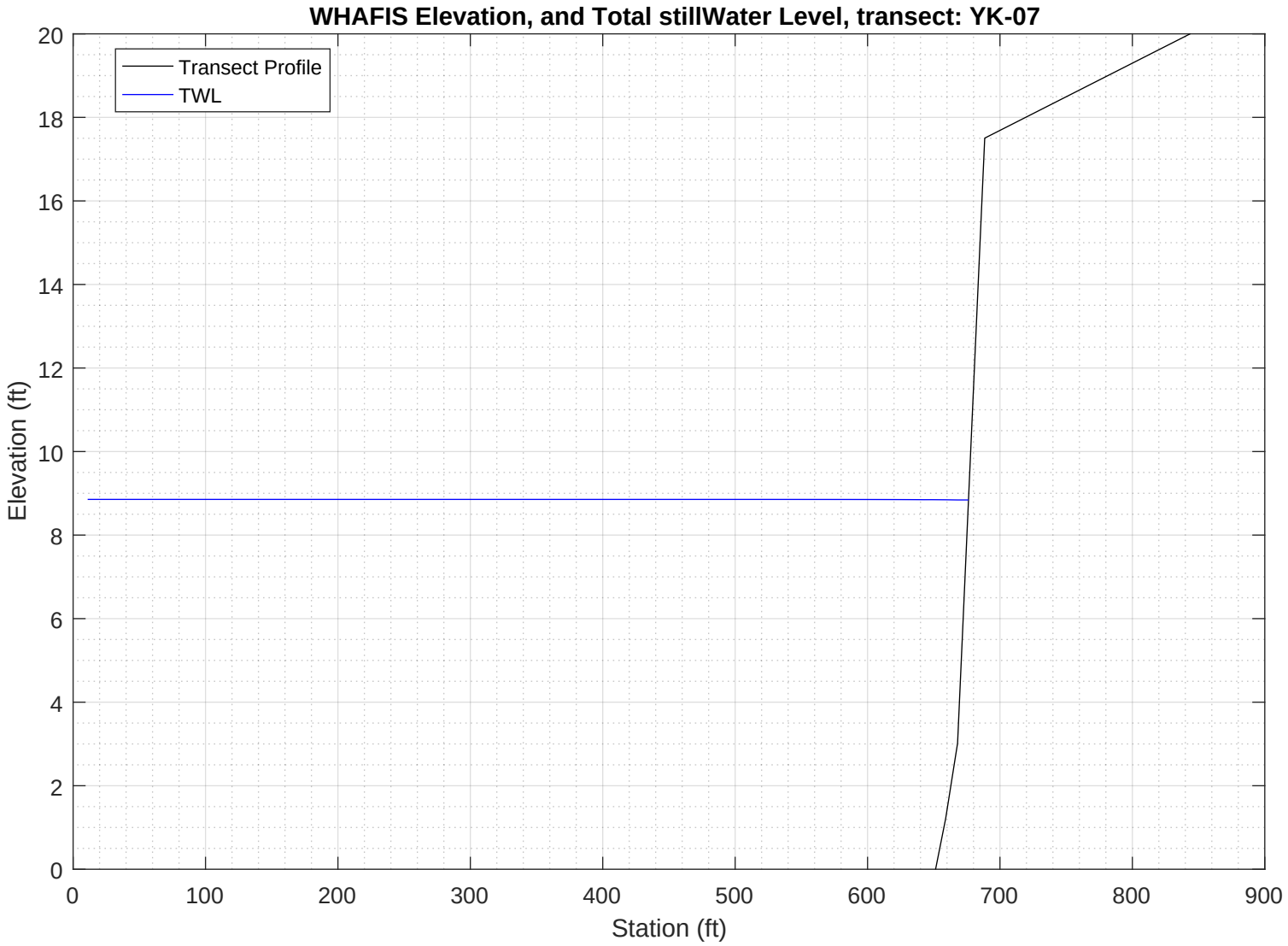
WHAFIS Elevation, and Total stillWater Level, transect: YK-07
Transect Profile
TWL
Elevation (ft)
Station (ft)
0
2
4
6
8
10
12
14
16
18
20
0
100
200
300
400
500
600
700
800
900

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WAVE HEIGHT COMPUTATIONS FOR FLOOD INSURANCE STUDIES (WHAFIS VERSION 4.0G, 08_2007)
Executed on: Tue Oct 16 14:32:51 2018
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                                        header
                                THIS IS A 100-YEAR CASE
                        THE FOLLOWING NON-DEFAULT WIND SPEEDS ARE BEING USED
                            WINDIF  56.14  WINDOF  56.14  WINDVH  60.00
                                        PART1 INPUT
      IE      0.000    -16.537     1.000     1.000     8.855     4.561     7.085    56.140    -0.005     0.000
      OF     12.000    -16.592     0.000     8.855     0.000     0.000     0.000     0.000    -0.005     0.000
      OF     13.000    -16.597     0.000     8.855     0.000     0.000     0.000     0.000    -0.005     0.000
      OF     14.000    -16.602     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     15.000    -16.606     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     16.000    -16.611     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     17.000    -16.615     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     18.000    -16.620     0.000     8.855     0.000     0.000     0.000     0.000    -0.005     0.000
      OF     19.000    -16.625     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     20.000    -16.629     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     21.000    -16.634     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     22.000    -16.638     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     23.000    -16.643     0.000     8.855     0.000     0.000     0.000     0.000    -0.005     0.000
      OF     24.000    -16.648     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     25.000    -16.652     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     26.000    -16.657     0.000     8.855     0.000     0.000     0.000     0.000    -0.005     0.000
      OF     27.000    -16.662     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     28.000    -16.666     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     29.000    -16.671     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     30.000    -16.675     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     31.000    -16.680     0.000     8.855     0.000     0.000     0.000     0.000    -0.005     0.000
      OF     32.000    -16.685     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     33.000    -16.689     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     34.000    -16.694     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     35.000    -16.698     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     36.000    -16.703     0.000     8.855     0.000     0.000     0.000     0.000    -0.005     0.000
      OF     37.000    -16.708     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     38.000    -16.712     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     39.000    -16.717     0.000     8.855     0.000     0.000     0.000     0.000    -0.005     0.000
      OF     40.000    -16.722     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     41.000    -16.726     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     42.000    -16.731     0.000     8.855     0.000     0.000     0.000     0.000    -0.004     0.000
      OF     43.000    -16.735     0.000     8.855     0.000     0.000     0.000     0.000    -0.001     0.000
      OF     44.000    -16.733     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     45.000    -16.731     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     46.000    -16.729     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     47.000    -16.727     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     48.000    -16.725     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     49.000    -16.724     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     50.000    -16.722     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     51.000    -16.720     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     52.000    -16.718     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     53.000    -16.716     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     54.000    -16.714     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     55.000    -16.712     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     56.000    -16.711     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     57.000    -16.709     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     58.000    -16.707     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     59.000    -16.705     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     60.000    -16.703     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     61.000    -16.701     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     62.000    -16.699     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     63.000    -16.698     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     64.000    -16.696     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     65.000    -16.694     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     66.000    -16.692     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     67.000    -16.690     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     68.000    -16.688     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     69.000    -16.686     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     70.000    -16.685     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     71.000    -16.683     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     72.000    -16.681     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     73.000    -16.679     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     74.000    -16.677     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     75.000    -16.675     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     76.000    -16.673     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     77.000    -16.671     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     78.000    -16.670     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     79.000    -16.668     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     80.000    -16.666     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     81.000    -16.664     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     82.000    -16.662     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     83.000    -16.660     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     84.000    -16.659     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     85.000    -16.657     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     86.000    -16.655     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     87.000    -16.653     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     88.000    -16.651     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     89.000    -16.649     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     90.000    -16.647     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     91.000    -16.645     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     92.000    -16.644     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     93.000    -16.642     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     94.000    -16.640     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     96.000    -16.636     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     97.000    -16.634     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF     99.000    -16.631     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF    100.000    -16.629     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF    102.000    -16.625     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF    103.000    -16.623     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF    105.000    -16.619     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF    106.000    -16.618     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF    108.000    -16.614     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF    109.000    -16.612     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF    111.000    -16.608     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF    112.000    -16.606     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF    114.000    -16.603     0.000     8.855     0.000     0.000     0.000     0.000     0.002     0.000
      OF    115.000    -16.599     0.000     8.855     0.000     0.000     0.000     0.000     0.005     0.000
      OF    118.000    -16.581     0.000     8.855     0.000     0.000     0.000     0.000     0.005     0.000
      OF    119.000    -16.578     0.000     8.855     0.000     0.000     0.000     0.000     0.004     0.000
      OF    121.000    -16.570     0.000     8.855     0.000     0.000     0.000     0.000     0.004     0.000
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OF	122.000	-16.567	0.000	8.855	0.000	0.000	0.000	0.000	0.004	0.000
OF	124.000	-16.559	0.000	8.855	0.000	0.000	0.000	0.000	0.004	0.000
OF	125.000	-16.556	0.000	8.855	0.000	0.000	0.000	0.000	0.004	0.000
OF	127.000	-16.548	0.000	8.855	0.000	0.000	0.000	0.000	0.004	0.000
OF	128.000	-16.545	0.000	8.855	0.000	0.000	0.000	0.000	0.004	0.000
OF	130.000	-16.537	0.000	8.855	0.000	0.000	0.000	0.000	0.004	0.000
OF	131.000	-16.533	0.000	8.855	0.000	0.000	0.000	0.000	0.004	0.000
OF	133.000	-16.526	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	134.000	-16.522	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	136.000	-16.515	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	137.000	-16.511	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	139.000	-16.504	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	140.000	-16.500	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	142.000	-16.493	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	143.000	-16.489	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	145.000	-16.482	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	146.000	-16.478	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	148.000	-16.471	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	149.000	-16.467	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	150.000	-16.463	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	151.000	-16.460	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	152.000	-16.456	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	153.000	-16.452	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	154.000	-16.449	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	155.000	-16.445	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	156.000	-16.441	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	157.000	-16.438	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	158.000	-16.434	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	159.000	-16.430	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	160.000	-16.427	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	161.000	-16.423	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	162.000	-16.419	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	163.000	-16.416	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	164.000	-16.412	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	165.000	-16.408	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	166.000	-16.405	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	167.000	-16.401	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	168.000	-16.397	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	169.000	-16.394	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	170.000	-16.390	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	171.000	-16.386	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	172.000	-16.382	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	173.000	-16.379	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	174.000	-16.375	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	175.000	-16.371	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	176.000	-16.368	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	177.000	-16.364	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	178.000	-16.360	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	179.000	-16.357	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	180.000	-16.353	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	181.000	-16.349	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	182.000	-16.346	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	183.000	-16.342	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	184.000	-16.338	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	185.000	-16.335	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	186.000	-16.331	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	187.000	-16.327	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	188.000	-16.323	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	189.000	-16.320	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	190.000	-16.316	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	191.000	-16.312	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	192.000	-16.309	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	193.000	-16.305	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	194.000	-16.301	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	195.000	-16.298	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	196.000	-16.294	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	197.000	-16.290	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	198.000	-16.287	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	199.000	-16.283	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	200.000	-16.279	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	201.000	-16.276	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	202.000	-16.272	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	203.000	-16.268	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	204.000	-16.265	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	205.000	-16.261	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	206.000	-16.257	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	207.000	-16.254	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	208.000	-16.250	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	209.000	-16.246	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	210.000	-16.242	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	211.000	-16.239	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	212.000	-16.235	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	213.000	-16.231	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	214.000	-16.228	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	215.000	-16.224	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	216.000	-16.220	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	217.000	-16.217	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	218.000	-16.213	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	219.000	-16.209	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	220.000	-16.206	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	221.000	-16.202	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	222.000	-16.198	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	223.000	-16.195	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	224.000	-16.191	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	225.000	-16.187	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	226.000	-16.184	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	227.000	-16.180	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	228.000	-16.176	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	229.000	-16.172	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	230.000	-16.169	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	231.000	-16.165	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	232.000	-16.161	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	233.000	-16.158	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	234.000	-16.154	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	235.000	-16.150	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	236.000	-16.147	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	237.000	-16.143	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	238.000	-16.139	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	239.000	-16.136	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	240.000	-16.132	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000

OF	241.000	-16.128	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	242.000	-16.125	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	243.000	-16.121	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	244.000	-16.117	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	245.000	-16.114	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	246.000	-16.110	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	247.000	-16.106	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	248.000	-16.103	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	249.000	-16.099	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	250.000	-16.095	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	251.000	-16.091	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	252.000	-16.088	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	253.000	-16.084	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
OF	254.000	-16.080	0.000	8.854	0.000	0.000	0.000	0.000	-0.018	0.000
OF	255.000	-16.120	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
OF	256.000	-16.160	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
OF	257.000	-16.200	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
OF	258.000	-16.239	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
OF	259.000	-16.279	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
OF	260.000	-16.319	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
OF	261.000	-16.359	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
OF	262.000	-16.399	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
OF	263.000	-16.439	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
OF	264.000	-16.479	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
OF	265.000	-16.519	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
OF	266.000	-16.559	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
OF	267.000	-16.598	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
OF	268.000	-16.638	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
OF	269.000	-16.678	0.000	8.854	0.000	0.000	0.000	0.000	-0.034	0.000
OF	270.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	-0.014	0.000
OF	271.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	272.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	273.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	274.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	275.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	276.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	277.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	278.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	279.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	280.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	281.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	282.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	283.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	284.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	285.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	286.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	287.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	288.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	289.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	290.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	291.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	292.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	293.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	294.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	295.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	296.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	297.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	298.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	299.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	300.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	-0.001	0.000
OF	301.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	-0.001	0.000
OF	302.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	303.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	304.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	305.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	306.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	307.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	308.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	309.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	310.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	311.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	312.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	313.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	314.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	315.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	316.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	317.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	318.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	319.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	320.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	321.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	322.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	323.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	324.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	325.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	326.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	327.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	328.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	329.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	330.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	331.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	332.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	333.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	334.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	335.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	336.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	337.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	338.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	339.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	340.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	341.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	342.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	343.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	344.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	345.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	346.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	347.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	348.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	349.000	-16.706	0.000	8.854	0.000	0.000	0.000	0.000	0.001	0.000
OF	350.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.001	0.000

OF	351.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	352.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	353.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	354.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	355.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	356.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	357.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	358.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	359.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	360.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	361.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	362.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	363.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	364.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	365.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	366.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	367.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	368.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	369.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	370.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	371.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	372.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	373.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	374.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	375.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	376.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	377.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	378.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	379.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	380.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	381.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	382.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	383.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	384.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	385.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	386.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	387.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	388.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	389.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	390.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	391.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	392.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	393.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	394.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	395.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	396.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	397.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	398.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	399.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	400.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	401.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	402.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	403.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.001	0.000
OF	404.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.001	0.000
OF	405.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	406.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	407.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	408.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	409.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	410.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	411.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	412.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	413.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	414.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	415.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	416.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	417.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	418.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	419.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	420.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	421.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	422.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	423.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	424.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.001	0.000
OF	425.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.001	0.000
OF	426.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	427.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	428.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	429.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	430.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	431.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	432.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	433.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	434.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	435.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	436.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	437.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	438.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	439.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	440.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	441.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	442.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	443.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	444.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	445.000	-16.703	0.000	8.854	0.000	0.000	0.000	0.000	0.001	0.000
OF	446.000	-16.702	0.000	8.854	0.000	0.000	0.000	0.000	0.001	0.000
OF	447.000	-16.702	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	448.000	-16.702	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	449.000	-16.702	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	450.000	-16.702	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	451.000	-16.702	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	452.000	-16.702	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	453.000	-16.702	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	454.000	-16.702	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	455.000	-16.702	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	456.000	-16.702	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	457.000	-16.702	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	458.000	-16.702	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	459.000	-16.702	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	460.000	-16.702	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000

OF	461.000	-16.702	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	462.000	-16.702	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	463.000	-16.702	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	464.000	-16.702	0.000	8.854	0.000	0.000	0.000	0.000	0.001	0.000
OF	465.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.001	0.000
OF	466.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	467.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	468.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	469.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	470.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	471.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	472.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	473.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	474.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	475.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	476.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	477.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	478.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	479.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	480.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	481.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	482.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	483.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.001	0.000
OF	484.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.001	0.000
OF	485.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	486.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	487.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	488.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	489.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	490.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	491.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	492.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	493.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	494.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	495.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	496.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	497.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	498.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	499.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	500.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	501.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	502.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.001	0.000
OF	503.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.001	0.000
OF	504.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	505.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	506.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	507.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	508.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	509.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	510.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	511.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	512.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	513.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	514.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	515.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	516.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	517.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
OF	518.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.007	0.000
OF	519.000	-16.686	0.000	8.854	0.000	0.000	0.000	0.000	0.068	0.000
OF	520.000	-16.562	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	521.000	-16.438	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	522.000	-16.314	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	523.000	-16.190	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	524.000	-16.066	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	525.000	-15.942	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	526.000	-15.818	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	527.000	-15.694	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	528.000	-15.570	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	529.000	-15.446	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	530.000	-15.322	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	531.000	-15.198	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	532.000	-15.074	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	533.000	-14.950	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	534.000	-14.825	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	535.000	-14.702	0.000	8.854	0.000	0.000	0.000	0.000	0.123	0.000
OF	536.000	-14.578	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	537.000	-14.453	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	538.000	-14.329	0.000	8.854	0.000	0.000	0.000	0.000	0.123	0.000
OF	539.000	-14.206	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	540.000	-14.081	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	541.000	-13.957	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	542.000	-13.833	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	543.000	-13.709	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	544.000	-13.585	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	545.000	-13.461	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	546.000	-13.337	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	547.000	-13.213	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	548.000	-13.089	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	549.000	-12.965	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	550.000	-12.841	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	551.000	-12.717	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	552.000	-12.593	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	553.000	-12.469	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	554.000	-12.345	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	555.000	-12.221	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	556.000	-12.097	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	557.000	-11.972	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	558.000	-11.848	0.000	8.854	0.000	0.000	0.000	0.000	0.123	0.000
OF	559.000	-11.725	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	560.000	-11.600	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	561.000	-11.476	0.000	8.854	0.000	0.000	0.000	0.000	0.123	0.000
OF	562.000	-11.353	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	563.000	-11.228	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	564.000	-11.104	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	565.000	-10.980	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	566.000	-10.856	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
OF	567.000	-10.732	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
OF	568.000	-10.608	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
OF	569.000	-10.484	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
OF	570.000	-10.360	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000

OF	571.000	-10.236	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
OF	572.000	-10.112	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
OF	573.000	-9.988	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
OF	574.000	-9.864	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
OF	575.000	-9.740	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
OF	576.000	-9.616	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
OF	577.000	-9.492	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
OF	578.000	-9.368	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
OF	579.000	-9.244	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
OF	580.000	-9.120	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
OF	581.000	-8.996	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
OF	582.000	-8.872	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
OF	583.000	-8.748	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
OF	584.000	-8.624	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
OF	585.000	-8.500	0.000	8.853	0.000	0.000	0.000	0.000	0.129	0.000
OF	586.000	-8.366	0.000	8.853	0.000	0.000	0.000	0.000	0.140	0.000
OF	587.000	-8.220	0.000	8.853	0.000	0.000	0.000	0.000	0.146	0.000
OF	588.000	-8.074	0.000	8.853	0.000	0.000	0.000	0.000	0.146	0.000
OF	589.000	-7.928	0.000	8.853	0.000	0.000	0.000	0.000	0.146	0.000
OF	590.000	-7.782	0.000	8.853	0.000	0.000	0.000	0.000	0.146	0.000
OF	591.000	-7.636	0.000	8.853	0.000	0.000	0.000	0.000	0.146	0.000
OF	592.000	-7.490	0.000	8.853	0.000	0.000	0.000	0.000	0.146	0.000
OF	593.000	-7.344	0.000	8.853	0.000	0.000	0.000	0.000	0.146	0.000
OF	594.000	-7.198	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
OF	595.000	-7.051	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
OF	596.000	-6.905	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
OF	597.000	-6.760	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
OF	598.000	-6.613	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
OF	599.000	-6.467	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
OF	600.000	-6.321	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
OF	601.000	-6.175	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
OF	602.000	-6.029	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
OF	603.000	-5.883	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
OF	604.000	-5.737	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
OF	605.000	-5.591	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
OF	606.000	-5.444	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
OF	607.000	-5.299	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
OF	608.000	-5.153	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
OF	609.000	-5.006	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
OF	610.000	-4.860	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
OF	611.000	-4.714	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
OF	612.000	-4.568	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
OF	613.000	-4.422	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
OF	614.000	-4.276	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
OF	615.000	-4.130	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
OF	616.000	-3.984	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
OF	617.000	-3.838	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
OF	618.000	-3.692	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
OF	619.000	-3.546	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
OF	620.000	-3.400	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
OF	621.000	-3.253	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
OF	622.000	-3.108	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
OF	623.000	-2.962	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
OF	624.000	-2.815	0.000	8.850	0.000	0.000	0.000	0.000	0.146	0.000
OF	625.000	-2.669	0.000	8.850	0.000	0.000	0.000	0.000	0.146	0.000
OF	626.000	-2.523	0.000	8.850	0.000	0.000	0.000	0.000	0.146	0.000
OF	627.000	-2.377	0.000	8.850	0.000	0.000	0.000	0.000	0.146	0.000
OF	628.000	-2.231	0.000	8.850	0.000	0.000	0.000	0.000	0.146	0.000
OF	629.000	-2.085	0.000	8.850	0.000	0.000	0.000	0.000	0.146	0.000
OF	630.000	-1.939	0.000	8.850	0.000	0.000	0.000	0.000	0.146	0.000
OF	631.000	-1.793	0.000	8.850	0.000	0.000	0.000	0.000	0.146	0.000
OF	632.000	-1.646	0.000	8.849	0.000	0.000	0.000	0.000	0.146	0.000
OF	633.000	-1.500	0.000	8.849	0.000	0.000	0.000	0.000	0.146	0.000
OF	634.000	-1.355	0.000	8.849	0.000	0.000	0.000	0.000	0.146	0.000
OF	635.000	-1.208	0.000	8.849	0.000	0.000	0.000	0.000	0.146	0.000
OF	636.000	-1.062	0.000	8.849	0.000	0.000	0.000	0.000	0.146	0.000
OF	637.000	-0.916	0.000	8.849	0.000	0.000	0.000	0.000	0.146	0.000
OF	638.000	-0.770	0.000	8.849	0.000	0.000	0.000	0.000	0.146	0.000
OF	639.000	-0.624	0.000	8.848	0.000	0.000	0.000	0.000	0.146	0.000
OF	640.000	-0.478	0.000	8.848	0.000	0.000	0.000	0.000	0.146	0.000
OF	641.000	-0.332	0.000	8.848	0.000	0.000	0.000	0.000	0.146	0.000
OF	642.000	-0.186	0.000	8.848	0.000	0.000	0.000	0.000	0.146	0.000
OF	643.000	-0.040	0.000	8.848	0.000	0.000	0.000	0.000	-0.042	0.000
OF	648.500	-0.459	0.000	8.848	0.000	0.000	0.000	0.000	0.078	0.000
IF	659.000	1.214	0.000	8.846	0.000	0.000	0.000	0.000	0.178	0.000
IF	668.000	3.018	0.000	8.841	0.000	0.000	0.000	0.000	0.444	0.000
IF	676.200	8.841	0.000	8.841	0.000	0.000	0.000	0.000	0.710	0.000
AS	1116.500	8.841	0.000	8.841	0.000	0.000	0.000	0.000	0.710	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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	END STATION	END ELEVATION	FETCH LENGTH	SURGE ELEV 10-YEAR	SURGE ELEV 100-YEAR	INITIAL WAVE HEIGHT	INITIAL W. PERIOD		BOTTOM SLOPE	AVERAGE A-ZONES
IE	0.000	-16.537	1.000	1.000	8.855	4.561	7.085	56.140	-0.005	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	12.000	-16.592	0.000	8.855	0.000	0.000	0.000	0.000	-0.005	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	13.000	-16.597	0.000	8.855	0.000	0.000	0.000	0.000	-0.005	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	14.000	-16.602	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	15.000	-16.606	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	16.000	-16.611	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	17.000	-16.615	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	18.000	-16.620	0.000	8.855	0.000	0.000	0.000	0.000	-0.005	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	19.000	-16.625	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	20.000	-16.629	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	21.000	-16.634	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	22.000	-16.638	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	23.000	-16.643	0.000	8.855	0.000	0.000	0.000	0.000	-0.005	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	24.000	-16.648	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	25.000	-16.652	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	26.000	-16.657	0.000	8.855	0.000	0.000	0.000	0.000	-0.005	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	27.000	-16.662	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	28.000	-16.666	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	29.000	-16.671	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	30.000	-16.675	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	31.000	-16.680	0.000	8.855	0.000	0.000	0.000	0.000	-0.005	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	32.000	-16.685	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	33.000	-16.689	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	34.000	-16.694	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	35.000	-16.698	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	36.000	-16.703	0.000	8.855	0.000	0.000	0.000	0.000	-0.005	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	37.000	-16.708	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	38.000	-16.712	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	39.000	-16.717	0.000	8.855	0.000	0.000	0.000	0.000	-0.005	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	40.000	-16.722	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	41.000	-16.726	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	42.000	-16.731	0.000	8.855	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	43.000	-16.735	0.000	8.855	0.000	0.000	0.000	0.000	-0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	44.000	-16.733	0.000	8.855	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	45.000	-16.731	0.000	8.855	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	46.000	-16.729	0.000	8.855	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	47.000	-16.727	0.000	8.855	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	48.000	-16.725	0.000	8.855	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	49.000	-16.724	0.000	8.855	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	50.000	-16.722	0.000	8.855	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	51.000	-16.720	0.000	8.855	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	52.000	-16.718	0.000	8.855	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	53.000	-16.716	0.000	8.855	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	54.000	-16.714	0.000	8.855	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	55.000	-16.712	0.000	8.855	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	56.000	-16.711	0.000	8.855	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES

OF	57.000	-16.709	0.000	8.855	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	58.000	-16.707	0.000	8.855	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	59.000	-16.705	0.000	8.855	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	60.000	-16.703	0.000	8.855	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	61.000	-16.701	0.000	8.855	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	62.000	-16.699	0.000	8.855	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	63.000	-16.698	0.000	8.855	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	64.000	-16.696	0.000	8.855	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	65.000	-16.694	0.000	8.855	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	66.000	-16.692	0.000	8.855	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	67.000	-16.690	0.000	8.855	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	68.000	-16.688	0.000	8.855	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	69.000	-16.686	0.000	8.855	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	70.000	-16.685	0.000	8.855	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	71.000	-16.683	0.000	8.855	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	72.000	-16.681	0.000	8.855	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	73.000	-16.679	0.000	8.855	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	74.000	-16.677	0.000	8.855	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	75.000	-16.675	0.000	8.855	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	76.000	-16.673	0.000	8.855	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	77.000	-16.671	0.000	8.855	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	78.000	-16.670	0.000	8.855	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	79.000	-16.668	0.000	8.855	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	80.000	-16.666	0.000	8.855	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	81.000	-16.664	0.000	8.855	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	82.000	-16.662	0.000	8.855	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	83.000	-16.660	0.000	8.855	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	84.000	-16.659	0.000	8.855	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	85.000	-16.657	0.000	8.855	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	86.000	-16.655	0.000	8.855	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	87.000	-16.653	0.000	8.855	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	88.000	-16.651	0.000	8.855	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	89.000	-16.649	0.000	8.855	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	90.000	-16.647	0.000	8.855	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	91.000	-16.645	0.000	8.855	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	92.000	-16.644	0.000	8.855	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	93.000	-16.642	0.000	8.855	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	94.000	-16.640	0.000	8.855	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	96.000	-16.636	0.000	8.855	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	97.000	-16.634	0.000	8.855	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	99.000	-16.631	0.000	8.855	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	100.000	-16.629	0.000	8.855	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	102.000	-16.625	0.000	8.855	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	103.000	-16.623	0.000	8.855	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	105.000	-16.619	0.000	8.855	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	106.000	-16.618	0.000	8.855	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	108.000	-16.614	0.000	8.855	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	109.000	-16.612	0.000	8.855	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	111.000	-16.608	0.000	8.855	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	112.000	-16.606	0.000	8.855	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	114.000	-16.603	0.000	8.855	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	115.000	-16.599	0.000	8.855	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	118.000	-16.581	0.000	8.855	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	119.000	-16.578	0.000	8.855	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	121.000	-16.570	0.000	8.855	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	122.000	-16.567	0.000	8.855	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	124.000	-16.559	0.000	8.855	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	125.000	-16.556	0.000	8.855	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	127.000	-16.548	0.000	8.855	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	128.000	-16.545	0.000	8.855	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	130.000	-16.537	0.000	8.855	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	131.000	-16.533	0.000	8.855	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	133.000	-16.526	0.000	8.854	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	134.000	-16.522	0.000	8.854	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	136.000	-16.515	0.000	8.854	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	137.000	-16.511	0.000	8.854	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	139.000	-16.504	0.000	8.854	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	140.000	-16.500	0.000	8.854	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	142.000	-16.493	0.000	8.854	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	143.000	-16.489	0.000	8.854	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	145.000	-16.482	0.000	8.854	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	146.000	-16.478	0.000	8.854	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	148.000	-16.471	0.000	8.854	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	149.000	-16.467	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	150.000	-16.463	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	151.000	-16.460	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	152.000	-16.456	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	153.000	-16.452	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	154.000	-16.449	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	155.000	-16.445	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	156.000	-16.441	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	157.000	-16.438	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	158.000	-16.434	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	159.000	-16.430	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	160.000	-16.427	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	161.000	-16.423	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	162.000	-16.419	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	163.000	-16.416	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	164.000	-16.412	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	165.000	-16.408	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	166.000	-16.405	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	167.000	-16.401	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	168.000	-16.397	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	169.000	-16.394	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	170.000	-16.390	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	171.000	-16.386	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	172.000	-16.382	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	173.000	-16.379	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	174.000	-16.375	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	175.000	-16.371	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	176.000	-16.368	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	177.000	-16.364	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	178.000	-16.360	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	179.000	-16.357	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	180.000	-16.353	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	181.000	-16.349	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	182.000	-16.346	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	183.000	-16.342	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	184.000	-16.338	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	185.000	-16.335	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES

OF	186.000	-16.331	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	187.000	-16.327	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	188.000	-16.323	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	189.000	-16.320	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	190.000	-16.316	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	191.000	-16.312	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	192.000	-16.309	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	193.000	-16.305	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	194.000	-16.301	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	195.000	-16.298	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	196.000	-16.294	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	197.000	-16.290	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	198.000	-16.287	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	199.000	-16.283	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	200.000	-16.279	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	201.000	-16.276	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	202.000	-16.272	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	203.000	-16.268	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	204.000	-16.265	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	205.000	-16.261	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	206.000	-16.257	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	207.000	-16.254	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	208.000	-16.250	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	209.000	-16.246	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	210.000	-16.242	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	211.000	-16.239	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	212.000	-16.235	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	213.000	-16.231	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	214.000	-16.228	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	215.000	-16.224	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	216.000	-16.220	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	217.000	-16.217	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	218.000	-16.213	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	219.000	-16.209	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	220.000	-16.206	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	221.000	-16.202	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	222.000	-16.198	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE

	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	223.000	-16.195	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	224.000	-16.191	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	225.000	-16.187	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	226.000	-16.184	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	227.000	-16.180	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	228.000	-16.176	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	229.000	-16.172	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	230.000	-16.169	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	231.000	-16.165	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	232.000	-16.161	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	233.000	-16.158	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	234.000	-16.154	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	235.000	-16.150	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	236.000	-16.147	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	237.000	-16.143	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	238.000	-16.139	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	239.000	-16.136	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	240.000	-16.132	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	241.000	-16.128	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	242.000	-16.125	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	243.000	-16.121	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	244.000	-16.117	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	245.000	-16.114	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	246.000	-16.110	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	247.000	-16.106	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	248.000	-16.103	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	249.000	-16.099	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	250.000	-16.095	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	251.000	-16.091	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	252.000	-16.088	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	253.000	-16.084	0.000	8.854	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	254.000	-16.080	0.000	8.854	0.000	0.000	0.000	0.000	-0.018	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	255.000	-16.120	0.000	8.854	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	256.000	-16.160	0.000	8.854	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	257.000	-16.200	0.000	8.854	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	258.000	-16.239	0.000	8.854	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	259.000	-16.279	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	260.000	-16.319	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	261.000	-16.359	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	262.000	-16.399	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	263.000	-16.439	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	264.000	-16.479	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	265.000	-16.519	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	266.000	-16.559	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	267.000	-16.598	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	268.000	-16.638	0.000	8.854	0.000	0.000	0.000	0.000	-0.040	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	269.000	-16.678	0.000	8.854	0.000	0.000	0.000	0.000	-0.034	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	270.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	-0.014	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	271.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	272.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	273.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	274.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	275.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	276.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	277.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	278.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	279.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	280.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	281.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	282.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	283.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	284.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	285.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	286.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	287.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	288.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	289.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	290.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	291.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	292.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	293.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	294.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	295.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES

OF	296.000	-16.705	0.000	8.854	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
OF	297.000	-16.705	0.000	8.854	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
OF	298.000	-16.705	0.000	8.854	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
OF	299.000	-16.705	0.000	8.854	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
OF	300.000	-16.705	0.000	8.854	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	301.000	-16.706	0.000	8.854	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	302.000	-16.706	0.000	8.854	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
OF	303.000	-16.706	0.000	8.854	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
OF	304.000	-16.706	0.000	8.854	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
OF	305.000	-16.706	0.000	8.854	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
OF	306.000	-16.706	0.000	8.854	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
OF	307.000	-16.706	0.000	8.854	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
OF	308.000	-16.706	0.000	8.854	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
OF	309.000	-16.706	0.000	8.854	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
OF	310.000	-16.706	0.000	8.854	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
OF	311.000	-16.706	0.000	8.854	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
OF	312.000	-16.706	0.000	8.854	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
OF	313.000	-16.706	0.000	8.854	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
OF	314.000	-16.706	0.000	8.854	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
OF	315.000	-16.706	0.000	8.854	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
OF	316.000	-16.706	0.000	8.854	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
OF	317.000	-16.706	0.000	8.854	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
OF	318.000	-16.706	0.000	8.854	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
OF	319.000	-16.706	0.000	8.854	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
OF	320.000	-16.706	0.000	8.854	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
OF	321.000	-16.706	0.000	8.854	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
OF	322.000	-16.706	0.000	8.854	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
OF	323.000	-16.706	0.000	8.854	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
OF	324.000	-16.706	0.000	8.854	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
OF	325.000	-16.706	0.000	8.854	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
OF	326.000	-16.706	0.000	8.854	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
OF	327.000	-16.706	0.000	8.854	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
OF	328.000	-16.706	0.000	8.854	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
OF	329.000	-16.706	0.000	8.854	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
OF	330.000	-16.706	0.000	8.854	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
OF	331.000	-16.706	0.000	8.854	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
OF	332.000	-16.706	0.000	8.854	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
OF	333.000	-16.706	0.000	8.854	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
OF	334.000	-16.706	0.000	8.854	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
OF	335.000	-16.706	0.000	8.854	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
OF	336.000	-16.706	0.000	8.854	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
OF	337.000	-16.706	0.000	8.854	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
OF	338.000	-16.706	0.000	8.854	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
OF	339.000	-16.706	0.000	8.854	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
OF	340.000	-16.706	0.000	8.854	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
OF	341.000	-16.706	0.000	8.854	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
OF	342.000	-16.706	0.000	8.854	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
OF	343.000	-16.706	0.000	8.854	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
OF	344.000	-16.706	0.000	8.854	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
OF	345.000	-16.706	0.000	8.854	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
OF	346.000	-16.706	0.000	8.854	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
OF	347.000	-16.706	0.000	8.854	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
OF	348.000	-16.706	0.000	8.854	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
OF	349.000	-16.706	0.000	8.854	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	350.000	-16.705	0.000	8.854	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	351.000	-16.705	0.000	8.854	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
OF	352.000	-16.705	0.000	8.854	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
OF	353.000	-16.705	0.000	8.854	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
OF	354.000	-16.705	0.000	8.854	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
OF	355.000	-16.705	0.000	8.854	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
OF	356.000	-16.705	0.000	8.854	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
OF	357.000	-16.705	0.000	8.854	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
OF	358.000	-16.705	0.000	8.854	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
OF	359.000	-16.705	0.000	8.854	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
OF	360.000	-16.705	0.000	8.854	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
OF	361.000	-16.705	0.000	8.854	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
OF	362.000	-16.705	0.000	8.854	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
OF	363.000	-16.705	0.000	8.854	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
OF	364.000	-16.705	0.000	8.854	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
OF	365.000	-16.705	0.000	8.854	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
OF	366.000	-16.705	0.000	8.854	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
OF	367.000	-16.705	0.000	8.854	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
OF	368.000	-16.705	0.000	8.854	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
OF	369.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	370.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	371.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	372.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	373.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	374.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	375.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	376.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	377.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	378.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	379.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	380.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	381.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	382.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	383.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	384.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	385.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	386.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	387.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	388.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	389.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	390.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	391.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	392.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	393.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	394.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	395.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	396.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	397.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	398.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	399.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	400.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	401.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	402.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	403.000	-16.705	0.000	8.854	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	404.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	405.000	-16.704	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES

OF	406.000	-16.704	0.000	8.854	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
OF	407.000	-16.704	0.000	8.854	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
OF	408.000	-16.704	0.000	8.854	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
OF	409.000	-16.704	0.000	8.854	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
OF	410.000	-16.704	0.000	8.854	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
OF	411.000	-16.704	0.000	8.854	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
OF	412.000	-16.704	0.000	8.854	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
OF	413.000	-16.704	0.000	8.854	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
OF	414.000	-16.704	0.000	8.854	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
OF	415.000	-16.704	0.000	8.854	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
OF	416.000	-16.704	0.000	8.854	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
OF	417.000	-16.704	0.000	8.854	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
OF	418.000	-16.704	0.000	8.854	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
OF	419.000	-16.704	0.000	8.854	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
OF	420.000	-16.704	0.000	8.854	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
OF	421.000	-16.704	0.000	8.854	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
OF	422.000	-16.704	0.000	8.854	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
OF	423.000	-16.704	0.000	8.854	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
OF	424.000	-16.704	0.000	8.854	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	425.000	-16.703	0.000	8.854	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	426.000	-16.703	0.000	8.854	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
OF	427.000	-16.703	0.000	8.854	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
OF	428.000	-16.703	0.000	8.854	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
OF	429.000	-16.703	0.000	8.854	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
OF	430.000	-16.703	0.000	8.854	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
OF	431.000	-16.703	0.000	8.854	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
OF	432.000	-16.703	0.000	8.854	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
OF	433.000	-16.703	0.000	8.854	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
OF	434.000	-16.703	0.000	8.854	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
OF	435.000	-16.703	0.000	8.854	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
OF	436.000	-16.703	0.000	8.854	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
OF	437.000	-16.703	0.000	8.854	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
OF	438.000	-16.703	0.000	8.854	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
OF	439.000	-16.703	0.000	8.854	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
OF	440.000	-16.703	0.000	8.854	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
OF	441.000	-16.703	0.000	8.854	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
OF	442.000	-16.703	0.000	8.854	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
OF	443.000	-16.703	0.000	8.854	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
OF	444.000	-16.703	0.000	8.854	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
OF	445.000	-16.703	0.000	8.854	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	446.000	-16.702	0.000	8.854	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	447.000	-16.702	0.000	8.854	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
OF	448.000	-16.702	0.000	8.854	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
OF	449.000	-16.702	0.000	8.854	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
OF	450.000	-16.702	0.000	8.854	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
OF	451.000	-16.702	0.000	8.854	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
OF	452.000	-16.702	0.000	8.854	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
OF	453.000	-16.702	0.000	8.854	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
OF	454.000	-16.702	0.000	8.854	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
OF	455.000	-16.702	0.000	8.854	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
OF	456.000	-16.702	0.000	8.854	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
OF	457.000	-16.702	0.000	8.854	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
OF	458.000	-16.702	0.000	8.854	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
OF	459.000	-16.702	0.000	8.854	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
OF	460.000	-16.702	0.000	8.854	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
OF	461.000	-16.702	0.000	8.854	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
OF	462.000	-16.702	0.000	8.854	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
OF	463.000	-16.702	0.000	8.854	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
OF	464.000	-16.702	0.000	8.854	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	465.000	-16.701	0.000	8.854	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	466.000	-16.701	0.000	8.854	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
OF	467.000	-16.701	0.000	8.854	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
OF	468.000	-16.701	0.000	8.854	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
OF	469.000	-16.701	0.000	8.854	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
OF	470.000	-16.701	0.000	8.854	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
OF	471.000	-16.701	0.000	8.854	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
OF	472.000	-16.701	0.000	8.854	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
OF	473.000	-16.701	0.000	8.854	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
OF	474.000	-16.701	0.000	8.854	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
OF	475.000	-16.701	0.000	8.854	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
OF	476.000	-16.701	0.000	8.854	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
OF	477.000	-16.701	0.000	8.854	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
OF	478.000	-16.701	0.000	8.854	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
OF	479.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000		0.000	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	480.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	481.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	482.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	483.000	-16.701	0.000	8.854	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	484.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	485.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	486.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	487.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	488.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	489.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	490.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	491.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	492.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	493.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	494.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	495.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	496.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	497.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	498.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	499.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	500.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	501.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	502.000	-16.700	0.000	8.854	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	503.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	504.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	505.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	506.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	507.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	508.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	509.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	510.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	511.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	512.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	513.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	514.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	515.000	-16.699	0.000	8.854	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES

OF	516.000	-16.699	0.000	8.854	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
OF	517.000	-16.699	0.000	8.854	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
OF	518.000	-16.699	0.000	8.854	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
OF	519.000	-16.686	0.000	8.854	0.000	0.000	0.000	0.000	0.068	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	520.000	-16.562	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	521.000	-16.438	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	522.000	-16.314	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	523.000	-16.190	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	524.000	-16.066	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	525.000	-15.942	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	526.000	-15.818	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	527.000	-15.694	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	528.000	-15.570	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	529.000	-15.446	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	530.000	-15.322	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	531.000	-15.198	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	532.000	-15.074	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	533.000	-14.950	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	534.000	-14.825	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	535.000	-14.702	0.000	8.854	0.000	0.000	0.000	0.000	0.123	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	536.000	-14.578	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	537.000	-14.453	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	538.000	-14.329	0.000	8.854	0.000	0.000	0.000	0.000	0.123	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	539.000	-14.206	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	540.000	-14.081	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	541.000	-13.957	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	542.000	-13.833	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	543.000	-13.709	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	544.000	-13.585	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	545.000	-13.461	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	546.000	-13.337	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	547.000	-13.213	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	548.000	-13.089	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	549.000	-12.965	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	550.000	-12.841	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	551.000	-12.717	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	552.000	-12.593	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE

	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	553.000	-12.469	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	554.000	-12.345	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	555.000	-12.221	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	556.000	-12.097	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	557.000	-11.972	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	558.000	-11.848	0.000	8.854	0.000	0.000	0.000	0.000	0.123	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	559.000	-11.725	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	560.000	-11.600	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	561.000	-11.476	0.000	8.854	0.000	0.000	0.000	0.000	0.123	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	562.000	-11.353	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	563.000	-11.228	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	564.000	-11.104	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	565.000	-10.980	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	566.000	-10.856	0.000	8.854	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	567.000	-10.732	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	568.000	-10.608	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	569.000	-10.484	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	570.000	-10.360	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	571.000	-10.236	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	572.000	-10.112	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	573.000	-9.988	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	574.000	-9.864	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	575.000	-9.740	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	576.000	-9.616	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	577.000	-9.492	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	578.000	-9.368	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	579.000	-9.244	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	580.000	-9.120	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	581.000	-8.996	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	582.000	-8.872	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	583.000	-8.748	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	584.000	-8.624	0.000	8.853	0.000	0.000	0.000	0.000	0.124	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	585.000	-8.500	0.000	8.853	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	586.000	-8.366	0.000	8.853	0.000	0.000	0.000	0.000	0.140	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	587.000	-8.220	0.000	8.853	0.000	0.000	0.000	0.000	0.146	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	588.000	-8.074	0.000	8.853	0.000	0.000	0.000	0.000	0.146	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	589.000	-7.928	0.000	8.853	0.000	0.000	0.000	0.000	0.146	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	590.000	-7.782	0.000	8.853	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	591.000	-7.636	0.000	8.853	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	592.000	-7.490	0.000	8.853	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	593.000	-7.344	0.000	8.853	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	594.000	-7.198	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	595.000	-7.051	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	596.000	-6.905	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	597.000	-6.760	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	598.000	-6.613	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	599.000	-6.467	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	600.000	-6.321	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	601.000	-6.175	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	602.000	-6.029	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	603.000	-5.883	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	604.000	-5.737	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	605.000	-5.591	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	606.000	-5.444	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	607.000	-5.299	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	608.000	-5.153	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	609.000	-5.006	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	610.000	-4.860	0.000	8.852	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	611.000	-4.714	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	612.000	-4.568	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	613.000	-4.422	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	614.000	-4.276	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	615.000	-4.130	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	616.000	-3.984	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	617.000	-3.838	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	618.000	-3.692	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	619.000	-3.546	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	620.000	-3.400	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	621.000	-3.253	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	622.000	-3.108	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	623.000	-2.962	0.000	8.851	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	624.000	-2.815	0.000	8.850	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	625.000	-2.669	0.000	8.850	0.000	0.000	0.000	0.000	0.146	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES

OF	626.000	-2.523	0.000	8.850	0.000	0.000	0.000	0.000	0.146	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	627.000	-2.377	0.000	8.850	0.000	0.000	0.000	0.000	0.146	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	628.000	-2.231	0.000	8.850	0.000	0.000	0.000	0.000	0.146	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	629.000	-2.085	0.000	8.850	0.000	0.000	0.000	0.000	0.146	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	630.000	-1.939	0.000	8.850	0.000	0.000	0.000	0.000	0.146	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	631.000	-1.793	0.000	8.850	0.000	0.000	0.000	0.000	0.146	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	632.000	-1.646	0.000	8.849	0.000	0.000	0.000	0.000	0.146	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	633.000	-1.500	0.000	8.849	0.000	0.000	0.000	0.000	0.146	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	634.000	-1.355	0.000	8.849	0.000	0.000	0.000	0.000	0.146	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	635.000	-1.208	0.000	8.849	0.000	0.000	0.000	0.000	0.146	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	636.000	-1.062	0.000	8.849	0.000	0.000	0.000	0.000	0.146	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	637.000	-0.916	0.000	8.849	0.000	0.000	0.000	0.000	0.146	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	638.000	-0.770	0.000	8.849	0.000	0.000	0.000	0.000	0.146	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	639.000	-0.624	0.000	8.848	0.000	0.000	0.000	0.000	0.146	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	640.000	-0.478	0.000	8.848	0.000	0.000	0.000	0.000	0.146	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	641.000	-0.332	0.000	8.848	0.000	0.000	0.000	0.000	0.146	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	642.000	-0.186	0.000	8.848	0.000	0.000	0.000	0.000	0.146	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	643.000	-0.040	0.000	8.848	0.000	0.000	0.000	0.000	-0.042	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	648.500	-0.459	0.000	8.848	0.000	0.000	0.000	0.000	0.078	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	659.000	1.214	0.000	8.846	0.000	0.000	0.000	0.000	0.178	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	668.000	3.018	0.000	8.841	0.000	0.000	0.000	0.000	0.444	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	676.200	8.841	0.000	8.841	0.000	0.000	0.000	0.000	0.710	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
AS	1116.500	8.841	0.000	8.841	0.000	0.000	0.000	0.000	0.710	0.000

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

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

1

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

LOCATION		CONTROLLING WAVE HEIGHT	SPECTRAL PEAK WAVE PERIOD	WAVE CREST ELEVATION
IE	0.00	4.56	7.09	12.05
OF	12.00	4.56	7.09	12.05
OF	13.00	4.56	7.09	12.05
OF	14.00	4.56	7.09	12.05
OF	15.00	4.56	7.09	12.05
OF	16.00	4.56	7.09	12.05
OF	17.00	4.56	7.09	12.05
OF	18.00	4.56	7.09	12.05
OF	19.00	4.56	7.09	12.05
OF	20.00	4.57	7.09	12.05
OF	21.00	4.57	7.09	12.05
OF	22.00	4.57	7.09	12.05
OF	23.00	4.57	7.09	12.05
OF	24.00	4.57	7.09	12.05
OF	25.00	4.57	7.09	12.05
OF	26.00	4.57	7.09	12.05
OF	27.00	4.57	7.09	12.05
OF	28.00	4.57	7.09	12.05
OF	29.00	4.57	7.09	12.05
OF	30.00	4.57	7.09	12.05
OF	31.00	4.57	7.09	12.05
OF	32.00	4.57	7.09	12.05
OF	33.00	4.57	7.09	12.05
OF	34.00	4.57	7.09	12.05
OF	35.00	4.57	7.09	12.05
OF	36.00	4.57	7.09	12.05
OF	37.00	4.57	7.09	12.05
OF	38.00	4.57	7.09	12.05
OF	39.00	4.57	7.09	12.05
OF	40.00	4.57	7.09	12.05
OF	41.00	4.57	7.09	12.05
OF	42.00	4.57	7.09	12.05
OF	43.00	4.57	7.09	12.05
OF	44.00	4.57	7.09	12.05
OF	45.00	4.57	7.09	12.05

OF	46.00	4.57	7.09	12.05
OF	47.00	4.57	7.09	12.06
OF	48.00	4.57	7.09	12.06
OF	49.00	4.57	7.09	12.06
OF	50.00	4.57	7.09	12.06
OF	51.00	4.57	7.09	12.06
OF	52.00	4.57	7.09	12.06
OF	53.00	4.57	7.09	12.06
OF	54.00	4.57	7.09	12.06
OF	55.00	4.57	7.09	12.06
OF	56.00	4.57	7.09	12.06
OF	57.00	4.58	7.09	12.06
OF	58.00	4.58	7.09	12.06
OF	59.00	4.58	7.09	12.06
OF	60.00	4.58	7.09	12.06
OF	61.00	4.58	7.09	12.06
OF	62.00	4.58	7.09	12.06
OF	63.00	4.58	7.09	12.06
OF	64.00	4.58	7.09	12.06
OF	65.00	4.58	7.09	12.06
OF	66.00	4.58	7.09	12.06
OF	67.00	4.58	7.09	12.06
OF	68.00	4.58	7.09	12.06
OF	69.00	4.58	7.09	12.06
OF	70.00	4.58	7.09	12.06
OF	71.00	4.58	7.09	12.06
OF	72.00	4.58	7.09	12.06
OF	73.00	4.58	7.09	12.06
OF	74.00	4.58	7.09	12.06
OF	75.00	4.58	7.09	12.06
OF	76.00	4.58	7.09	12.06
OF	77.00	4.58	7.09	12.06
OF	78.00	4.58	7.09	12.06
OF	79.00	4.58	7.09	12.06
OF	80.00	4.58	7.09	12.06
OF	81.00	4.58	7.09	12.06
OF	82.00	4.58	7.09	12.06
OF	83.00	4.59	7.09	12.06
OF	84.00	4.59	7.09	12.06
OF	85.00	4.59	7.09	12.07
OF	86.00	4.59	7.09	12.07
OF	87.00	4.59	7.09	12.07
OF	88.00	4.59	7.09	12.07
OF	89.00	4.59	7.09	12.07
OF	90.00	4.59	7.09	12.07
OF	91.00	4.59	7.09	12.07
OF	92.00	4.59	7.09	12.07
OF	93.00	4.59	7.09	12.07
OF	94.00	4.59	7.09	12.07
OF	96.00	4.59	7.09	12.07
OF	97.00	4.59	7.09	12.07
OF	99.00	4.59	7.09	12.07
OF	100.00	4.59	7.09	12.07
OF	102.00	4.59	7.09	12.07
OF	103.00	4.59	7.09	12.07
OF	105.00	4.59	7.09	12.07
OF	106.00	4.59	7.09	12.07
OF	108.00	4.59	7.09	12.07
OF	109.00	4.60	7.09	12.07
OF	111.00	4.60	7.09	12.07
OF	112.00	4.60	7.09	12.07
OF	114.00	4.60	7.09	12.07
OF	115.00	4.60	7.09	12.07
OF	118.00	4.60	7.09	12.07
OF	119.00	4.60	7.09	12.07
OF	121.00	4.60	7.09	12.08
OF	122.00	4.60	7.09	12.08
OF	124.00	4.60	7.09	12.08
OF	125.00	4.60	7.09	12.08
OF	127.00	4.60	7.09	12.08
OF	128.00	4.60	7.09	12.08
OF	130.00	4.60	7.09	12.08
OF	131.00	4.60	7.09	12.08
OF	133.00	4.61	7.09	12.08
OF	134.00	4.61	7.09	12.08
OF	136.00	4.61	7.09	12.08
OF	137.00	4.61	7.09	12.08
OF	139.00	4.61	7.09	12.08
OF	140.00	4.61	7.09	12.08
OF	142.00	4.61	7.09	12.08
OF	143.00	4.61	7.09	12.08
OF	145.00	4.61	7.09	12.08
OF	146.00	4.61	7.09	12.08
OF	148.00	4.61	7.09	12.08
OF	149.00	4.61	7.09	12.08
OF	150.00	4.61	7.09	12.08
OF	151.00	4.61	7.09	12.08
OF	152.00	4.61	7.09	12.08
OF	153.00	4.61	7.09	12.08
OF	154.00	4.61	7.09	12.08
OF	155.00	4.61	7.09	12.08
OF	156.00	4.62	7.09	12.08
OF	157.00	4.62	7.09	12.08
OF	158.00	4.62	7.09	12.09
OF	159.00	4.62	7.09	12.09
OF	160.00	4.62	7.09	12.09
OF	161.00	4.62	7.09	12.09
OF	162.00	4.62	7.09	12.09
OF	163.00	4.62	7.09	12.09
OF	164.00	4.62	7.09	12.09
OF	165.00	4.62	7.09	12.09
OF	166.00	4.62	7.09	12.09
OF	167.00	4.62	7.09	12.09
OF	168.00	4.62	7.09	12.09
OF	169.00	4.62	7.09	12.09
OF	170.00	4.62	7.09	12.09
OF	171.00	4.62	7.09	12.09
OF	172.00	4.62	7.09	12.09
OF	173.00	4.62	7.09	12.09
OF	174.00	4.62	7.09	12.09

OF	175.00	4.62	7.09	12.09
OF	176.00	4.62	7.09	12.09
OF	177.00	4.62	7.09	12.09
OF	178.00	4.62	7.09	12.09
OF	179.00	4.62	7.09	12.09
OF	180.00	4.63	7.09	12.09
OF	181.00	4.63	7.09	12.09
OF	182.00	4.63	7.09	12.09
OF	183.00	4.63	7.09	12.09
OF	184.00	4.63	7.09	12.09
OF	185.00	4.63	7.09	12.09
OF	186.00	4.63	7.09	12.09
OF	187.00	4.63	7.09	12.09
OF	188.00	4.63	7.09	12.09
OF	189.00	4.63	7.09	12.09
OF	190.00	4.63	7.09	12.09
OF	191.00	4.63	7.09	12.10
OF	192.00	4.63	7.09	12.10
OF	193.00	4.63	7.09	12.10
OF	194.00	4.63	7.09	12.10
OF	195.00	4.63	7.09	12.10
OF	196.00	4.63	7.09	12.10
OF	197.00	4.63	7.09	12.10
OF	198.00	4.63	7.09	12.10
OF	199.00	4.63	7.09	12.10
OF	200.00	4.63	7.09	12.10
OF	201.00	4.63	7.09	12.10
OF	202.00	4.63	7.09	12.10
OF	203.00	4.64	7.09	12.10
OF	204.00	4.64	7.09	12.10
OF	205.00	4.64	7.09	12.10
OF	206.00	4.64	7.09	12.10
OF	207.00	4.64	7.09	12.10
OF	208.00	4.64	7.09	12.10
OF	209.00	4.64	7.09	12.10
OF	210.00	4.64	7.09	12.10
OF	211.00	4.64	7.09	12.10
OF	212.00	4.64	7.09	12.10
OF	213.00	4.64	7.09	12.10
OF	214.00	4.64	7.09	12.10
OF	215.00	4.64	7.09	12.10
OF	216.00	4.64	7.09	12.10
OF	217.00	4.64	7.09	12.10
OF	218.00	4.64	7.09	12.10
OF	219.00	4.64	7.09	12.10
OF	220.00	4.64	7.09	12.10
OF	221.00	4.64	7.09	12.10
OF	222.00	4.64	7.09	12.10
OF	223.00	4.64	7.09	12.10
OF	224.00	4.64	7.09	12.10
OF	225.00	4.64	7.09	12.11
OF	226.00	4.65	7.09	12.11
OF	227.00	4.65	7.09	12.11
OF	228.00	4.65	7.09	12.11
OF	229.00	4.65	7.09	12.11
OF	230.00	4.65	7.09	12.11
OF	231.00	4.65	7.09	12.11
OF	232.00	4.65	7.09	12.11
OF	233.00	4.65	7.09	12.11
OF	234.00	4.65	7.09	12.11
OF	235.00	4.65	7.09	12.11
OF	236.00	4.65	7.09	12.11
OF	237.00	4.65	7.09	12.11
OF	238.00	4.65	7.09	12.11
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OF	253.00	4.66	7.09	12.11
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OF	259.00	4.65	7.09	12.11
OF	260.00	4.65	7.09	12.11
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OF	262.00	4.65	7.09	12.11
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OF	265.00	4.65	7.09	12.11
OF	266.00	4.65	7.09	12.11
OF	267.00	4.65	7.09	12.11
OF	268.00	4.65	7.09	12.11
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OF	270.00	4.64	7.09	12.11
OF	271.00	4.65	7.09	12.11
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OF	281.00	4.65	7.09	12.11
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OF	283.00	4.65	7.09	12.11
OF	284.00	4.65	7.09	12.11

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OF	287.00	4.65	7.09	12.11
OF	288.00	4.65	7.09	12.11
OF	289.00	4.65	7.09	12.11
OF	290.00	4.65	7.09	12.11
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OF	300.00	4.65	7.09	12.11
OF	301.00	4.65	7.09	12.11
OF	302.00	4.66	7.09	12.11
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OF	394.00	4.68	7.09	12.13

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OF	398.00	4.69	7.09	12.13
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OF	401.00	4.69	7.09	12.14
OF	402.00	4.69	7.09	12.14
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OF	487.00	4.71	7.09	12.15
OF	488.00	4.72	7.09	12.15
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OF	491.00	4.72	7.09	12.16
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OF	493.00	4.72	7.09	12.16
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OF	503.00	4.72	7.09	12.16
OF	504.00	4.72	7.09	12.16

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OF	506.00	4.72	7.09	12.16
OF	507.00	4.72	7.09	12.16
OF	508.00	4.72	7.09	12.16
OF	509.00	4.72	7.09	12.16
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OF	522.00	4.74	7.09	12.17
OF	523.00	4.74	7.09	12.17
OF	524.00	4.74	7.09	12.18
OF	525.00	4.75	7.09	12.18
OF	526.00	4.75	7.09	12.18
OF	527.00	4.76	7.09	12.18
OF	528.00	4.76	7.10	12.19
OF	529.00	4.76	7.10	12.19
OF	530.00	4.77	7.10	12.19
OF	531.00	4.77	7.10	12.20
OF	532.00	4.78	7.10	12.20
OF	533.00	4.78	7.10	12.20
OF	534.00	4.79	7.10	12.20
OF	535.00	4.79	7.10	12.21
OF	536.00	4.80	7.10	12.21
OF	537.00	4.80	7.10	12.21
OF	538.00	4.80	7.10	12.22
OF	539.00	4.81	7.10	12.22
OF	540.00	4.81	7.10	12.22
OF	541.00	4.82	7.10	12.23
OF	542.00	4.82	7.10	12.23
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OF	546.00	4.84	7.10	12.24
OF	547.00	4.85	7.10	12.25
OF	548.00	4.85	7.10	12.25
OF	549.00	4.86	7.10	12.26
OF	550.00	4.86	7.10	12.26
OF	551.00	4.87	7.10	12.26
OF	552.00	4.88	7.10	12.27
OF	553.00	4.88	7.10	12.27
OF	554.00	4.89	7.10	12.27
OF	555.00	4.89	7.10	12.28
OF	556.00	4.90	7.10	12.28
OF	557.00	4.90	7.10	12.29
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OF	559.00	4.92	7.10	12.29
OF	560.00	4.92	7.10	12.30
OF	561.00	4.93	7.10	12.30
OF	562.00	4.93	7.10	12.31
OF	563.00	4.94	7.10	12.31
OF	564.00	4.95	7.10	12.32
OF	565.00	4.95	7.10	12.32
OF	566.00	4.96	7.10	12.33
OF	567.00	4.97	7.10	12.33
OF	568.00	4.97	7.10	12.33
OF	569.00	4.98	7.10	12.34
OF	570.00	4.99	7.10	12.34
OF	571.00	4.99	7.10	12.35
OF	572.00	5.00	7.10	12.35
OF	573.00	5.01	7.10	12.36
OF	574.00	5.01	7.10	12.36
OF	575.00	5.02	7.10	12.37
OF	576.00	5.03	7.10	12.37
OF	577.00	5.04	7.10	12.38
OF	578.00	5.04	7.10	12.38
OF	579.00	5.05	7.10	12.39
OF	580.00	5.06	7.10	12.39
OF	581.00	5.07	7.10	12.40
OF	582.00	5.08	7.10	12.41
OF	583.00	5.08	7.10	12.41
OF	584.00	5.09	7.10	12.42
OF	585.00	5.10	7.10	12.42
OF	586.00	5.11	7.10	12.43
OF	587.00	5.12	7.10	12.44
OF	588.00	5.13	7.10	12.44
OF	589.00	5.14	7.10	12.45
OF	590.00	5.15	7.10	12.46
OF	591.00	5.16	7.10	12.47
OF	592.00	5.17	7.10	12.47
OF	593.00	5.18	7.10	12.48
OF	594.00	5.20	7.10	12.49
OF	595.00	5.21	7.10	12.50
OF	596.00	5.22	7.10	12.50
OF	597.00	5.23	7.10	12.51
OF	598.00	5.24	7.10	12.52
OF	599.00	5.25	7.10	12.53
OF	600.00	5.27	7.10	12.54
OF	601.00	5.28	7.10	12.55
OF	602.00	5.29	7.10	12.56
OF	603.00	5.31	7.10	12.57
OF	604.00	5.32	7.10	12.58
OF	605.00	5.33	7.10	12.59
OF	606.00	5.35	7.10	12.59
OF	607.00	5.36	7.10	12.60
OF	608.00	5.38	7.10	12.61
OF	609.00	5.39	7.10	12.63
OF	610.00	5.41	7.10	12.64
OF	611.00	5.42	7.10	12.65
OF	612.00	5.44	7.10	12.66
OF	613.00	5.45	7.10	12.67
OF	614.00	5.47	7.10	12.68

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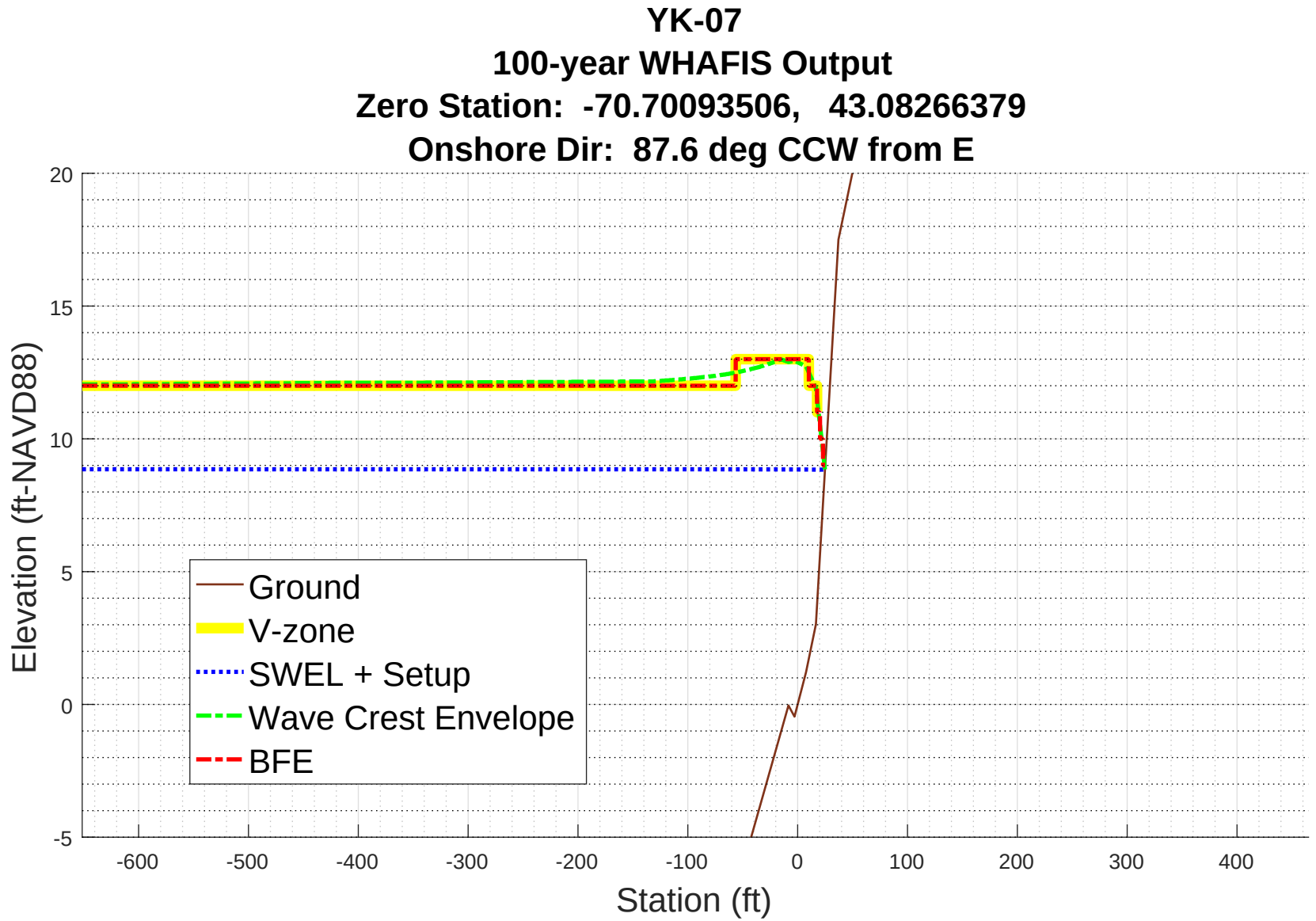
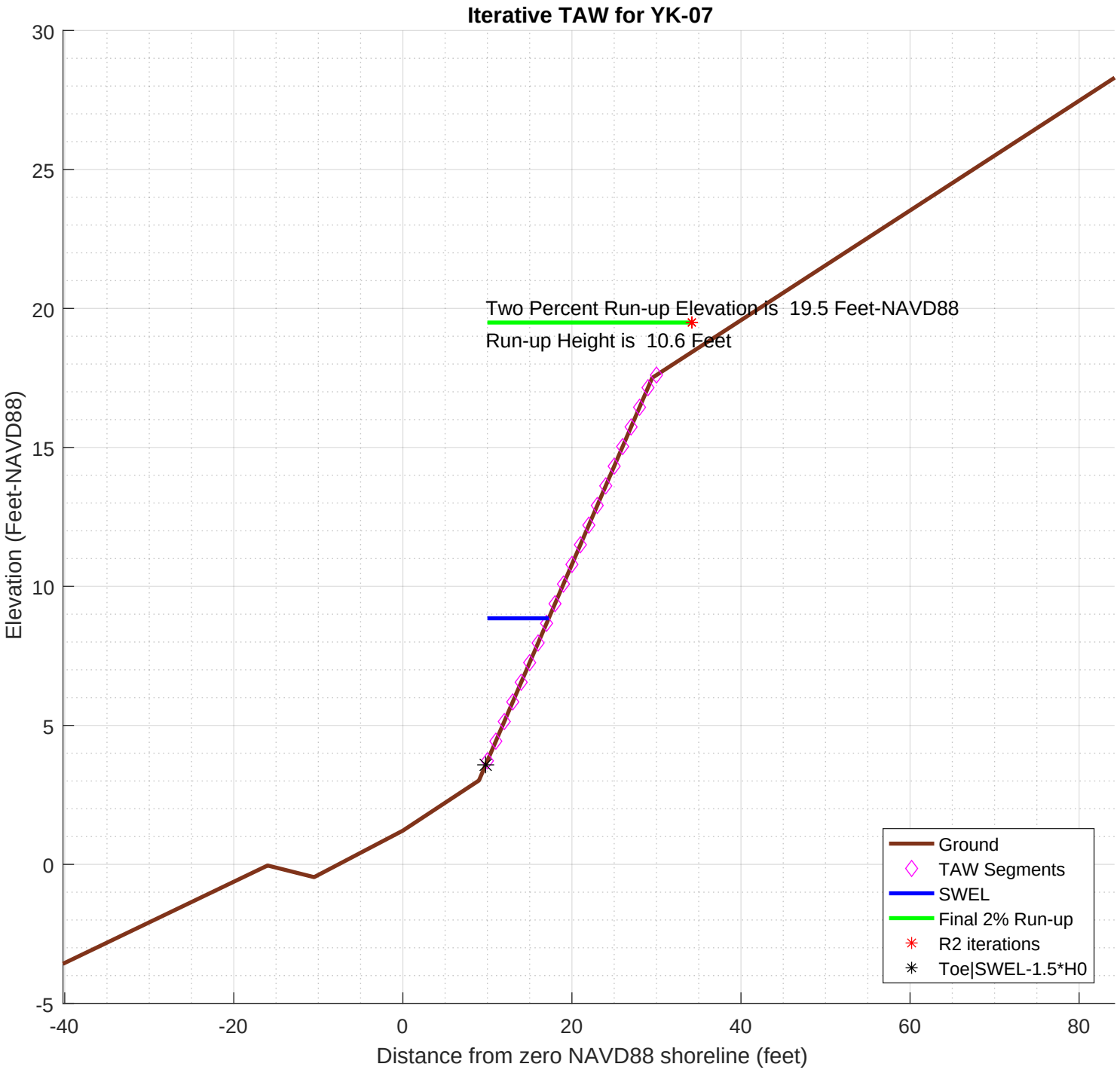
OF     615.00         5.49         7.10        12.69
OF     616.00         5.50         7.10        12.70
OF     617.00         5.52         7.10        12.71
OF     618.00         5.54         7.10        12.73
OF     619.00         5.55         7.10        12.74
OF     620.00         5.57         7.10        12.75
OF     621.00         5.59         7.10        12.77
OF     622.00         5.61         7.10        12.78
OF     623.00         5.63         7.10        12.79
OF     624.00         5.65         7.10        12.81
OF     625.00         5.67         7.10        12.82
OF     626.00         5.69         7.10        12.83
OF     627.00         5.71         7.10        12.85
OF     628.00         5.73         7.10        12.86
OF     629.00         5.76         7.10        12.88
OF     630.00         5.78         7.10        12.90
OF     631.00         5.80         7.10        12.91
OF     632.00         5.83         7.10        12.93
OF     633.00         5.85         7.10        12.94
OF     634.00         5.88         7.10        12.96
OF     635.00         5.90         7.10        12.98
OF     636.00         5.92         7.10        13.00
OF     637.00         5.90         7.10        12.98
OF     638.00         5.89         7.10        12.97
OF     639.00         5.87         7.10        12.95
OF     640.00         5.84         7.10        12.94
OF     641.00         5.82         7.10        12.92
OF     642.00         5.80         7.10        12.91
OF     643.00         5.78         7.10        12.89
OF     648.50         5.85         7.10        12.94
IF     659.00         5.56         7.10        12.73
IF     668.00         4.39         7.10        11.91
IF     676.20         0.01         7.10         8.85
AS    1116.50         0.00         0.00         8.84
PART3 LOCATION OF AREAS ABOVE 100-YEAR SURGE
     BETWEEN    676.20 AND   1116.50
          PART4 LOCATION OF SURGE CHANGES
STATION          10-YEAR SURGE          100-YEAR SURGE
133.00                1.00                8.85
567.00                1.00                8.85
594.00                1.00                8.85
611.00                1.00                8.85
624.00                1.00                8.85
632.00                1.00                8.85
639.00                1.00                8.85
659.00                1.00                8.85
668.00                1.00                8.84
               PART5  LOCATION OF V ZONES
     STATION OF GUTTER          LOCATION OF ZONE
               670.60              WINDWARD
          PART6 NUMBERED A ZONES AND V ZONES
STATION OF GUTTER  ELEVATION  ZONE DESIGNATION   FHF
       0.00          12.05
                                 V22  EL=12     120
     131.00          12.08
                                 V22  EL=12     120
     133.00          12.08
                                 V22  EL=12     120
     566.00          12.33
                                 V22  EL=12     120
     567.00          12.33
                                 V22  EL=12     120
     593.00          12.48
                                 V22  EL=12     120
     594.00          12.49
                                 V22  EL=12     120
     595.41          12.50
                                 V22  EL=13     120
     610.00          12.64
                                 V22  EL=13     120
     611.00          12.65
                                 V22  EL=13     120
     623.00          12.79
                                 V22  EL=13     120
     624.00          12.81
                                 V22  EL=13     120
     631.00          12.91
                                 V22  EL=13     120
     632.00          12.93
                                 V22  EL=13     120
     638.00          12.97
                                 V22  EL=13     120
     639.00          12.95
                                 V22  EL=13     120
     648.50          12.94
                                 V22  EL=13     120
     659.00          12.73
                                 V22  EL=13     120
     661.56          12.50
                                 V22  EL=12     120
     668.00          11.91
                                 V22  EL=12     120
     669.10          11.50
                                 V22  EL=11     120
     670.60          10.94
                                 A16  EL=11      80
     671.78          10.50
                                 A16  EL=10      80
     674.45           9.50
                                 A16  EL= 9      80
     676.20           8.85
    1116.50           8.84
          ZONE TERMINATED AT END OF TRANSECT
          PART 7   POSTSCRIPT NOTES
PS#  1   START(361535.9625,4771200.1498)
PS#  2   END(361550.198,4771543.3657)
-1.000000e+00
```


YK-07
100-year WHAFIS Output
Zero Station: -70.70093506, 43.08266379
Onshore Dir: 87.6 deg CCW from E
Elevation (ft-NAVD88)
Station (ft)
Ground
V-zone
SWEL + Setup
Wave Crest Envelope
BFE
20
15
10
5
0
-5
-600
-500
-400
-300
-200
-100
0
100
200
300
400


Iterative TAW for YK-07
Two Percent Run-up Elevation is 19.5 Feet-NAVD88
Run-up Height is 10.6 Feet
Elevation (Feet-NAVD88)
Distance from zero NAVD88 shoreline (feet)
30
25
20
15
10
5
0
-5
-40
-20
0
20
40
60
80
Ground
TAW Segments
SWEL
Final 2% Run-up
R2 iterations
Toe|SWEL-1.5*H0

```
diary on         % begin recording

% FEMA appeal for The Town of Kittery, York county, Maine
% TRANSECT ID: YK-07
% calculation by SJH, Ransom Consulting, Inc. 16-Oct-2018
% 100-year wave runup using TAW methodology
% including berm and weighted average with foreshore if necessary
%
% chk nld 20181015
%
% This script assumes that the incident wave conditions provided
% as input in the configuration section below are the
% appropriate values located at the end of the foreshore
% or toe of the slope on which the run-up is being calculated
% the script does not attempt to apply a depth limit or any other
% transformation to the incident wave conditions other than
% conversion of the peak wave period to the spectral mean wave
% as recommended in the references below
%
%
% references:
%
% Van der Meer, J.W., 2002. Technical Report Wave Run-up and
% Wave Overtopping at Dikes. TAW Technical Advisory Committee on
% Flood Defence, The Netherlands.
%
% FEMA. 2007,  Atlantic Ocean and Gulf of Mexico Coastal Guidelines Update
%
%
%

%-------------------------------------------------------------------------
% CONFIG
%-------------------------------------------------------------------------
fname='inpfiles/YK-07sta_ele_include.csv';   % file with station, elevation, include
                                        % third colunm is 0 for excluded points
imgname='logfiles/YK-07-runup';
SWEL=8.8546;  % 100-yr still water level including wave setup.
H0=3.4842;    % significant wave height at toe of structure
Tp=7.1158;    % peak period, 1/fma,
T0=Tp/1.1;

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

setupAtToe=-0.047323;
maxSetup=0.45734;   % only used in case of berm/shallow foreshore weighted average

plotTitle='Iterative TAW for YK-07'

plotTitle =

Iterative TAW for YK-07



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

SWEL=SWEL+setupAtToe

SWEL =

                  8.807277

SWEL_fore=SWEL+maxSetup

SWEL_fore =

                  9.264617



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

L0 =

          214.122943442864


% 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 =
```

```
                  3.580977


% 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 =

                 14.033577


% 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 =

          9.79623426047403


top_sta =

          24.5894455129702

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

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

top_sta =

          24.5894455129702

toe_sta

toe_sta =

          9.79623426047403




% check for case where the toe of slope is below SWL-1.5*H0
% in this case interpolate setup from the setupAtToe(really setup as first station), and the max setup
% also un-include points seaward of SWL-1.5*H0
if Ztoe > dep(1)
   dd=SWEL_fore-dep;
   k=find(dd<0,1); % k is index of first land point
   staAtSWL=interp1(dep(k-1:k),sta(k-1:k),SWEL_fore);
   dsta=staAtSWL-sta(1);
   dsetup=maxSetup-setupAtToe;
   dsetdsta=dsetup/dsta;
   setup=setupAtToe+dsetdsta*(toe_sta-sta(1));
   sprintf('-!!- Location of SWEL-1.5*H0 is %4.1f ft landward of toe of slope',dsta)
   sprintf('-!!- Setup is interpolated between setup at toe of slope and max setup')
   sprintf('-!!-       setup is adjusted to %4.2f feet',setup)
   SWEL=SWEL-setupAtToe+setup;
   sprintf('-!!-       SWEL is adjusted to %4.2f feet',SWEL)
   k=find(dep < SWEL-1.5*H0)
   sta(k)=[];
   dep(k)=[];
else
   sprintf('-!!- The User has selected a starting point that is %4.2f feet above the elevation of SWEL-1.5H0\n',de
   sprintf('-!!- This may be reasonable for some cases.  However the user may want to consider:\n')
   sprintf('-!!-   1) Selecting a starting point that is at or below %4.2f feet elevation, or\n', Ztoe)
   sprintf('-!!-   2) Reducing the incident wave height to a depth limited condition.\n')
```

```
end

ans =

-!!- Location of SWEL-1.5*H0 is  8.8 ft landward of toe of slope


ans =

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


ans =

-!!-       setup is adjusted to -0.00 feet


ans =

-!!-       SWEL is adjusted to 8.85 feet


k =

     1



% now iterate converge on a runup elevation
tol=0.001;  % convergence criteria
R2del=999;
R2_new=3*H0; %initial guess
R2=R2_new;
iter=0;
R2_all=[];
topStaAll=[];
Berm_Segs=[];
TAW_ALWAYS_VALID=1;
while(abs(R2del) > tol && iter <= 25)
    iter=iter+1;
    sprintf ('!----------------- STARTING ITERATION %d -----------------!',iter)
    % elevation of toe of slope
    Ztoe
    % station of toe slope (relative to 0-NAVD88 shoreline
    toe_sta
    % station of top of slope/extent of 2% run-up
    top_sta
    % elevation of top of slope/extent of 2% run-up
    Z2
    % incident significant wave height
    H0
    % incident spectral peak wave period
    Tp
    % incident spectral mean wave period
    T0

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

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

    % loop over profile segments to determine berm factor
    % re-calculate influence of depth of berm based on this run-up elevation
    % check for berm, berm width, berm height
    berm_width=0;
    rdh_sum=0;
    Berm_Segs=[];
    Berm_Heights=[];
    for kk=1:length(sta)-1
       ddep=dep(kk+1)-dep(kk);
       dsta=sta(kk+1)-sta(kk);
       s=ddep/dsta;
       if  (s < 1/15)     % count it as a berm if slope is flatter than 1:15 (see TAW manual)
          sprintf ('Berm Factor Calculation: Iteration %d, Profile Segment: %d',iter,kk)
          berm_width=berm_width+dsta;   % tally the width of all berm segments
          % compute the rdh for this segment and weight it by the segment length
          dh=SWEL-(dep(kk)+dep(kk+1))/2
          if  dh < 0
              chi=R2;
          else
              chi=2* H0;
          end
```

```
      if (dh <= R2 & dh >=-2*H0)
         rdh=(0.5-0.5*cos(3.14159*dh/chi)) ;
      else
         rdh=1;
      end
      rdh_sum=rdh_sum + rdh * dsta
      Berm_Segs=[Berm_Segs, kk];
      Berm_Heights=[Berm_Heights, (dep(kk)+dep(kk+1))/2];
   end
   if dep(kk) >= Z2  % jump out of loop if we reached limit of run-up for this iteration
      break
   end
end
sprintf ('!------- End Berm Factor Calculation, Iter: %d ---------!',iter)
berm_width
rB=berm_width/Lslope
if (berm_width > 0)
   rdh_mean=rdh_sum/berm_width
else
   rdh_mean=1
end
gamma_berm=1- rB * (1-rdh_mean)
if gamma_berm > 1
   gamma_berm=1
end
if gamma_berm < 0.6
   gamma_berm =0.6
end
% Iribarren number
slope=(Z2-Ztoe)/(Lslope-berm_width)
Irb=(slope/(sqrt(H0/L0)))
% runup height
gamma_berm
gamma_perm
gamma_beta
gamma_rough
gamma=gamma_berm*gamma_perm*gamma_beta*gamma_rough

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

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


% check to see if we need to evaluate a shallow foreshore
if berm_width > 0.25 * L0;
   disp ('!   Berm_width is greater than 1/4 wave length')
   disp ('!   Runup will be weighted average with foreshore calculation assuming depth limited wave height on
   % do the foreshore calculation
   fore_H0=0.78*(SWEL_fore-min(Berm_Heights))
   % get upper slope
   fore_toe_sta=-999;
   fore_toe_dep=-999;
   for kk=length(dep)-1:-1:1
      ddep=dep(kk+1)-dep(kk);
      dsta=sta(kk+1)-sta(kk);
      s=ddep/dsta;
      if s < 1/15
         break
      end
      fore_toe_sta=sta(kk);
      fore_toe_dep=dep(kk);
      upper_slope=(Z2-fore_toe_dep)/(top_sta-fore_toe_sta)
   end
   fore_Irb=upper_slope/(sqrt(fore_H0/L0));
   fore_gamma=gamma_perm*gamma_beta*gamma_rough;
   if (fore_Irb < 1.8)
      fore_R2=fore_gamma*fore_H0*1.77*fore_Irb;
   else
      fore_R2=fore_gamma*fore_H0*(4.3-(1.6/sqrt(fore_Irb)));
   end
   if berm_width >= L0
      R2_new=fore_R_2(i)
      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 =
                3.580977
toe_sta =
          9.79623426047403
top_sta =
          24.5894455129702
Z2 =
               14.033577
H0 =
                  3.4842
Tp =
                  7.1158
T0 =
          6.46890909090909
R2 =
                 10.4526
Z2 =
          19.3053323771829
top_sta =
          33.7687286817006
Lslope =
          23.9724944212265
ans =
!------- End Berm Factor Calculation, Iter: 1 ---------!
berm_width =
     0
rB =
     0
rdh_mean =
     1
gamma_berm =
     1
slope =
         0.655933216664334
Irb =
          5.14209017513286
gamma_berm =
     1
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                      0.85
gamma =
                      0.85
ans =
!!! - - Iribaren number:   5.14 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:1.5 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
           10.645107787798
R2del =
         0.192507787798041
Z2 =
           19.497840164981
ans =
!----------------- STARTING ITERATION 2 -----------------!
Ztoe =
                3.580977
toe_sta =
          9.79623426047403
top_sta =
           34.194655367302
Z2 =
           19.497840164981
H0 =
                  3.4842
Tp =
                  7.1158
```

```
T0 =
        6.46890909090909
R2 =
         10.645107787798
Z2 =
         19.497840164981
top_sta =
         34.194655367302
Lslope =
         24.398421106828
ans =
!------- End Berm Factor Calculation, Iter: 2 ---------!
berm_width =
     0
rB =
     0
rdh_mean =
     1
gamma_berm =
     1
slope =
        0.652372671792543
Irb =
         5.11417781707839
gamma_berm =
     1
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                      0.85
gamma =
                      0.85
ans =
!!! - - Iribaren number:   5.11 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:1.5 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
         10.6394130795372
R2del =
       0.00569470826082252
Z2 =
         19.4921454567202
ans =
!----------------- STARTING ITERATION 3 -----------------!
Ztoe =
                3.580977
toe_sta =
         9.79623426047403
top_sta =
         34.1820557304627
Z2 =
         19.4921454567202
H0 =
                  3.4842
Tp =
                  7.1158
T0 =
         6.46890909090909
R2 =
         10.6394130795372
Z2 =
         19.4921454567202
top_sta =
         34.1820557304627
Lslope =
         24.3858214699887
ans =
!------- End Berm Factor Calculation, Iter: 3 ---------!
berm_width =
     0
rB =
     0
rdh_mean =
     1
gamma_berm =
     1
slope =
        0.652476213536699
Irb =
         5.11498951706829
gamma_berm =
     1
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                      0.85
gamma =
                      0.85
ans =
!!! - - Iribaren number:   5.11 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:1.5 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
```

```
R2_new =
          10.6395793411926
R2del =
      0.000166261655392574
Z2 =
          19.4923117183755
% final 2% runup elevation
Z2=R2_new+SWEL
Z2 =
          19.4923117183755
diary off
-1.000000e+00
```

PART 5: RUNUP2

for transect: YK-07

Station locations shifted by: -7.62 feet from their
original location to set the shoreline to
elevation 0 for RUNUP2 input

RUNUP2 INPUT CONVERSIONS
for transect: YK-07

Incident significant wave height: 2.85 feet

Peak wave period: 7.09 seconds

Mean wave height: 1.78 feet

Local Depth below SWEL: 25.39 feet

Mean wave height deshoaled using Hunt equation
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

Deepwater mean wave height: 1.59 feet

END RUNUP2 CONVERSIONS

RUNUP2 RESULTS
for transect: YK-07

RUNUP2 SWEL:
8.90
8.90
8.90
8.90
8.90
8.90
8.90
8.90
8.90

RUNUP2 deepwater mean wave heights:
1.51
1.51
1.51
1.59
1.59
1.59
1.67
1.67
1.67

RUNUP2 mean wave periods:
5.72
6.02
6.32
5.72
6.02
6.32
5.72
6.02
6.32

RUNUP2 runup above SWEL:
2.84
2.91

```
2.98
3.01
3.08
3.14
3.19
3.24
3.31

RUNUP2 Mean runup height above SWEL: 3.08 feet

RUNUP2 2-percent runup height above SWEL: 6.77 feet

RUNUP2 2-percent runup elevation: 15.67 feet-NAVD88

RUNUP2 Messages:
No Messages

_______________END RUNUP2 RESULTS_____________________


_________________ACES BEACH RUNUP_____________________

Incident significant wave height: 2.85 feet

Significant wave height deshoaled using Hunt equation

Deepwater significant wave height: 2.23 feet

Peak wave period: 7.09 seconds

Average beach Slope: 1:20.23 (H:V)

ACES RUNUP CALCULATED USING 'Aces_Beach_Runup.m'

ACES Beach 2-percent runup height above SWEL: 2.64 feet

ACES Beach 2-percent runup elevation: 11.54 feet-NAVD88

ACES BEACH RUNUP is valid

_____________END ACES BEACH RESULTS___________________

PART 5 COMPLETE_____________________________________________
```

```
  FEMA                                                    sjh            job 2
  RUNUP2 transect: YK-07                                                 1
1.00
  -16.54 -651.4 0.8
  -16.54 -521.4 0.8
  -16.39 -482.4 0.8
  -16.08 -397.4 0.8
  -16.08 -128.4 0.8
  -16.07 -127.4 0.8
  -13.83 -109.4 0.8
  -13.46 -106.4 0.8
  -10.61 -83.4  0.8
  -10.24 -80.4  0.8
  -8.50 -66.4  0.8
  -8.37 -65.4  0.8
  -6.76 -54.4  0.8
  -2.96 -28.4  0.8
  -2.52 -25.4  0.8
  -0.04 -8.4   0.8
  -0.04 -2.9   0.8
  1.21  7.6    0.8
  3.02  16.6   0.8
1 17.50 37.1   0.8
 8.9   1.51  5.72
 8.9   1.51  6.02
 8.9   1.51  6.32
 8.9   1.59  5.72
 8.9   1.59  6.02
 8.9   1.59  6.32
 8.9   1.67  5.72
 8.9   1.67  6.02
 8.9   1.67  6.32
```

CLIENT- FEMA ** WAVE RUNUP-VERSION 2.0 ** ENGINEERED BY sjh JOB job 2
PROJECT-RUNUP2 transect: YK-07 RUN 1 PAGE 1

****

CROSS SECTION PROFILE

	LENGTH	ELEV.	SLOPE	ROUGHNESS
1	-651.0	-16.5		
			.00	.80
2	-521.0	-16.5		
			195.00	.80
3	-482.0	-16.3		
			283.33	.80
4	-397.0	-16.0		
			FLAT	.80
5	-128.0	-16.0		
			FLAT	.80
6	-127.0	-16.0		
			8.18	.80
7	-109.0	-13.8		
			7.50	.80
8	-106.0	-13.4		
			8.07	.80
9	-83.4	-10.6		
			7.50	.80
10	-80.4	-10.2		
			8.24	.80
11	-66.4	-8.5		
			7.69	.80
12	-65.4	-8.4		
			6.83	.80
13	-54.4	-6.8		
			6.84	.80
14	-28.4	-3.0		
			6.82	.80
15	-25.4	-2.5		
			6.85	.80
16	-8.4	.0		
			FLAT	.80
17	-2.9	.0		
			8.40	.80
18	7.6	1.2		
			4.97	.80
19	16.6	3.0		
			1.42	.80
20	37.1	17.5		

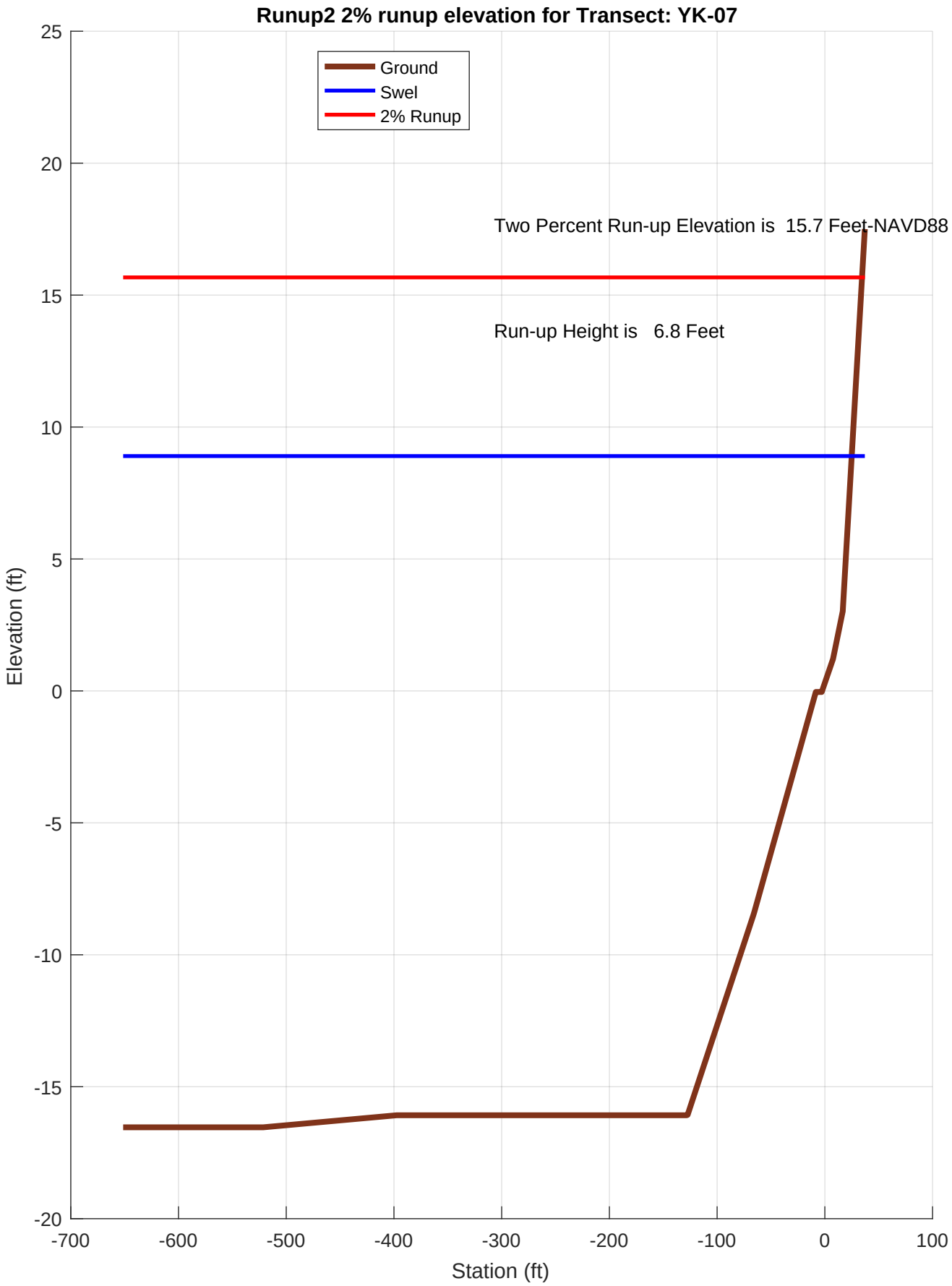
LAST SLOPE 1.00 LAST ROUGHNESS .80

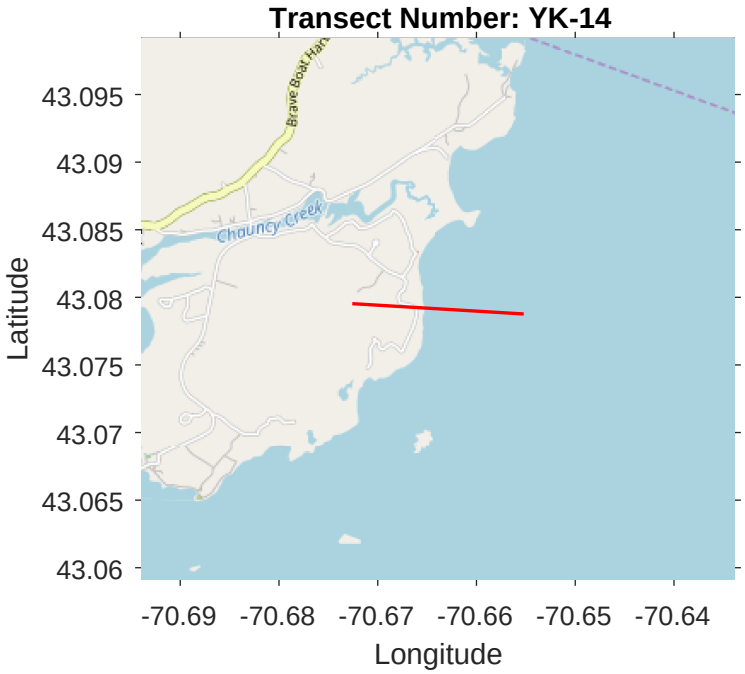
CLIENT- FEMA ** WAVE RUNUP-VERSION 2.0 ** ENGINEERED BY sjh JOB job 2
PROJECT-RUNUP2 transect: YK-07 RUN 1 PAGE 2

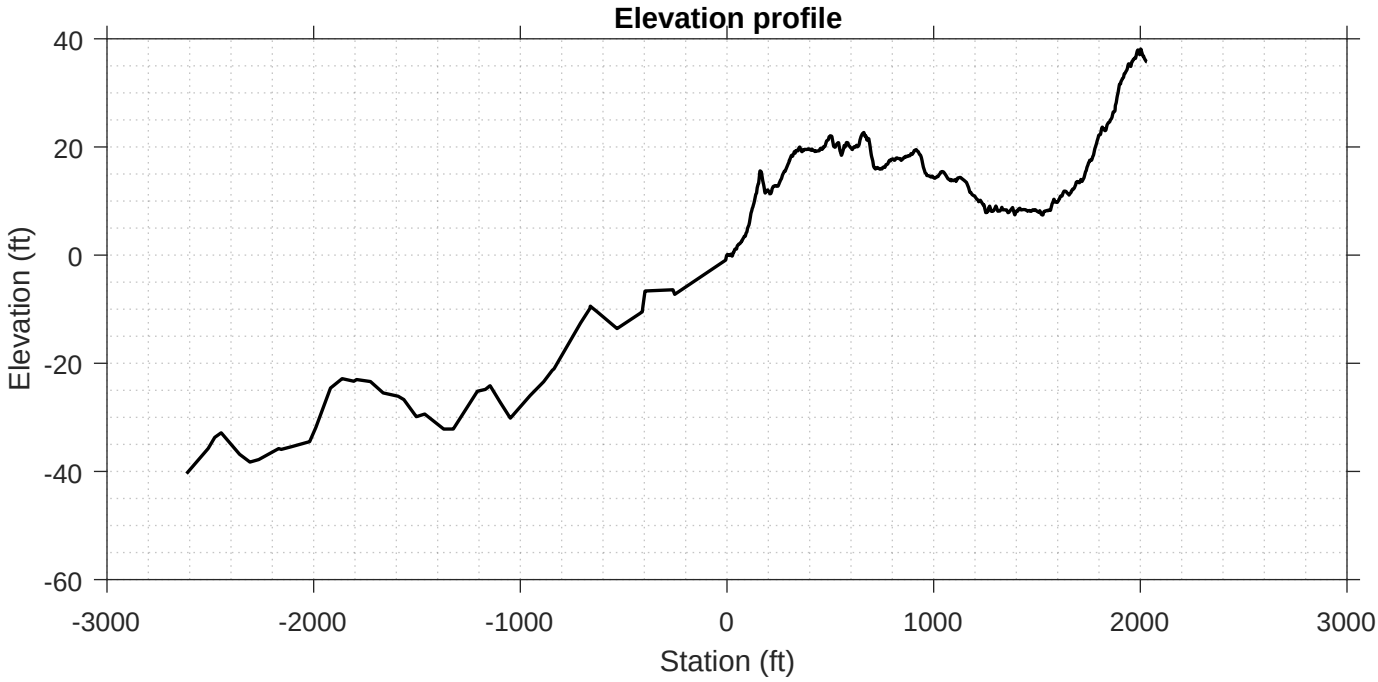
****

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.)
8.90	1.51	5.72	11	19	2.84	2.21
8.90	1.51	6.02	11	19	2.91	2.26
8.90	1.51	6.32	11	19	2.98	2.30
8.90	1.59	5.72	11	19	3.01	2.31
8.90	1.59	6.02	11	19	3.08	2.35
8.90	1.59	6.32	11	19	3.14	2.39
8.90	1.67	5.72	11	19	3.19	2.41
8.90	1.67	6.02	11	19	3.24	2.45
8.90	1.67	6.32	11	19	3.31	2.49


Runup2 2% runup elevation for Transect: YK-07
Ground
Swel
2% Runup
Two Percent Run-up Elevation is 15.7 Feet-NAVD88
Run-up Height is 6.8 Feet
Elevation (ft)
Station (ft)
25
20
15
10
5
0
-5
-10
-15
-20
-700
-600
-500
-400
-300
-200
-100
0
100


Transect Number: YK-14
Brave Boat Harbor
Chauncy Creek
43.095
43.09
43.085
43.08
43.075
43.07
43.065
43.06
Latitude
-70.69
-70.68
-70.67
-70.66
-70.65
-70.64
Longitude


Elevation profile
40
20
0
-20
-40
-60
Elevation (ft)
-3000
-2000
-1000
0
1000
2000
3000
Station (ft)

DATA LOG FOR TRANSECT ID: YK-14

PART 1: USER INPUT

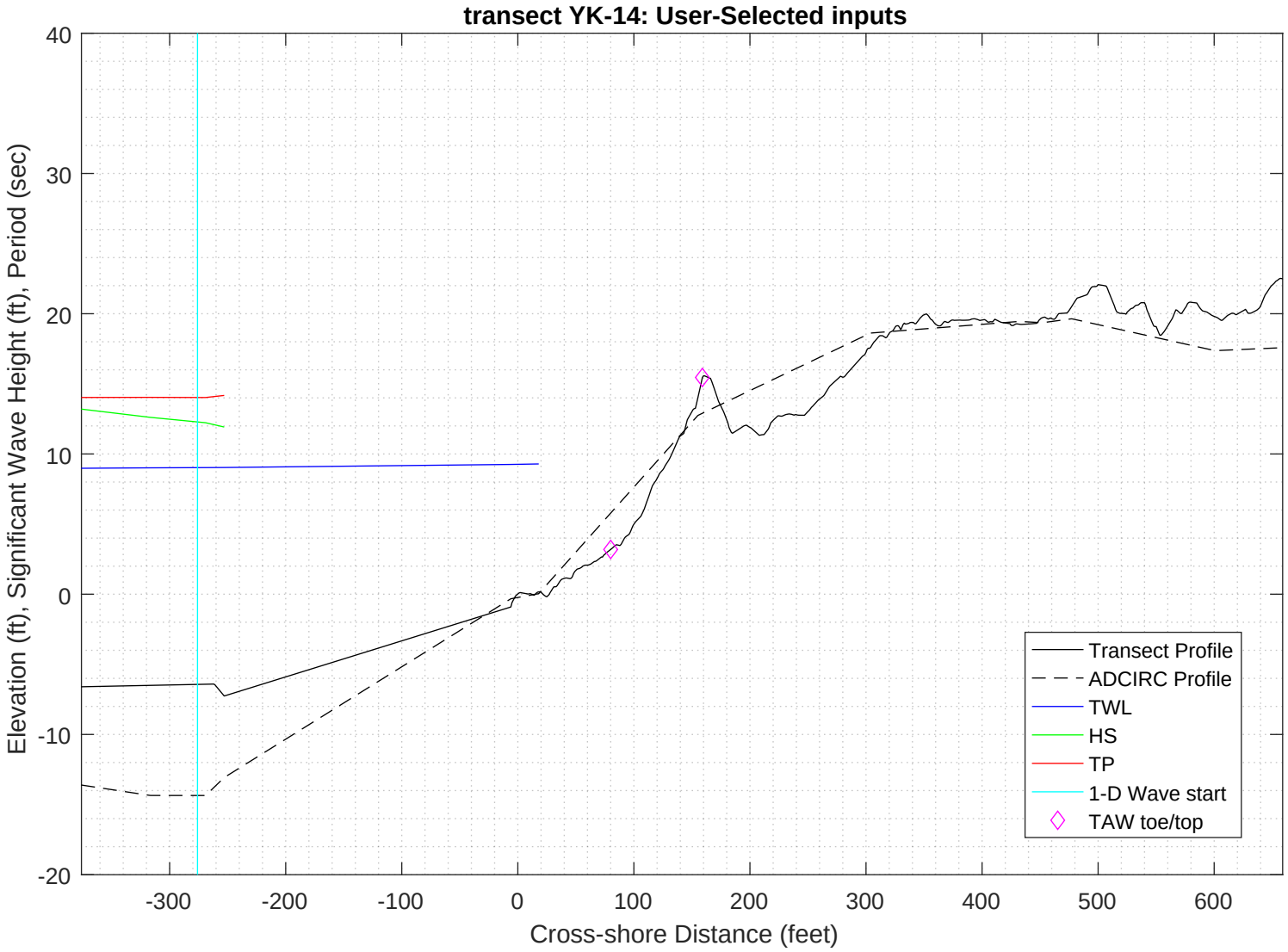
SWAN 1-D / WHAFIS input

station: -276 ft
LON: -70.664 deg E
LAT: 43.0792 deg N
Bottom ELEV: -6.4312 ft-NAVD88
TWL: 9.0247 ft-NAVD88
HS: 12.2833 ft
TP: 14.0266 sec
Wave Direction bin: 180 deg CCW from East (90 deg sector)
Transect Direction: 177.4802 deg CCW from East

TAW/RUNUP input

toe sta: 80 ft
toe elev: 3.1913 ft-NAVD88
top sta: 159 ft
top elev: 15.4548 ft-NAVD88
Wave and water level conditions at toe to be calculated in SWAN 1-D

PART 1 COMPLETE


transect YK-14: User-Selected inputs
Elevation (ft), Significant Wave Height (ft), Period (sec)
Cross-shore Distance (feet)
40
30
20
10
0
-10
-20
-300
-200
-100
0
100
200
300
400
500
600
Transect Profile
ADCIRC Profile
TWL
HS
TP
1-D Wave start
TAW toe/top

```
_____________________________________________________________________
PART 2: SWAN 1-D

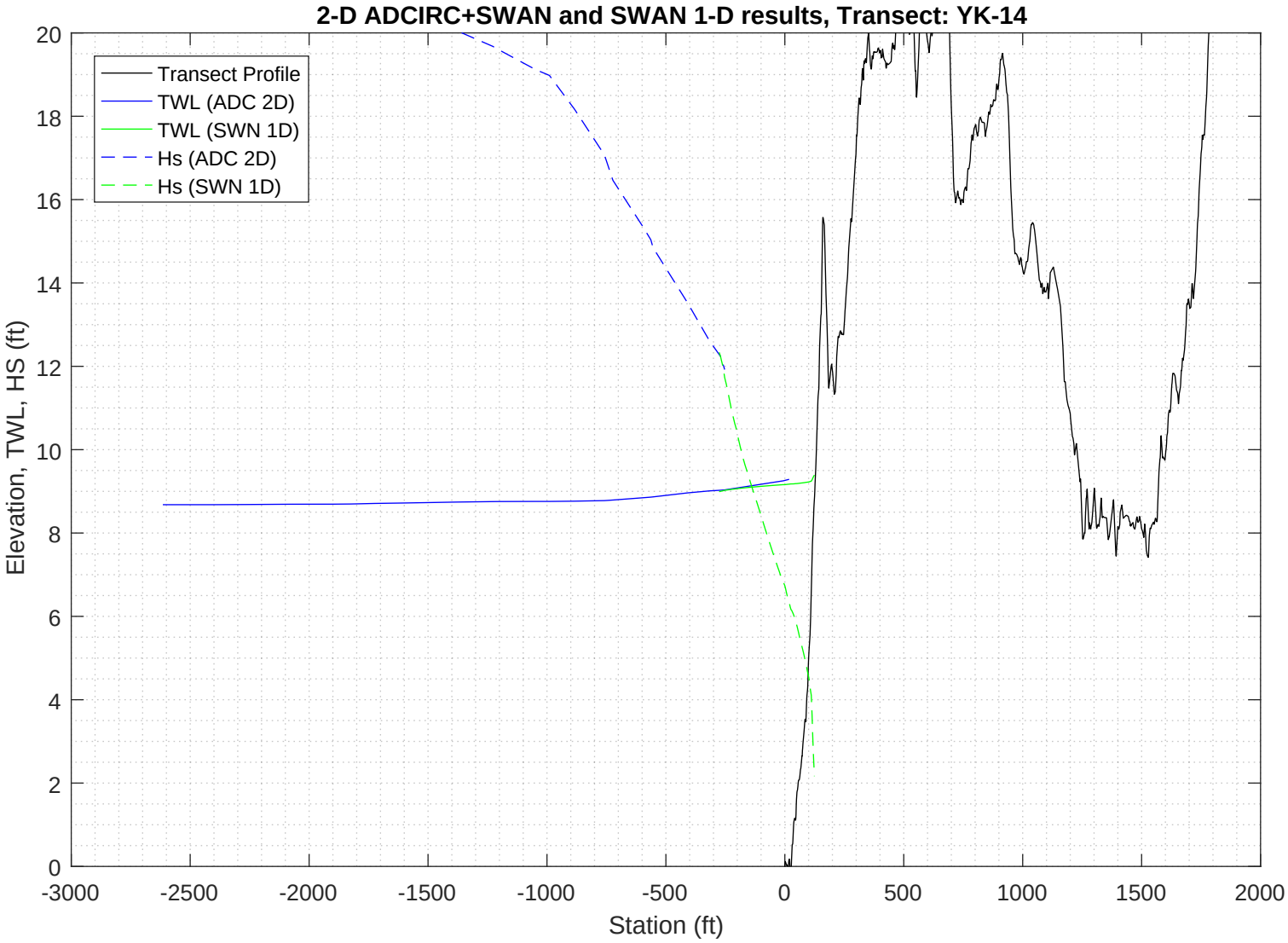
swan input grid name: 2_swan/gridfiles/YK-14zmeters_xmeters.grd
swan file name:       2_swan/swanfiles/YK-14.swn
swan output name:     2_swan/swanfiles/YK-14.dat

Boundary Conditions:
    TWL- 2.7507 meters
    HS-  3.744 meters
    PER- 14.0266 seconds

Batch File: 2_swan/swanfiles/runswan.dat

SWAN maximum additional wave setup: 1.203 feet
SWAN output at toe:
    SETUP- 0.60275 feet
    HS-    5.0464 feet
    PER-   13.8696 seconds

PART 2 COMPLETE_____________________________________________
```


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

```
1

                    Execution started at 20181016.143020


                    ---------------------------------------
                                  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      122       0.   122     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      122   0      1       1

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

  READ    BOTTOM   -1. '../gridfiles/YK-14zmeters_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   3.744     14.0266     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      122  122    0

 !TABLe 'sname' < HEADer|NOHEADer|INDexed > 'fname' <output parameters> (output time)

  Table 'curve'   HEADER 'YK-14.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             123 MYC              1
                      : MCGRD           124
                      : 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  10.57 % 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   0.82 % 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  15.45 % 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  31.71 % 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  82.93 % 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  97.57 % of wet grid points ( 99.50 % required)

iteration    8; sweep 1
iteration    8; sweep 2
iteration    8; sweep 3
iteration    8; sweep 4
accuracy OK in  98.38 % of wet grid points ( 99.50 % required)

iteration    9; sweep 1
iteration    9; sweep 2
iteration    9; sweep 3
iteration    9; sweep 4
accuracy OK in  98.38 % of wet grid points ( 99.50 % required)

iteration   10; sweep 1
iteration   10; sweep 2
iteration   10; sweep 3
iteration   10; sweep 4
accuracy OK in 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.       3.75943       13.8175       13.8874       12.6604         0.000       31.7614       4.6786     -0.031373
          1.            0.       3.74335       13.8264       13.8874       12.1986         0.000       31.7568       4.6827     -0.027341
          2.            0.       3.72277       13.8341       13.8874       11.8272         0.000       31.7390       4.6867     -0.023282
          3.            0.       3.69798       13.8401       13.8874       11.5404       360.000       31.6838       4.6908     -0.019214
          4.            0.       3.67479       13.8447       13.8874       11.3208       360.000       31.7761       4.6846     -0.015428
          5.            0.       3.64599       13.8480       13.8874       11.1485       360.000       32.1683       4.7496     -0.010416
          6.            0.       3.61383       13.8503       13.8874       11.0143         0.000       32.6231       4.8550     -0.005011
          7.            0.       3.57629       13.8518       13.8874       10.9105         0.000       32.6964       4.9600      0.000000
          8.            0.       3.55247       13.8528       13.8874       10.8054         0.000       32.4644       4.9427      0.002701
          9.            0.       3.52959       13.8533       13.8874       10.7069         0.001       32.2005       4.9152      0.005162
         10.            0.       3.50351       13.8534       13.8874       10.6210       359.995       31.9062       4.8978      0.007831
         11.            0.       3.47611       13.8533       13.8874       10.5523       359.977       31.5965       4.8704      0.010402
         12.            0.       3.44748       13.8529       13.8874       10.4969       359.924       31.3109       4.8430      0.013010
         13.            0.       3.41791       13.8524       13.8874       10.4472       359.864       31.0395       4.8257      0.015724
         14.            0.       3.39004       13.8516       13.8874       10.4031       359.806       30.7841       4.7982      0.018208
         15.            0.       3.36149       13.8508       13.8874       10.3619       359.752       30.5444       4.7808      0.020798
         16.            0.       3.33459       13.8498       13.8874       10.3254       359.701       30.3237       4.7532      0.023175
         17.            0.       3.30915       13.8487       13.8874       10.2823       359.688       30.1223       4.7355      0.025547
         18.            0.       3.28547       13.8476       13.8874       10.2407       359.689       29.9123       4.7077      0.027682
         19.            0.       3.26218       13.8464       13.8874       10.2015       359.694       29.7162       4.6798      0.029782
         20.            0.       3.23796       13.8451       13.8874       10.1641       359.700       29.5277       4.6620      0.032011
         21.            0.       3.21955       13.8439       13.8874       10.0974       359.707       29.3563       4.6341      0.034083
         22.            0.       3.19870       13.8430       13.8874       10.0335       359.709       29.2041       4.6164      0.036439
         23.            0.       3.17096       13.8422       13.8874       10.0057       359.705       29.0696       4.5890      0.039026
         24.            0.       3.14275       13.8416       13.8874        9.9771       359.733       28.9228       4.5717      0.041680
         25.            0.       3.11731       13.8412       13.8874        9.9447       359.683       28.7447       4.5440      0.044015
         26.            0.       3.09323       13.8409       13.8874        9.9097       359.618       28.5739       4.5163      0.046253
         27.            0.       3.06866       13.8408       13.8874        9.8740       359.553       28.4080       4.4986      0.048580
         28.            0.       3.04537       13.8407       13.8874        9.8414       359.492       28.2435       4.4707      0.050705
         29.            0.       3.02126       13.8408       13.8874        9.8094       359.436       28.0812       4.4529      0.052938
         30.            0.       2.99842       13.8408       13.8874        9.7808       359.385       27.9190       4.4250      0.054970
         31.            0.       2.97750       13.8408       13.8874        9.7410       359.382       27.7554       4.4070      0.056963
         32.            0.       2.95815       13.8409       13.8874        9.7020       359.395       27.5938       4.3788      0.058760
         33.            0.       2.93789       13.8411       13.8874        9.6630       359.413       27.4357       4.3607      0.060684
         34.            0.       2.91998       13.8413       13.8874        9.6180       359.445       27.2694       4.3324      0.062417
         35.            0.       2.90260       13.8415       13.8874        9.5713       359.482       27.1112       4.3041      0.064129
         36.            0.       2.88443       13.8419       13.8874        9.5239       359.525       26.9605       4.2860      0.065968
         37.            0.       2.86652       13.8422       13.8874        9.4831       359.574       26.8184       4.2577      0.067673
         38.            0.       2.84714       13.8426       13.8874        9.4444       359.618       26.6832       4.2395      0.069538
         39.            0.       2.82878       13.8431       13.8874        9.4091       359.663       26.5514       4.2112      0.071231
         40.            0.       2.80950       13.8436       13.8874        9.3736       359.712       26.4233       4.1931      0.073053
         41.            0.       2.79158       13.8441       13.8874        9.3392       359.775       26.2865       4.1647      0.074678
         42.            0.       2.77389       13.8446       13.8874        9.3053       359.843       26.1584       4.1363      0.076288
         43.            0.       2.75528       13.8451       13.8874        9.2707       359.913       26.0345       4.1180      0.078035
         44.            0.       2.73835       13.8457       13.8874        9.2363       359.995       25.9076       4.0896      0.079578
         45.            0.       2.72040       13.8462       13.8874        9.2015         0.077       25.7822       4.0713      0.081266
         46.            0.       2.70336       13.8468       13.8874        9.1700         0.158       25.6561       4.0428      0.082791
         47.            0.       2.68516       13.8473       13.8874        9.1386         0.236       25.5317       4.0245      0.084469
         48.            0.       2.66775       13.8479       13.8874        9.1106         0.314       25.3961       3.9960      0.085983
         49.            0.       2.65022       13.8484       13.8874        9.0841         0.390       25.2679       3.9675      0.087506
         50.            0.       2.63162       13.8490       13.8874        9.0574         0.462       25.1438       3.9492      0.089181
         51.            0.       2.61421       13.8495       13.8874        9.0322         0.533       25.0204       3.9207      0.090694
         52.            0.       2.59575       13.8500       13.8874        9.0064         0.600       24.8994       3.9024      0.092360
         53.            0.       2.57804       13.8506       13.8874        8.9848         0.663       24.7790       3.8739      0.093873
         54.            0.       2.55909       13.8511       13.8874        8.9637         0.723       24.6612       3.8555      0.095543
         55.            0.       2.54093       13.8516       13.8874        8.9463         0.780       24.5320       3.8270      0.097049
         56.            0.       2.52273       13.8521       13.8874        8.9300         0.835       24.4102       3.7986      0.098560
         57.            0.       2.50360       13.8526       13.8874        8.9129         0.887       24.2924       3.7802      0.100216
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58.	0.	2.48554	13.8531	13.8874	8.8985	0.939	24.1745	3.7517	0.101705
59.	0.	2.46670	13.8535	13.8874	8.8824	0.988	24.0571	3.7333	0.103328
60.	0.	2.44906	13.8540	13.8874	8.8685	1.038	23.9382	3.7048	0.104777
61.	0.	2.43056	13.8545	13.8874	8.8531	1.085	23.8205	3.6864	0.106366
62.	0.	2.41303	13.8549	13.8874	8.8403	1.132	23.6915	3.6578	0.107788
63.	0.	2.39555	13.8554	13.8874	8.8281	1.177	23.5698	3.6292	0.109213
64.	0.	2.37719	13.8558	13.8874	8.8145	1.220	23.4524	3.6108	0.110781
65.	0.	2.36004	13.8562	13.8874	8.8028	1.262	23.3348	3.5822	0.112181
66.	0.	2.34208	13.8566	13.8874	8.7893	1.304	23.2195	3.5637	0.113719
67.	0.	2.32517	13.8570	13.8874	8.7783	1.343	23.1053	3.5351	0.115098
68.	0.	2.30741	13.8574	13.8874	8.7657	1.382	22.9939	3.5166	0.116617
69.	0.	2.29059	13.8578	13.8874	8.7556	1.419	22.8727	3.4880	0.117977
70.	0.	2.27384	13.8582	13.8874	8.7459	1.457	22.7593	3.4593	0.119340
71.	0.	2.25625	13.8585	13.8874	8.7344	1.494	22.6498	3.4408	0.120843
72.	0.	2.23968	13.8589	13.8874	8.7256	1.531	22.5411	3.4122	0.122191
73.	0.	2.22246	13.8592	13.8874	8.7139	1.570	22.4337	3.3937	0.123670
74.	0.	2.20632	13.8595	13.8874	8.7043	1.609	22.3260	3.3650	0.124990
75.	0.	2.18929	13.8599	13.8874	8.6932	1.647	22.2195	3.3465	0.126452
76.	0.	2.17318	13.8602	13.8874	8.6845	1.684	22.1030	3.3178	0.127759
77.	0.	2.15707	13.8605	13.8874	8.6763	1.719	21.9932	3.2891	0.129074
78.	0.	2.14005	13.8608	13.8874	8.6665	1.754	21.8868	3.2705	0.130535
79.	0.	2.12404	13.8611	13.8874	8.6594	1.787	21.7811	3.2418	0.131841
80.	0.	2.10713	13.8613	13.8874	8.6505	1.820	21.6769	3.2233	0.133291
81.	0.	2.09124	13.8616	13.8874	8.6443	1.851	21.5726	3.1946	0.134585
82.	0.	2.07341	13.8619	13.8874	8.6359	1.870	21.3279	3.1760	0.136007
83.	0.	2.06847	13.8623	13.8874	8.6593	1.892	20.9203	3.0052	0.135180
84.	0.	2.05520	13.8627	13.8874	8.6700	1.925	20.5932	2.8956	0.135617
85.	0.	2.03355	13.8631	13.8874	8.6653	1.964	20.4271	2.8575	0.137549
86.	0.	2.00754	13.8635	13.8874	8.6500	2.006	20.3851	2.8703	0.140348
87.	0.	1.98324	13.8638	13.8874	8.6360	2.049	20.4012	2.8830	0.142958
88.	0.	1.95931	13.8641	13.8874	8.6209	2.085	20.3829	2.9055	0.145509
89.	0.	1.94103	13.8644	13.8874	8.6182	2.115	20.2945	2.8771	0.147117
90.	0.	1.92356	13.8646	13.8874	8.6164	2.154	20.3096	2.8487	0.148723
91.	0.	1.89820	13.8648	13.8874	8.5920	2.201	20.4467	2.9217	0.151724
92.	0.	1.87875	13.8650	13.8874	8.5797	2.221	20.3691	2.9436	0.153641
93.	0.	1.87157	13.8653	13.8874	8.6000	2.228	20.0985	2.8235	0.153496
94.	0.	1.85864	13.8656	13.8874	8.6106	2.235	19.7866	2.7441	0.154124
95.	0.	1.84609	13.8658	13.8874	8.6254	2.246	19.4668	2.6446	0.154618
96.	0.	1.82919	13.8661	13.8874	8.6321	2.266	19.2378	2.5758	0.155850
97.	0.	1.80688	13.8664	13.8874	8.6265	2.296	19.1320	2.5581	0.158073
98.	0.	1.78163	13.8666	13.8874	8.6142	2.310	18.9371	2.5707	0.160697
99.	0.	1.77159	13.8669	13.8874	8.6374	2.323	18.6088	2.4307	0.160739
100.	0.	1.75165	13.8672	13.8874	8.6429	2.341	18.3559	2.3624	0.162401
101.	0.	1.72751	13.8675	13.8874	8.6409	2.364	18.1623	2.3248	0.164806
102.	0.	1.70344	13.8678	13.8874	8.6392	2.394	18.0217	2.2873	0.167257
103.	0.	1.67621	13.8680	13.8874	8.6309	2.419	17.8813	2.2802	0.170244
104.	0.	1.65509	13.8682	13.8874	8.6354	2.444	17.7013	2.2222	0.172209
105.	0.	1.63105	13.8685	13.8874	8.6353	2.464	17.5102	2.1847	0.174654
106.	0.	1.60884	13.8688	13.8874	8.6403	2.481	17.2768	2.1268	0.176769
107.	0.	1.58669	13.8690	13.8874	8.6475	2.497	17.0139	2.0589	0.178850
108.	0.	1.56312	13.8693	13.8874	8.6542	2.513	16.7372	1.9912	0.181160
109.	0.	1.53814	13.8696	13.8874	8.6601	2.532	16.4646	1.9237	0.183720
110.	0.	1.51094	13.8699	13.8874	8.6633	2.565	16.2910	1.8668	0.186756
111.	0.	1.47469	13.8702	13.8874	8.6505	2.577	16.0614	1.8813	0.191315
112.	0.	1.45787	13.8705	13.8874	8.6740	2.588	15.6782	1.7424	0.192445
113.	0.	1.42882	13.8709	13.8874	8.6809	2.583	15.2426	1.6657	0.195694
114.	0.	1.40469	13.8713	13.8874	8.6974	2.573	14.6962	1.5280	0.197995
115.	0.	1.37614	13.8719	13.8874	8.7042	2.593	14.1726	1.3812	0.201219
116.	0.	1.32983	13.8724	13.8874	8.7010	2.593	13.6743	1.2981	0.208132
117.	0.	1.28764	13.8731	13.8874	8.7159	2.503	12.9833	1.1743	0.214310
118.	0.	1.25254	13.8740	13.8874	8.8323	2.310	12.1306	0.9590	0.219011
119.	0.	1.10971	13.8855	13.8874	9.3946	0.979	11.7735	0.7504	0.250363
120.	0.	0.93115	13.9121	13.8874	9.9219	359.653	11.4767	0.6254	0.295413
121.	0.	0.78434	13.9429	13.8874	10.3120	358.946	11.0611	0.5235	0.333487
122.	0.	0.66017	13.9637	13.8874	10.6813	359.089	11.5770	0.4367	0.366668

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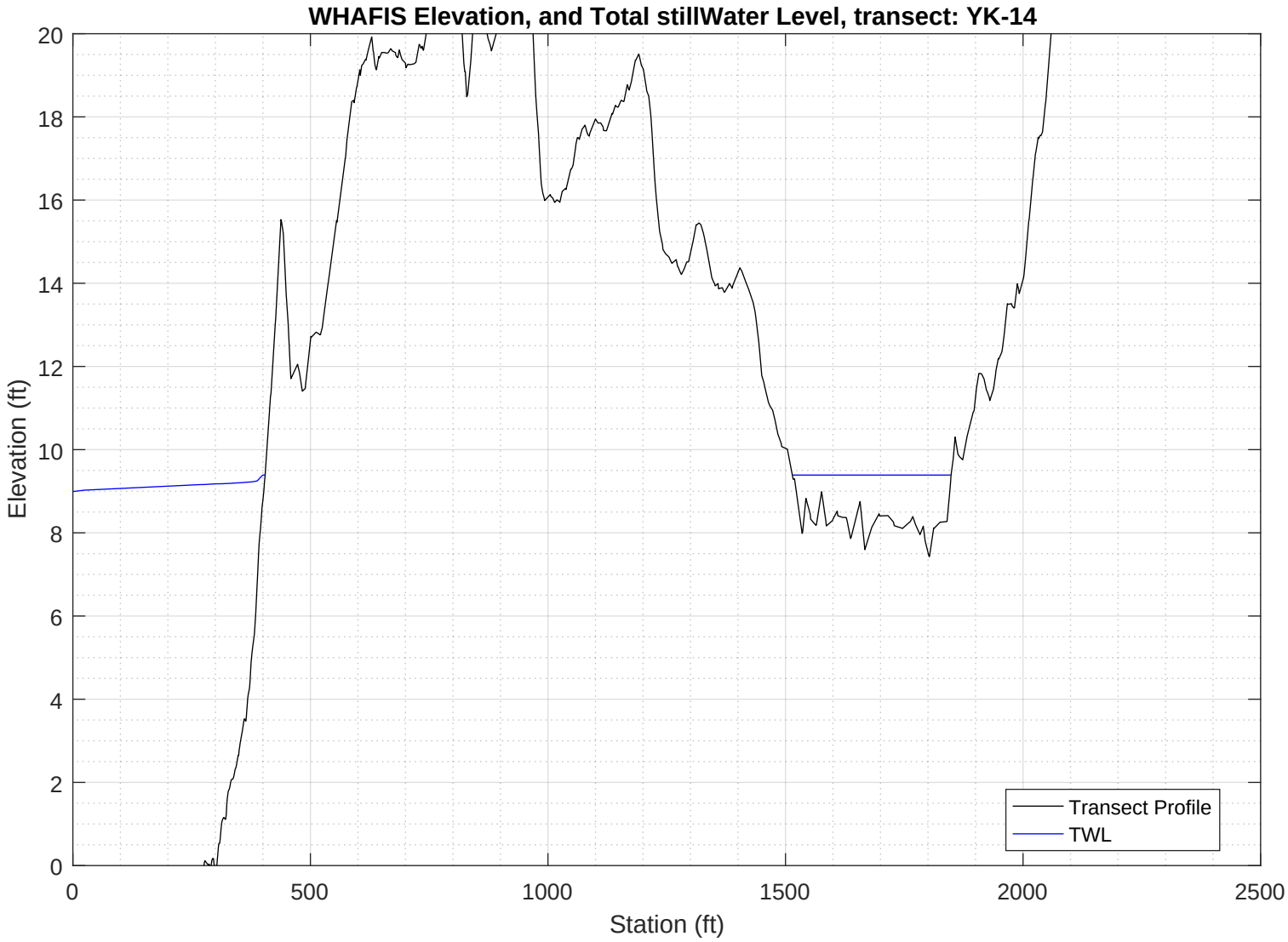
_____________________________________________________________________
PART 3: WHAFIS

WHAFIS input:  YK-14.dat
WHAFIS output: YK-14.out

PART 3 COMPLETE_____________________________________________________
```


WHAFIS Elevation, and Total stillWater Level, transect: YK-14
Elevation (ft)
Station (ft)
0
2
4
6
8
10
12
14
16
18
20
0
500
1000
1500
2000
2500
Transect Profile
TWL

```
WAVE HEIGHT COMPUTATIONS FOR FLOOD INSURANCE STUDIES (WHAFIS VERSION 4.0G, 08_2007)
Executed on: Tue Oct 16 14:32:51 2018
Input file:  C:\0_PROJECTS\171.06084-Kittery-2017-FEMA\modeling\transect_analysis\3_whafis\whafis4\YK-14.dat
Output file: C:\0_PROJECTS\171.06084-Kittery-2017-FEMA\modeling\transect_analysis\3_whafis\whafis4\YK-14.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
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IE	0.000	-6.431	1.000	1.000	9.025	19.653	14.027	56.140	0.002	0.000
OF	1.000	-6.430	0.000	8.995	0.000	0.000	0.000	0.000	0.002	0.000
OF	2.000	-6.428	0.000	8.996	0.000	0.000	0.000	0.000	0.002	0.000
OF	3.000	-6.426	0.000	8.997	0.000	0.000	0.000	0.000	0.002	0.000
OF	4.000	-6.424	0.000	8.998	0.000	0.000	0.000	0.000	0.002	0.000
OF	5.000	-6.423	0.000	9.000	0.000	0.000	0.000	0.000	0.002	0.000
OF	6.000	-6.421	0.000	9.001	0.000	0.000	0.000	0.000	0.002	0.000
OF	7.000	-6.419	0.000	9.002	0.000	0.000	0.000	0.000	0.002	0.000
OF	8.000	-6.418	0.000	9.003	0.000	0.000	0.000	0.000	0.002	0.000
OF	9.000	-6.416	0.000	9.004	0.000	0.000	0.000	0.000	0.002	0.000
OF	10.000	-6.414	0.000	9.006	0.000	0.000	0.000	0.000	0.002	0.000
OF	11.000	-6.413	0.000	9.007	0.000	0.000	0.000	0.000	0.002	0.000
OF	12.000	-6.411	0.000	9.008	0.000	0.000	0.000	0.000	0.002	0.000
OF	13.000	-6.409	0.000	9.009	0.000	0.000	0.000	0.000	0.002	0.000
OF	14.000	-6.408	0.000	9.011	0.000	0.000	0.000	0.000	-0.024	0.000
OF	15.000	-6.457	0.000	9.012	0.000	0.000	0.000	0.000	-0.075	0.000
OF	16.000	-6.557	0.000	9.014	0.000	0.000	0.000	0.000	-0.100	0.000
OF	17.000	-6.657	0.000	9.015	0.000	0.000	0.000	0.000	-0.100	0.000
OF	18.000	-6.757	0.000	9.017	0.000	0.000	0.000	0.000	-0.100	0.000
OF	19.000	-6.857	0.000	9.019	0.000	0.000	0.000	0.000	-0.100	0.000
OF	20.000	-6.957	0.000	9.020	0.000	0.000	0.000	0.000	-0.100	0.000
OF	21.000	-7.057	0.000	9.022	0.000	0.000	0.000	0.000	-0.100	0.000
OF	22.000	-7.158	0.000	9.023	0.000	0.000	0.000	0.000	-0.100	0.000
OF	23.000	-7.258	0.000	9.025	0.000	0.000	0.000	0.000	0.025	0.000
OF	270.000	-0.911	0.000	9.160	0.000	0.000	0.000	0.000	0.027	0.000
OF	271.000	-0.597	0.000	9.160	0.000	0.000	0.000	0.000	0.237	0.000
OF	272.000	-0.436	0.000	9.160	0.000	0.000	0.000	0.000	0.161	0.000
OF	273.000	-0.275	0.000	9.160	0.000	0.000	0.000	0.000	0.155	0.000
OF	274.000	-0.127	0.000	9.160	0.000	0.000	0.000	0.000	0.110	0.000
OF	275.000	-0.056	0.000	9.160	0.000	0.000	0.000	0.000	0.071	0.000
IF	276.000	0.014	0.000	9.161	0.000	0.000	0.000	0.000	0.070	0.000
IF	277.000	0.085	0.000	9.161	0.000	0.000	0.000	0.000	0.051	0.000
IF	278.000	0.117	0.000	9.162	0.000	0.000	0.000	0.000	0.009	0.000
IF	279.000	0.102	0.000	9.162	0.000	0.000	0.000	0.000	-0.015	0.000
IF	280.000	0.087	0.000	9.163	0.000	0.000	0.000	0.000	-0.015	0.000
IF	281.000	0.072	0.000	9.164	0.000	0.000	0.000	0.000	-0.015	0.000
IF	282.000	0.058	0.000	9.165	0.000	0.000	0.000	0.000	-0.015	0.000
IF	283.000	0.043	0.000	9.166	0.000	0.000	0.000	0.000	-0.015	0.000
IF	284.000	0.028	0.000	9.167	0.000	0.000	0.000	0.000	-0.015	0.000
IF	285.000	0.013	0.000	9.167	0.000	0.000	0.000	0.000	0.002	0.000
IF	286.000	0.032	0.000	9.168	0.000	0.000	0.000	0.000	0.011	0.000
IF	287.000	0.035	0.000	9.169	0.000	0.000	0.000	0.000	-0.020	0.000
OF	288.000	-0.007	0.000	9.170	0.000	0.000	0.000	0.000	-0.039	0.000
OF	289.000	-0.043	0.000	9.170	0.000	0.000	0.000	0.000	-0.036	0.000
OF	290.000	-0.078	0.000	9.171	0.000	0.000	0.000	0.000	0.022	0.000
IF	291.000	0.002	0.000	9.171	0.000	0.000	0.000	0.000	0.080	0.000
IF	292.000	0.083	0.000	9.172	0.000	0.000	0.000	0.000	0.072	0.000
IF	293.000	0.146	0.000	9.172	0.000	0.000	0.000	0.000	0.039	0.000
IF	294.000	0.161	0.000	9.173	0.000	0.000	0.000	0.000	0.015	0.000
IF	295.000	0.177	0.000	9.173	0.000	0.000	0.000	0.000	-0.002	0.000
IF	296.000	0.158	0.000	9.174	0.000	0.000	0.000	0.000	-0.060	0.000
IF	297.000	0.056	0.000	9.175	0.000	0.000	0.000	0.000	-0.095	0.000
OF	298.000	-0.033	0.000	9.176	0.000	0.000	0.000	0.000	-0.074	0.000
OF	299.000	-0.092	0.000	9.177	0.000	0.000	0.000	0.000	-0.060	0.000
OF	300.000	-0.152	0.000	9.177	0.000	0.000	0.000	0.000	-0.046	0.000
OF	301.000	-0.183	0.000	9.178	0.000	0.000	0.000	0.000	0.025	0.000
OF	302.000	-0.102	0.000	9.178	0.000	0.000	0.000	0.000	0.082	0.000
OF	303.000	-0.020	0.000	9.178	0.000	0.000	0.000	0.000	0.120	0.000
IF	304.000	0.138	0.000	9.178	0.000	0.000	0.000	0.000	0.143	0.000
IF	305.000	0.265	0.000	9.178	0.000	0.000	0.000	0.000	0.132	0.000
IF	306.000	0.401	0.000	9.178	0.000	0.000	0.000	0.000	0.130	0.000
IF	307.000	0.524	0.000	9.179	0.000	0.000	0.000	0.000	0.064	0.000
IF	308.000	0.530	0.000	9.179	0.000	0.000	0.000	0.000	0.005	0.000
IF	309.000	0.535	0.000	9.179	0.000	0.000	0.000	0.000	0.048	0.000
IF	310.000	0.627	0.000	9.179	0.000	0.000	0.000	0.000	0.111	0.000
IF	311.000	0.758	0.000	9.179	0.000	0.000	0.000	0.000	0.132	0.000
IF	312.000	0.890	0.000	9.179	0.000	0.000	0.000	0.000	0.122	0.000
IF	313.000	1.002	0.000	9.180	0.000	0.000	0.000	0.000	0.091	0.000
IF	314.000	1.072	0.000	9.180	0.000	0.000	0.000	0.000	0.048	0.000
IF	315.000	1.099	0.000	9.181	0.000	0.000	0.000	0.000	0.027	0.000
IF	316.000	1.126	0.000	9.181	0.000	0.000	0.000	0.000	0.026	0.000
IF	317.000	1.151	0.000	9.182	0.000	0.000	0.000	0.000	0.016	0.000
IF	318.000	1.158	0.000	9.183	0.000	0.000	0.000	0.000	-0.005	0.000
IF	319.000	1.141	0.000	9.183	0.000	0.000	0.000	0.000	-0.017	0.000
IF	320.000	1.124	0.000	9.184	0.000	0.000	0.000	0.000	-0.017	0.000
IF	321.000	1.107	0.000	9.185	0.000	0.000	0.000	0.000	0.008	0.000
IF	322.000	1.140	0.000	9.185	0.000	0.000	0.000	0.000	0.071	0.000
IF	323.000	1.248	0.000	9.185	0.000	0.000	0.000	0.000	0.163	0.000
IF	324.000	1.467	0.000	9.185	0.000	0.000	0.000	0.000	0.181	0.000
IF	325.000	1.610	0.000	9.186	0.000	0.000	0.000	0.000	0.114	0.000
IF	326.000	1.696	0.000	9.186	0.000	0.000	0.000	0.000	0.086	0.000
IF	327.000	1.783	0.000	9.187	0.000	0.000	0.000	0.000	0.059	0.000
IF	328.000	1.813	0.000	9.187	0.000	0.000	0.000	0.000	0.023	0.000
IF	329.000	1.829	0.000	9.188	0.000	0.000	0.000	0.000	0.031	0.000
IF	330.000	1.876	0.000	9.189	0.000	0.000	0.000	0.000	0.047	0.000
IF	331.000	1.923	0.000	9.189	0.000	0.000	0.000	0.000	0.063	0.000
IF	332.000	2.001	0.000	9.190	0.000	0.000	0.000	0.000	0.059	0.000
IF	333.000	2.041	0.000	9.191	0.000	0.000	0.000	0.000	0.035	0.000
IF	334.000	2.071	0.000	9.191	0.000	0.000	0.000	0.000	0.016	0.000
IF	335.000	2.073	0.000	9.192	0.000	0.000	0.000	0.000	0.002	0.000
IF	336.000	2.075	0.000	9.193	0.000	0.000	0.000	0.000	0.006	0.000
IF	337.000	2.085	0.000	9.194	0.000	0.000	0.000	0.000	0.022	0.000
IF	338.000	2.118	0.000	9.195	0.000	0.000	0.000	0.000	0.035	0.000
IF	339.000	2.156	0.000	9.196	0.000	0.000	0.000	0.000	0.049	0.000
IF	340.000	2.217	0.000	9.196	0.000	0.000	0.000	0.000	0.061	0.000
IF	341.000	2.278	0.000	9.197	0.000	0.000	0.000	0.000	0.057	0.000
IF	342.000	2.332	0.000	9.198	0.000	0.000	0.000	0.000	0.033	0.000
IF	343.000	2.344	0.000	9.198	0.000	0.000	0.000	0.000	0.031	0.000
IF	344.000	2.394	0.000	9.199	0.000	0.000	0.000	0.000	0.058	0.000
IF	345.000	2.459	0.000	9.200	0.000	0.000	0.000	0.000	0.065	0.000
IF	346.000	2.523	0.000	9.200	0.000	0.000	0.000	0.000	0.065	0.000

IF	347.000	2.588	0.000	9.201	0.000	0.000	0.000	0.000	0.064	0.000
IF	348.000	2.652	0.000	9.202	0.000	0.000	0.000	0.000	0.030	0.000
IF	349.000	2.649	0.000	9.202	0.000	0.000	0.000	0.000	0.065	0.000
IF	350.000	2.781	0.000	9.203	0.000	0.000	0.000	0.000	0.097	0.000
IF	351.000	2.844	0.000	9.203	0.000	0.000	0.000	0.000	0.076	0.000
IF	352.000	2.934	0.000	9.204	0.000	0.000	0.000	0.000	0.078	0.000
IF	353.000	2.999	0.000	9.205	0.000	0.000	0.000	0.000	0.065	0.000
IF	354.000	3.063	0.000	9.206	0.000	0.000	0.000	0.000	0.064	0.000
IF	355.000	3.127	0.000	9.206	0.000	0.000	0.000	0.000	0.064	0.000
IF	356.000	3.191	0.000	9.207	0.000	0.000	0.000	0.000	0.064	0.000
IF	357.000	3.255	0.000	9.208	0.000	0.000	0.000	0.000	0.069	0.000
IF	358.000	3.330	0.000	9.209	0.000	0.000	0.000	0.000	0.077	0.000
IF	359.000	3.409	0.000	9.210	0.000	0.000	0.000	0.000	0.077	0.000
IF	360.000	3.484	0.000	9.211	0.000	0.000	0.000	0.000	0.060	0.000
IF	361.000	3.530	0.000	9.212	0.000	0.000	0.000	0.000	0.013	0.000
IF	362.000	3.510	0.000	9.213	0.000	0.000	0.000	0.000	-0.020	0.000
IF	363.000	3.490	0.000	9.214	0.000	0.000	0.000	0.000	-0.020	0.000
IF	364.000	3.470	0.000	9.216	0.000	0.000	0.000	0.000	0.033	0.000
IF	365.000	3.556	0.000	9.216	0.000	0.000	0.000	0.000	0.119	0.000
IF	366.000	3.707	0.000	9.217	0.000	0.000	0.000	0.000	0.152	0.000
IF	367.000	3.860	0.000	9.217	0.000	0.000	0.000	0.000	0.153	0.000
IF	368.000	4.013	0.000	9.218	0.000	0.000	0.000	0.000	0.122	0.000
IF	369.000	4.104	0.000	9.219	0.000	0.000	0.000	0.000	0.073	0.000
IF	370.000	4.160	0.000	9.220	0.000	0.000	0.000	0.000	0.056	0.000
IF	371.000	4.216	0.000	9.221	0.000	0.000	0.000	0.000	0.064	0.000
IF	372.000	4.288	0.000	9.221	0.000	0.000	0.000	0.000	0.115	0.000
IF	373.000	4.446	0.000	9.222	0.000	0.000	0.000	0.000	0.181	0.000
IF	374.000	4.650	0.000	9.223	0.000	0.000	0.000	0.000	0.204	0.000
IF	375.000	4.854	0.000	9.224	0.000	0.000	0.000	0.000	0.172	0.000
IF	376.000	4.993	0.000	9.225	0.000	0.000	0.000	0.000	0.127	0.000
IF	377.000	5.109	0.000	9.226	0.000	0.000	0.000	0.000	0.108	0.000
IF	378.000	5.210	0.000	9.227	0.000	0.000	0.000	0.000	0.095	0.000
IF	379.000	5.298	0.000	9.229	0.000	0.000	0.000	0.000	0.087	0.000
IF	380.000	5.384	0.000	9.232	0.000	0.000	0.000	0.000	0.086	0.000
IF	381.000	5.470	0.000	9.234	0.000	0.000	0.000	0.000	0.086	0.000
IF	382.000	5.557	0.000	9.236	0.000	0.000	0.000	0.000	0.127	0.000
IF	383.000	5.724	0.000	9.237	0.000	0.000	0.000	0.000	0.170	0.000
IF	384.000	5.898	0.000	9.239	0.000	0.000	0.000	0.000	0.179	0.000
IF	385.000	6.082	0.000	9.241	0.000	0.000	0.000	0.000	0.214	0.000
IF	386.000	6.326	0.000	9.242	0.000	0.000	0.000	0.000	0.241	0.000
IF	387.000	6.565	0.000	9.243	0.000	0.000	0.000	0.000	0.231	0.000
IF	388.000	6.787	0.000	9.252	0.000	0.000	0.000	0.000	0.226	0.000
IF	389.000	7.017	0.000	9.262	0.000	0.000	0.000	0.000	0.239	0.000
IF	390.000	7.265	0.000	9.271	0.000	0.000	0.000	0.000	0.247	0.000
IF	391.000	7.512	0.000	9.283	0.000	0.000	0.000	0.000	0.235	0.000
IF	392.000	7.735	0.000	9.297	0.000	0.000	0.000	0.000	0.178	0.000
IF	393.000	7.867	0.000	9.311	0.000	0.000	0.000	0.000	0.127	0.000
IF	394.000	7.990	0.000	9.324	0.000	0.000	0.000	0.000	0.118	0.000
IF	395.000	8.104	0.000	9.335	0.000	0.000	0.000	0.000	0.132	0.000
IF	396.000	8.253	0.000	9.347	0.000	0.000	0.000	0.000	0.153	0.000
IF	397.000	8.410	0.000	9.358	0.000	0.000	0.000	0.000	0.169	0.000
IF	398.000	8.590	0.000	9.368	0.000	0.000	0.000	0.000	0.142	0.000
IF	399.000	8.694	0.000	9.379	0.000	0.000	0.000	0.000	0.097	0.000
IF	400.000	8.785	0.000	9.389	0.000	0.000	0.000	0.000	0.104	0.000
IF	402.000	9.007	0.000	9.389	0.000	0.000	0.000	0.000	0.130	0.000
IF	403.000	9.175	0.000	9.389	0.000	0.000	0.000	0.000	0.141	0.000
IF	404.700	9.389	0.000	9.389	0.000	0.000	0.000	0.000	0.126	0.000
AS	1514.300	9.389	0.000	9.389	0.000	0.000	0.000	0.000	-0.058	0.000
IF	1516.000	9.289	0.000	9.389	0.000	0.000	0.000	0.000	-0.019	0.000
IF	1519.000	9.298	0.000	9.389	0.000	0.000	0.000	0.000	-0.069	0.000
IF	1535.000	7.984	0.000	9.389	0.000	0.000	0.000	0.000	-0.076	0.000
IF	1536.000	8.012	0.000	9.389	0.000	0.000	0.000	0.000	0.106	0.000
IF	1543.000	8.829	0.000	9.389	0.000	0.000	0.000	0.000	0.027	0.000
IF	1552.000	8.451	0.000	9.389	0.000	0.000	0.000	0.000	-0.050	0.000
IF	1553.000	8.328	0.000	9.389	0.000	0.000	0.000	0.000	-0.023	0.000
IF	1564.000	8.180	0.000	9.389	0.000	0.000	0.000	0.000	-0.012	0.000
IF	1565.000	8.190	0.000	9.389	0.000	0.000	0.000	0.000	0.067	0.000
IF	1576.000	8.989	0.000	9.389	0.000	0.000	0.000	0.000	0.004	0.000
IF	1585.000	8.280	0.000	9.389	0.000	0.000	0.000	0.000	-0.082	0.000
IF	1586.000	8.165	0.000	9.389	0.000	0.000	0.000	0.000	0.001	0.000
IF	1599.000	8.296	0.000	9.389	0.000	0.000	0.000	0.000	0.012	0.000
IF	1600.000	8.332	0.000	9.389	0.000	0.000	0.000	0.000	0.023	0.000
IF	1609.000	8.524	0.000	9.389	0.000	0.000	0.000	0.000	0.008	0.000
IF	1610.000	8.411	0.000	9.389	0.000	0.000	0.000	0.000	-0.015	0.000
IF	1619.000	8.375	0.000	9.389	0.000	0.000	0.000	0.000	-0.004	0.000
IF	1621.000	8.371	0.000	9.389	0.000	0.000	0.000	0.000	-0.001	0.000
IF	1628.000	8.368	0.000	9.389	0.000	0.000	0.000	0.000	-0.011	0.000
IF	1630.000	8.269	0.000	9.389	0.000	0.000	0.000	0.000	-0.056	0.000
IF	1637.000	7.863	0.000	9.389	0.000	0.000	0.000	0.000	-0.048	0.000
IF	1638.000	7.886	0.000	9.389	0.000	0.000	0.000	0.000	0.045	0.000
IF	1657.000	8.753	0.000	9.389	0.000	0.000	0.000	0.000	-0.006	0.000
IF	1666.000	7.717	0.000	9.389	0.000	0.000	0.000	0.000	-0.116	0.000
IF	1667.000	7.595	0.000	9.389	0.000	0.000	0.000	0.000	0.026	0.000
IF	1681.000	8.110	0.000	9.389	0.000	0.000	0.000	0.000	0.036	0.000
IF	1682.000	8.140	0.000	9.389	0.000	0.000	0.000	0.000	0.022	0.000
IF	1697.000	8.459	0.000	9.389	0.000	0.000	0.000	0.000	0.017	0.000
IF	1698.000	8.406	0.000	9.389	0.000	0.000	0.000	0.000	-0.003	0.000
IF	1715.000	8.413	0.000	9.389	0.000	0.000	0.000	0.000	0.000	0.000
IF	1716.000	8.411	0.000	9.389	0.000	0.000	0.000	0.000	-0.013	0.000
IF	1727.000	8.263	0.000	9.389	0.000	0.000	0.000	0.000	-0.019	0.000
IF	1729.000	8.171	0.000	9.389	0.000	0.000	0.000	0.000	-0.008	0.000
IF	1745.000	8.113	0.000	9.389	0.000	0.000	0.000	0.000	-0.004	0.000
IF	1746.000	8.103	0.000	9.389	0.000	0.000	0.000	0.000	0.009	0.000
IF	1763.000	8.276	0.000	9.389	0.000	0.000	0.000	0.000	0.013	0.000
IF	1768.000	8.391	0.000	9.389	0.000	0.000	0.000	0.000	-0.008	0.000
IF	1774.000	8.189	0.000	9.389	0.000	0.000	0.000	0.000	-0.029	0.000
IF	1782.000	7.986	0.000	9.389	0.000	0.000	0.000	0.000	-0.026	0.000
IF	1783.000	7.956	0.000	9.389	0.000	0.000	0.000	0.000	0.022	0.000
IF	1790.000	8.159	0.000	9.389	0.000	0.000	0.000	0.000	-0.014	0.000
IF	1794.000	7.802	0.000	9.389	0.000	0.000	0.000	0.000	-0.060	0.000
IF	1802.000	7.438	0.000	9.389	0.000	0.000	0.000	0.000	-0.042	0.000
IF	1803.000	7.426	0.000	9.389	0.000	0.000	0.000	0.000	0.068	0.000
IF	1812.000	8.119	0.000	9.389	0.000	0.000	0.000	0.000	0.068	0.000
IF	1813.000	8.110	0.000	9.389	0.000	0.000	0.000	0.000	0.010	0.000
IF	1826.000	8.262	0.000	9.389	0.000	0.000	0.000	0.000	0.010	0.000
IF	1827.000	8.255	0.000	9.389	0.000	0.000	0.000	0.000	0.001	0.000
IF	1840.000	8.273	0.000	9.389	0.000	0.000	0.000	0.000	0.040	0.000
IF	1846.000	9.012	0.000	9.389	0.000	0.000	0.000	0.000	0.125	0.000
IF	1847.000	9.150	0.000	9.389	0.000	0.000	0.000	0.000	0.151	0.000
IF	1848.500	9.389	0.000	9.389	0.000	0.000	0.000	0.000	0.159	0.000

	AS	2130.000	9.389	0.000	9.389	0.000	0.000	0.000	0.000	0.159	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	-6.431	1.000	1.000	9.025	19.653	14.027	56.140	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	1.000	-6.430	0.000	8.995	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2.000	-6.428	0.000	8.996	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3.000	-6.426	0.000	8.997	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	4.000	-6.424	0.000	8.998	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	5.000	-6.423	0.000	9.000	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	6.000	-6.421	0.000	9.001	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	7.000	-6.419	0.000	9.002	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	8.000	-6.418	0.000	9.003	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	9.000	-6.416	0.000	9.004	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	10.000	-6.414	0.000	9.006	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	11.000	-6.413	0.000	9.007	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	12.000	-6.411	0.000	9.008	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	13.000	-6.409	0.000	9.009	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	14.000	-6.408	0.000	9.011	0.000	0.000	0.000	0.000	-0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	15.000	-6.457	0.000	9.012	0.000	0.000	0.000	0.000	-0.075	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	16.000	-6.557	0.000	9.014	0.000	0.000	0.000	0.000	-0.100	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	17.000	-6.657	0.000	9.015	0.000	0.000	0.000	0.000	-0.100	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	18.000	-6.757	0.000	9.017	0.000	0.000	0.000	0.000	-0.100	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	19.000	-6.857	0.000	9.019	0.000	0.000	0.000	0.000	-0.100	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	20.000	-6.957	0.000	9.020	0.000	0.000	0.000	0.000	-0.100	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	21.000	-7.057	0.000	9.022	0.000	0.000	0.000	0.000	-0.100	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	22.000	-7.158	0.000	9.023	0.000	0.000	0.000	0.000	-0.100	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	23.000	-7.258	0.000	9.025	0.000	0.000	0.000	0.000	0.025	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	270.000	-0.911	0.000	9.160	0.000	0.000	0.000	0.000	0.027	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	271.000	-0.597	0.000	9.160	0.000	0.000	0.000	0.000	0.237	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	272.000	-0.436	0.000	9.160	0.000	0.000	0.000	0.000	0.161	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	273.000	-0.275	0.000	9.160	0.000	0.000	0.000	0.000	0.155	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	274.000	-0.127	0.000	9.160	0.000	0.000	0.000	0.000	0.110	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	275.000	-0.056	0.000	9.160	0.000	0.000	0.000	0.000	0.071	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	276.000	0.014	0.000	9.161	0.000	0.000	0.000	0.000	0.070	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	277.000	0.085	0.000	9.161	0.000	0.000	0.000	0.000	0.051	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	278.000	0.117	0.000	9.162	0.000	0.000	0.000	0.000	0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	279.000	0.102	0.000	9.162	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
IF	280.000	0.087	0.000	9.163	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

IF	281.000	0.072	0.000	9.164	0.000	0.000	0.000	0.000	-0.015	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	282.000	0.058	0.000	9.165	0.000	0.000	0.000	0.000	-0.015	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	283.000	0.043	0.000	9.166	0.000	0.000	0.000	0.000	-0.015	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	284.000	0.028	0.000	9.167	0.000	0.000	0.000	0.000	-0.015	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	285.000	0.013	0.000	9.167	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	286.000	0.032	0.000	9.168	0.000	0.000	0.000	0.000	0.011	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	287.000	0.035	0.000	9.169	0.000	0.000	0.000	0.000	-0.020	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	288.000	-0.007	0.000	9.170	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	289.000	-0.043	0.000	9.170	0.000	0.000	0.000	0.000	-0.036	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	290.000	-0.078	0.000	9.171	0.000	0.000	0.000	0.000	0.022	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	291.000	0.002	0.000	9.171	0.000	0.000	0.000	0.000	0.080	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	292.000	0.083	0.000	9.172	0.000	0.000	0.000	0.000	0.072	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	293.000	0.146	0.000	9.172	0.000	0.000	0.000	0.000	0.039	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	294.000	0.161	0.000	9.173	0.000	0.000	0.000	0.000	0.015	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	295.000	0.177	0.000	9.173	0.000	0.000	0.000	0.000	-0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	296.000	0.158	0.000	9.174	0.000	0.000	0.000	0.000	-0.060	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	297.000	0.056	0.000	9.175	0.000	0.000	0.000	0.000	-0.095	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	298.000	-0.033	0.000	9.176	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	299.000	-0.092	0.000	9.177	0.000	0.000	0.000	0.000	-0.060	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	300.000	-0.152	0.000	9.177	0.000	0.000	0.000	0.000	-0.046	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	301.000	-0.183	0.000	9.178	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	302.000	-0.102	0.000	9.178	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	303.000	-0.020	0.000	9.178	0.000	0.000	0.000	0.000	0.120	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	304.000	0.138	0.000	9.178	0.000	0.000	0.000	0.000	0.143	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	305.000	0.265	0.000	9.178	0.000	0.000	0.000	0.000	0.132	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	306.000	0.401	0.000	9.178	0.000	0.000	0.000	0.000	0.130	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	307.000	0.524	0.000	9.179	0.000	0.000	0.000	0.000	0.064	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	308.000	0.530	0.000	9.179	0.000	0.000	0.000	0.000	0.005	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	309.000	0.535	0.000	9.179	0.000	0.000	0.000	0.000	0.048	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	310.000	0.627	0.000	9.179	0.000	0.000	0.000	0.000	0.111	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	311.000	0.758	0.000	9.179	0.000	0.000	0.000	0.000	0.132	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	312.000	0.890	0.000	9.179	0.000	0.000	0.000	0.000	0.122	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	313.000	1.002	0.000	9.180	0.000	0.000	0.000	0.000	0.091	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	314.000	1.072	0.000	9.180	0.000	0.000	0.000	0.000	0.048	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	315.000	1.099	0.000	9.181	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	316.000	1.126	0.000	9.181	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	317.000	1.151	0.000	9.182	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE

	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	318.000	1.158	0.000	9.183	0.000	0.000	0.000	0.000	-0.005	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	319.000	1.141	0.000	9.183	0.000	0.000	0.000	0.000	-0.017	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	320.000	1.124	0.000	9.184	0.000	0.000	0.000	0.000	-0.017	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	321.000	1.107	0.000	9.185	0.000	0.000	0.000	0.000	0.008	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	322.000	1.140	0.000	9.185	0.000	0.000	0.000	0.000	0.071	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	323.000	1.248	0.000	9.185	0.000	0.000	0.000	0.000	0.163	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	324.000	1.467	0.000	9.185	0.000	0.000	0.000	0.000	0.181	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	325.000	1.610	0.000	9.186	0.000	0.000	0.000	0.000	0.114	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	326.000	1.696	0.000	9.186	0.000	0.000	0.000	0.000	0.086	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	327.000	1.783	0.000	9.187	0.000	0.000	0.000	0.000	0.059	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	328.000	1.813	0.000	9.187	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	329.000	1.829	0.000	9.188	0.000	0.000	0.000	0.000	0.031	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	330.000	1.876	0.000	9.189	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	331.000	1.923	0.000	9.189	0.000	0.000	0.000	0.000	0.063	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	332.000	2.001	0.000	9.190	0.000	0.000	0.000	0.000	0.059	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	333.000	2.041	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
IF	334.000	2.071	0.000	9.191	0.000	0.000	0.000	0.000	0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	335.000	2.073	0.000	9.192	0.000	0.000	0.000	0.000	0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	336.000	2.075	0.000	9.193	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	337.000	2.085	0.000	9.194	0.000	0.000	0.000	0.000	0.022	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	338.000	2.118	0.000	9.195	0.000	0.000	0.000	0.000	0.035	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	339.000	2.156	0.000	9.196	0.000	0.000	0.000	0.000	0.049	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	340.000	2.217	0.000	9.196	0.000	0.000	0.000	0.000	0.061	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	341.000	2.278	0.000	9.197	0.000	0.000	0.000	0.000	0.057	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	342.000	2.332	0.000	9.198	0.000	0.000	0.000	0.000	0.033	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	343.000	2.344	0.000	9.198	0.000	0.000	0.000	0.000	0.031	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	344.000	2.394	0.000	9.199	0.000	0.000	0.000	0.000	0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	345.000	2.459	0.000	9.200	0.000	0.000	0.000	0.000	0.065	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	346.000	2.523	0.000	9.200	0.000	0.000	0.000	0.000	0.065	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	347.000	2.588	0.000	9.201	0.000	0.000	0.000	0.000	0.064	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	348.000	2.652	0.000	9.202	0.000	0.000	0.000	0.000	0.030	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	349.000	2.649	0.000	9.202	0.000	0.000	0.000	0.000	0.065	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	350.000	2.781	0.000	9.203	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	351.000	2.844	0.000	9.203	0.000	0.000	0.000	0.000	0.076	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	352.000	2.934	0.000	9.204	0.000	0.000	0.000	0.000	0.078	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	353.000	2.999	0.000	9.205	0.000	0.000	0.000	0.000	0.065	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	354.000	3.063	0.000	9.206	0.000	0.000	0.000	0.000	0.064	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	355.000	3.127	0.000	9.206	0.000	0.000	0.000	0.000	0.064	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	356.000	3.191	0.000	9.207	0.000	0.000	0.000	0.000	0.064	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	357.000	3.255	0.000	9.208	0.000	0.000	0.000	0.000	0.069	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	358.000	3.330	0.000	9.209	0.000	0.000	0.000	0.000	0.077	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	359.000	3.409	0.000	9.210	0.000	0.000	0.000	0.000	0.077	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	360.000	3.484	0.000	9.211	0.000	0.000	0.000	0.000	0.060	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	361.000	3.530	0.000	9.212	0.000	0.000	0.000	0.000	0.013	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	362.000	3.510	0.000	9.213	0.000	0.000	0.000	0.000	-0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	363.000	3.490	0.000	9.214	0.000	0.000	0.000	0.000	-0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	364.000	3.470	0.000	9.216	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	365.000	3.556	0.000	9.216	0.000	0.000	0.000	0.000	0.119	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	366.000	3.707	0.000	9.217	0.000	0.000	0.000	0.000	0.152	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	367.000	3.860	0.000	9.217	0.000	0.000	0.000	0.000	0.153	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	368.000	4.013	0.000	9.218	0.000	0.000	0.000	0.000	0.122	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	369.000	4.104	0.000	9.219	0.000	0.000	0.000	0.000	0.073	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	370.000	4.160	0.000	9.220	0.000	0.000	0.000	0.000	0.056	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	371.000	4.216	0.000	9.221	0.000	0.000	0.000	0.000	0.064	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	372.000	4.288	0.000	9.221	0.000	0.000	0.000	0.000	0.115	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	373.000	4.446	0.000	9.222	0.000	0.000	0.000	0.000	0.181	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	374.000	4.650	0.000	9.223	0.000	0.000	0.000	0.000	0.204	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	375.000	4.854	0.000	9.224	0.000	0.000	0.000	0.000	0.172	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	376.000	4.993	0.000	9.225	0.000	0.000	0.000	0.000	0.127	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	377.000	5.109	0.000	9.226	0.000	0.000	0.000	0.000	0.108	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	378.000	5.210	0.000	9.227	0.000	0.000	0.000	0.000	0.095	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	379.000	5.298	0.000	9.229	0.000	0.000	0.000	0.000	0.087	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	380.000	5.384	0.000	9.232	0.000	0.000	0.000	0.000	0.086	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	381.000	5.470	0.000	9.234	0.000	0.000	0.000	0.000	0.086	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	382.000	5.557	0.000	9.236	0.000	0.000	0.000	0.000	0.127	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	383.000	5.724	0.000	9.237	0.000	0.000	0.000	0.000	0.170	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	384.000	5.898	0.000	9.239	0.000	0.000	0.000	0.000	0.179	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	385.000	6.082	0.000	9.241	0.000	0.000	0.000	0.000	0.214	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	386.000	6.326	0.000	9.242	0.000	0.000	0.000	0.000	0.241	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	387.000	6.565	0.000	9.243	0.000	0.000	0.000	0.000	0.231	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	388.000	6.787	0.000	9.252	0.000	0.000	0.000	0.000	0.226	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	389.000	7.017	0.000	9.262	0.000	0.000	0.000	0.000	0.239	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	390.000	7.265	0.000	9.271	0.000	0.000	0.000	0.000	0.247	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES

IF	391.000	7.512	0.000	9.283	0.000	0.000	0.000	0.000	0.235	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	392.000	7.735	0.000	9.297	0.000	0.000	0.000	0.000	0.178	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	393.000	7.867	0.000	9.311	0.000	0.000	0.000	0.000	0.127	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	394.000	7.990	0.000	9.324	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
IF	395.000	8.104	0.000	9.335	0.000	0.000	0.000	0.000	0.132	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	396.000	8.253	0.000	9.347	0.000	0.000	0.000	0.000	0.153	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	397.000	8.410	0.000	9.358	0.000	0.000	0.000	0.000	0.169	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	398.000	8.590	0.000	9.368	0.000	0.000	0.000	0.000	0.142	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	399.000	8.694	0.000	9.379	0.000	0.000	0.000	0.000	0.097	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	400.000	8.785	0.000	9.389	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
IF	402.000	9.007	0.000	9.389	0.000	0.000	0.000	0.000	0.130	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	403.000	9.175	0.000	9.389	0.000	0.000	0.000	0.000	0.141	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	404.700	9.389	0.000	9.389	0.000	0.000	0.000	0.000	0.126	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
AS	1514.300	9.389	0.000	9.389	0.000	0.000	0.000	0.000	-0.058	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1516.000	9.289	0.000	9.389	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
IF	1519.000	9.298	0.000	9.389	0.000	0.000	0.000	0.000	-0.069	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1535.000	7.984	0.000	9.389	0.000	0.000	0.000	0.000	-0.076	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1536.000	8.012	0.000	9.389	0.000	0.000	0.000	0.000	0.106	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1543.000	8.829	0.000	9.389	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	1552.000	8.451	0.000	9.389	0.000	0.000	0.000	0.000	-0.050	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1553.000	8.328	0.000	9.389	0.000	0.000	0.000	0.000	-0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1564.000	8.180	0.000	9.389	0.000	0.000	0.000	0.000	-0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1565.000	8.190	0.000	9.389	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
IF	1576.000	8.989	0.000	9.389	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1585.000	8.280	0.000	9.389	0.000	0.000	0.000	0.000	-0.082	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1586.000	8.165	0.000	9.389	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1599.000	8.296	0.000	9.389	0.000	0.000	0.000	0.000	0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1600.000	8.332	0.000	9.389	0.000	0.000	0.000	0.000	0.023	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1609.000	8.524	0.000	9.389	0.000	0.000	0.000	0.000	0.008	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1610.000	8.411	0.000	9.389	0.000	0.000	0.000	0.000	-0.015	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1619.000	8.375	0.000	9.389	0.000	0.000	0.000	0.000	-0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1621.000	8.371	0.000	9.389	0.000	0.000	0.000	0.000	-0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1628.000	8.368	0.000	9.389	0.000	0.000	0.000	0.000	-0.011	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1630.000	8.269	0.000	9.389	0.000	0.000	0.000	0.000	-0.056	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1637.000	7.863	0.000	9.389	0.000	0.000	0.000	0.000	-0.048	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1638.000	7.886	0.000	9.389	0.000	0.000	0.000	0.000	0.045	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1657.000	8.753	0.000	9.389	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	1666.000	7.717	0.000	9.389	0.000	0.000	0.000	0.000	-0.116	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1667.000	7.595	0.000	9.389	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	1681.000	8.110	0.000	9.389	0.000	0.000	0.000	0.000	0.036	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1682.000	8.140	0.000	9.389	0.000	0.000	0.000	0.000	0.022	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1697.000	8.459	0.000	9.389	0.000	0.000	0.000	0.000	0.017	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1698.000	8.406	0.000	9.389	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	1715.000	8.413	0.000	9.389	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	1716.000	8.411	0.000	9.389	0.000	0.000	0.000	0.000	-0.013	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1727.000	8.263	0.000	9.389	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
IF	1729.000	8.171	0.000	9.389	0.000	0.000	0.000	0.000	-0.008	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1745.000	8.113	0.000	9.389	0.000	0.000	0.000	0.000	-0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1746.000	8.103	0.000	9.389	0.000	0.000	0.000	0.000	0.009	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1763.000	8.276	0.000	9.389	0.000	0.000	0.000	0.000	0.013	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1768.000	8.391	0.000	9.389	0.000	0.000	0.000	0.000	-0.008	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1774.000	8.189	0.000	9.389	0.000	0.000	0.000	0.000	-0.029	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1782.000	7.986	0.000	9.389	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	1783.000	7.956	0.000	9.389	0.000	0.000	0.000	0.000	0.022	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1790.000	8.159	0.000	9.389	0.000	0.000	0.000	0.000	-0.014	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1794.000	7.802	0.000	9.389	0.000	0.000	0.000	0.000	-0.060	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1802.000	7.438	0.000	9.389	0.000	0.000	0.000	0.000	-0.042	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1803.000	7.426	0.000	9.389	0.000	0.000	0.000	0.000	0.068	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1812.000	8.119	0.000	9.389	0.000	0.000	0.000	0.000	0.068	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1813.000	8.110	0.000	9.389	0.000	0.000	0.000	0.000	0.010	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1826.000	8.262	0.000	9.389	0.000	0.000	0.000	0.000	0.010	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1827.000	8.255	0.000	9.389	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1840.000	8.273	0.000	9.389	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	1846.000	9.012	0.000	9.389	0.000	0.000	0.000	0.000	0.125	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1847.000	9.150	0.000	9.389	0.000	0.000	0.000	0.000	0.151	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1848.500	9.389	0.000	9.389	0.000	0.000	0.000	0.000	0.159	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
AS	2130.000	9.389	0.000	9.389	0.000	0.000	0.000	0.000	0.159	0.000

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

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

1

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

	LOCATION		CONTROLLING WAVE HEIGHT	SPECTRAL PEAK WAVE PERIOD	WAVE CREST ELEVATION
IE	0.00		11.77	14.03	17.26
OF	1.00		11.75	14.03	17.22
OF	2.00		11.75	14.03	17.22
OF	3.00		11.75	14.03	17.22
OF	4.00		11.75	14.03	17.22
OF	5.00		11.75	14.03	17.22
OF	6.00		11.75	14.03	17.22
OF	7.00		11.74	14.03	17.22
OF	8.00		11.74	14.03	17.22
OF	9.00		11.74	14.03	17.22
OF	10.00		11.74	14.03	17.23
OF	11.00		11.74	14.03	17.23
OF	12.00		11.74	14.03	17.23

OF	13.00	11.74	14.03	17.23
OF	14.00	11.74	14.03	17.23
OF	15.00	11.76	14.03	17.24
OF	16.00	11.78	14.03	17.26
OF	17.00	11.80	14.03	17.28
OF	18.00	11.82	14.03	17.29
OF	19.00	11.85	14.03	17.31
OF	20.00	11.87	14.03	17.33
OF	21.00	11.89	14.03	17.35
OF	22.00	11.91	14.03	17.36
OF	23.00	11.94	14.03	17.38
	127.98	10.42	14.03	16.38
	232.95	8.44	14.03	15.05
OF	270.00	7.73	14.03	14.57
OF	271.00	7.50	14.03	14.41
OF	272.00	7.37	14.03	14.32
OF	273.00	7.25	14.03	14.24
OF	274.00	7.14	14.03	14.16
OF	275.00	7.09	14.03	14.12
IF	276.00	7.03	14.03	14.08
IF	277.00	6.98	14.03	14.05
IF	278.00	6.96	14.03	14.03
IF	279.00	6.96	14.03	14.04
IF	280.00	6.97	14.03	14.04
IF	281.00	6.97	14.03	14.04
IF	282.00	6.98	14.03	14.05
IF	283.00	6.98	14.03	14.05
IF	284.00	6.98	14.03	14.06
IF	285.00	6.99	14.03	14.06
IF	286.00	6.99	14.03	14.06
IF	287.00	6.99	14.03	14.06
OF	288.00	7.00	14.03	14.07
OF	289.00	7.01	14.03	14.07
OF	290.00	7.01	14.03	14.08
IF	291.00	7.00	14.03	14.07
IF	292.00	6.99	14.03	14.06
IF	293.00	6.94	14.03	14.03
IF	294.00	6.93	14.03	14.03
IF	295.00	6.92	14.03	14.02
IF	296.00	6.93	14.03	14.02
IF	297.00	6.95	14.03	14.04
OF	298.00	6.97	14.03	14.05
OF	299.00	6.98	14.03	14.06
OF	300.00	6.99	14.03	14.07
OF	301.00	7.00	14.03	14.08
OF	302.00	6.98	14.03	14.07
OF	303.00	6.97	14.03	14.06
IF	304.00	6.94	14.03	14.04
IF	305.00	6.86	14.03	13.98
IF	306.00	6.75	14.03	13.91
IF	307.00	6.66	14.03	13.84
IF	308.00	6.66	14.03	13.84
IF	309.00	6.65	14.03	13.84
IF	310.00	6.58	14.03	13.79
IF	311.00	6.48	14.03	13.72
IF	312.00	6.38	14.03	13.65
IF	313.00	6.30	14.03	13.59
IF	314.00	6.24	14.03	13.55
IF	315.00	6.23	14.03	13.54
IF	316.00	6.20	14.03	13.52
IF	317.00	6.19	14.03	13.51
IF	318.00	6.18	14.03	13.51
IF	319.00	6.19	14.03	13.51
IF	320.00	6.19	14.03	13.52
IF	321.00	6.20	14.03	13.52
IF	322.00	6.19	14.03	13.52
IF	323.00	6.11	14.03	13.47
IF	324.00	5.95	14.03	13.35
IF	325.00	5.84	14.03	13.27
IF	326.00	5.77	14.03	13.23
IF	327.00	5.71	14.03	13.18
IF	328.00	5.69	14.03	13.17
IF	329.00	5.67	14.03	13.16
IF	330.00	5.64	14.03	13.14
IF	331.00	5.60	14.03	13.11
IF	332.00	5.54	14.03	13.07
IF	333.00	5.52	14.03	13.05
IF	334.00	5.49	14.03	13.04
IF	335.00	5.49	14.03	13.04
IF	336.00	5.49	14.03	13.04
IF	337.00	5.48	14.03	13.03
IF	338.00	5.46	14.03	13.02
IF	339.00	5.43	14.03	13.00
IF	340.00	5.38	14.03	12.97
IF	341.00	5.34	14.03	12.93
IF	342.00	5.30	14.03	12.91
IF	343.00	5.29	14.03	12.90
IF	344.00	5.25	14.03	12.88
IF	345.00	5.20	14.03	12.84
IF	346.00	5.15	14.03	12.81
IF	347.00	5.11	14.03	12.77
IF	348.00	5.06	14.03	12.74
IF	349.00	5.06	14.03	12.74
IF	350.00	4.96	14.03	12.67
IF	351.00	4.91	14.03	12.64
IF	352.00	4.84	14.03	12.59
IF	353.00	4.79	14.03	12.56
IF	354.00	4.75	14.03	12.53
IF	355.00	4.70	14.03	12.49
IF	356.00	4.65	14.03	12.46
IF	357.00	4.60	14.03	12.43
IF	358.00	4.54	14.03	12.39
IF	359.00	4.48	14.03	12.35
IF	360.00	4.43	14.03	12.31
IF	361.00	4.39	14.03	12.29
IF	362.00	4.40	14.03	12.29
IF	363.00	4.41	14.03	12.30
IF	364.00	4.41	14.03	12.31
IF	365.00	4.38	14.03	12.28
IF	366.00	4.26	14.03	12.20

IF	367.00	4.14	14.03	12.12
IF	368.00	4.03	14.03	12.04
IF	369.00	3.96	14.03	11.99
IF	370.00	3.92	14.03	11.96
IF	371.00	3.87	14.03	11.93
IF	372.00	3.82	14.03	11.89
IF	373.00	3.70	14.03	11.81
IF	374.00	3.54	14.03	11.70
IF	375.00	3.39	14.03	11.59
IF	376.00	3.28	14.03	11.52
IF	377.00	3.19	14.03	11.46
IF	378.00	3.11	14.03	11.41
IF	379.00	3.05	14.03	11.36
IF	380.00	2.98	14.03	11.32
IF	381.00	2.92	14.03	11.28
IF	382.00	2.85	14.03	11.23
IF	383.00	2.73	14.03	11.14
IF	384.00	2.59	14.03	11.05
IF	385.00	2.45	14.03	10.96
IF	386.00	2.26	14.03	10.83
IF	387.00	2.08	14.03	10.70
IF	388.00	1.92	14.03	10.59
IF	389.00	1.74	14.03	10.48
IF	390.00	1.56	14.03	10.36
IF	391.00	1.38	14.03	10.25
IF	392.00	1.22	14.03	10.15
IF	393.00	1.12	14.03	10.10
IF	394.00	1.04	14.03	10.05
IF	395.00	0.96	14.03	10.01
IF	396.00	0.85	14.03	9.94
IF	397.00	0.74	14.03	9.87
IF	398.00	0.61	14.03	9.79
IF	399.00	0.53	14.03	9.75
IF	400.00	0.47	14.03	9.72
IF	402.00	0.30	14.03	9.60
IF	403.00	0.17	14.03	9.51
IF	404.70	0.01	14.03	9.39
AS	1514.30	0.00	0.00	9.39
IF	1516.00	0.02	0.18	9.41
IF	1519.00	0.04	0.24	9.42
IF	1535.00	0.11	0.39	9.47
IF	1536.00	0.11	0.39	9.47
IF	1543.00	0.14	0.43	9.48
IF	1552.00	0.16	0.47	9.50
IF	1553.00	0.17	0.48	9.50
IF	1564.00	0.20	0.52	9.53
IF	1565.00	0.20	0.52	9.53
IF	1576.00	0.19	0.55	9.52
IF	1585.00	0.25	0.58	9.56
IF	1586.00	0.25	0.58	9.56
IF	1599.00	0.28	0.62	9.58
IF	1600.00	0.28	0.62	9.58
IF	1609.00	0.29	0.64	9.59
IF	1610.00	0.30	0.64	9.60
IF	1619.00	0.31	0.66	9.61
IF	1621.00	0.32	0.67	9.61
IF	1628.00	0.33	0.68	9.62
IF	1630.00	0.34	0.68	9.62
IF	1637.00	0.35	0.70	9.64
IF	1638.00	0.36	0.70	9.64
IF	1657.00	0.32	0.73	9.62
IF	1666.00	0.40	0.75	9.67
IF	1667.00	0.40	0.75	9.67
IF	1681.00	0.42	0.77	9.69
IF	1682.00	0.42	0.77	9.69
IF	1697.00	0.42	0.79	9.68
IF	1698.00	0.42	0.80	9.69
IF	1715.00	0.44	0.82	9.70
IF	1716.00	0.44	0.82	9.70
IF	1727.00	0.47	0.84	9.72
IF	1729.00	0.48	0.84	9.73
IF	1745.00	0.51	0.86	9.74
IF	1746.00	0.51	0.86	9.75
IF	1763.00	0.51	0.88	9.74
IF	1768.00	0.49	0.89	9.73
IF	1774.00	0.52	0.89	9.75
IF	1782.00	0.56	0.90	9.78
IF	1783.00	0.56	0.90	9.78
IF	1790.00	0.55	0.91	9.77
IF	1794.00	0.58	0.91	9.80
IF	1802.00	0.61	0.92	9.82
IF	1803.00	0.61	0.92	9.82
IF	1812.00	0.57	0.93	9.79
IF	1813.00	0.57	0.93	9.79
IF	1826.00	0.56	0.95	9.78
IF	1827.00	0.56	0.95	9.78
IF	1840.00	0.56	0.96	9.78
IF	1846.00	0.26	0.97	9.57
IF	1847.00	0.17	0.97	9.51
IF	1848.50	0.01	0.97	9.39
AS	2130.00	0.00	0.00	9.39

PART3 LOCATION OF AREAS ABOVE 100-YEAR SURGE

BETWEEN 404.70 AND 1514.30

BETWEEN 1848.50 AND 2130.00

PART4 LOCATION OF SURGE CHANGES

STATION	10-YEAR SURGE	100-YEAR SURGE
1.00	1.00	8.99
2.00	1.00	9.00
3.00	1.00	9.00
4.00	1.00	9.00
5.00	1.00	9.00
6.00	1.00	9.00
7.00	1.00	9.00
8.00	1.00	9.00
9.00	1.00	9.00
10.00	1.00	9.01
11.00	1.00	9.01
12.00	1.00	9.01
13.00	1.00	9.01
14.00	1.00	9.01

15.00	1.00	9.01
16.00	1.00	9.01
17.00	1.00	9.02
18.00	1.00	9.02
19.00	1.00	9.02
20.00	1.00	9.02
21.00	1.00	9.02
22.00	1.00	9.02
23.00	1.00	9.02
270.00	1.00	9.16
276.00	1.00	9.16
278.00	1.00	9.16
280.00	1.00	9.16
281.00	1.00	9.16
282.00	1.00	9.16
283.00	1.00	9.17
284.00	1.00	9.17
286.00	1.00	9.17
287.00	1.00	9.17
288.00	1.00	9.17
290.00	1.00	9.17
292.00	1.00	9.17
294.00	1.00	9.17
296.00	1.00	9.17
297.00	1.00	9.18
298.00	1.00	9.18
299.00	1.00	9.18
301.00	1.00	9.18
307.00	1.00	9.18
313.00	1.00	9.18
315.00	1.00	9.18
317.00	1.00	9.18
318.00	1.00	9.18
320.00	1.00	9.18
321.00	1.00	9.19
325.00	1.00	9.19
327.00	1.00	9.19
329.00	1.00	9.19
330.00	1.00	9.19
332.00	1.00	9.19
333.00	1.00	9.19
335.00	1.00	9.19
336.00	1.00	9.19
337.00	1.00	9.19
338.00	1.00	9.19
339.00	1.00	9.20
341.00	1.00	9.20
342.00	1.00	9.20
344.00	1.00	9.20
345.00	1.00	9.20
347.00	1.00	9.20
348.00	1.00	9.20
350.00	1.00	9.20
352.00	1.00	9.20
353.00	1.00	9.20
354.00	1.00	9.21
356.00	1.00	9.21
357.00	1.00	9.21
358.00	1.00	9.21
359.00	1.00	9.21
360.00	1.00	9.21
361.00	1.00	9.21
362.00	1.00	9.21
363.00	1.00	9.21
364.00	1.00	9.22
366.00	1.00	9.22
368.00	1.00	9.22
369.00	1.00	9.22
370.00	1.00	9.22
371.00	1.00	9.22
373.00	1.00	9.22
374.00	1.00	9.22
375.00	1.00	9.22
376.00	1.00	9.23
377.00	1.00	9.23
378.00	1.00	9.23
379.00	1.00	9.23
380.00	1.00	9.23
381.00	1.00	9.23
382.00	1.00	9.24
383.00	1.00	9.24
384.00	1.00	9.24
385.00	1.00	9.24
386.00	1.00	9.24
387.00	1.00	9.24
388.00	1.00	9.25
389.00	1.00	9.26
390.00	1.00	9.27
391.00	1.00	9.28
392.00	1.00	9.30
393.00	1.00	9.31
394.00	1.00	9.32
395.00	1.00	9.34
396.00	1.00	9.35
397.00	1.00	9.36
398.00	1.00	9.37
399.00	1.00	9.38
400.00	1.00	9.39

PART5 LOCATION OF V ZONES

STATION OF GUTTER	LOCATION OF ZONE
379.74	WINDWARD

PART6 NUMBERED A ZONES AND V ZONES

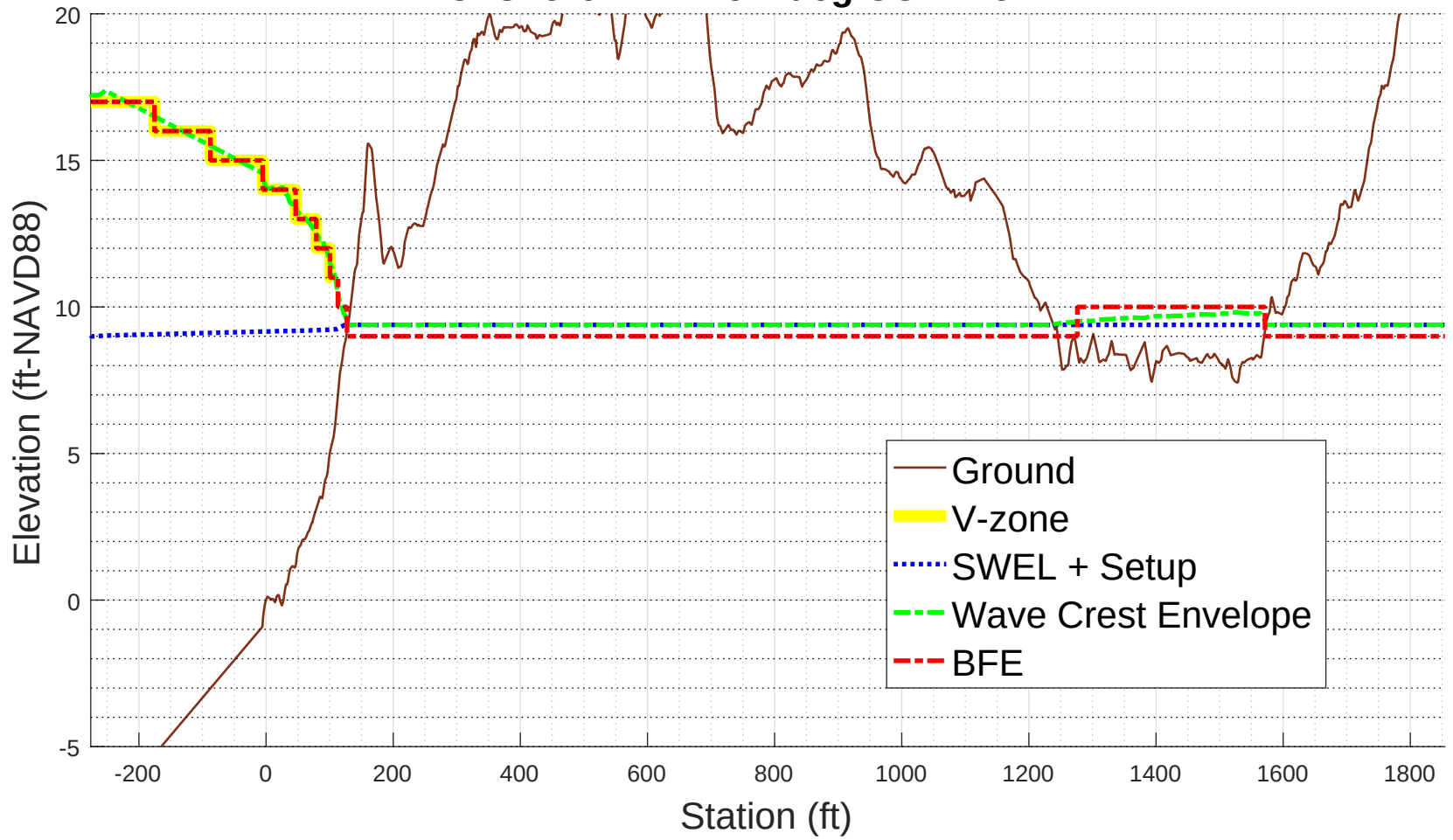
STATION OF GUTTER	ELEVATION	ZONE DESIGNATION	FHF
0.00	17.26	V22 EL=17	120
1.00	17.22	V22 EL=17	120
2.00	17.22	V22 EL=17	120
3.00	17.22		

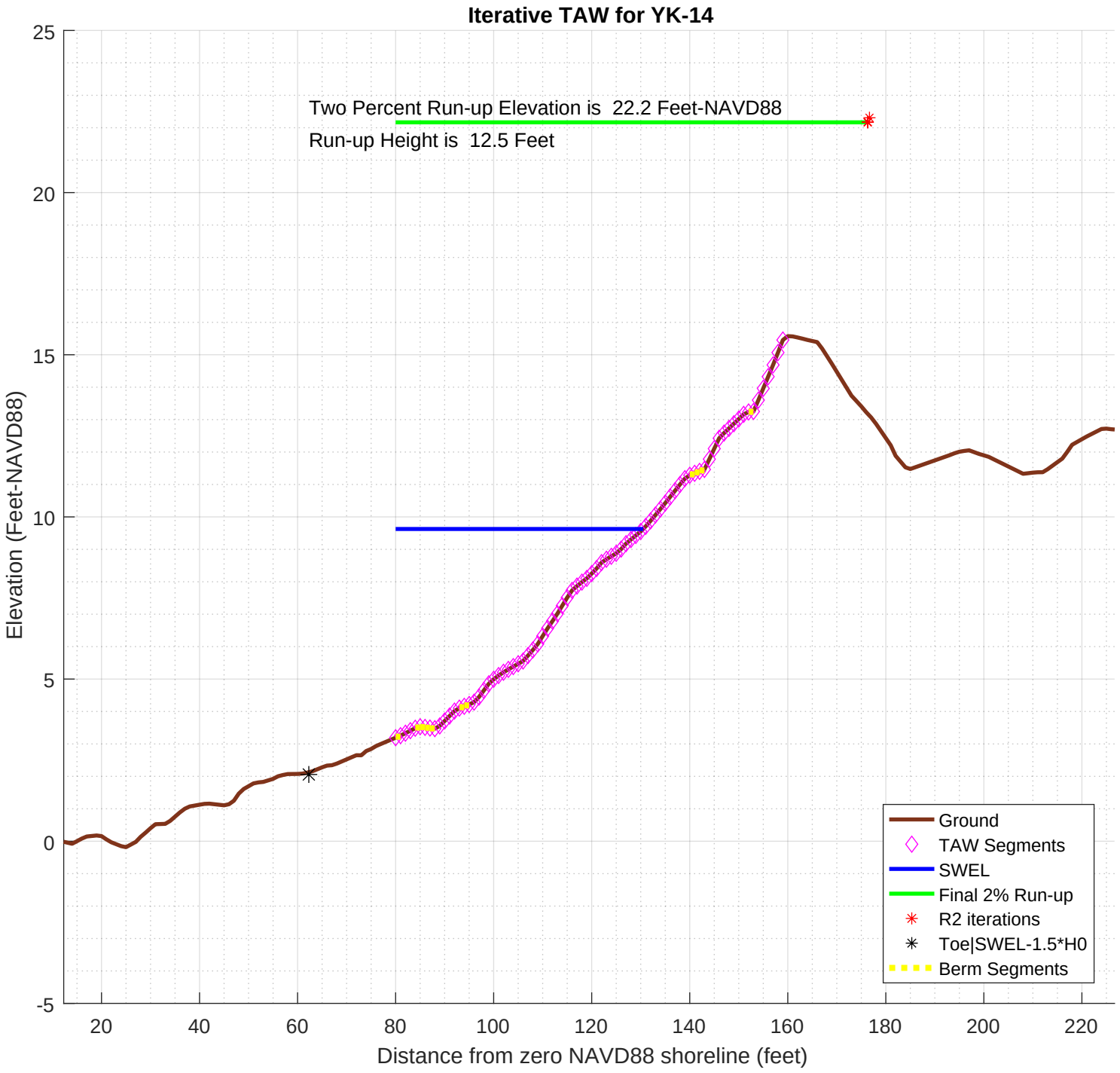
4.00	17.22	V22	EL=17	120
5.00	17.22	V22	EL=17	120
6.00	17.22	V22	EL=17	120
7.00	17.22	V22	EL=17	120
8.00	17.22	V22	EL=17	120
9.00	17.22	V22	EL=17	120
10.00	17.23	V22	EL=17	120
11.00	17.23	V22	EL=17	120
12.00	17.23	V22	EL=17	120
13.00	17.23	V22	EL=17	120
14.00	17.23	V22	EL=17	120
15.00	17.24	V22	EL=17	120
16.00	17.26	V22	EL=17	120
17.00	17.28	V22	EL=17	120
18.00	17.29	V22	EL=17	120
19.00	17.31	V22	EL=17	120
20.00	17.33	V22	EL=17	120
21.00	17.35	V22	EL=17	120
22.00	17.36	V22	EL=17	120
23.00	17.38	V22	EL=17	120
114.98	16.50	V23	EL=16	130
197.08	15.50	V23	EL=15	130
270.00	14.57	V23	EL=15	130
270.44	14.50	V23	EL=14	130
275.00	14.12	V23	EL=14	130
276.00	14.08	V23	EL=14	130
277.00	14.05	V23	EL=14	130
278.00	14.03	V23	EL=14	130
279.00	14.04	V23	EL=14	130
280.00	14.04	V23	EL=14	130
281.00	14.04	V23	EL=14	130
282.00	14.05	V23	EL=14	130
283.00	14.05	V23	EL=14	130
284.00	14.06	V23	EL=14	130
285.00	14.06	V23	EL=14	130
286.00	14.06	V23	EL=14	130
287.00	14.06	V23	EL=14	130
288.00	14.07	V23	EL=14	130
289.00	14.07	V23	EL=14	130
290.00	14.08	V23	EL=14	130
291.00	14.07	V23	EL=14	130
292.00	14.06	V23	EL=14	130
293.00	14.03	V23	EL=14	130
294.00	14.03	V23	EL=14	130
295.00	14.02	V23	EL=14	130
296.00	14.02	V23	EL=14	130
297.00	14.04	V23	EL=14	130
298.00	14.05	V23	EL=14	130
299.00	14.06	V23	EL=14	130
300.00	14.07	V23	EL=14	130
301.00	14.08	V23	EL=14	130
306.00	13.91	V23	EL=14	130
307.00	13.84	V23	EL=14	130
312.00	13.65	V23	EL=14	130
313.00	13.59			

314.00	13.55	V23	EL=14	130
315.00	13.54	V23	EL=14	130
316.00	13.52	V23	EL=14	130
317.00	13.51	V23	EL=14	130
318.00	13.51	V23	EL=14	130
319.00	13.51	V23	EL=14	130
320.00	13.52	V23	EL=14	130
321.00	13.52	V23	EL=14	130
322.36	13.50	V23	EL=14	130
324.00	13.35	V23	EL=13	130
325.00	13.27	V23	EL=13	130
326.00	13.23	V23	EL=13	130
327.00	13.18	V23	EL=13	130
328.00	13.17	V23	EL=13	130
329.00	13.16	V23	EL=13	130
330.00	13.14	V23	EL=13	130
331.00	13.11	V23	EL=13	130
332.00	13.07	V23	EL=13	130
333.00	13.05	V23	EL=13	130
334.00	13.04	V23	EL=13	130
335.00	13.04	V23	EL=13	130
336.00	13.04	V23	EL=13	130
337.00	13.03	V23	EL=13	130
338.00	13.02	V23	EL=13	130
339.00	13.00	V23	EL=13	130
340.00	12.97	V23	EL=13	130
341.00	12.93	V23	EL=13	130
342.00	12.91	V23	EL=13	130
343.00	12.90	V23	EL=13	130
344.00	12.88	V23	EL=13	130
345.00	12.84	V23	EL=13	130
346.00	12.81	V23	EL=13	130
347.00	12.77	V23	EL=13	130
348.00	12.74	V23	EL=13	130
349.00	12.74	V23	EL=13	130
350.00	12.67	V23	EL=13	130
351.00	12.64	V23	EL=13	130
352.00	12.59	V23	EL=13	130
353.00	12.56	V23	EL=13	130
354.00	12.53	V23	EL=13	130
354.82	12.50	V23	EL=12	130
355.00	12.49	V23	EL=12	130
356.00	12.46	V23	EL=12	130
357.00	12.43	V23	EL=12	130
358.00	12.39	V23	EL=12	130
359.00	12.35	V23	EL=12	130
360.00	12.31	V23	EL=12	130
361.00	12.29	V23	EL=12	130
362.00	12.29	V23	EL=12	130
363.00	12.30	V23	EL=12	130
364.00	12.31	V23	EL=12	130
365.00	12.28	V23	EL=12	130
366.00	12.20	V23	EL=12	130
367.00	12.12	V23	EL=12	130
368.00	12.04			

```
                                                                V23  EL=12     130
          369.00          11.99
                                                                V23  EL=12     130
          370.00          11.96
                                                                V23  EL=12     130
          371.00          11.93
                                                                V23  EL=12     130
          372.00          11.89
                                                                V23  EL=12     130
          373.00          11.81
                                                                V23  EL=12     130
          374.00          11.70
                                                                V23  EL=12     130
          375.00          11.59
                                                                V23  EL=12     130
          376.00          11.52
                                                                V23  EL=12     130
          376.34          11.50
                                                                V23  EL=11     130
          377.00          11.46
                                                                V23  EL=11     130
          378.00          11.41
                                                                V23  EL=11     130
          379.00          11.36
                                                                V23  EL=11     130
          379.74          11.33
                                                                A17  EL=11      85
          380.00          11.32
                                                                A17  EL=11      85
          381.00          11.28
                                                                A17  EL=11      85
          382.00          11.23
                                                                A17  EL=11      85
          383.00          11.14
                                                                A17  EL=11      85
          384.00          11.05
                                                                A17  EL=11      85
          385.00          10.96
                                                                A17  EL=11      85
          386.00          10.83
                                                                A17  EL=11      85
          387.00          10.70
                                                                A17  EL=11      85
          388.00          10.59
                                                                A17  EL=11      85
          388.85          10.50
                                                                A17  EL=10      85
          389.00          10.48
                                                                A17  EL=10      85
          390.00          10.36
                                                                A17  EL=10      85
          391.00          10.25
                                                                A17  EL=10      85
          392.00          10.15
                                                                A17  EL=10      85
          393.00          10.10
                                                                A17  EL=10      85
          394.00          10.05
                                                                A17  EL=10      85
          395.00          10.01
                                                                A17  EL=10      85
          396.00           9.94
                                                                A17  EL=10      85
          397.00           9.87
                                                                A17  EL=10      85
          398.00           9.79
                                                                A17  EL=10      85
          399.00           9.75
                                                                A17  EL=10      85
          400.00           9.72
                                                                A17  EL=10      85
          403.09           9.50
                                                                A17  EL= 9      85
          404.70           9.39
         1514.30           9.39
                                                                A17  EL= 9      85
         1550.63           9.50
                                                                A17  EL=10      85
         1847.13           9.50
                                                                A17  EL= 9      85
         1848.50           9.39
         2130.00           9.39
                          ZONE TERMINATED AT END OF TRANSECT
                          PART 7   POSTSCRIPT NOTES
PS#  1   START(364546.5562,4770948.4646)
PS#  2   END(363899.1929,4771000.183)
-1.000000e+00
```

YK-14
100-year WHAFIS Output
Zero Station: -70.66498721, 43.07920027
Onshore Dir: 175.4 deg CCW from E




Iterative TAW for YK-14
Two Percent Run-up Elevation is 22.2 Feet-NAVD88
Run-up Height is 12.5 Feet
Elevation (Feet-NAVD88)
Distance from zero NAVD88 shoreline (feet)
25
20
15
10
5
0
-5
20
40
60
80
100
120
140
160
180
200
220
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 Kittery, York county, Maine
% TRANSECT ID: YK-14
% calculation by SJH, Ransom Consulting, Inc. 16-Oct-2018
% 100-year wave runup using TAW methodology
% including berm and weighted average with foreshore if necessary
%
% chk nld 20181015
%
% This script assumes that the incident wave conditions provided
% as input in the configuration section below are the
% appropriate values located at the end of the foreshore
% or toe of the slope on which the run-up is being calculated
% the script does not attempt to apply a depth limit or any other
% transformation to the incident wave conditions other than
% conversion of the peak wave period to the spectral mean wave
% as recommended in the references below
%
%
% references:
%
% Van der Meer, J.W., 2002. Technical Report Wave Run-up and
% Wave Overtopping at Dikes. TAW Technical Advisory Committee on
% Flood Defence, The Netherlands.
%
% FEMA. 2007,  Atlantic Ocean and Gulf of Mexico Coastal Guidelines Update
%
%
%

%-----------------------------------------------------------------------
% CONFIG
%-----------------------------------------------------------------------
fname='inpfiles/YK-14sta_ele_include.csv';   % file with station, elevation, include
                                        % third colunm is 0 for excluded points
imgname='logfiles/YK-14-runup';
SWEL=9.0247;  % 100-yr still water level including wave setup.
H0=5.0464;    % significant wave height at toe of structure
Tp=13.8696;    % peak period, 1/fma,
T0=Tp/1.1;

gamma_berm=0.94586;   % this may get changed automatically below
gamma_rough=0.8;
gamma_beta=1;
gamma_perm=1;

setupAtToe=0.60275;
maxSetup=1.203;   % only used in case of berm/shallow foreshore weighted average

plotTitle='Iterative TAW for YK-14'

plotTitle =

Iterative TAW for YK-14



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

SWEL=SWEL+setupAtToe

SWEL =

                   9.62745

SWEL_fore=SWEL+maxSetup

SWEL_fore =

                  10.83045



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

L0 =

          813.473876807648


% 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 =
```

```
                    2.05785


% read the transect
[sta,dep,inc] = textread(fname,'%n%n%n%*[^\n]','delimiter',',','headerlines',0);

% remove unselected points
k=find(inc==0);
sta(k)=[];
dep(k)=[];

sta_org=sta;  % used for plotting purposes
dep_org=dep;


% initial guess at maximum run-up elevation to estimate slope
Z2=SWEL+1.5*H0

Z2 =

                   17.19705


% determine station at the max runup and -1.5*H0 (i.e. the toe)
top_sta=-999;
toe_sta=-999;
for kk=1:length(sta)-1
    if ((Z2 > dep(kk)) & (Z2 <= dep(kk+1)))    % here is the intersection of z2 with profile
       top_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Z2)
    end
    if  ((Ztoe > dep(kk)) & (Ztoe <= dep(kk+1)))    % here is the intersection of Ztoe with profile
       toe_sta=interp1(dep(kk:kk+1),sta(kk:kk+1),Ztoe)
    end
end
% check to make sure we got them, if not extend the end slopes outward
S=diff(dep)./diff(sta);
if toe_sta==-999
   dy=dep(1)-Ztoe;
   toe_sta=sta(1)-dy/S(1)
end

toe_sta =

                62.28984375

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

top_sta =

           163.491492652746


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

top_sta =

           163.491492652746

toe_sta

toe_sta =

                62.28984375



% check for case where the toe of slope is below SWL-1.5*H0
% in this case interpolate setup from the setupAtToe(really setup as first station), and the max setup
% also un-include points seaward of SWL-1.5*H0
if Ztoe > dep(1)
   dd=SWEL_fore-dep;
   k=find(dd<0,1); % k is index of first land point
   staAtSWL=interp1(dep(k-1:k),sta(k-1:k),SWEL_fore);
   dsta=staAtSWL-sta(1);
   dsetup=maxSetup-setupAtToe;
   dsetdsta=dsetup/dsta;
   setup=setupAtToe+dsetdsta*(toe_sta-sta(1));
   sprintf('-!!- Location of SWEL-1.5*H0 is %4.1f ft landward of toe of slope',dsta)
   sprintf('-!!- Setup is interpolated between setup at toe of slope and max setup')
   sprintf('-!!-       setup is adjusted to %4.2f feet',setup)
   SWEL=SWEL-setupAtToe+setup;
   sprintf('-!!-       SWEL is adjusted to %4.2f feet',SWEL)
   k=find(dep < SWEL-1.5*H0)
   sta(k)=[];
   dep(k)=[];
else
   sprintf('-!!- The User has selected a starting point that is %4.2f feet above the elevation of SWEL-1.5H0\n',de
   sprintf('-!!- This may be reasonable for some cases.  However the user may want to consider:\n')
   sprintf('-!!-   1) Selecting a starting point that is at or below %4.2f feet elevation, or\n', Ztoe)
   sprintf('-!!-   2) Reducing the incident wave height to a depth limited condition.\n')
```

```
end

ans =

-!!- The User has selected a starting point that is 1.13 feet above the elevation of SWEL-1.5H0


ans =

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


ans =

-!!-   1) Selecting a starting point that is at or below 2.06 feet elevation, or


ans =

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




% now iterate converge on a runup elevation
tol=0.001;  % convergence criteria
R2del=999;
R2_new=3*H0; %initial guess
R2=R2_new;
iter=0;
R2_all=[];
topStaAll=[];
Berm_Segs=[];
TAW_ALWAYS_VALID=1;
while(abs(R2del) > tol && iter <= 25)
    iter=iter+1;
    sprintf ('!----------------- STARTING ITERATION %d -----------------!',iter)
    % elevation of toe of slope
    Ztoe
    % station of toe slope (relative to 0-NAVD88 shoreline
    toe_sta
    % station of top of slope/extent of 2% run-up
    top_sta
    % elevation of top of slope/extent of 2% run-up
    Z2
    % incident significant wave height
    H0
    % incident spectral peak wave period
    Tp
    % incident spectral mean wave period
    T0

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

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

    % loop over profile segments to determine berm factor
    % re-calculate influence of depth of berm based on this run-up elevation
    % check for berm, berm width, berm height
    berm_width=0;
    rdh_sum=0;
    Berm_Segs=[];
    Berm_Heights=[];
    for kk=1:length(sta)-1
       ddep=dep(kk+1)-dep(kk);
       dsta=sta(kk+1)-sta(kk);
       s=ddep/dsta;
       if  (s < 1/15)     % count it as a berm if slope is flatter than 1:15 (see TAW manual)
          sprintf ('Berm Factor Calculation: Iteration %d, Profile Segment: %d',iter,kk)
          berm_width=berm_width+dsta;   % tally the width of all berm segments
          % compute the rdh for this segment and weight it by the segment length
          dh=SWEL-(dep(kk)+dep(kk+1))/2
          if  dh < 0
              chi=R2;
          else
              chi=2* H0;
          end
          if (dh <= R2 & dh >=-2*H0)
```

```
         rdh=(0.5-0.5*cos(3.14159*dh/chi)) ;
      else
         rdh=1;
      end
      rdh_sum=rdh_sum + rdh * dsta
      Berm_Segs=[Berm_Segs, kk];
      Berm_Heights=[Berm_Heights, (dep(kk)+dep(kk+1))/2];
   end
   if dep(kk) >= Z2  % jump out of loop if we reached limit of run-up for this iteration
      break
   end
end
sprintf ('!------- End Berm Factor Calculation, Iter: %d ---------!',iter)
berm_width
rB=berm_width/Lslope
if (berm_width > 0)
   rdh_mean=rdh_sum/berm_width
else
   rdh_mean=1
end
gamma_berm=1- rB * (1-rdh_mean)
if gamma_berm > 1
   gamma_berm=1
end
if gamma_berm < 0.6
   gamma_berm =0.6
end
% Iribarren number
slope=(Z2-Ztoe)/(Lslope-berm_width)
Irb=(slope/(sqrt(H0/L0)))
% runup height
gamma_berm
gamma_perm
gamma_beta
gamma_rough
gamma=gamma_berm*gamma_perm*gamma_beta*gamma_rough

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

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


% check to see if we need to evaluate a shallow foreshore
if berm_width > 0.25 * L0;
   disp ('!   Berm_width is greater than 1/4 wave length')
   disp ('!   Runup will be weighted average with foreshore calculation assuming depth limited wave height on
   % do the foreshore calculation
   fore_H0=0.78*(SWEL_fore-min(Berm_Heights))
   % get upper slope
   fore_toe_sta=-999;
   fore_toe_dep=-999;
   for kk=length(dep)-1:-1:1
      ddep=dep(kk+1)-dep(kk);
      dsta=sta(kk+1)-sta(kk);
      s=ddep/dsta;
      if s < 1/15
         break
      end
      fore_toe_sta=sta(kk);
      fore_toe_dep=dep(kk);
      upper_slope=(Z2-fore_toe_dep)/(top_sta-fore_toe_sta)
   end
   fore_Irb=upper_slope/(sqrt(fore_H0/L0));
   fore_gamma=gamma_perm*gamma_beta*gamma_rough;
   if (fore_Irb < 1.8)
      fore_R2=fore_gamma*fore_H0*1.77*fore_Irb;
   else
      fore_R2=fore_gamma*fore_H0*(4.3-(1.6/sqrt(fore_Irb)));
   end
   if berm_width >= L0
      R2_new=fore_R_2(i)
      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 =
                    2.05785
toe_sta =
                 62.28984375
top_sta =
           163.491492652746
Z2 =
                   17.19705
H0 =
                     5.0464
Tp =
                    13.8696
T0 =
           12.6087272727273
R2 =
                    15.1392
Z2 =
                   24.76665
top_sta =
           183.005800464037
Lslope =
           120.715956714037
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 1
dh =
                    6.40415
rdh_sum =
          0.705078441336681
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 5
dh =
                    6.12075
rdh_sum =
           1.36918535957689
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 6
dh =
                    6.10765
rdh_sum =
           2.03136504131019
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 7
dh =
                     6.1274
rdh_sum =
           2.69644924739887
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 8
dh =
                     6.1471
rdh_sum =
           3.36442440939487
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 14
dh =
                     5.4951
rdh_sum =
           3.93403045140461
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 15
dh =
                     5.4392
rdh_sum =
           4.49501109899534
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 61
dh =
                    -1.6858
rdh_sum =
           4.52529499276545
ans =
```

```
Berm Factor Calculation: Iteration 1, Profile Segment: 62
dh =
                   -1.7461
rdh_sum =
          4.55775993558207
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 63
dh =
                  -1.80575
rdh_sum =
          4.59245444305643
ans =
Berm Factor Calculation: Iteration 1, Profile Segment: 73
dh =
                   -3.6155
rdh_sum =
          4.72670049075932
ans =
!------- End Berm Factor Calculation, Iter: 1 ---------!
berm_width =
    11
rB =
        0.0911229989756681
rdh_mean =
          0.429700044614483
gamma_berm =
          0.948032557749582
slope =
          0.206978097627021
Irb =
           2.62787897714968
gamma_berm =
          0.948032557749582
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.8
gamma =
          0.758426046199666
ans =
!!! - - Iribaren number:   2.49 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:4.8 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          12.6799138320692
R2del =
          2.45928616793076
Z2 =
          22.3073638320692
ans =
!----------------- STARTING ITERATION 2 -----------------!
Ztoe =
                   2.05785
toe_sta =
                62.28984375
top_sta =
          176.665800031114
Z2 =
          22.3073638320692
H0 =
                    5.0464
Tp =
                   13.8696
T0 =
          12.6087272727273
R2 =
          12.6799138320692
Z2 =
          22.3073638320692
top_sta =
          176.665800031114
Lslope =
          114.375956281114
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 1
dh =
                   6.40415
rdh_sum =
          0.705078441336681
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 5
dh =
                   6.12075
rdh_sum =
          1.36918535957689
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 6
dh =
                   6.10765
rdh_sum =
          2.03136504131019
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 7
dh =
```

```
                    6.1274
rdh_sum =
          2.69644924739887
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 8
dh =
                    6.1471
rdh_sum =
          3.36442440939487
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 14
dh =
                    5.4951
rdh_sum =
          3.93403045140461
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 15
dh =
                    5.4392
rdh_sum =
          4.49501109899534
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 61
dh =
                   -1.6858
rdh_sum =
          4.53799399224344
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 62
dh =
                   -1.7461
rdh_sum =
          4.58405788429837
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 63
dh =
                  -1.80575
rdh_sum =
          4.63326925212787
ans =
Berm Factor Calculation: Iteration 2, Profile Segment: 73
dh =
                   -3.6155
rdh_sum =
          4.82081438782316
ans =
!------- End Berm Factor Calculation, Iter: 2 ---------!
berm_width =
    11
rB =
        0.0961740592836146
rdh_mean =
          0.438255853438469
gamma_berm =
          0.945974785146368
slope =
          0.195882239550984
Irb =
           2.48700140360081
gamma_berm =
          0.945974785146368
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                        0.8
gamma =
          0.756779828117094
ans =
!!! - - Iribaren number:   2.35 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.1 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
           12.5471026981632
R2del =
          0.132811133906046
Z2 =
           22.1745526981632
ans =
!----------------- STARTING ITERATION 3 -----------------!
Ztoe =
                    2.05785
toe_sta =
                62.28984375
top_sta =
          176.323415050691
Z2 =
          22.1745526981632
H0 =
                     5.0464
Tp =
                    13.8696
T0 =
          12.6087272727273
R2 =
```

```
          12.5471026981632
Z2 =
          22.1745526981632
top_sta =
          176.323415050691
Lslope =
          114.033571300691
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 1
dh =
                    6.40415
rdh_sum =
         0.705078441336681
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 5
dh =
                    6.12075
rdh_sum =
          1.36918535957689
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 6
dh =
                    6.10765
rdh_sum =
          2.03136504131019
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 7
dh =
                     6.1274
rdh_sum =
          2.69644924739887
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 8
dh =
                     6.1471
rdh_sum =
          3.36442440939487
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 14
dh =
                     5.4951
rdh_sum =
          3.93403045140461
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 15
dh =
                     5.4392
rdh_sum =
          4.49501109899534
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 61
dh =
                    -1.6858
rdh_sum =
          4.53889513675129
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 62
dh =
                    -1.7461
rdh_sum =
          4.58592370100266
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 63
dh =
                   -1.80575
rdh_sum =
          4.63616448915641
ans =
Berm Factor Calculation: Iteration 3, Profile Segment: 73
dh =
                    -3.6155
rdh_sum =
          4.82742483687506
ans =
!------- End Berm Factor Calculation, Iter: 3 ---------!
berm_width =
    11
rB =
        0.0964628212072255
rdh_mean =
          0.438856803352278
gamma_berm =
           0.94587054415012
slope =
          0.195244156290137
Irb =
           2.47890003632537
gamma_berm =
           0.94587054415012
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                        0.8
gamma =
```

```
         0.756696435320096
ans =
!!! - - Iribaren number:   2.34 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.1 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          12.5393945010368
R2del =
       0.00770819712635351
Z2 =
          22.1668445010368
ans =
!----------------- STARTING ITERATION 4 -----------------!
Ztoe =
                    2.05785
toe_sta =
               62.28984375
top_sta =
          176.303543441704
Z2 =
          22.1668445010368
H0 =
                     5.0464
Tp =
                    13.8696
T0 =
          12.6087272727273
R2 =
          12.5393945010368
Z2 =
          22.1668445010368
top_sta =
          176.303543441704
Lslope =
          114.013699691704
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 1
dh =
                    6.40415
rdh_sum =
         0.705078441336681
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 5
dh =
                    6.12075
rdh_sum =
          1.36918535957689
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 6
dh =
                    6.10765
rdh_sum =
          2.03136504131019
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 7
dh =
                     6.1274
rdh_sum =
          2.69644924739887
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 8
dh =
                     6.1471
rdh_sum =
          3.36442440939487
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 14
dh =
                     5.4951
rdh_sum =
          3.93403045140461
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 15
dh =
                     5.4392
rdh_sum =
          4.49501109899534
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 61
dh =
                    -1.6858
rdh_sum =
          4.53894830132819
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 62
dh =
                    -1.7461
rdh_sum =
          4.58603377669006
ans =
Berm Factor Calculation: Iteration 4, Profile Segment: 63
dh =
                   -1.80575
rdh_sum =
          4.63633529426494
ans =
```

```
Berm Factor Calculation: Iteration 4, Profile Segment: 73
dh =
                  -3.6155
rdh_sum =
          4.82781455033553
ans =
!------- End Berm Factor Calculation, Iter: 4 ---------!
berm_width =
    11
rB =
        0.0964796338487771
rdh_mean =
          0.438892231848684
gamma_berm =
          0.945864527979057
slope =
           0.19520699247982
Irb =
           2.47842818931854
gamma_berm =
          0.945864527979057
gamma_perm =
     1
gamma_beta =
     1
gamma_rough =
                       0.8
gamma =
          0.756691622383245
ans =
!!! - - Iribaren number:   2.34 is in the valid range (0.5-10), TAW RECOMMENDED - - !!!
ans =
!!! - - slope: 1:5.1 V:H is in the valid range (1:8 - 1:1), TAW RECOMMENDED - - !!!
R2_new =
          12.5389453716216
R2del =
      0.000449129415235561
Z2 =
          22.1663953716216
% final 2% runup elevation
Z2=R2_new+SWEL
Z2 =
          22.1663953716216
diary off
-1.000000e+00
```

PART 5: RUNUP2

for transect: YK-14

Station locations shifted by: -0.20 feet from their
original location to set the shoreline to
elevation 0 for RUNUP2 input

RUNUP2 INPUT CONVERSIONS
for transect: YK-14

Incident significant wave height: 12.28 feet

Peak wave period: 14.03 seconds

Mean wave height: 7.69 feet

Local Depth below SWEL: 15.46 feet

Mean wave height deshoaled using Hunt equation
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

Deepwater mean wave height: 4.59 feet

END RUNUP2 CONVERSIONS

RUNUP2 RESULTS
for transect: YK-14

RUNUP2 SWEL:
9.00
9.00
9.00
9.00
9.00
9.00
9.00
9.00
9.00

RUNUP2 deepwater mean wave heights:
4.37
4.37
4.37
4.59
4.59
4.59
4.82
4.82
4.82

RUNUP2 mean wave periods:
11.33
11.92
12.52
11.33
11.92
12.52
11.33
11.92
12.52

RUNUP2 runup above SWEL:
3.57
3.81

```
4.06
3.65
3.91
4.33
3.80
3.97
3.97

RUNUP2 Mean runup height above SWEL: 3.90 feet

RUNUP2 2-percent runup height above SWEL: 8.57 feet

RUNUP2 2-percent runup elevation: 17.57 feet-NAVD88

RUNUP2 Messages:
No Messages

_______________END RUNUP2 RESULTS_____________________


_________________ACES BEACH RUNUP_____________________

Incident significant wave height: 12.28 feet

Significant wave height deshoaled using Hunt equation

Deepwater significant wave height: 6.43 feet

Peak wave period: 14.03 seconds

Average beach Slope: 1:19.88 (H:V)

ACES RUNUP CALCULATED USING 'Aces_Beach_Runup.m'

ACES Beach 2-percent runup height above SWEL: 8.62 feet

ACES Beach 2-percent runup elevation: 17.62 feet-NAVD88

ACES BEACH RUNUP is valid

_____________END ACES BEACH RESULTS__________________

PART 5 COMPLETE_____________________________________________
```

```
  FEMA                                                    sjh            job 2
  RUNUP2 transect: YK-14                                                 1
3.00
  -6.43 -275.8 0.8
  -6.41 -252.8 0.8
  -0.91 -5.8   0.8
  -0.13 -1.8   0.8
  0.12  2.2    0.8
  0.18  28.2   0.8
  1.00  37.2   0.8
  1.16  46.2   0.8
  1.78  51.2   0.8
  2.65  73.2   0.8
  3.53  85.2   0.8
  3.56  89.2   0.8
  5.56  106.2  0.8
  7.73  116.2  0.8
  9.88  132.2  0.8
  11.18 139.2  0.8
  11.46 143.2  0.8
  12.42 146.2  0.8
  13.25 153.2  0.8
1 15.45 159.2  0.8
 9.0   4.37  11.33
 9.0   4.37  11.92
 9.0   4.37  12.52
 9.0   4.59  11.33
 9.0   4.59  11.92
 9.0   4.59  12.52
 9.0   4.82  11.33
 9.0   4.82  11.92
 9.0   4.82  12.52
```

CLIENT- FEMA ** WAVE RUNUP-VERSION 2.0 ** ENGINEERED BY sjh JOB job 2
PROJECT-RUNUP2 transect: YK-14 RUN 1 PAGE 1

****

CROSS SECTION PROFILE

	LENGTH	ELEV.	SLOPE	ROUGHNESS
1	-275.8	-6.4		
			.00	.80
2	-252.8	-6.4		
			44.91	.80
3	-5.8	-.9		
			5.13	.80
4	-1.8	-.1		
			16.00	.80
5	2.2	.1		
			433.33	.80
6	28.2	.2		
			10.98	.80
7	37.2	1.0		
			56.25	.80
8	46.2	1.2		
			8.06	.80
9	51.2	1.8		
			25.29	.80
10	73.2	2.7		
			13.64	.80
11	85.2	3.5		
			133.33	.80
12	89.2	3.6		
			8.50	.80
13	106.2	5.6		
			4.61	.80
14	116.2	7.7		
			7.44	.80
15	132.2	9.9		
			5.38	.80
16	139.2	11.2		
			14.29	.80
17	143.2	11.5		
			3.13	.80
18	146.2	12.4		
			8.43	.80
19	153.2	13.3		
			2.73	.80
20	159.2	15.5		

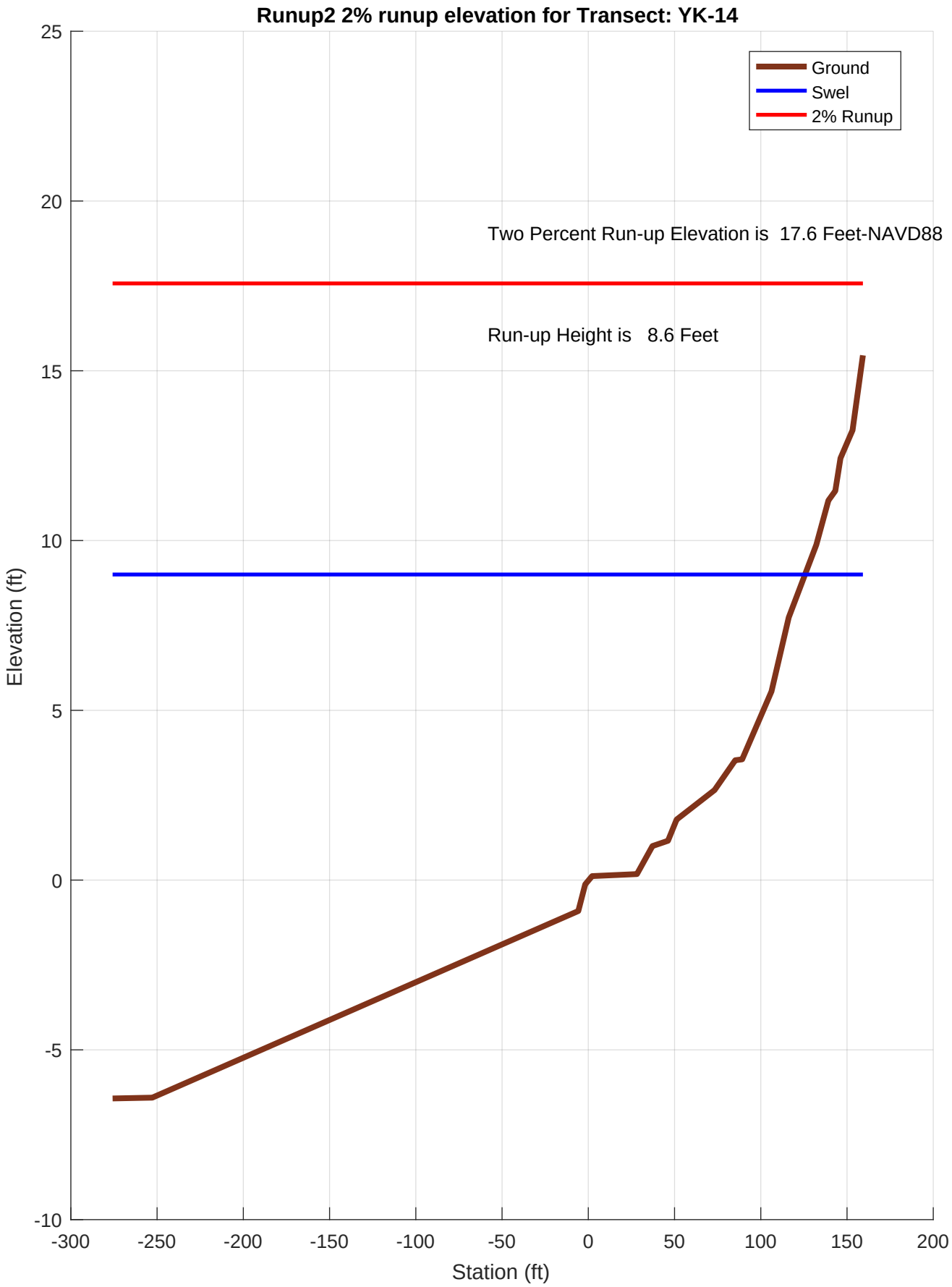
LAST SLOPE 3.00 LAST ROUGHNESS .80

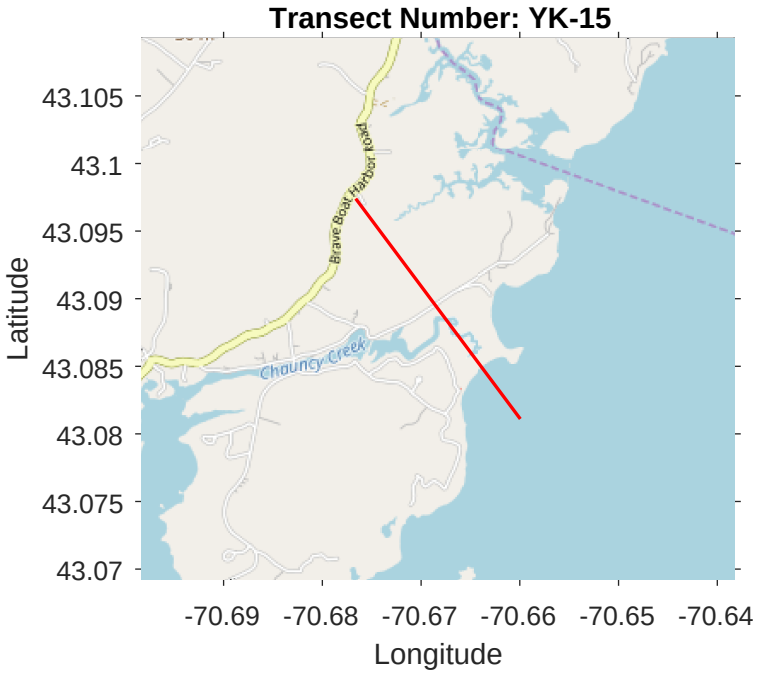
CLIENT- FEMA ** WAVE RUNUP-VERSION 2.0 ** ENGINEERED BY sjh JOB job 2
PROJECT-RUNUP2 transect: YK-14 RUN 1 PAGE 2

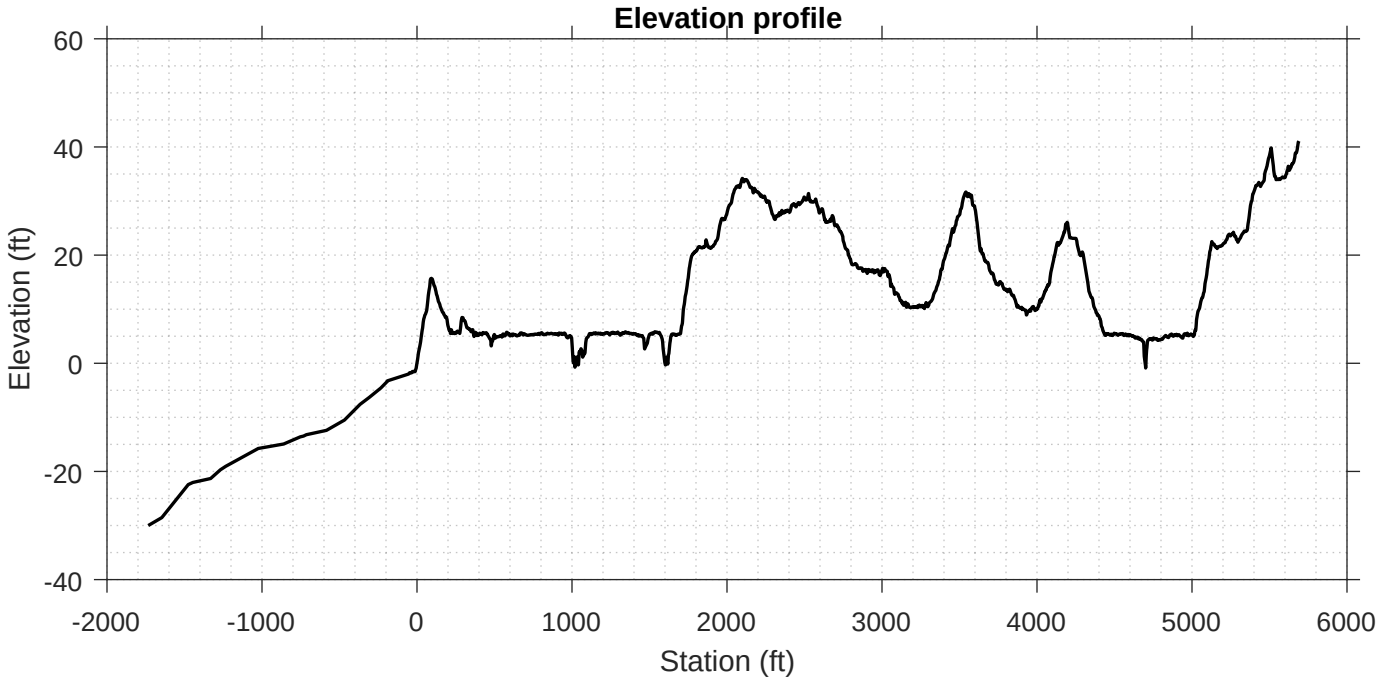
****

OUTPUT TABLE

INPUT PARAMETERS			RUNUP RESULTS			
WATER LEVEL ABOVE DATUM (FT.)	DEEP WATER WAVE HEIGHT (FT.)	WAVE PERIOD (SEC.)	BREAKING SLOPE NUMBER	RUNUP SLOPE NUMBER	RUNUP ABOVE WATER LEVEL (FT.)	BREAKER DEPTH (FT.)
9.00	4.37	11.33	5	18	3.57	9.23
9.00	4.37	11.92	5	18	3.81	9.45
9.00	4.37	12.52	5	18	4.06	9.68
9.00	4.59	11.33	5	18	3.65	9.58
9.00	4.59	11.92	5	18	3.91	9.81
9.00	4.59	12.52	2	19	4.33	9.97
9.00	4.82	11.33	5	18	3.80	9.95
9.00	4.82	11.92	2	18	3.97	10.11
9.00	4.82	12.52	2	18	3.97	10.35


Runup2 2% runup elevation for Transect: YK-14
Ground
Swel
2% Runup
Two Percent Run-up Elevation is 17.6 Feet-NAVD88
Run-up Height is 8.6 Feet
Elevation (ft)
Station (ft)
25
20
15
10
5
0
-5
-10
-300
-250
-200
-150
-100
-50
0
50
100
150
200


Transect Number: YK-15
Latitude
Longitude
43.105
43.1
43.095
43.09
43.085
43.08
43.075
43.07
-70.69
-70.68
-70.67
-70.66
-70.65
-70.64
Brave Boat Harbor Road
Chauncy Creek


Elevation profile
Elevation (ft)
Station (ft)
60
40
20
0
-20
-40
-2000
-1000
0
1000
2000
3000
4000
5000
6000

DATA LOG FOR TRANSECT ID: YK-15

PART 1: USER INPUT

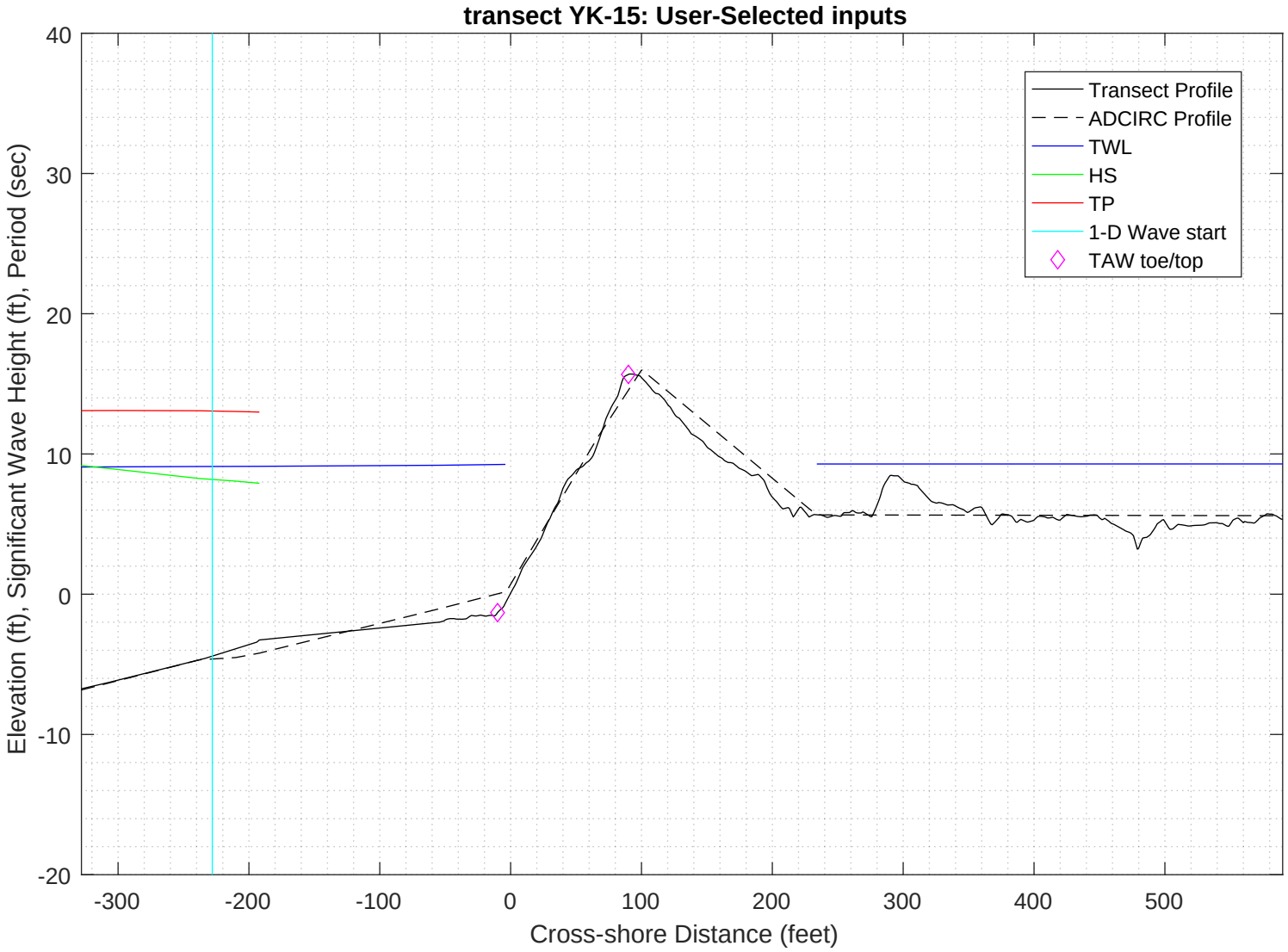
SWAN 1-D / WHAFIS input

station: -228 ft
LON: -70.6633 deg E
LAT: 43.0844 deg N
Bottom ELEV: -4.4141 ft-NAVD88
TWL: 9.1092 ft-NAVD88
HS: 8.1833 ft
TP: 13.0622 sec
Wave Direction bin: 135 deg CCW from East (90 deg sector)
Transect Direction: 135.6454 deg CCW from East

TAW/RUNUP input

toe sta: -10 ft
toe elev: -1.313 ft-NAVD88
top sta: 90 ft
top elev: 15.6725 ft-NAVD88
Wave and water level conditions at toe to be calculated in SWAN 1-D

PART 1 COMPLETE


transect YK-15: User-Selected inputs
Transect Profile
ADCIRC Profile
TWL
HS
TP
1-D Wave start
TAW toe/top
Elevation (ft), Significant Wave Height (ft), Period (sec)
Cross-shore Distance (feet)
40
30
20
10
0
-10
-20
-300
-200
-100
0
100
200
300
400
500

```
_____________________________________________________________________
PART 2: SWAN 1-D

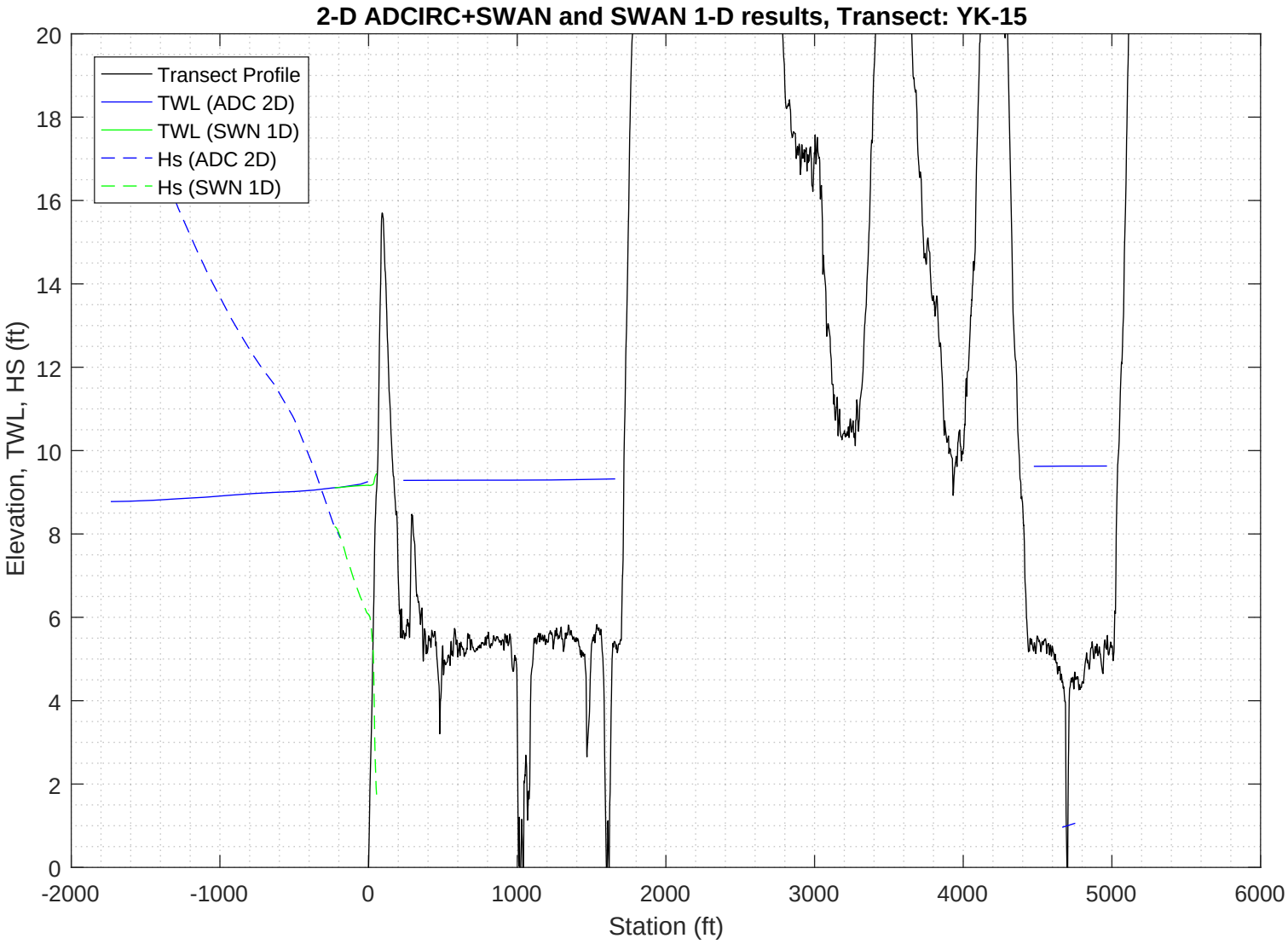
swan input grid name: 2_swan/gridfiles/YK-15zmeters_xmeters.grd
swan file name:       2_swan/swanfiles/YK-15.swn
swan output name:     2_swan/swanfiles/YK-15.dat

Boundary Conditions:
    TWL- 2.7765 meters
    HS-  2.4943 meters
    PER- 13.0622 seconds

Batch File: 2_swan/swanfiles/runswan.dat

SWAN maximum additional wave setup: 1.117 feet
SWAN output at toe:
    SETUP- 0.1933 feet
    HS-    6.1074 feet
    PER-   12.7859 seconds

PART 2 COMPLETE_____________________________________________
```


2-D ADCIRC+SWAN and SWAN 1-D results, Transect: YK-15
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
-2000
-1000
0
1000
2000
3000
4000
5000
6000

```
1

                    Execution started at 20181016.143020


                    ---------------------------------------
                                  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      86       0.   86     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      86   0      1       1

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

  READ    BOTTOM   -1. '../gridfiles/YK-15zmeters_xmeters.grd'    1      0       FREE

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

 ! -- WIND [vel] [dir]

 WIND      25.1  0

 ! -- BOUnd SHAPespec

 BOUND SHAPE JONSWAP 3.3  PEAK DSPR POWER

 ! -- BOUndspec

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

 BOUN SIDE W CCW CONSTANT PAR   2.4943     13.0622     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      86  86    0

 !TABLe 'sname' < HEADer|NOHEADer|INDexed > 'fname' <output parameters> (output time)

  Table 'curve'   HEADER 'YK-15.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              87 MYC              1
                      : MCGRD            88
                      : 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   4.60 % 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   1.15 % 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   4.60 % 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  19.55 % 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  91.96 % 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  97.71 % of wet grid points ( 99.50 % required)

iteration    8; sweep 1
iteration    8; sweep 2
iteration    8; sweep 3
iteration    8; sweep 4
accuracy OK in  98.86 % of wet grid points ( 99.50 % required)

iteration    9; sweep 1
iteration    9; sweep 2
iteration    9; sweep 3
iteration    9; sweep 4
accuracy OK in  98.86 % of wet grid points ( 99.50 % required)

iteration   10; sweep 1
iteration   10; sweep 2
iteration   10; sweep 3
iteration   10; sweep 4
accuracy OK in  98.86 % of wet grid points ( 99.50 % required)

iteration   11; sweep 1
iteration   11; sweep 2
iteration   11; sweep 3
iteration   11; sweep 4
accuracy OK in  98.86 % of wet grid points ( 99.50 % required)

iteration   12; sweep 1
iteration   12; sweep 2
iteration   12; sweep 3
iteration   12; sweep 4
accuracy OK in  98.86 % of wet grid points ( 99.50 % required)

iteration   13; sweep 1
iteration   13; sweep 2
iteration   13; sweep 3
iteration   13; sweep 4
accuracy OK in  98.86 % of wet grid points ( 99.50 % required)

iteration   14; sweep 1
iteration   14; sweep 2
iteration   14; sweep 3
iteration   14; sweep 4
accuracy OK in  98.86 % of wet grid points ( 99.50 % required)

iteration   15; sweep 1
iteration   15; sweep 2
iteration   15; sweep 3
iteration   15; sweep 4
accuracy OK in 100.00 % of wet grid points ( 99.50 % required)


STOP
```

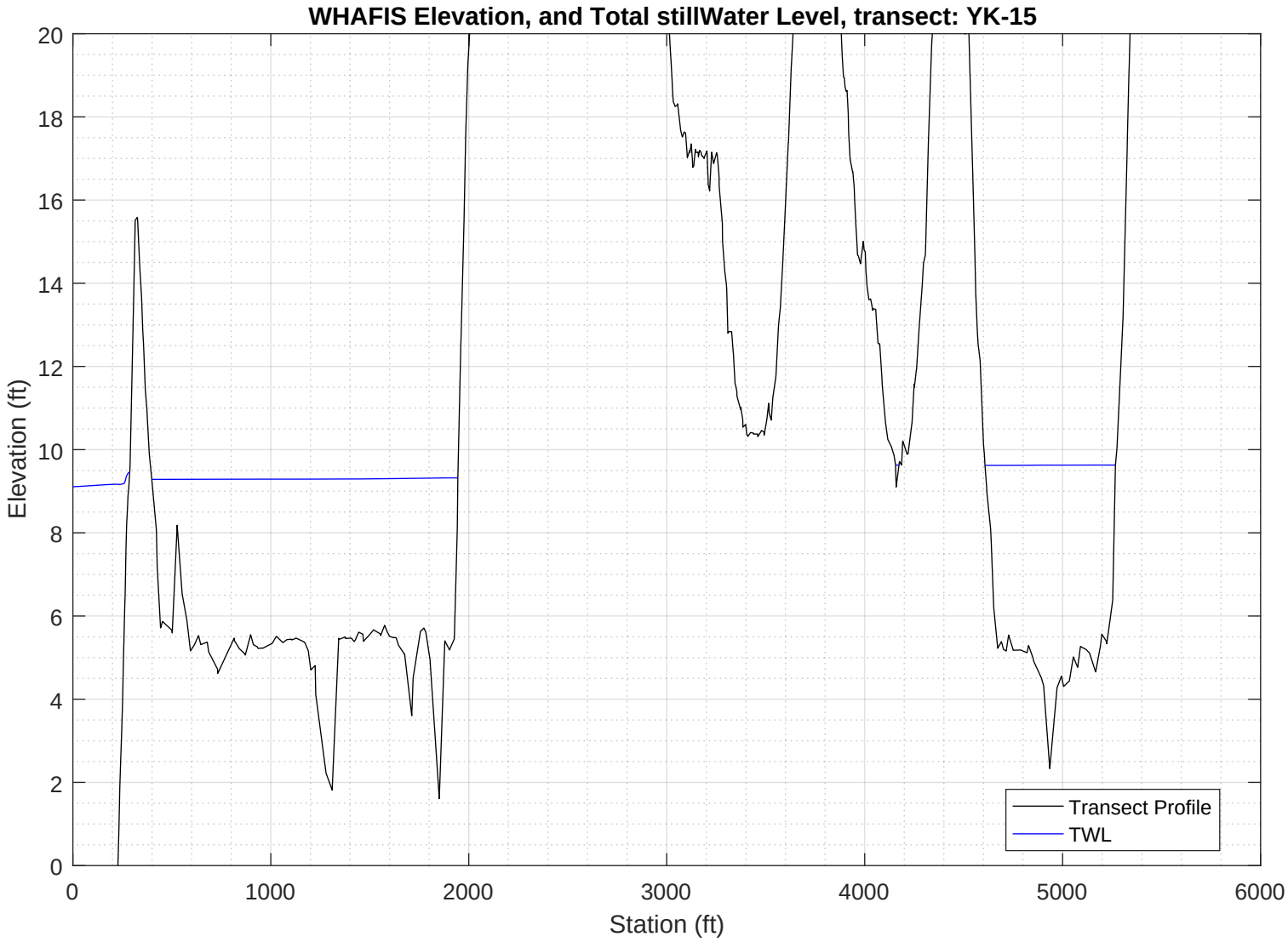
```
%
%
% Run:1     Table:curve             SWAN version:41.20A
%
%       Xp            Yp            Hsig          TPsmoo        RTpeak        Tm_10         Dir           Dspr          Depth         Setup
%      [m]           [m]            [m]           [sec]         [sec]         [sec]        [degr]        [degr]         [m]           [m]
%
          0.            0.       2.48968       12.7563       12.4477       11.7873         0.000        31.5057       4.1200      0.000000
          1.            0.       2.48957       12.7708       12.4477       11.4857         0.000        31.2621       4.0905      0.000471
          2.            0.       2.48812       12.7842       12.4477       11.2211         0.000        31.0179       4.0610      0.000980
          3.            0.       2.48496       12.7955       12.4477       11.0000         0.000        30.8087       4.0316      0.001559
          4.            0.       2.48045       12.8048       12.4477       10.8167         0.000        30.6212       4.0022      0.002182
          5.            0.       2.47344       12.8121       12.4477       10.6641         0.000        30.4358       3.9830      0.002973
          6.            0.       2.46679       12.8177       12.4477       10.5303         0.000        30.2336       3.9537      0.003666
          7.            0.       2.45922       12.8217       12.4477       10.4136         0.000        30.0251       3.9244      0.004397
          8.            0.       2.45082       12.8245       12.4477       10.3117         0.000        29.8142       3.8952      0.005163
          9.            0.       2.44169       12.8262       12.4477       10.2222         0.000        29.6026       3.8660      0.005961
         10.            0.       2.43120       12.8270       12.4477       10.1433         0.000        29.3376       3.8368      0.006795
         11.            0.       2.42373       12.8272       12.4477       10.0746         0.000        29.0889       3.7773      0.007254
         12.            0.       2.41099       12.8265       12.4477       10.0092         0.000        28.9383       3.7685      0.008456
         13.            0.       2.39848       12.8253       12.4477        9.9510         0.000        28.8213       3.7596      0.009649
         14.            0.       2.38600       12.8237       12.4477        9.8990         0.000        28.7166       3.7508      0.010828
         15.            0.       2.37650       12.8218       12.4477        9.8211         0.000        28.6288       3.7420      0.012008
         16.            0.       2.36760       12.8197       12.4477        9.7406         0.000        28.5611       3.7332      0.013194
         17.            0.       2.35731       12.8174       12.4477        9.6641         0.000        28.4987       3.7345      0.014512
         18.            0.       2.34747       12.8150       12.4477        9.5952         0.000        28.4191       3.7257      0.015684
         19.            0.       2.33583       12.8125       12.4477        9.5391       359.989        28.3461       3.7169      0.016929
         20.            0.       2.32297       12.8099       12.4477        9.4928       359.959        28.2736       3.7082      0.018211
         21.            0.       2.30977       12.8073       12.4477        9.4516       359.920        28.1968       3.6995      0.019480
         22.            0.       2.29658       12.8047       12.4477        9.4134       359.884        28.1187       3.6907      0.020723
         23.            0.       2.28330       12.8020       12.4477        9.3789       359.843        28.0373       3.6819      0.021945
         24.            0.       2.27006       12.7993       12.4477        9.3469       359.803        27.9548       3.6731      0.023143
         25.            0.       2.25825       12.7966       12.4477        9.3102       359.792        27.8677       3.6642      0.024241
         26.            0.       2.24660       12.7939       12.4477        9.2711       359.790        27.7869       3.6554      0.025370
         27.            0.       2.23719       12.7915       12.4477        9.2161       359.801        27.7065       3.6464      0.026447
         28.            0.       2.22825       12.7893       12.4477        9.1589       359.809        27.6284       3.6375      0.027504
         29.            0.       2.21936       12.7875       12.4477        9.1038       359.813        27.5651       3.6285      0.028547
         30.            0.       2.20926       12.7859       12.4477        9.0512       359.817        27.5069       3.6297      0.029701
         31.            0.       2.19941       12.7847       12.4477        9.0059       359.818        27.4381       3.6207      0.030730
         32.            0.       2.18838       12.7837       12.4477        8.9689       359.806        27.3724       3.6118      0.031794
         33.            0.       2.17703       12.7828       12.4477        8.9356       359.790        27.3051       3.6029      0.032851
         34.            0.       2.16544       12.7821       12.4477        8.9056       359.768        27.2353       3.5939      0.033898
         35.            0.       2.15384       12.7815       12.4477        8.8776       359.746        27.1651       3.5849      0.034927
         36.            0.       2.14229       12.7811       12.4477        8.8512       359.726        27.0956       3.5759      0.035937
         37.            0.       2.13082       12.7807       12.4477        8.8264       359.706        27.0261       3.5669      0.036927
         38.            0.       2.12015       12.7804       12.4477        8.7989       359.702        26.9530       3.5579      0.037863
         39.            0.       2.10973       12.7802       12.4477        8.7717       359.702        26.8791       3.5488      0.038773
         40.            0.       2.09986       12.7801       12.4477        8.7416       359.703        26.8066       3.5397      0.039667
         41.            0.       2.09011       12.7800       12.4477        8.7119       359.705        26.7347       3.5306      0.040550
         42.            0.       2.08048       12.7800       12.4477        8.6835       359.707        26.6766       3.5214      0.041424
         43.            0.       2.07010       12.7800       12.4477        8.6548       359.708        26.6248       3.5224      0.042394
         44.            0.       2.06050       12.7801       12.4477        8.6297       359.709        26.5612       3.5132      0.043230
         45.            0.       2.05085       12.7802       12.4477        8.6059       359.711        26.4945       3.5041      0.044056
         46.            0.       2.04119       12.7803       12.4477        8.5833       359.712        26.4274       3.4949      0.044871
         47.            0.       2.03155       12.7805       12.4477        8.5619       359.713        26.3605       3.4857      0.045675
         48.            0.       2.02193       12.7807       12.4477        8.5416       359.714        26.2942       3.4765      0.046469
         49.            0.       2.01235       12.7809       12.4477        8.5222       359.715        26.2285       3.4673      0.047252
         50.            0.       2.00282       12.7811       12.4477        8.5037       359.716        26.1634       3.4580      0.048025
         51.            0.       1.99333       12.7814       12.4477        8.4861       359.717        26.0988       3.4488      0.048787
         52.            0.       1.98392       12.7816       12.4477        8.4692       359.718        26.0349       3.4395      0.049537
         53.            0.       1.97434       12.7819       12.4477        8.4529       359.719        25.9460       3.4303      0.050276
         54.            0.       1.96597       12.7822       12.4477        8.4406       359.724        25.8078       3.4008      0.050791
         55.            0.       1.95862       12.7826       12.4477        8.4291       359.735        25.6876       3.3612      0.051203
         56.            0.       1.94858       12.7829       12.4477        8.4101       359.742        25.6494       3.3621      0.052074
         57.            0.       1.93823       12.7831       12.4477        8.3899       359.748        25.6397       3.3730      0.053024
```

58.	0.	1.92881	12.7834	12.4477	8.3726	359.756	25.6060	3.3738	0.053826
59.	0.	1.91978	12.7837	12.4477	8.3575	359.765	25.4956	3.3645	0.054492
60.	0.	1.91399	12.7842	12.4477	8.3487	359.785	25.3552	3.3147	0.054715
61.	0.	1.90516	12.7845	12.4477	8.3315	359.803	25.2643	3.3054	0.055402
62.	0.	1.89662	12.7848	12.4477	8.3147	359.824	25.2020	3.2961	0.056082
63.	0.	1.88769	12.7851	12.4477	8.2968	359.843	25.1825	3.2969	0.056861
64.	0.	1.87820	12.7853	12.4477	8.2776	359.860	25.1610	3.3077	0.057717
65.	0.	1.87035	12.7856	12.4477	8.2629	359.881	25.1097	3.2983	0.058328
66.	0.	1.86153	12.7859	12.4477	8.2480	359.903	24.9217	3.2889	0.058919
67.	0.	1.85924	12.7866	12.4477	8.2519	359.946	24.5662	3.1784	0.058436
68.	0.	1.85390	12.7873	12.4477	8.2524	359.991	24.0567	3.0781	0.058128
69.	0.	1.85298	12.7884	12.4477	8.2671	0.054	23.3936	2.8969	0.056910
70.	0.	1.84815	12.7896	12.4477	8.2764	0.123	22.6869	2.7260	0.056005
71.	0.	1.84157	12.7910	12.4477	8.2837	0.205	21.8632	2.5350	0.055030
72.	0.	1.83378	12.7928	12.4477	8.2888	0.302	21.0040	2.3139	0.053920
73.	0.	1.81316	12.7945	12.4477	8.2725	0.392	20.2213	2.1549	0.054865
74.	0.	1.78421	12.7962	12.4477	8.2470	0.482	19.5214	2.0173	0.057257
75.	0.	1.75010	12.7976	12.4477	8.2169	0.584	18.8153	1.8805	0.060535
76.	0.	1.70835	12.7989	12.4477	8.2047	0.622	18.0050	1.7249	0.064872
77.	0.	1.66171	12.8005	12.4477	8.2168	0.595	17.0330	1.5399	0.069942
78.	0.	1.62200	12.8023	12.4477	8.2320	0.564	15.9441	1.3140	0.074009
79.	0.	1.57526	12.8043	12.4477	8.2090	0.550	14.9748	1.1312	0.081175
80.	0.	1.43136	12.8202	12.4477	8.5955	0.423	14.4070	0.9720	0.111989
81.	0.	1.21861	12.9892	12.4477	9.1880	359.573	13.9771	0.8227	0.162694
82.	0.	0.95624	13.2431	13.8874	9.9634	358.739	13.7279	0.6383	0.228292
83.	0.	0.79631	13.5278	13.8874	10.2339	358.243	13.2540	0.5295	0.269519
84.	0.	0.69343	13.9603	13.8874	9.9548	357.647	12.5786	0.4664	0.296399
85.	0.	0.58337	16.8312	17.2856	10.2083	357.513	12.7351	0.3854	0.325405
86.	0.	0.52711	16.8963	17.2856	10.1753	357.878	13.1058	0.3505	0.340473

```
PART 3: WHAFIS

WHAFIS input:  YK-15.dat
WHAFIS output: YK-15.out

PART 3 COMPLETE
```


WHAFIS Elevation, and Total stillWater Level, transect: YK-15
Elevation (ft)
Station (ft)
0
2
4
6
8
10
12
14
16
18
20
0
1000
2000
3000
4000
5000
6000
Transect Profile
TWL

```
WAVE HEIGHT COMPUTATIONS FOR FLOOD INSURANCE STUDIES (WHAFIS VERSION 4.0G, 08_2007)
Executed on: Tue Oct 16 14:32:51 2018
Input file:  C:\0_PROJECTS\171.06084-Kittery-2017-FEMA\modeling\transect_analysis\3_whafis\whafis4\YK-15.dat
Output file: C:\0_PROJECTS\171.06084-Kittery-2017-FEMA\modeling\transect_analysis\3_whafis\whafis4\YK-15.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	-4.414	1.000	1.000	9.109	13.093	13.062	56.140	0.029	0.000
OF	1.000	-4.385	0.000	9.109	0.000	0.000	0.000	0.000	0.029	0.000
OF	2.000	-4.356	0.000	9.109	0.000	0.000	0.000	0.000	0.029	0.000
OF	3.000	-4.326	0.000	9.110	0.000	0.000	0.000	0.000	0.029	0.000
OF	4.000	-4.297	0.000	9.110	0.000	0.000	0.000	0.000	0.029	0.000
OF	5.000	-4.268	0.000	9.110	0.000	0.000	0.000	0.000	0.029	0.000
OF	6.000	-4.238	0.000	9.110	0.000	0.000	0.000	0.000	0.029	0.000
OF	7.000	-4.209	0.000	9.110	0.000	0.000	0.000	0.000	0.029	0.000
OF	8.000	-4.180	0.000	9.110	0.000	0.000	0.000	0.000	0.029	0.000
OF	9.000	-4.150	0.000	9.111	0.000	0.000	0.000	0.000	0.029	0.000
OF	10.000	-4.121	0.000	9.111	0.000	0.000	0.000	0.000	0.029	0.000
OF	11.000	-4.092	0.000	9.111	0.000	0.000	0.000	0.000	0.029	0.000
OF	12.000	-4.063	0.000	9.111	0.000	0.000	0.000	0.000	0.029	0.000
OF	13.000	-4.033	0.000	9.111	0.000	0.000	0.000	0.000	0.029	0.000
OF	14.000	-4.004	0.000	9.112	0.000	0.000	0.000	0.000	0.029	0.000
OF	15.000	-3.975	0.000	9.112	0.000	0.000	0.000	0.000	0.029	0.000
OF	16.000	-3.945	0.000	9.112	0.000	0.000	0.000	0.000	0.029	0.000
OF	17.000	-3.916	0.000	9.112	0.000	0.000	0.000	0.000	0.029	0.000
OF	18.000	-3.887	0.000	9.113	0.000	0.000	0.000	0.000	0.029	0.000
OF	19.000	-3.858	0.000	9.113	0.000	0.000	0.000	0.000	0.029	0.000
OF	20.000	-3.828	0.000	9.113	0.000	0.000	0.000	0.000	0.029	0.000
OF	21.000	-3.799	0.000	9.113	0.000	0.000	0.000	0.000	0.029	0.000
OF	22.000	-3.770	0.000	9.113	0.000	0.000	0.000	0.000	0.029	0.000
OF	23.000	-3.741	0.000	9.114	0.000	0.000	0.000	0.000	0.029	0.000
OF	24.000	-3.711	0.000	9.114	0.000	0.000	0.000	0.000	0.029	0.000
OF	25.000	-3.682	0.000	9.114	0.000	0.000	0.000	0.000	0.029	0.000
OF	26.000	-3.653	0.000	9.114	0.000	0.000	0.000	0.000	0.029	0.000
OF	27.000	-3.623	0.000	9.115	0.000	0.000	0.000	0.000	0.029	0.000
OF	28.000	-3.594	0.000	9.115	0.000	0.000	0.000	0.000	0.029	0.000
OF	29.000	-3.565	0.000	9.115	0.000	0.000	0.000	0.000	0.029	0.000
OF	30.000	-3.536	0.000	9.115	0.000	0.000	0.000	0.000	0.029	0.000
OF	31.000	-3.506	0.000	9.116	0.000	0.000	0.000	0.000	0.029	0.000
OF	32.000	-3.477	0.000	9.116	0.000	0.000	0.000	0.000	0.029	0.000
OF	33.000	-3.448	0.000	9.116	0.000	0.000	0.000	0.000	0.029	0.000
OF	34.000	-3.418	0.000	9.116	0.000	0.000	0.000	0.000	0.053	0.000
OF	35.000	-3.341	0.000	9.116	0.000	0.000	0.000	0.000	0.078	0.000
OF	36.000	-3.262	0.000	9.116	0.000	0.000	0.000	0.000	0.010	0.000
OF	174.000	-1.988	0.000	9.160	0.000	0.000	0.000	0.000	0.009	0.000
OF	175.000	-1.959	0.000	9.160	0.000	0.000	0.000	0.000	0.027	0.000
OF	176.000	-1.934	0.000	9.160	0.000	0.000	0.000	0.000	0.027	0.000
OF	177.000	-1.905	0.000	9.160	0.000	0.000	0.000	0.000	0.048	0.000
OF	178.000	-1.839	0.000	9.160	0.000	0.000	0.000	0.000	0.056	0.000
OF	179.000	-1.793	0.000	9.160	0.000	0.000	0.000	0.000	0.034	0.000
OF	180.000	-1.772	0.000	9.160	0.000	0.000	0.000	0.000	0.021	0.000
OF	181.000	-1.751	0.000	9.160	0.000	0.000	0.000	0.000	0.016	0.000
OF	182.000	-1.740	0.000	9.161	0.000	0.000	0.000	0.000	0.005	0.000
OF	183.000	-1.740	0.000	9.161	0.000	0.000	0.000	0.000	0.000	0.000
OF	184.000	-1.740	0.000	9.161	0.000	0.000	0.000	0.000	0.000	0.000
OF	185.000	-1.740	0.000	9.162	0.000	0.000	0.000	0.000	-0.015	0.000
OF	186.000	-1.769	0.000	9.162	0.000	0.000	0.000	0.000	-0.017	0.000
OF	187.000	-1.775	0.000	9.162	0.000	0.000	0.000	0.000	-0.003	0.000
OF	188.000	-1.776	0.000	9.162	0.000	0.000	0.000	0.000	-0.001	0.000
OF	189.000	-1.777	0.000	9.163	0.000	0.000	0.000	0.000	-0.002	0.000
OF	190.000	-1.779	0.000	9.163	0.000	0.000	0.000	0.000	-0.003	0.000
OF	191.000	-1.783	0.000	9.163	0.000	0.000	0.000	0.000	0.003	0.000
OF	192.000	-1.774	0.000	9.163	0.000	0.000	0.000	0.000	0.009	0.000
OF	193.000	-1.765	0.000	9.163	0.000	0.000	0.000	0.000	0.009	0.000
OF	194.000	-1.756	0.000	9.164	0.000	0.000	0.000	0.000	0.033	0.000
OF	195.000	-1.699	0.000	9.164	0.000	0.000	0.000	0.000	0.064	0.000
OF	196.000	-1.628	0.000	9.164	0.000	0.000	0.000	0.000	0.065	0.000
OF	197.000	-1.569	0.000	9.164	0.000	0.000	0.000	0.000	0.056	0.000
OF	198.000	-1.516	0.000	9.164	0.000	0.000	0.000	0.000	0.021	0.000
OF	199.000	-1.528	0.000	9.164	0.000	0.000	0.000	0.000	-0.012	0.000
OF	200.000	-1.540	0.000	9.165	0.000	0.000	0.000	0.000	-0.012	0.000
OF	201.000	-1.551	0.000	9.165	0.000	0.000	0.000	0.000	-0.006	0.000
OF	202.000	-1.551	0.000	9.165	0.000	0.000	0.000	0.000	0.010	0.000
OF	203.000	-1.531	0.000	9.165	0.000	0.000	0.000	0.000	0.020	0.000
OF	204.000	-1.510	0.000	9.165	0.000	0.000	0.000	0.000	0.020	0.000
OF	205.000	-1.490	0.000	9.166	0.000	0.000	0.000	0.000	0.001	0.000
OF	206.000	-1.507	0.000	9.166	0.000	0.000	0.000	0.000	-0.022	0.000
OF	207.000	-1.533	0.000	9.166	0.000	0.000	0.000	0.000	-0.024	0.000
OF	208.000	-1.554	0.000	9.166	0.000	0.000	0.000	0.000	-0.016	0.000
OF	209.000	-1.565	0.000	9.167	0.000	0.000	0.000	0.000	0.004	0.000
OF	210.000	-1.546	0.000	9.167	0.000	0.000	0.000	0.000	0.019	0.000
OF	211.000	-1.528	0.000	9.167	0.000	0.000	0.000	0.000	0.019	0.000
OF	212.000	-1.509	0.000	9.167	0.000	0.000	0.000	0.000	0.012	0.000
OF	213.000	-1.503	0.000	9.167	0.000	0.000	0.000	0.000	-0.006	0.000
OF	214.000	-1.520	0.000	9.168	0.000	0.000	0.000	0.000	-0.017	0.000
OF	215.000	-1.537	0.000	9.168	0.000	0.000	0.000	0.000	-0.009	0.000
OF	216.000	-1.538	0.000	9.168	0.000	0.000	0.000	0.000	0.045	0.000
OF	217.000	-1.446	0.000	9.168	0.000	0.000	0.000	0.000	0.113	0.000
OF	218.000	-1.313	0.000	9.168	0.000	0.000	0.000	0.000	0.120	0.000
OF	219.000	-1.206	0.000	9.168	0.000	0.000	0.000	0.000	0.100	0.000
OF	220.000	-1.113	0.000	9.168	0.000	0.000	0.000	0.000	0.081	0.000
OF	221.000	-1.044	0.000	9.167	0.000	0.000	0.000	0.000	0.076	0.000
OF	222.000	-0.960	0.000	9.167	0.000	0.000	0.000	0.000	0.111	0.000
OF	223.000	-0.823	0.000	9.167	0.000	0.000	0.000	0.000	0.165	0.000
OF	224.000	-0.630	0.000	9.167	0.000	0.000	0.000	0.000	0.185	0.000
OF	225.000	-0.454	0.000	9.167	0.000	0.000	0.000	0.000	0.177	0.000
OF	226.000	-0.277	0.000	9.166	0.000	0.000	0.000	0.000	0.177	0.000
OF	227.000	-0.100	0.000	9.166	0.000	0.000	0.000	0.000	0.176	0.000
IF	228.000	0.076	0.000	9.166	0.000	0.000	0.000	0.000	0.176	0.000
IF	229.000	0.251	0.000	9.165	0.000	0.000	0.000	0.000	0.172	0.000
IF	230.000	0.421	0.000	9.165	0.000	0.000	0.000	0.000	0.163	0.000
IF	231.000	0.578	0.000	9.165	0.000	0.000	0.000	0.000	0.169	0.000
IF	232.000	0.758	0.000	9.165	0.000	0.000	0.000	0.000	0.197	0.000
IF	233.000	0.972	0.000	9.164	0.000	0.000	0.000	0.000	0.214	0.000
IF	234.000	1.186	0.000	9.164	0.000	0.000	0.000	0.000	0.214	0.000
IF	235.000	1.400	0.000	9.163	0.000	0.000	0.000	0.000	0.221	0.000
IF	236.000	1.629	0.000	9.163	0.000	0.000	0.000	0.000	0.230	0.000
IF	237.000	1.861	0.000	9.163	0.000	0.000	0.000	0.000	0.191	0.000

IF	238.000	2.011	0.000	9.164	0.000	0.000	0.000	0.000	0.148	0.000
IF	239.000	2.157	0.000	9.164	0.000	0.000	0.000	0.000	0.145	0.000
IF	240.000	2.302	0.000	9.164	0.000	0.000	0.000	0.000	0.145	0.000
IF	241.000	2.447	0.000	9.165	0.000	0.000	0.000	0.000	0.144	0.000
IF	242.000	2.590	0.000	9.166	0.000	0.000	0.000	0.000	0.137	0.000
IF	243.000	2.721	0.000	9.167	0.000	0.000	0.000	0.000	0.135	0.000
IF	244.000	2.861	0.000	9.168	0.000	0.000	0.000	0.000	0.139	0.000
IF	245.000	3.000	0.000	9.169	0.000	0.000	0.000	0.000	0.140	0.000
IF	246.000	3.140	0.000	9.170	0.000	0.000	0.000	0.000	0.141	0.000
IF	247.000	3.282	0.000	9.171	0.000	0.000	0.000	0.000	0.152	0.000
IF	248.000	3.444	0.000	9.172	0.000	0.000	0.000	0.000	0.162	0.000
IF	249.000	3.606	0.000	9.174	0.000	0.000	0.000	0.000	0.162	0.000
IF	250.000	3.768	0.000	9.175	0.000	0.000	0.000	0.000	0.161	0.000
IF	251.000	3.928	0.000	9.177	0.000	0.000	0.000	0.000	0.181	0.000
IF	252.000	4.130	0.000	9.178	0.000	0.000	0.000	0.000	0.218	0.000
IF	253.000	4.364	0.000	9.180	0.000	0.000	0.000	0.000	0.232	0.000
IF	254.000	4.594	0.000	9.181	0.000	0.000	0.000	0.000	0.230	0.000
IF	255.000	4.824	0.000	9.182	0.000	0.000	0.000	0.000	0.230	0.000
IF	256.000	5.054	0.000	9.183	0.000	0.000	0.000	0.000	0.204	0.000
IF	257.000	5.232	0.000	9.186	0.000	0.000	0.000	0.000	0.173	0.000
IF	258.000	5.399	0.000	9.188	0.000	0.000	0.000	0.000	0.192	0.000
IF	259.000	5.616	0.000	9.190	0.000	0.000	0.000	0.000	0.216	0.000
IF	260.000	5.832	0.000	9.198	0.000	0.000	0.000	0.000	0.208	0.000
IF	261.000	6.033	0.000	9.207	0.000	0.000	0.000	0.000	0.189	0.000
IF	262.000	6.210	0.000	9.217	0.000	0.000	0.000	0.000	0.161	0.000
IF	263.000	6.354	0.000	9.229	0.000	0.000	0.000	0.000	0.144	0.000
IF	264.000	6.498	0.000	9.245	0.000	0.000	0.000	0.000	0.191	0.000
IF	265.000	6.736	0.000	9.260	0.000	0.000	0.000	0.000	0.256	0.000
IF	266.000	7.010	0.000	9.277	0.000	0.000	0.000	0.000	0.273	0.000
IF	267.000	7.283	0.000	9.297	0.000	0.000	0.000	0.000	0.271	0.000
IF	268.000	7.552	0.000	9.317	0.000	0.000	0.000	0.000	0.230	0.000
IF	269.000	7.744	0.000	9.337	0.000	0.000	0.000	0.000	0.183	0.000
IF	270.000	7.918	0.000	9.350	0.000	0.000	0.000	0.000	0.175	0.000
IF	271.000	8.093	0.000	9.362	0.000	0.000	0.000	0.000	0.158	0.000
IF	272.000	8.234	0.000	9.375	0.000	0.000	0.000	0.000	0.111	0.000
IF	273.000	8.316	0.000	9.384	0.000	0.000	0.000	0.000	0.084	0.000
IF	274.000	8.401	0.000	9.392	0.000	0.000	0.000	0.000	0.088	0.000
IF	275.000	8.492	0.000	9.401	0.000	0.000	0.000	0.000	0.100	0.000
IF	276.000	8.601	0.000	9.409	0.000	0.000	0.000	0.000	0.113	0.000
IF	277.000	8.717	0.000	9.418	0.000	0.000	0.000	0.000	0.116	0.000
IF	278.000	8.833	0.000	9.427	0.000	0.000	0.000	0.000	0.100	0.000
IF	279.000	8.917	0.000	9.435	0.000	0.000	0.000	0.000	0.065	0.000
IF	280.000	8.964	0.000	9.440	0.000	0.000	0.000	0.000	0.047	0.000
IF	281.000	9.011	0.000	9.444	0.000	0.000	0.000	0.000	0.047	0.000
IF	282.000	9.058	0.000	9.449	0.000	0.000	0.000	0.000	0.072	0.000
IF	287.100	9.449	0.000	9.449	0.000	0.000	0.000	0.000	0.077	0.000
AS	398.700	9.449	0.000	9.449	0.000	0.000	0.000	0.000	-0.060	0.000
IF	422.000	8.062	0.000	9.285	0.000	0.000	0.000	0.000	-0.083	0.000
IF	426.000	7.187	0.000	9.285	0.000	0.000	0.000	0.000	-0.112	0.000
IF	443.000	5.713	0.000	9.285	0.000	0.000	0.000	0.000	-0.049	0.000
IF	453.000	5.870	0.000	9.285	0.000	0.000	0.000	0.000	-0.001	0.000
IF	501.000	5.653	0.000	9.285	0.000	0.000	0.000	0.000	-0.006	0.000
IF	502.000	5.593	0.000	9.285	0.000	0.000	0.000	0.000	0.097	0.000
IF	527.000	8.182	0.000	9.286	0.000	0.000	0.000	0.000	0.085	0.000
IF	530.000	7.977	0.000	9.286	0.000	0.000	0.000	0.000	-0.066	0.000
IF	552.000	6.536	0.000	9.286	0.000	0.000	0.000	0.000	-0.045	0.000
IF	576.000	5.898	0.000	9.286	0.000	0.000	0.000	0.000	-0.033	0.000
IF	594.000	5.161	0.000	9.286	0.000	0.000	0.000	0.000	-0.016	0.000
IF	613.000	5.299	0.000	9.287	0.000	0.000	0.000	0.000	0.009	0.000
IF	635.000	5.531	0.000	9.287	0.000	0.000	0.000	0.000	0.000	0.000
IF	646.000	5.312	0.000	9.287	0.000	0.000	0.000	0.000	-0.004	0.000
IF	679.000	5.374	0.000	9.288	0.000	0.000	0.000	0.000	-0.004	0.000
IF	686.000	5.137	0.000	9.288	0.000	0.000	0.000	0.000	-0.013	0.000
IF	731.000	4.722	0.000	9.288	0.000	0.000	0.000	0.000	-0.011	0.000
IF	732.000	4.620	0.000	9.288	0.000	0.000	0.000	0.000	0.009	0.000
IF	815.000	5.469	0.000	9.289	0.000	0.000	0.000	0.000	0.009	0.000
IF	816.000	5.408	0.000	9.289	0.000	0.000	0.000	0.000	-0.010	0.000
IF	841.000	5.215	0.000	9.289	0.000	0.000	0.000	0.000	-0.006	0.000
IF	870.000	5.084	0.000	9.289	0.000	0.000	0.000	0.000	-0.005	0.000
IF	871.000	5.061	0.000	9.289	0.000	0.000	0.000	0.000	0.017	0.000
IF	898.000	5.549	0.000	9.290	0.000	0.000	0.000	0.000	0.006	0.000
IF	912.000	5.311	0.000	9.290	0.000	0.000	0.000	0.000	-0.009	0.000
IF	932.000	5.259	0.000	9.290	0.000	0.000	0.000	0.000	-0.004	0.000
IF	936.000	5.219	0.000	9.290	0.000	0.000	0.000	0.000	-0.001	0.000
IF	957.000	5.232	0.000	9.290	0.000	0.000	0.000	0.000	0.000	0.000
IF	958.000	5.223	0.000	9.290	0.000	0.000	0.000	0.000	0.002	0.000
IF	1006.000	5.340	0.000	9.290	0.000	0.000	0.000	0.000	0.002	0.000
IF	1007.000	5.343	0.000	9.290	0.000	0.000	0.000	0.000	0.008	0.000
IF	1028.000	5.511	0.000	9.290	0.000	0.000	0.000	0.000	0.000	0.000
IF	1061.000	5.361	0.000	9.290	0.000	0.000	0.000	0.000	-0.002	0.000
IF	1081.000	5.431	0.000	9.290	0.000	0.000	0.000	0.000	0.004	0.000
IF	1082.000	5.433	0.000	9.290	0.000	0.000	0.000	0.000	0.000	0.000
IF	1105.000	5.441	0.000	9.290	0.000	0.000	0.000	0.000	0.000	0.000
IF	1106.000	5.424	0.000	9.290	0.000	0.000	0.000	0.000	0.001	0.000
IF	1129.000	5.469	0.000	9.290	0.000	0.000	0.000	0.000	0.002	0.000
IF	1130.000	5.463	0.000	9.290	0.000	0.000	0.000	0.000	-0.002	0.000
IF	1156.000	5.405	0.000	9.291	0.000	0.000	0.000	0.000	-0.002	0.000
IF	1171.000	5.370	0.000	9.291	0.000	0.000	0.000	0.000	-0.007	0.000
IF	1189.000	5.170	0.000	9.291	0.000	0.000	0.000	0.000	-0.022	0.000
IF	1202.000	4.703	0.000	9.291	0.000	0.000	0.000	0.000	-0.010	0.000
IF	1224.000	4.809	0.000	9.291	0.000	0.000	0.000	0.000	-0.023	0.000
IF	1227.000	4.116	0.000	9.291	0.000	0.000	0.000	0.000	-0.047	0.000
IF	1279.000	2.222	0.000	9.292	0.000	0.000	0.000	0.000	-0.028	0.000
IF	1310.000	1.815	0.000	9.293	0.000	0.000	0.000	0.000	0.051	0.000
IF	1343.000	5.462	0.000	9.293	0.000	0.000	0.000	0.000	0.106	0.000
IF	1344.000	5.437	0.000	9.293	0.000	0.000	0.000	0.000	0.001	0.000
IF	1376.000	5.498	0.000	9.294	0.000	0.000	0.000	0.000	0.001	0.000
IF	1377.000	5.460	0.000	9.294	0.000	0.000	0.000	0.000	-0.001	0.000
IF	1407.000	5.469	0.000	9.294	0.000	0.000	0.000	0.000	-0.002	0.000
IF	1421.000	5.384	0.000	9.295	0.000	0.000	0.000	0.000	-0.002	0.000
IF	1428.000	5.434	0.000	9.295	0.000	0.000	0.000	0.000	0.010	0.000
IF	1444.000	5.611	0.000	9.295	0.000	0.000	0.000	0.000	0.004	0.000
IF	1465.000	5.563	0.000	9.296	0.000	0.000	0.000	0.000	-0.009	0.000
IF	1468.000	5.391	0.000	9.296	0.000	0.000	0.000	0.000	0.000	0.000
IF	1500.000	5.555	0.000	9.297	0.000	0.000	0.000	0.000	0.005	0.000
IF	1519.000	5.668	0.000	9.299	0.000	0.000	0.000	0.000	0.000	0.000
IF	1554.000	5.566	0.000	9.300	0.000	0.000	0.000	0.000	-0.004	0.000
IF	1555.000	5.530	0.000	9.300	0.000	0.000	0.000	0.000	0.010	0.000
IF	1575.000	5.778	0.000	9.301	0.000	0.000	0.000	0.000	0.004	0.000
IF	1586.000	5.640	0.000	9.301	0.000	0.000	0.000	0.000	-0.011	0.000

IF	1600.000	5.512	0.000	9.302	0.000	0.000	0.000	0.000	-0.005	0.000
IF	1618.000	5.482	0.000	9.303	0.000	0.000	0.000	0.000	-0.001	0.000
IF	1633.000	5.480	0.000	9.304	0.000	0.000	0.000	0.000	-0.007	0.000
IF	1645.000	5.298	0.000	9.305	0.000	0.000	0.000	0.000	-0.009	0.000
IF	1675.000	5.083	0.000	9.307	0.000	0.000	0.000	0.000	-0.007	0.000
IF	1676.000	5.087	0.000	9.307	0.000	0.000	0.000	0.000	-0.040	0.000
IF	1712.000	3.603	0.000	9.309	0.000	0.000	0.000	0.000	-0.013	0.000
IF	1719.000	4.516	0.000	9.309	0.000	0.000	0.000	0.000	0.046	0.000
IF	1756.000	5.631	0.000	9.312	0.000	0.000	0.000	0.000	0.022	0.000
IF	1773.000	5.710	0.000	9.313	0.000	0.000	0.000	0.000	-0.001	0.000
IF	1783.000	5.613	0.000	9.313	0.000	0.000	0.000	0.000	-0.024	0.000
IF	1805.000	4.925	0.000	9.315	0.000	0.000	0.000	0.000	-0.035	0.000
IF	1806.000	4.817	0.000	9.315	0.000	0.000	0.000	0.000	-0.072	0.000
IF	1851.000	1.607	0.000	9.318	0.000	0.000	0.000	0.000	0.008	0.000
IF	1879.000	5.402	0.000	9.320	0.000	0.000	0.000	0.000	0.069	0.000
IF	1903.000	5.183	0.000	9.321	0.000	0.000	0.000	0.000	-0.008	0.000
IF	1904.000	5.203	0.000	9.321	0.000	0.000	0.000	0.000	0.011	0.000
IF	1927.000	5.450	0.000	9.321	0.000	0.000	0.000	0.000	0.076	0.000
IF	1942.000	8.106	0.000	9.321	0.000	0.000	0.000	0.000	0.216	0.000
IF	1944.900	9.321	0.000	9.321	0.000	0.000	0.000	0.000	0.419	0.000
AS	4156.000	9.321	0.000	9.321	0.000	0.000	0.000	0.000	-0.073	0.000
IF	4159.000	9.101	0.000	9.630	0.000	0.000	0.000	0.000	0.018	0.000
IF	4173.400	9.630	0.000	9.630	0.000	0.000	0.000	0.000	0.037	0.000
AS	4607.700	9.630	0.000	9.630	0.000	0.000	0.000	0.000	-0.063	0.000
IF	4616.000	9.111	0.000	9.623	0.000	0.000	0.000	0.000	-0.069	0.000
IF	4617.000	8.983	0.000	9.623	0.000	0.000	0.000	0.000	-0.050	0.000
IF	4636.000	8.107	0.000	9.623	0.000	0.000	0.000	0.000	-0.053	0.000
IF	4639.000	7.817	0.000	9.623	0.000	0.000	0.000	0.000	-0.119	0.000
IF	4652.000	6.199	0.000	9.623	0.000	0.000	0.000	0.000	-0.079	0.000
IF	4672.000	5.225	0.000	9.623	0.000	0.000	0.000	0.000	-0.021	0.000
IF	4691.000	5.385	0.000	9.623	0.000	0.000	0.000	0.000	-0.001	0.000
IF	4701.000	5.201	0.000	9.623	0.000	0.000	0.000	0.000	-0.009	0.000
IF	4715.000	5.158	0.000	9.623	0.000	0.000	0.000	0.000	0.013	0.000
IF	4727.000	5.543	0.000	9.623	0.000	0.000	0.000	0.000	0.001	0.000
IF	4749.000	5.205	0.000	9.624	0.000	0.000	0.000	0.000	-0.016	0.000
IF	4750.000	5.177	0.000	9.624	0.000	0.000	0.000	0.000	-0.001	0.000
IF	4788.000	5.182	0.000	9.625	0.000	0.000	0.000	0.000	-0.001	0.000
IF	4820.000	5.118	0.000	9.625	0.000	0.000	0.000	0.000	0.003	0.000
IF	4828.000	5.291	0.000	9.626	0.000	0.000	0.000	0.000	-0.004	0.000
IF	4850.000	4.997	0.000	9.627	0.000	0.000	0.000	0.000	-0.015	0.000
IF	4854.000	4.911	0.000	9.627	0.000	0.000	0.000	0.000	-0.011	0.000
IF	4892.000	4.519	0.000	9.628	0.000	0.000	0.000	0.000	-0.012	0.000
IF	4904.000	4.324	0.000	9.628	0.000	0.000	0.000	0.000	-0.051	0.000
IF	4935.000	2.332	0.000	9.628	0.000	0.000	0.000	0.000	-0.001	0.000
IF	4972.000	4.280	0.000	9.628	0.000	0.000	0.000	0.000	0.038	0.000
IF	4994.000	4.554	0.000	9.628	0.000	0.000	0.000	0.000	0.001	0.000
IF	5005.000	4.306	0.000	9.628	0.000	0.000	0.000	0.000	-0.003	0.000
IF	5034.000	4.439	0.000	9.628	0.000	0.000	0.000	0.000	0.014	0.000
IF	5054.000	5.017	0.000	9.629	0.000	0.000	0.000	0.000	0.008	0.000
IF	5076.000	4.765	0.000	9.629	0.000	0.000	0.000	0.000	0.007	0.000
IF	5090.000	5.269	0.000	9.629	0.000	0.000	0.000	0.000	0.010	0.000
IF	5119.000	5.193	0.000	9.629	0.000	0.000	0.000	0.000	-0.004	0.000
IF	5136.000	5.108	0.000	9.629	0.000	0.000	0.000	0.000	-0.011	0.000
IF	5166.000	4.664	0.000	9.630	0.000	0.000	0.000	0.000	-0.015	0.000
IF	5167.000	4.656	0.000	9.630	0.000	0.000	0.000	0.000	0.025	0.000
IF	5191.000	5.283	0.000	9.630	0.000	0.000	0.000	0.000	0.029	0.000
IF	5198.000	5.566	0.000	9.630	0.000	0.000	0.000	0.000	0.003	0.000
IF	5222.000	5.383	0.000	9.630	0.000	0.000	0.000	0.000	-0.009	0.000
IF	5223.000	5.332	0.000	9.630	0.000	0.000	0.000	0.000	0.032	0.000
IF	5253.000	6.380	0.000	9.630	0.000	0.000	0.000	0.000	0.098	0.000
IF	5266.700	9.630	0.000	9.630	0.000	0.000	0.000	0.000	0.237	0.000
AS	5585.000	9.630	0.000	9.630	0.000	0.000	0.000	0.000	0.237	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	-4.414	1.000	1.000	9.109	13.093	13.062	56.140	0.029	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	1.000	-4.385	0.000	9.109	0.000	0.000	0.000	0.000	0.029	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	2.000	-4.356	0.000	9.109	0.000	0.000	0.000	0.000	0.029	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	3.000	-4.326	0.000	9.110	0.000	0.000	0.000	0.000	0.029	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	4.000	-4.297	0.000	9.110	0.000	0.000	0.000	0.000	0.029	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	5.000	-4.268	0.000	9.110	0.000	0.000	0.000	0.000	0.029	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	6.000	-4.238	0.000	9.110	0.000	0.000	0.000	0.000	0.029	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	7.000	-4.209	0.000	9.110	0.000	0.000	0.000	0.000	0.029	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	8.000	-4.180	0.000	9.110	0.000	0.000	0.000	0.000	0.029	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	9.000	-4.150	0.000	9.111	0.000	0.000	0.000	0.000	0.029	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	10.000	-4.121	0.000	9.111	0.000	0.000	0.000	0.000	0.029	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	11.000	-4.092	0.000	9.111	0.000	0.000	0.000	0.000	0.029	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	12.000	-4.063	0.000	9.111	0.000	0.000	0.000	0.000	0.029	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	13.000	-4.033	0.000	9.111	0.000	0.000	0.000	0.000	0.029	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	14.000	-4.004	0.000	9.112	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	15.000	-3.975	0.000	9.112	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	16.000	-3.945	0.000	9.112	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	17.000	-3.916	0.000	9.112	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	18.000	-3.887	0.000	9.113	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	19.000	-3.858	0.000	9.113	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	20.000	-3.828	0.000	9.113	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	21.000	-3.799	0.000	9.113	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	22.000	-3.770	0.000	9.113	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	23.000	-3.741	0.000	9.114	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	24.000	-3.711	0.000	9.114	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	25.000	-3.682	0.000	9.114	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	26.000	-3.653	0.000	9.114	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	27.000	-3.623	0.000	9.115	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	28.000	-3.594	0.000	9.115	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	29.000	-3.565	0.000	9.115	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	30.000	-3.536	0.000	9.115	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	31.000	-3.506	0.000	9.116	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	32.000	-3.477	0.000	9.116	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	33.000	-3.448	0.000	9.116	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	34.000	-3.418	0.000	9.116	0.000	0.000	0.000	0.000		0.053	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	35.000	-3.341	0.000	9.116	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	36.000	-3.262	0.000	9.116	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	174.000	-1.988	0.000	9.160	0.000	0.000	0.000	0.000		0.009	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	175.000	-1.959	0.000	9.160	0.000	0.000	0.000	0.000		0.027	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	176.000	-1.934	0.000	9.160	0.000	0.000	0.000	0.000		0.027	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	177.000	-1.905	0.000	9.160	0.000	0.000	0.000	0.000		0.048	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	178.000	-1.839	0.000	9.160	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	179.000	-1.793	0.000	9.160	0.000	0.000	0.000	0.000		0.034	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	180.000	-1.772	0.000	9.160	0.000	0.000	0.000	0.000		0.021	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	181.000	-1.751	0.000	9.160	0.000	0.000	0.000	0.000		0.016	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	182.000	-1.740	0.000	9.161	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	183.000	-1.740	0.000	9.161	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
OF	184.000	-1.740	0.000	9.161	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
OF	185.000	-1.740	0.000	9.162	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	186.000	-1.769	0.000	9.162	0.000	0.000	0.000	0.000		-0.017	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	187.000	-1.775	0.000	9.162	0.000	0.000	0.000	0.000		-0.003	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
OF	188.000	-1.776	0.000	9.162	0.000	0.000	0.000	0.000		-0.001	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	189.000	-1.777	0.000	9.163	0.000	0.000	0.000	0.000	-0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	190.000	-1.779	0.000	9.163	0.000	0.000	0.000	0.000	-0.003	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	191.000	-1.783	0.000	9.163	0.000	0.000	0.000	0.000	0.003	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	192.000	-1.774	0.000	9.163	0.000	0.000	0.000	0.000	0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	193.000	-1.765	0.000	9.163	0.000	0.000	0.000	0.000	0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	194.000	-1.756	0.000	9.164	0.000	0.000	0.000	0.000	0.033	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	195.000	-1.699	0.000	9.164	0.000	0.000	0.000	0.000	0.064	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	196.000	-1.628	0.000	9.164	0.000	0.000	0.000	0.000	0.065	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	197.000	-1.569	0.000	9.164	0.000	0.000	0.000	0.000	0.056	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	198.000	-1.516	0.000	9.164	0.000	0.000	0.000	0.000	0.021	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	199.000	-1.528	0.000	9.164	0.000	0.000	0.000	0.000	-0.012	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	200.000	-1.540	0.000	9.165	0.000	0.000	0.000	0.000	-0.012	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	201.000	-1.551	0.000	9.165	0.000	0.000	0.000	0.000	-0.006	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	202.000	-1.551	0.000	9.165	0.000	0.000	0.000	0.000	0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	203.000	-1.531	0.000	9.165	0.000	0.000	0.000	0.000	0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	204.000	-1.510	0.000	9.165	0.000	0.000	0.000	0.000	0.020	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	205.000	-1.490	0.000	9.166	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	206.000	-1.507	0.000	9.166	0.000	0.000	0.000	0.000	-0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	207.000	-1.533	0.000	9.166	0.000	0.000	0.000	0.000	-0.024	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	208.000	-1.554	0.000	9.166	0.000	0.000	0.000	0.000	-0.016	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	209.000	-1.565	0.000	9.167	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	210.000	-1.546	0.000	9.167	0.000	0.000	0.000	0.000	0.019	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	211.000	-1.528	0.000	9.167	0.000	0.000	0.000	0.000	0.019	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	212.000	-1.509	0.000	9.167	0.000	0.000	0.000	0.000	0.012	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	213.000	-1.503	0.000	9.167	0.000	0.000	0.000	0.000	-0.006	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	214.000	-1.520	0.000	9.168	0.000	0.000	0.000	0.000	-0.017	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	215.000	-1.537	0.000	9.168	0.000	0.000	0.000	0.000	-0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	216.000	-1.538	0.000	9.168	0.000	0.000	0.000	0.000	0.045	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	217.000	-1.446	0.000	9.168	0.000	0.000	0.000	0.000	0.113	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	218.000	-1.313	0.000	9.168	0.000	0.000	0.000	0.000	0.120	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	219.000	-1.206	0.000	9.168	0.000	0.000	0.000	0.000	0.100	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	220.000	-1.113	0.000	9.168	0.000	0.000	0.000	0.000	0.081	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	221.000	-1.044	0.000	9.167	0.000	0.000	0.000	0.000	0.076	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	222.000	-0.960	0.000	9.167	0.000	0.000	0.000	0.000	0.111	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	223.000	-0.823	0.000	9.167	0.000	0.000	0.000	0.000	0.165	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
OF	224.000	-0.630	0.000	9.167	0.000	0.000	0.000	0.000	0.185	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES

OF	225.000	-0.454	0.000	9.167	0.000	0.000	0.000	0.000	0.177	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	226.000	-0.277	0.000	9.166	0.000	0.000	0.000	0.000	0.177	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
OF	227.000	-0.100	0.000	9.166	0.000	0.000	0.000	0.000	0.176	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	228.000	0.076	0.000	9.166	0.000	0.000	0.000	0.000	0.176	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	229.000	0.251	0.000	9.165	0.000	0.000	0.000	0.000	0.172	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	230.000	0.421	0.000	9.165	0.000	0.000	0.000	0.000	0.163	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	231.000	0.578	0.000	9.165	0.000	0.000	0.000	0.000	0.169	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	232.000	0.758	0.000	9.165	0.000	0.000	0.000	0.000	0.197	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	233.000	0.972	0.000	9.164	0.000	0.000	0.000	0.000	0.214	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	234.000	1.186	0.000	9.164	0.000	0.000	0.000	0.000	0.214	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	235.000	1.400	0.000	9.163	0.000	0.000	0.000	0.000	0.221	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	236.000	1.629	0.000	9.163	0.000	0.000	0.000	0.000	0.230	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	237.000	1.861	0.000	9.163	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	238.000	2.011	0.000	9.164	0.000	0.000	0.000	0.000	0.148	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	239.000	2.157	0.000	9.164	0.000	0.000	0.000	0.000	0.145	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	240.000	2.302	0.000	9.164	0.000	0.000	0.000	0.000	0.145	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	241.000	2.447	0.000	9.165	0.000	0.000	0.000	0.000	0.144	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	242.000	2.590	0.000	9.166	0.000	0.000	0.000	0.000	0.137	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	243.000	2.721	0.000	9.167	0.000	0.000	0.000	0.000	0.135	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	244.000	2.861	0.000	9.168	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
IF	245.000	3.000	0.000	9.169	0.000	0.000	0.000	0.000	0.140	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	246.000	3.140	0.000	9.170	0.000	0.000	0.000	0.000	0.141	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	247.000	3.282	0.000	9.171	0.000	0.000	0.000	0.000	0.152	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	248.000	3.444	0.000	9.172	0.000	0.000	0.000	0.000	0.162	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	249.000	3.606	0.000	9.174	0.000	0.000	0.000	0.000	0.162	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	250.000	3.768	0.000	9.175	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
IF	251.000	3.928	0.000	9.177	0.000	0.000	0.000	0.000	0.181	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	252.000	4.130	0.000	9.178	0.000	0.000	0.000	0.000	0.218	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	253.000	4.364	0.000	9.180	0.000	0.000	0.000	0.000	0.232	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	254.000	4.594	0.000	9.181	0.000	0.000	0.000	0.000	0.230	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	255.000	4.824	0.000	9.182	0.000	0.000	0.000	0.000	0.230	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	256.000	5.054	0.000	9.183	0.000	0.000	0.000	0.000	0.204	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	257.000	5.232	0.000	9.186	0.000	0.000	0.000	0.000	0.173	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	258.000	5.399	0.000	9.188	0.000	0.000	0.000	0.000	0.192	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	259.000	5.616	0.000	9.190	0.000	0.000	0.000	0.000	0.216	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	260.000	5.832	0.000	9.198	0.000	0.000	0.000	0.000	0.208	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	261.000	6.033	0.000	9.207	0.000	0.000	0.000	0.000	0.189	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE

	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	262.000	6.210	0.000	9.217	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
IF	263.000	6.354	0.000	9.229	0.000	0.000	0.000	0.000		0.144	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	264.000	6.498	0.000	9.245	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	265.000	6.736	0.000	9.260	0.000	0.000	0.000	0.000		0.256	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	266.000	7.010	0.000	9.277	0.000	0.000	0.000	0.000		0.273	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	267.000	7.283	0.000	9.297	0.000	0.000	0.000	0.000		0.271	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	268.000	7.552	0.000	9.317	0.000	0.000	0.000	0.000		0.230	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	269.000	7.744	0.000	9.337	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	270.000	7.918	0.000	9.350	0.000	0.000	0.000	0.000		0.175	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	271.000	8.093	0.000	9.362	0.000	0.000	0.000	0.000		0.158	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	272.000	8.234	0.000	9.375	0.000	0.000	0.000	0.000		0.111	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	273.000	8.316	0.000	9.384	0.000	0.000	0.000	0.000		0.084	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	274.000	8.401	0.000	9.392	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
IF	275.000	8.492	0.000	9.401	0.000	0.000	0.000	0.000		0.100	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	276.000	8.601	0.000	9.409	0.000	0.000	0.000	0.000		0.113	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	277.000	8.717	0.000	9.418	0.000	0.000	0.000	0.000		0.116	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	278.000	8.833	0.000	9.427	0.000	0.000	0.000	0.000		0.100	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	279.000	8.917	0.000	9.435	0.000	0.000	0.000	0.000		0.065	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	280.000	8.964	0.000	9.440	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	281.000	9.011	0.000	9.444	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	282.000	9.058	0.000	9.449	0.000	0.000	0.000	0.000		0.072	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	287.100	9.449	0.000	9.449	0.000	0.000	0.000	0.000		0.077	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
AS	398.700	9.449	0.000	9.449	0.000	0.000	0.000	0.000		-0.060	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	422.000	8.062	0.000	9.285	0.000	0.000	0.000	0.000		-0.083	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	426.000	7.187	0.000	9.285	0.000	0.000	0.000	0.000		-0.112	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	443.000	5.713	0.000	9.285	0.000	0.000	0.000	0.000		-0.049	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	453.000	5.870	0.000	9.285	0.000	0.000	0.000	0.000		-0.001	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	501.000	5.653	0.000	9.285	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	502.000	5.593	0.000	9.285	0.000	0.000	0.000	0.000		0.097	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	527.000	8.182	0.000	9.286	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
IF	530.000	7.977	0.000	9.286	0.000	0.000	0.000	0.000		-0.066	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	552.000	6.536	0.000	9.286	0.000	0.000	0.000	0.000		-0.045	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	576.000	5.898	0.000	9.286	0.000	0.000	0.000	0.000		-0.033	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	594.000	5.161	0.000	9.286	0.000	0.000	0.000	0.000		-0.016	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	613.000	5.299	0.000	9.287	0.000	0.000	0.000	0.000		0.009	0.000
	END	END	NEW SURGE	NEW SURGE						BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR						SLOPE	A-ZONES
IF	635.000	5.531	0.000	9.287	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	646.000	5.312	0.000	9.287	0.000	0.000	0.000	0.000		-0.004	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	679.000	5.374	0.000	9.288	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	686.000	5.137	0.000	9.288	0.000	0.000	0.000	0.000	-0.013	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	731.000	4.722	0.000	9.288	0.000	0.000	0.000	0.000	-0.011	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	732.000	4.620	0.000	9.288	0.000	0.000	0.000	0.000	0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	815.000	5.469	0.000	9.289	0.000	0.000	0.000	0.000	0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	816.000	5.408	0.000	9.289	0.000	0.000	0.000	0.000	-0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	841.000	5.215	0.000	9.289	0.000	0.000	0.000	0.000	-0.006	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	870.000	5.084	0.000	9.289	0.000	0.000	0.000	0.000	-0.005	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	871.000	5.061	0.000	9.289	0.000	0.000	0.000	0.000	0.017	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	898.000	5.549	0.000	9.290	0.000	0.000	0.000	0.000	0.006	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	912.000	5.311	0.000	9.290	0.000	0.000	0.000	0.000	-0.009	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	932.000	5.259	0.000	9.290	0.000	0.000	0.000	0.000	-0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	936.000	5.219	0.000	9.290	0.000	0.000	0.000	0.000	-0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	957.000	5.232	0.000	9.290	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	958.000	5.223	0.000	9.290	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1006.000	5.340	0.000	9.290	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1007.000	5.343	0.000	9.290	0.000	0.000	0.000	0.000	0.008	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1028.000	5.511	0.000	9.290	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1061.000	5.361	0.000	9.290	0.000	0.000	0.000	0.000	-0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1081.000	5.431	0.000	9.290	0.000	0.000	0.000	0.000	0.004	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1082.000	5.433	0.000	9.290	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1105.000	5.441	0.000	9.290	0.000	0.000	0.000	0.000	0.000	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1106.000	5.424	0.000	9.290	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1129.000	5.469	0.000	9.290	0.000	0.000	0.000	0.000	0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1130.000	5.463	0.000	9.290	0.000	0.000	0.000	0.000	-0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1156.000	5.405	0.000	9.291	0.000	0.000	0.000	0.000	-0.002	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1171.000	5.370	0.000	9.291	0.000	0.000	0.000	0.000	-0.007	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1189.000	5.170	0.000	9.291	0.000	0.000	0.000	0.000	-0.022	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1202.000	4.703	0.000	9.291	0.000	0.000	0.000	0.000	-0.010	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1224.000	4.809	0.000	9.291	0.000	0.000	0.000	0.000	-0.023	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1227.000	4.116	0.000	9.291	0.000	0.000	0.000	0.000	-0.047	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1279.000	2.222	0.000	9.292	0.000	0.000	0.000	0.000	-0.028	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1310.000	1.815	0.000	9.293	0.000	0.000	0.000	0.000	0.051	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1343.000	5.462	0.000	9.293	0.000	0.000	0.000	0.000	0.106	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1344.000	5.437	0.000	9.293	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
IF	1376.000	5.498	0.000	9.294	0.000	0.000	0.000	0.000	0.001	0.000
	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES

IF	1377.000	5.460	0.000	9.294	0.000	0.000	0.000	0.000	-0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1407.000	5.469	0.000	9.294	0.000	0.000	0.000	0.000	-0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1421.000	5.384	0.000	9.295	0.000	0.000	0.000	0.000	-0.002	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1428.000	5.434	0.000	9.295	0.000	0.000	0.000	0.000	0.010	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1444.000	5.611	0.000	9.295	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1465.000	5.563	0.000	9.296	0.000	0.000	0.000	0.000	-0.009	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1468.000	5.391	0.000	9.296	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	1500.000	5.555	0.000	9.297	0.000	0.000	0.000	0.000	0.005	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1519.000	5.668	0.000	9.299	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	1554.000	5.566	0.000	9.300	0.000	0.000	0.000	0.000	-0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1555.000	5.530	0.000	9.300	0.000	0.000	0.000	0.000	0.010	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1575.000	5.778	0.000	9.301	0.000	0.000	0.000	0.000	0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1586.000	5.640	0.000	9.301	0.000	0.000	0.000	0.000	-0.011	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1600.000	5.512	0.000	9.302	0.000	0.000	0.000	0.000	-0.005	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1618.000	5.482	0.000	9.303	0.000	0.000	0.000	0.000	-0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1633.000	5.480	0.000	9.304	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	1645.000	5.298	0.000	9.305	0.000	0.000	0.000	0.000	-0.009	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1675.000	5.083	0.000	9.307	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	1676.000	5.087	0.000	9.307	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	1712.000	3.603	0.000	9.309	0.000	0.000	0.000	0.000	-0.013	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1719.000	4.516	0.000	9.309	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	1756.000	5.631	0.000	9.312	0.000	0.000	0.000	0.000	0.022	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1773.000	5.710	0.000	9.313	0.000	0.000	0.000	0.000	-0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1783.000	5.613	0.000	9.313	0.000	0.000	0.000	0.000	-0.024	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1805.000	4.925	0.000	9.315	0.000	0.000	0.000	0.000	-0.035	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1806.000	4.817	0.000	9.315	0.000	0.000	0.000	0.000	-0.072	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1851.000	1.607	0.000	9.318	0.000	0.000	0.000	0.000	0.008	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1879.000	5.402	0.000	9.320	0.000	0.000	0.000	0.000	0.069	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1903.000	5.183	0.000	9.321	0.000	0.000	0.000	0.000	-0.008	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1904.000	5.203	0.000	9.321	0.000	0.000	0.000	0.000	0.011	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1927.000	5.450	0.000	9.321	0.000	0.000	0.000	0.000	0.076	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1942.000	8.106	0.000	9.321	0.000	0.000	0.000	0.000	0.216	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	1944.900	9.321	0.000	9.321	0.000	0.000	0.000	0.000	0.419	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
AS	4156.000	9.321	0.000	9.321	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
IF	4159.000	9.101	0.000	9.630	0.000	0.000	0.000	0.000	0.018	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4173.400	9.630	0.000	9.630	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
AS	4607.700	9.630	0.000	9.630	0.000	0.000	0.000	0.000	-0.063	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE

	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4616.000	9.111	0.000	9.623	0.000	0.000	0.000	0.000	-0.069	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4617.000	8.983	0.000	9.623	0.000	0.000	0.000	0.000	-0.050	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4636.000	8.107	0.000	9.623	0.000	0.000	0.000	0.000	-0.053	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4639.000	7.817	0.000	9.623	0.000	0.000	0.000	0.000	-0.119	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4652.000	6.199	0.000	9.623	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	4672.000	5.225	0.000	9.623	0.000	0.000	0.000	0.000	-0.021	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4691.000	5.385	0.000	9.623	0.000	0.000	0.000	0.000	-0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4701.000	5.201	0.000	9.623	0.000	0.000	0.000	0.000	-0.009	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4715.000	5.158	0.000	9.623	0.000	0.000	0.000	0.000	0.013	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4727.000	5.543	0.000	9.623	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4749.000	5.205	0.000	9.624	0.000	0.000	0.000	0.000	-0.016	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4750.000	5.177	0.000	9.624	0.000	0.000	0.000	0.000	-0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4788.000	5.182	0.000	9.625	0.000	0.000	0.000	0.000	-0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4820.000	5.118	0.000	9.625	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	4828.000	5.291	0.000	9.626	0.000	0.000	0.000	0.000	-0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4850.000	4.997	0.000	9.627	0.000	0.000	0.000	0.000	-0.015	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4854.000	4.911	0.000	9.627	0.000	0.000	0.000	0.000	-0.011	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4892.000	4.519	0.000	9.628	0.000	0.000	0.000	0.000	-0.012	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4904.000	4.324	0.000	9.628	0.000	0.000	0.000	0.000	-0.051	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4935.000	2.332	0.000	9.628	0.000	0.000	0.000	0.000	-0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4972.000	4.280	0.000	9.628	0.000	0.000	0.000	0.000	0.038	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	4994.000	4.554	0.000	9.628	0.000	0.000	0.000	0.000	0.001	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5005.000	4.306	0.000	9.628	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	5034.000	4.439	0.000	9.628	0.000	0.000	0.000	0.000	0.014	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5054.000	5.017	0.000	9.629	0.000	0.000	0.000	0.000	0.008	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5076.000	4.765	0.000	9.629	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	5090.000	5.269	0.000	9.629	0.000	0.000	0.000	0.000	0.010	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5119.000	5.193	0.000	9.629	0.000	0.000	0.000	0.000	-0.004	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5136.000	5.108	0.000	9.629	0.000	0.000	0.000	0.000	-0.011	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5166.000	4.664	0.000	9.630	0.000	0.000	0.000	0.000	-0.015	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5167.000	4.656	0.000	9.630	0.000	0.000	0.000	0.000	0.025	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5191.000	5.283	0.000	9.630	0.000	0.000	0.000	0.000	0.029	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5198.000	5.566	0.000	9.630	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	5222.000	5.383	0.000	9.630	0.000	0.000	0.000	0.000	-0.009	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5223.000	5.332	0.000	9.630	0.000	0.000	0.000	0.000	0.032	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5253.000	6.380	0.000	9.630	0.000	0.000	0.000	0.000	0.098	0.000
	END	END	NEW SURGE	NEW SURGE					BOTTOM	AVERAGE
	STATION	ELEVATION	10-YEAR	100-YEAR					SLOPE	A-ZONES
IF	5266.700	9.630	0.000	9.630	0.000	0.000	0.000	0.000	0.237	0.000

	END STATION	END ELEVATION	NEW SURGE 10-YEAR	NEW SURGE 100-YEAR					BOTTOM SLOPE	AVERAGE A-ZONES
AS	5585.000	9.630	0.000	9.630	0.000	0.000	0.000	0.000	0.237	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	10.30	13.06	16.32
OF	1.00	10.27	13.06	16.30
OF	2.00	10.25	13.06	16.29
OF	3.00	10.23	13.06	16.27
OF	4.00	10.21	13.06	16.26
OF	5.00	10.19	13.06	16.24
OF	6.00	10.17	13.06	16.23
OF	7.00	10.14	13.06	16.21
OF	8.00	10.12	13.06	16.20
OF	9.00	10.10	13.06	16.18
OF	10.00	10.08	13.06	16.17
OF	11.00	10.06	13.06	16.15
OF	12.00	10.04	13.06	16.14
OF	13.00	10.01	13.06	16.12
OF	14.00	9.99	13.06	16.11
OF	15.00	9.97	13.06	16.09
OF	16.00	9.95	13.06	16.08
OF	17.00	9.93	13.06	16.06
OF	18.00	9.91	13.06	16.05
OF	19.00	9.89	13.06	16.03
OF	20.00	9.86	13.06	16.02
OF	21.00	9.84	13.06	16.00
OF	22.00	9.82	13.06	15.99
OF	23.00	9.80	13.06	15.97
OF	24.00	9.78	13.06	15.96
OF	25.00	9.76	13.06	15.94
OF	26.00	9.73	13.06	15.93
OF	27.00	9.71	13.06	15.91
OF	28.00	9.69	13.06	15.90
OF	29.00	9.67	13.06	15.88
OF	30.00	9.65	13.06	15.87
OF	31.00	9.63	13.06	15.85
OF	32.00	9.60	13.06	15.84
OF	33.00	9.58	13.06	15.82
OF	34.00	9.56	13.06	15.81
OF	35.00	9.50	13.06	15.77
OF	36.00	9.44	13.06	15.73
	146.40	8.71	13.06	15.25
OF	174.00	8.52	13.06	15.13
OF	175.00	8.50	13.06	15.11
OF	176.00	8.48	13.06	15.10
OF	177.00	8.46	13.06	15.08
OF	178.00	8.41	13.06	15.05
OF	179.00	8.38	13.06	15.02
OF	180.00	8.36	13.06	15.01
OF	181.00	8.35	13.06	15.00
OF	182.00	8.34	13.06	15.00
OF	183.00	8.34	13.06	15.00
OF	184.00	8.34	13.06	15.00
OF	185.00	8.34	13.06	15.00
OF	186.00	8.35	13.06	15.01
OF	187.00	8.35	13.06	15.01
OF	188.00	8.35	13.06	15.01
OF	189.00	8.36	13.06	15.01
OF	190.00	8.36	13.06	15.01
OF	191.00	8.36	13.06	15.02
OF	192.00	8.36	13.06	15.02
OF	193.00	8.36	13.06	15.01
OF	194.00	8.35	13.06	15.01
OF	195.00	8.31	13.06	14.98
OF	196.00	8.26	13.06	14.94
OF	197.00	8.21	13.06	14.91
OF	198.00	8.17	13.06	14.88
OF	199.00	8.18	13.06	14.89
OF	200.00	8.18	13.06	14.89
OF	201.00	8.19	13.06	14.90
OF	202.00	8.19	13.06	14.90
OF	203.00	8.18	13.06	14.89
OF	204.00	8.17	13.06	14.88
OF	205.00	8.15	13.06	14.87
OF	206.00	8.16	13.06	14.88
OF	207.00	8.17	13.06	14.88
OF	208.00	8.17	13.06	14.89
OF	209.00	8.18	13.06	14.89
OF	210.00	8.18	13.06	14.89
OF	211.00	8.17	13.06	14.89
OF	212.00	8.17	13.06	14.89
OF	213.00	8.17	13.06	14.88
OF	214.00	8.17	13.06	14.89
OF	215.00	8.18	13.06	14.89
OF	216.00	8.18	13.06	14.89
OF	217.00	8.12	13.06	14.85
OF	218.00	8.02	13.06	14.78
OF	219.00	7.94	13.06	14.73
OF	220.00	7.87	13.06	14.68
OF	221.00	7.82	13.06	14.64
OF	222.00	7.76	13.06	14.60
OF	223.00	7.65	13.06	14.52
OF	224.00	7.51	13.06	14.42
OF	225.00	7.38	13.06	14.33
OF	226.00	7.24	13.06	14.24
OF	227.00	7.11	13.06	14.14
IF	228.00	6.98	13.06	14.05
IF	229.00	6.84	13.06	13.95
IF	230.00	6.71	13.06	13.87
IF	231.00	6.60	13.06	13.78
IF	232.00	6.46	13.06	13.69
IF	233.00	6.30	13.06	13.57
IF	234.00	6.13	13.06	13.46

IF	235.00	5.97	13.06	13.34
IF	236.00	5.80	13.06	13.22
IF	237.00	5.62	13.06	13.10
IF	238.00	5.51	13.06	13.02
IF	239.00	5.40	13.06	12.94
IF	240.00	5.29	13.06	12.86
IF	241.00	5.18	13.06	12.79
IF	242.00	5.07	13.06	12.71
IF	243.00	4.97	13.06	12.65
IF	244.00	4.86	13.06	12.57
IF	245.00	4.76	13.06	12.50
IF	246.00	4.65	13.06	12.43
IF	247.00	4.55	13.06	12.35
IF	248.00	4.42	13.06	12.27
IF	249.00	4.30	13.06	12.18
IF	250.00	4.18	13.06	12.10
IF	251.00	4.06	13.06	12.02
IF	252.00	3.90	13.06	11.91
IF	253.00	3.72	13.06	11.79
IF	254.00	3.55	13.06	11.66
IF	255.00	3.37	13.06	11.54
IF	256.00	3.20	13.06	11.42
IF	257.00	3.06	13.06	11.33
IF	258.00	2.94	13.06	11.24
IF	259.00	2.77	13.06	11.13
IF	260.00	2.61	13.06	11.02
IF	261.00	2.46	13.06	10.93
IF	262.00	2.33	13.06	10.85
IF	263.00	2.23	13.06	10.79
IF	264.00	2.13	13.06	10.74
IF	265.00	1.96	13.06	10.63
IF	266.00	1.76	13.06	10.51
IF	267.00	1.57	13.06	10.39
IF	268.00	1.37	13.06	10.28
IF	269.00	1.24	13.06	10.20
IF	270.00	1.11	13.06	10.13
IF	271.00	0.99	13.06	10.05
IF	272.00	0.89	13.06	10.00
IF	273.00	0.83	13.06	9.97
IF	274.00	0.77	13.06	9.93
IF	275.00	0.71	13.06	9.90
IF	276.00	0.63	13.06	9.85
IF	277.00	0.55	13.06	9.80
IF	278.00	0.46	13.06	9.75
IF	279.00	0.40	13.06	9.72
IF	280.00	0.37	13.06	9.70
IF	281.00	0.34	13.06	9.68
IF	282.00	0.30	13.06	9.66
IF	287.10	0.01	13.06	9.45
AS	398.70	0.00	0.00	9.45
IF	422.00	0.12	0.40	9.37
IF	426.00	0.13	0.42	9.38
IF	443.00	0.18	0.50	9.41
IF	453.00	0.21	0.53	9.43
IF	501.00	0.32	0.66	9.51
IF	502.00	0.32	0.66	9.51
IF	527.00	0.36	0.71	9.54
IF	530.00	0.37	0.71	9.54
IF	552.00	0.41	0.75	9.57
IF	576.00	0.45	0.79	9.60
IF	594.00	0.48	0.81	9.63
IF	613.00	0.52	0.84	9.65
IF	635.00	0.55	0.87	9.67
IF	646.00	0.57	0.88	9.68
IF	679.00	0.62	0.92	9.72
IF	686.00	0.63	0.92	9.73
IF	731.00	0.69	0.97	9.77
IF	732.00	0.69	0.97	9.77
IF	815.00	0.80	1.05	9.85
IF	816.00	0.80	1.05	9.85
IF	841.00	0.83	1.07	9.87
IF	870.00	0.87	1.09	9.90
IF	871.00	0.87	1.09	9.90
IF	898.00	0.90	1.11	9.92
IF	912.00	0.92	1.12	9.93
IF	932.00	0.94	1.14	9.95
IF	936.00	0.95	1.14	9.95
IF	957.00	0.97	1.15	9.97
IF	958.00	0.97	1.15	9.97
IF	1006.00	1.02	1.19	10.01
IF	1007.00	1.02	1.19	10.01
IF	1028.00	1.04	1.20	10.02
IF	1061.00	1.08	1.22	10.05
IF	1081.00	1.10	1.23	10.06
IF	1082.00	1.10	1.23	10.06
IF	1105.00	1.12	1.25	10.08
IF	1106.00	1.12	1.25	10.08
IF	1129.00	1.14	1.26	10.09
IF	1130.00	1.15	1.26	10.09
IF	1156.00	1.17	1.27	10.11
IF	1171.00	1.19	1.28	10.12
IF	1189.00	1.21	1.29	10.14
IF	1202.00	1.23	1.30	10.15
IF	1224.00	1.25	1.31	10.16
IF	1227.00	1.25	1.31	10.17
IF	1279.00	1.31	1.34	10.21
IF	1310.00	1.34	1.35	10.23
IF	1343.00	1.33	1.37	10.23
IF	1344.00	1.33	1.37	10.23
IF	1376.00	1.36	1.39	10.24
IF	1377.00	1.36	1.39	10.25
IF	1407.00	1.38	1.40	10.26
IF	1421.00	1.40	1.41	10.27
IF	1428.00	1.40	1.41	10.27
IF	1444.00	1.40	1.42	10.27
IF	1465.00	1.42	1.43	10.29
IF	1468.00	1.43	1.43	10.29
IF	1500.00	1.44	1.44	10.31
IF	1519.00	1.45	1.45	10.31
IF	1554.00	1.48	1.46	10.33

IF	1555.00	1.48	1.46	10.34
IF	1575.00	1.47	1.47	10.33
IF	1586.00	1.49	1.48	10.34
IF	1600.00	1.51	1.48	10.36
IF	1618.00	1.53	1.49	10.37
IF	1633.00	1.54	1.50	10.38
IF	1645.00	1.56	1.50	10.39
IF	1675.00	1.59	1.51	10.42
IF	1676.00	1.59	1.51	10.42
IF	1712.00	1.66	1.53	10.47
IF	1719.00	1.64	1.53	10.46
IF	1756.00	1.59	1.54	10.42
IF	1773.00	1.59	1.55	10.43
IF	1783.00	1.60	1.55	10.44
IF	1805.00	1.69	1.56	10.50
IF	1806.00	1.69	1.56	10.50
IF	1851.00	1.78	1.58	10.56
IF	1879.00	1.68	1.59	10.50
IF	1903.00	1.72	1.60	10.53
IF	1904.00	1.72	1.60	10.53
IF	1927.00	1.71	1.60	10.51
IF	1942.00	0.82	1.61	9.90
IF	1944.90	0.01	1.61	9.33
AS	4156.00	0.00	0.00	9.32
IF	4159.00	0.03	0.21	9.65
IF	4173.40	0.01	0.37	9.64
AS	4607.70	0.00	0.00	9.63
IF	4616.00	0.06	0.29	9.67
IF	4617.00	0.07	0.30	9.67
IF	4636.00	0.13	0.43	9.72
IF	4639.00	0.14	0.44	9.72
IF	4652.00	0.18	0.50	9.75
IF	4672.00	0.23	0.56	9.79
IF	4691.00	0.28	0.61	9.82
IF	4701.00	0.30	0.64	9.83
IF	4715.00	0.33	0.67	9.85
IF	4727.00	0.35	0.69	9.87
IF	4749.00	0.39	0.73	9.90
IF	4750.00	0.39	0.73	9.90
IF	4788.00	0.46	0.79	9.95
IF	4820.00	0.51	0.84	9.98
IF	4828.00	0.53	0.85	9.99
IF	4850.00	0.56	0.87	10.02
IF	4854.00	0.57	0.88	10.02
IF	4892.00	0.62	0.92	10.06
IF	4904.00	0.64	0.93	10.08
IF	4935.00	0.68	0.97	10.11
IF	4972.00	0.73	1.00	10.14
IF	4994.00	0.76	1.02	10.16
IF	5005.00	0.78	1.03	10.17
IF	5034.00	0.81	1.05	10.20
IF	5054.00	0.84	1.07	10.22
IF	5076.00	0.87	1.09	10.24
IF	5090.00	0.88	1.10	10.25
IF	5119.00	0.92	1.12	10.27
IF	5136.00	0.94	1.13	10.29
IF	5166.00	0.97	1.15	10.31
IF	5167.00	0.97	1.15	10.31
IF	5191.00	1.00	1.17	10.33
IF	5198.00	1.01	1.17	10.33
IF	5222.00	1.03	1.19	10.35
IF	5223.00	1.03	1.19	10.35
IF	5253.00	1.05	1.21	10.36
IF	5266.70	0.01	1.22	9.64
AS	5585.00	0.00	0.00	9.63

PART3 LOCATION OF AREAS ABOVE 100-YEAR SURGE

BETWEEN	287.10	AND	398.70
BETWEEN	1944.90	AND	4156.00
BETWEEN	4173.40	AND	4607.70
BETWEEN	5266.70	AND	5585.00

PART4 LOCATION OF SURGE CHANGES

STATION	10-YEAR SURGE	100-YEAR SURGE
3.00	1.00	9.11
9.00	1.00	9.11
14.00	1.00	9.11
18.00	1.00	9.11
23.00	1.00	9.11
27.00	1.00	9.11
31.00	1.00	9.12
174.00	1.00	9.16
182.00	1.00	9.16
185.00	1.00	9.16
189.00	1.00	9.16
194.00	1.00	9.16
200.00	1.00	9.16
205.00	1.00	9.17
209.00	1.00	9.17
214.00	1.00	9.17
221.00	1.00	9.17
226.00	1.00	9.17
229.00	1.00	9.16
233.00	1.00	9.16
235.00	1.00	9.16
238.00	1.00	9.16
241.00	1.00	9.16
242.00	1.00	9.17
243.00	1.00	9.17
244.00	1.00	9.17
245.00	1.00	9.17
246.00	1.00	9.17
247.00	1.00	9.17
248.00	1.00	9.17
249.00	1.00	9.17
250.00	1.00	9.18
251.00	1.00	9.18
252.00	1.00	9.18
253.00	1.00	9.18
254.00	1.00	9.18
255.00	1.00	9.18
256.00	1.00	9.18

257.00	1.00	9.19
258.00	1.00	9.19
259.00	1.00	9.19
260.00	1.00	9.20
261.00	1.00	9.21
262.00	1.00	9.22
263.00	1.00	9.23
264.00	1.00	9.24
265.00	1.00	9.26
266.00	1.00	9.28
267.00	1.00	9.30
268.00	1.00	9.32
269.00	1.00	9.34
270.00	1.00	9.35
271.00	1.00	9.36
272.00	1.00	9.38
273.00	1.00	9.38
274.00	1.00	9.39
275.00	1.00	9.40
276.00	1.00	9.41
277.00	1.00	9.42
278.00	1.00	9.43
279.00	1.00	9.44
280.00	1.00	9.44
281.00	1.00	9.44
282.00	1.00	9.45
422.00	1.00	9.28
527.00	1.00	9.29
613.00	1.00	9.29
679.00	1.00	9.29
815.00	1.00	9.29
898.00	1.00	9.29
1156.00	1.00	9.29
1279.00	1.00	9.29
1310.00	1.00	9.29
1376.00	1.00	9.29
1421.00	1.00	9.30
1465.00	1.00	9.30
1500.00	1.00	9.30
1519.00	1.00	9.30
1554.00	1.00	9.30
1575.00	1.00	9.30
1600.00	1.00	9.30
1618.00	1.00	9.30
1633.00	1.00	9.30
1645.00	1.00	9.31
1675.00	1.00	9.31
1712.00	1.00	9.31
1756.00	1.00	9.31
1773.00	1.00	9.31
1805.00	1.00	9.31
1851.00	1.00	9.32
1879.00	1.00	9.32
1903.00	1.00	9.32
4159.00	1.00	9.63
4616.00	1.00	9.62
4749.00	1.00	9.62
4788.00	1.00	9.62
4828.00	1.00	9.63
4850.00	1.00	9.63
4892.00	1.00	9.63
5054.00	1.00	9.63
5166.00	1.00	9.63

PART5 LOCATION OF V ZONES

STATION OF GUTTER	LOCATION OF ZONE
257.49	WINDWARD

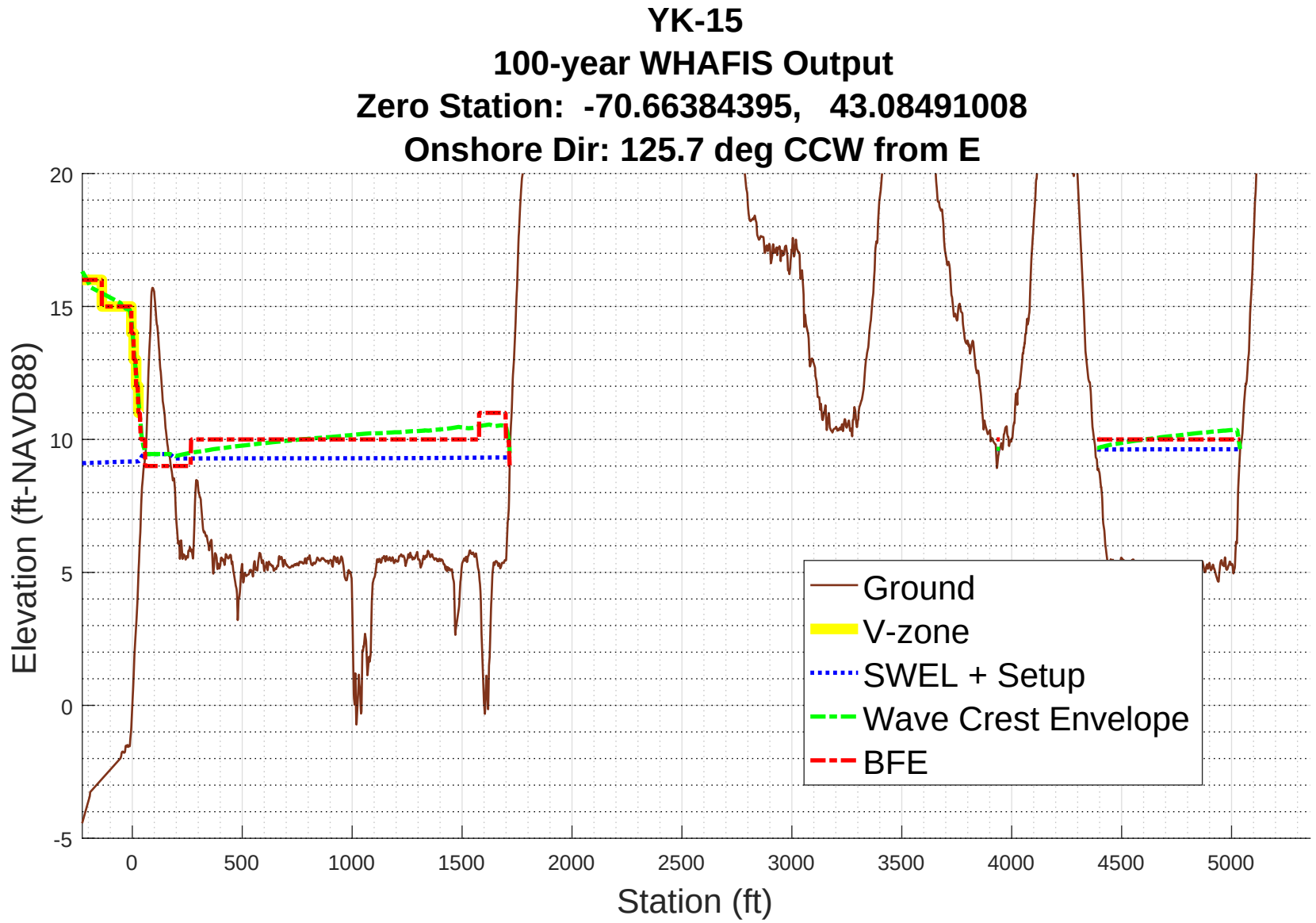
PART6 NUMBERED A ZONES AND V ZONES

STATION OF GUTTER	ELEVATION	ZONE DESIGNATION		FHF
0.00	16.32	V23	EL=16	130
2.00	16.29	V23	EL=16	130
3.00	16.27	V23	EL=16	130
8.00	16.20	V23	EL=16	130
9.00	16.18	V23	EL=16	130
13.00	16.12	V23	EL=16	130
14.00	16.11	V23	EL=16	130
17.00	16.06	V23	EL=16	130
18.00	16.05	V23	EL=16	130
22.00	15.99	V23	EL=16	130
23.00	15.97	V23	EL=16	130
26.00	15.93	V23	EL=16	130
27.00	15.91	V23	EL=16	130
30.00	15.87	V23	EL=16	130
31.00	15.85	V23	EL=16	130
36.00	15.73	V23	EL=16	130
88.16	15.50	V23	EL=15	130
174.00	15.13	V23	EL=15	130
181.00	15.00	V23	EL=15	130
182.00	15.00	V23	EL=15	130
184.00	15.00	V23	EL=15	130

185.00	15.00			
188.00	15.01	V23	EL=15	130
189.00	15.01	V23	EL=15	130
193.00	15.01	V23	EL=15	130
194.00	15.01	V23	EL=15	130
199.00	14.89	V23	EL=15	130
200.00	14.89	V23	EL=15	130
204.00	14.88	V23	EL=15	130
205.00	14.87	V23	EL=15	130
208.00	14.89	V23	EL=15	130
209.00	14.89	V23	EL=15	130
213.00	14.88	V23	EL=15	130
214.00	14.89	V23	EL=15	130
220.00	14.68	V23	EL=15	130
221.00	14.64	V23	EL=15	130
223.24	14.50	V23	EL=14	130
225.00	14.33	V23	EL=14	130
226.00	14.24	V23	EL=14	130
228.00	14.05	V23	EL=14	130
229.00	13.95	V23	EL=14	130
232.00	13.69	V23	EL=14	130
233.00	13.57	V23	EL=14	130
233.63	13.50	V23	EL=13	130
234.00	13.46	V23	EL=13	130
235.00	13.34	V23	EL=13	130
237.00	13.10	V23	EL=13	130
238.00	13.02	V23	EL=13	130
240.00	12.86	V23	EL=13	130
241.00	12.79	V23	EL=13	130
242.00	12.71	V23	EL=13	130
243.00	12.65	V23	EL=13	130
244.00	12.57	V23	EL=13	130
245.00	12.50	V23	EL=13	130
245.00	12.50	V23	EL=12	130
246.00	12.43	V23	EL=12	130
247.00	12.35	V23	EL=12	130
248.00	12.27	V23	EL=12	130
249.00	12.18	V23	EL=12	130
250.00	12.10	V23	EL=12	130
251.00	12.02	V23	EL=12	130
252.00	11.91	V23	EL=12	130
253.00	11.79	V23	EL=12	130
254.00	11.66	V23	EL=12	130
255.00	11.54	V23	EL=12	130
255.35	11.50	V23	EL=11	130
256.00	11.42	V23	EL=11	130
257.00	11.33	V23	EL=11	130
257.49	11.29	A18	EL=11	90
258.00	11.24	A18	EL=11	90
259.00	11.13	A18	EL=11	90
260.00	11.02	A18	EL=11	90
261.00	10.93	A18	EL=11	90
262.00	10.85	A18	EL=11	90
263.00	10.79	A18	EL=11	90
264.00	10.74	A18	EL=11	90

265.00	10.63			
266.00	10.51	A18	EL=11	90
266.08	10.50	A18	EL=11	90
267.00	10.39	A18	EL=10	90
268.00	10.28	A18	EL=10	90
269.00	10.20	A18	EL=10	90
270.00	10.13	A18	EL=10	90
271.00	10.05	A18	EL=10	90
272.00	10.00	A18	EL=10	90
273.00	9.97	A18	EL=10	90
274.00	9.93	A18	EL=10	90
275.00	9.90	A18	EL=10	90
276.00	9.85	A18	EL=10	90
277.00	9.80	A18	EL=10	90
278.00	9.75	A18	EL=10	90
279.00	9.72	A18	EL=10	90
280.00	9.70	A18	EL=10	90
281.00	9.68	A18	EL=10	90
282.00	9.66	A18	EL=10	90
285.98	9.50	A18	EL= 9	90
287.10	9.45			
398.70	9.45	A18	EL= 9	90
422.00	9.37	A18	EL= 9	90
497.33	9.50	A18	EL=10	90
502.00	9.51	A18	EL=10	90
527.00	9.54	A18	EL=10	90
594.00	9.63	A18	EL=10	90
613.00	9.65	A18	EL=10	90
646.00	9.68	A18	EL=10	90
679.00	9.72	A18	EL=10	90
732.00	9.77	A18	EL=10	90
815.00	9.85	A18	EL=10	90
871.00	9.90	A18	EL=10	90
898.00	9.92	A18	EL=10	90
1130.00	10.09	A18	EL=10	90
1156.00	10.11	A18	EL=10	90
1227.00	10.17	A18	EL=10	90
1279.00	10.21	A18	EL=10	90
1310.00	10.23	A18	EL=10	90
1344.00	10.23	A18	EL=10	90
1376.00	10.24	A18	EL=10	90
1407.00	10.26	A18	EL=10	90
1421.00	10.27	A18	EL=10	90
1444.00	10.27	A18	EL=10	90
1465.00	10.29	A18	EL=10	90
1468.00	10.29	A18	EL=10	90
1500.00	10.31	A18	EL=10	90
1519.00	10.31	A18	EL=10	90
1554.00	10.33	A18	EL=10	90
1555.00	10.34	A18	EL=10	90
1575.00	10.33	A18	EL=10	90
1586.00	10.34	A18	EL=10	90
1600.00	10.36	A18	EL=10	90
1618.00	10.37	A18	EL=10	90
1633.00	10.38	A18	EL=10	90
1645.00	10.39			

```
                                                    A18  EL=10      90
          1675.00          10.42
                                                    A18  EL=10      90
          1676.00          10.42
                                                    A18  EL=10      90
          1712.00          10.47
                                                    A18  EL=10      90
          1719.00          10.46
                                                    A18  EL=10      90
          1756.00          10.42
                                                    A18  EL=10      90
          1773.00          10.43
                                                    A18  EL=10      90
          1783.00          10.44
                                                    A18  EL=10      90
          1805.00          10.50
                                                    A18  EL=10      90
          1806.00          10.50
                                                    A18  EL=10      90
          1806.14          10.50
                                                    A18  EL=11      90
          1851.00          10.56
                                                    A18  EL=11      90
          1878.16          10.50
                                                    A18  EL=10      90
          1879.00          10.50
                                                    A18  EL=10      90
          1880.57          10.50
                                                    A18  EL=11      90
          1903.00          10.53
                                                    A18  EL=11      90
          1927.35          10.50
                                                    A18  EL=10      90
          1944.02           9.50
                                                    A18  EL= 9      90
          1944.90           9.33
          4156.00           9.32
                                                    A18  EL= 9      90
          4157.62           9.50
                                                    A18  EL=10      90
          4159.00           9.65
                                                    A18  EL=10      90
          4173.40           9.64
          4607.70           9.63
                                                    A18  EL=10      90
          4616.00           9.67
                                                    A18  EL=10      90
          4727.00           9.87
                                                    A18  EL=10      90
          4749.00           9.90
                                                    A18  EL=10      90
          4750.00           9.90
                                                    A18  EL=10      90
          4788.00           9.95
                                                    A18  EL=10      90
          4820.00           9.98
                                                    A18  EL=10      90
          4828.00           9.99
                                                    A18  EL=10      90
          4850.00          10.02
                                                    A18  EL=10      90
          4854.00          10.02
                                                    A18  EL=10      90
          4892.00          10.06
                                                    A18  EL=10      90
          5034.00          10.20
                                                    A18  EL=10      90
          5054.00          10.22
                                                    A18  EL=10      90
          5136.00          10.29
                                                    A18  EL=10      90
          5166.00          10.31
                                                    A18  EL=10      90
          5266.70           9.64
          5585.00           9.63
                      ZONE TERMINATED AT END OF TRANSECT
                      PART 7   POSTSCRIPT NOTES
PS#  1   START(364608.9079,4771531.0929)
PS#  2   END(363614.9415,4772913.1221)
-1.000000e+00
```


YK-15
100-year WHAFIS Output
Zero Station: -70.66384395, 43.08491008
Onshore Dir: 125.7 deg CCW from E
Elevation (ft-NAVD88)
Station (ft)
20
15
10
5
0
-5
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
Ground
V-zone
SWEL + Setup
Wave Crest Envelope
BFE

PART 5: RUNUP2

for transect: YK-15

Station locations shifted by: -0.43 feet from their
original location to set the shoreline to
elevation 0 for RUNUP2 input

RUNUP2 INPUT CONVERSIONS
for transect: YK-15

Incident significant wave height: 8.18 feet

Peak wave period: 13.06 seconds

Mean wave height: 5.12 feet

Local Depth below SWEL: 13.52 feet

Mean wave height deshoaled using Hunt equation
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

Deepwater mean wave height: 3.07 feet

END RUNUP2 CONVERSIONS

RUNUP2 RESULTS
for transect: YK-15

RUNUP2 SWEL:
9.10
9.10
9.10
9.10
9.10
9.10
9.10
9.10
9.10
9.10

RUNUP2 deepwater mean wave heights:
2.91
2.91
2.91
3.07
3.07
3.07
3.22
3.22
3.22

RUNUP2 mean wave periods:
10.55
11.10
11.66
10.55
11.10
11.66
10.55
11.10
11.66

RUNUP2 runup above SWEL:
5.50
5.82

```
6.20
5.68
6.09
6.45
5.96
6.33
6.58

RUNUP2 Mean runup height above SWEL: 6.07 feet

RUNUP2 2-percent runup height above SWEL: 13.35 feet

RUNUP2 2-percent runup elevation: 22.45 feet-NAVD88

RUNUP2 Messages:
No Messages

_______________END RUNUP2 RESULTS_____________________


_________________ACES BEACH RUNUP_____________________

Incident significant wave height: 8.18 feet

Significant wave height deshoaled using Hunt equation

Deepwater significant wave height: 4.29 feet

Peak wave period: 13.06 seconds

Average beach Slope: 1:15.83 (H:V)

ACES RUNUP CALCULATED USING 'Aces_Beach_Runup.m'

ACES Beach 2-percent runup height above SWEL: 7.42 feet

ACES Beach 2-percent runup elevation: 16.52 feet-NAVD88

ACES BEACH RUNUP is valid

_____________END ACES BEACH RESULTS__________________

PART 5 COMPLETE_____________________________________________
```

```
  FEMA                                                    sjh            job 2
  RUNUP2 transect: YK-15                                                 1
23.0
  -4.41 -227.6 1.0
  -3.42 -193.6 1.0
  -3.26 -191.6 1.0
  -1.99 -53.6  1.0
  -1.74 -45.6  1.0
  -1.74 -33.6  1.0
  -1.52 -29.6  1.0
  -1.49 -11.6  1.0
  -0.96 -5.6   1.0
  0.76  4.4    1.0
  1.86  9.4    1.0
  3.93  23.4   1.0
  6.50  36.4   1.0
  8.23  44.4   1.0
  8.92  51.4   1.0
  9.73  62.4   1.0
  12.55 73.4   1.0
  14.17 82.4   1.0
  15.52 87.4   1.0
1 15.67 90.4   1.0
 9.1   2.91  10.55
 9.1   2.91  11.10
 9.1   2.91  11.66
 9.1   3.07  10.55
 9.1   3.07  11.10
 9.1   3.07  11.66
 9.1   3.22  10.55
 9.1   3.22  11.10
 9.1   3.22  11.66
```

CLIENT- FEMA ** WAVE RUNUP-VERSION 2.0 ** ENGINEERED BY sjh JOB job 2
PROJECT-RUNUP2 transect: YK-15 RUN 1 PAGE 1

****

CROSS SECTION PROFILE

	LENGTH	ELEV.	SLOPE	ROUGHNESS
1	-227.6	-4.4		
			.00	1.00
2	-193.6	-3.4		
			12.50	1.00
3	-191.6	-3.3		
			108.66	1.00
4	-53.6	-2.0		
			32.00	1.00
5	-45.6	-1.7		
			FLAT	1.00
6	-33.6	-1.7		
			18.18	1.00
7	-29.6	-1.5		
			600.00	1.00
8	-11.6	-1.5		
			11.32	1.00
9	-5.6	-.9		
			5.81	1.00
10	4.4	.8		
			4.55	1.00
11	9.4	1.9		
			6.76	1.00
12	23.4	3.9		
			5.06	1.00
13	36.4	6.5		
			4.62	1.00
14	44.4	8.2		
			10.14	1.00
15	51.4	8.9		
			13.58	1.00
16	62.4	9.7		
			3.90	1.00
17	73.4	12.6		
			5.56	1.00
18	82.4	14.2		
			3.70	1.00
19	87.4	15.5		
			20.00	1.00
20	90.4	15.7		

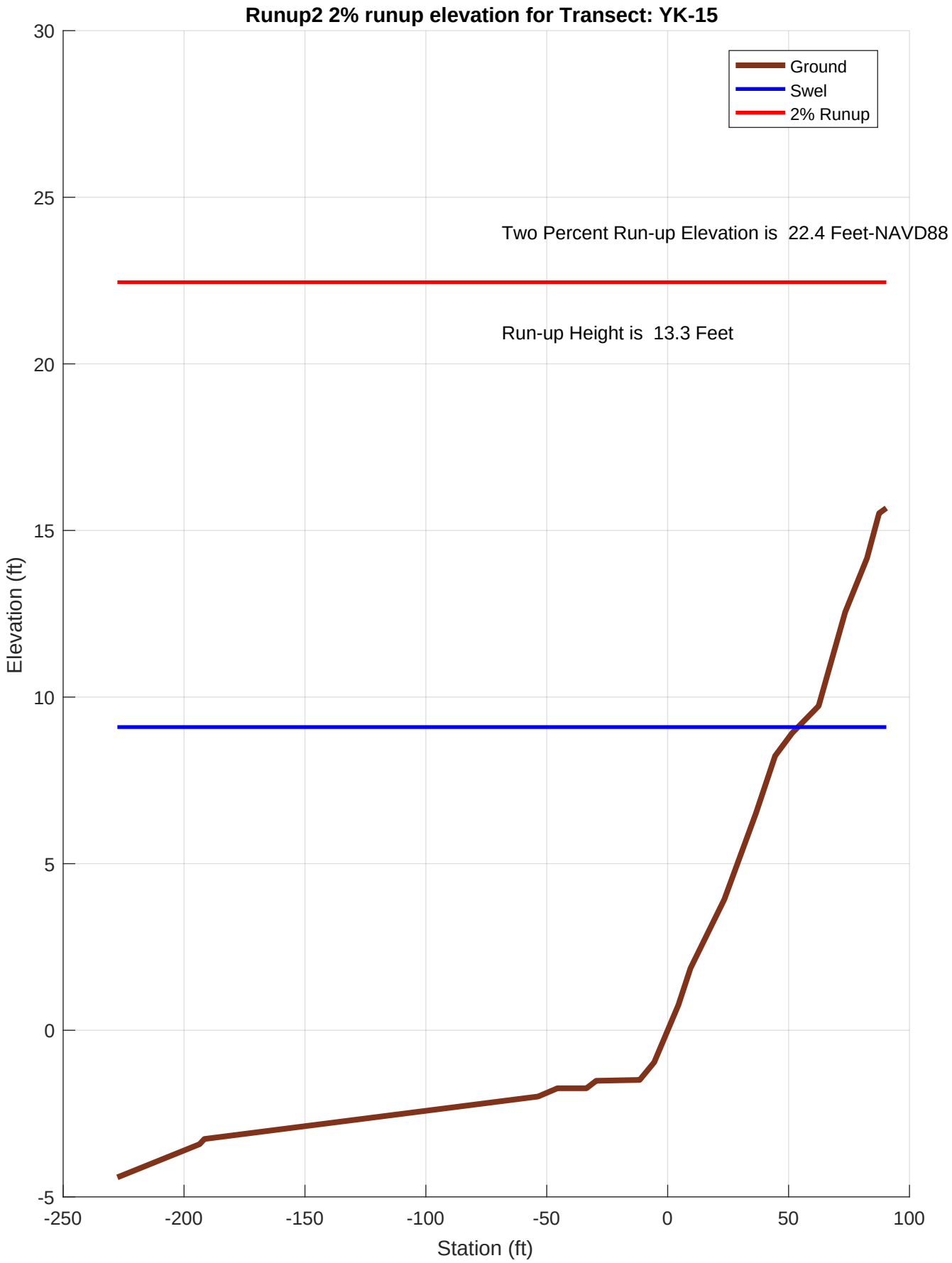
LAST SLOPE 23.00 LAST ROUGHNESS 1.00

CLIENT- FEMA ** WAVE RUNUP-VERSION 2.0 ** ENGINEERED BY sjh JOB job 2
PROJECT-RUNUP2 transect: YK-15 RUN 1 PAGE 2

****

OUTPUT TABLE

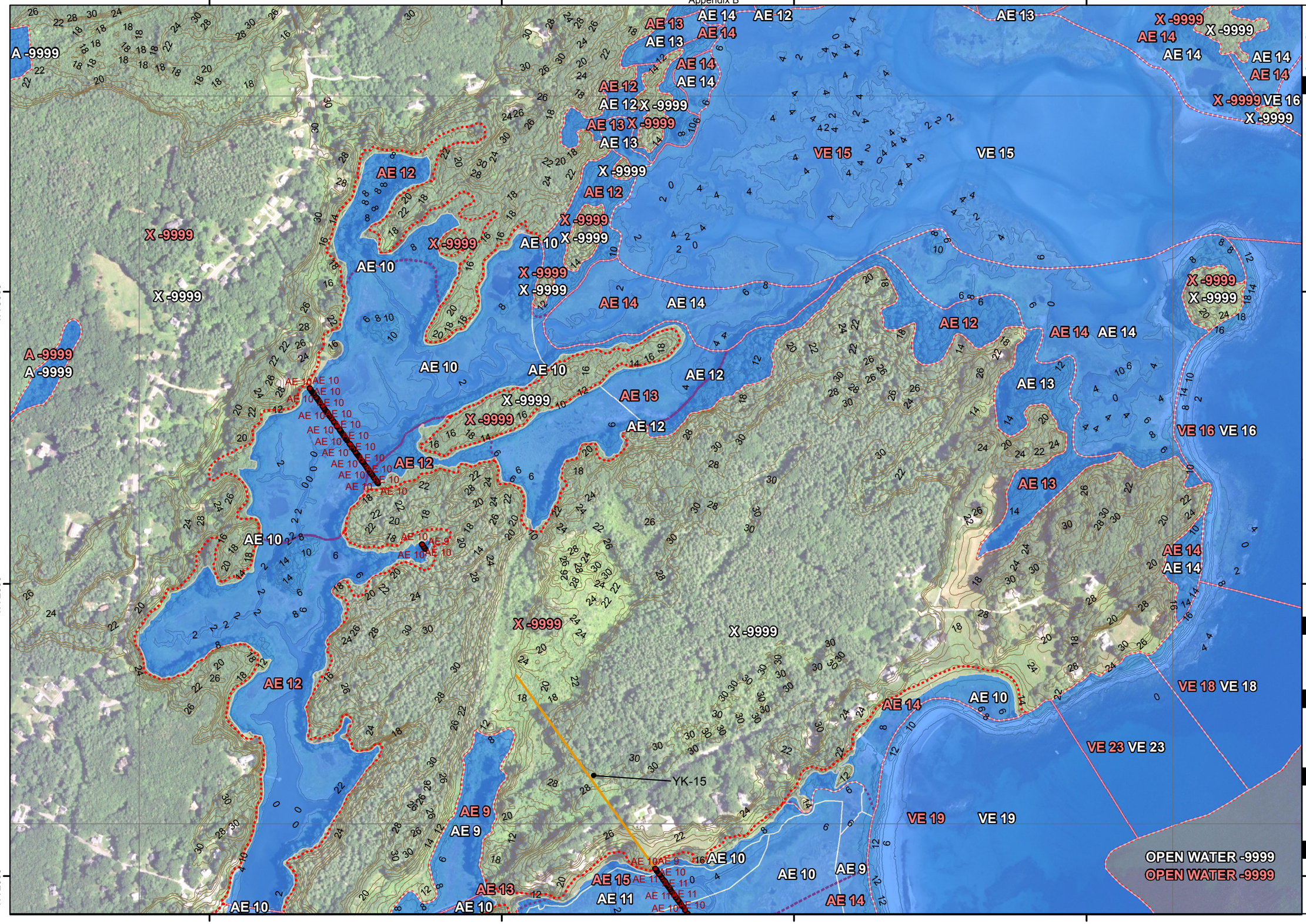
INPUT PARAMETERS			RUNUP RESULTS			
WATER LEVEL ABOVE DATUM (FT.)	DEEP WATER WAVE HEIGHT (FT.)	WAVE PERIOD (SEC.)	BREAKING SLOPE NUMBER	RUNUP SLOPE NUMBER	RUNUP ABOVE WATER LEVEL (FT.)	BREAKER DEPTH (FT.)
9.10	2.91	10.55	11	18	5.50	4.78
9.10	2.91	11.10	11	18	5.82	4.90
9.10	2.91	11.66	11	18	6.20	5.02
9.10	3.07	10.55	11	18	5.68	4.99
9.10	3.07	11.10	11	18	6.09	5.10
9.10	3.07	11.66	11	18	6.45	5.23
9.10	3.22	10.55	11	18	5.96	5.18
9.10	3.22	11.10	11	18	6.33	5.29
9.10	3.22	11.66	11	20	6.58	5.42


Runup2 2% runup elevation for Transect: YK-15
Ground
Swel
2% Runup
Two Percent Run-up Elevation is 22.4 Feet-NAVD88
Run-up Height is 13.3 Feet
Elevation (ft)
Station (ft)
30
25
20
15
10
5
0
-5
-250
-200
-150
-100
-50
0
50
100

Appendix B

363500.000000 364000.000000 364500.000000 365000.000000

4773000.000000 4772500.000000 4772000.000000



RANSOM Consulting Engineers and Scientists

Legend & Notes

- FEMA Preliminary Flood Zone, Hazard Zone, and BFE (VE 17)
- Proposed Flood Zone, Hazard Zone, and BFE (VE 17)
- WHAFIS Card Location, Hazard Zone, and BFE -Intact (VE 12)
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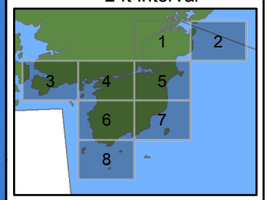
- WHAFIS Transect Location
- Elevation Contour -2 ft Interval



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3. The map projection and grid are UTM Zone 19 North.
4. The vertical datum is NAVD88.

Scale & Orientation

0 250 500

1 inch = 500 feet

Prepared For

Town of Kittery, Maine

Drawn By: SJH
Checked By: NLD
Date: 10/17/18

171.06084 | Oct 2018

Tile 1: Proposed Flood Zones, FEMA Zones, and Hydraulic Data

M:\2017\171.06084\GIS\Maps\Figure2_template.mxd

365000 000000 | 365500 000000 | 366000 000000 | 366500 000000 | 367000 000000

4773000 000000 | 4772500 000000 | 4772000 000000

AE 13
AE 14 X -9999 AE 14 X -9999 AE 14 X -9999 X -9999
VE 19 VE 19
X -9999 VE 16 VE 16 X -9999
VE 15 VE 15
X -9999 X -9999
AE 14 AE 14
AE 13 AE 13
VE 16 VE 16
X -9999 AE 14 X -9999 AE 14
VE 18 VE 18
VE 23 VE 23
VE 19 VE 19
OPEN WATER -9999
OPEN WATER -9999

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Consulting Engineers and Scientists

Legend & Notes

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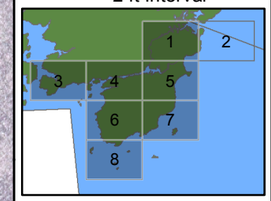

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Scale & Orientation

0 250 500

1 inch = 500 feet

Prepared For

Town of Kittery, Maine

Drawn By: SJH
Checked By: NLD
Date: 10/17/18

171.06084 | Oct 2018

Tile 2: Proposed Flood Zones, FEMA Zones, and Hydraulic Data

M:\2017\171.06084\GIS\Maps\Figure2_template.mxd

Appendix B

360000.000000 360500.000000 361000.000000 361500.000000

4772000.000000 4771500.000000 4771000.000000

X -9999 X -9999 AE 10 AE 10 AE 10 AE 10 AE 10 AE 10 A -9999 VE 12 VE 12 X -9999 X -9999 VE 12 VE 12 X -9999 X -9999 AE 9 AE 9 X -9999 X -9999 AE 10 AE 10 AE 11 AE 11 AE 11 VE 21 VE 21 VE 21 VE 21 VE 13 VE 13 AE 17 AE 18 AE 17 AE 17 AE 17 AE 18 AE 18 VE 21 VE 17 VE 31 VE 17 VE 19 VE 15 VE 24 VE 19 VE 15 VE 15 AE 17 X -9999 X -9999 AE 18 AE 9 AE 11 AE 18 AE 17 X -9999 X -9999 VE 15 VE 15 VE 20 VE 17 VE 19 VE 19 VE 18 VE 18 OPEN WATER -9999 OPEN WATER -9999 YK-05 YK-06F YK-07

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Legend & Notes

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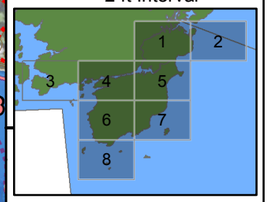
- WHAFIS Transect Location
- Elevation Contour -2 ft Interval



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4. The vertical datum is NAVD88.

Scale & Orientation

0 250 500

1 inch = 500 feet

Prepared For

Town of Kittery, Maine

Drawn By: SJH
Checked By: NLD
Date: 10/17/18

171.06084 | Oct 2018

Tile 3: Proposed Flood Zones, FEMA Zones, and Hydraulic Data

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361500.000000 362000.000000 362500.000000 363000.000000 363500.000000

4772000.000000 4771500.000000 4771000.000000

A -9999 X -9999 AE 9 AE 10 AE 11 AE 12 AE 13 AE 15 AE 16 AE 17 AE 18
VE 10 VE 11 VE 12 VE 15 VE 17 VE 18 VE 19 VE 24
YK-07

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Legend & Notes

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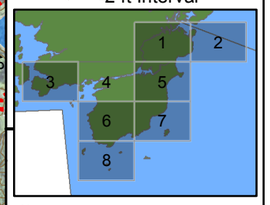

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Scale & Orientation

0 250 500

1 inch = 500 feet

Prepared For

Town of Kittery, Maine

Drawn By: SJH
Checked By: NLD
Date: 10/17/18

171.06084 | Oct 2018

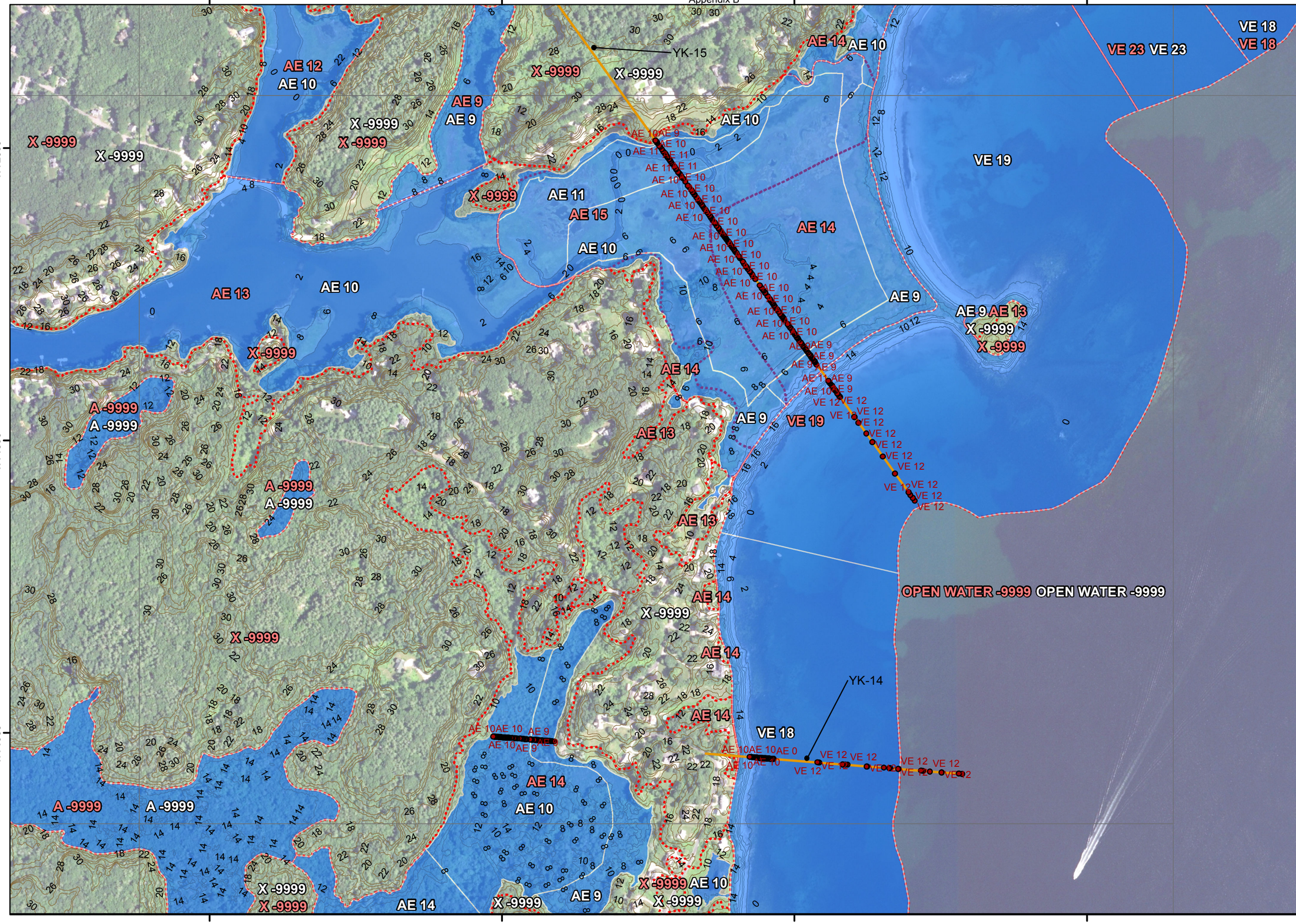
Tile 4: Proposed Flood Zones, FEMA Zones, and Hydraulic Data

M:\2017\171.06084\GIS\Maps\Figure2_template.mxd

Appendix B

363500 000000 | 364000 000000 | 364500 000000 | 365000 000000

4772000 000000 | 4771500 000000 | 4771000 000000



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Legend & Notes

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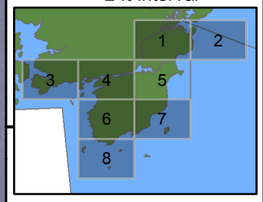

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Scale & Orientation

0 250 500

1 inch = 500 feet

Prepared For

Town of Kittery, Maine

Drawn By: SJH
Checked By: NLD
Date: 10/17/18

171.06084 | Oct 2018

Tile 5: Proposed Flood Zones, FEMA Zones, and Hydraulic Data

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361500.000000 362000.000000 362500.000000 363000.000000 363500.000000

4771000.000000 4770500.000000 4770000.000000 4769500.000000

VE 19 VE 19 | X -9999 | AE 16 AE 16 | A -9999 A -9999 | X -9999

VE 18 VE 18 | X -9999 | A -9999 A -9999 | AE 14 | AE 14

AE 16 AE 16 | X -9999 X -9999 | A -9999 A -9999 | AE 13 AE 13 | AE 13 | X -9999 X -9999

OPEN WATER -9999 OPEN WATER -9999 | X -9999 X -9999 | X -9999 X -9999 | AE 14 AE 14 | X -9999 X -9999 | AE 14

X -9999 X -9999 | AE 14 AE 14 | X -9999 X -9999 | VE 16 VE 16 | VE 20 VE 20

AE 13 AE 13 | VE 16 VE 16 | VE 19 VE 19 | OPEN WATER -9999 OPEN WATER -9999

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Legend & Notes

- FEMA Preliminary Flood Zone, Hazard Zone, and BFE (VE 17)
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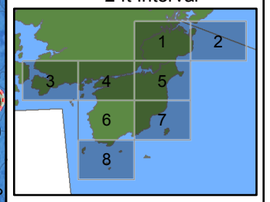

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4. The vertical datum is NAVD88.

Scale & Orientation

0 250 500

1 inch = 500 feet

Prepared For

Town of Kittery, Maine

Drawn By: SJH
Checked By: NLD
Date: 10/17/18

171.06084 | Oct 2018

Tile 6: Proposed Flood Zones, FEMA Zones, and Hydraulic Data

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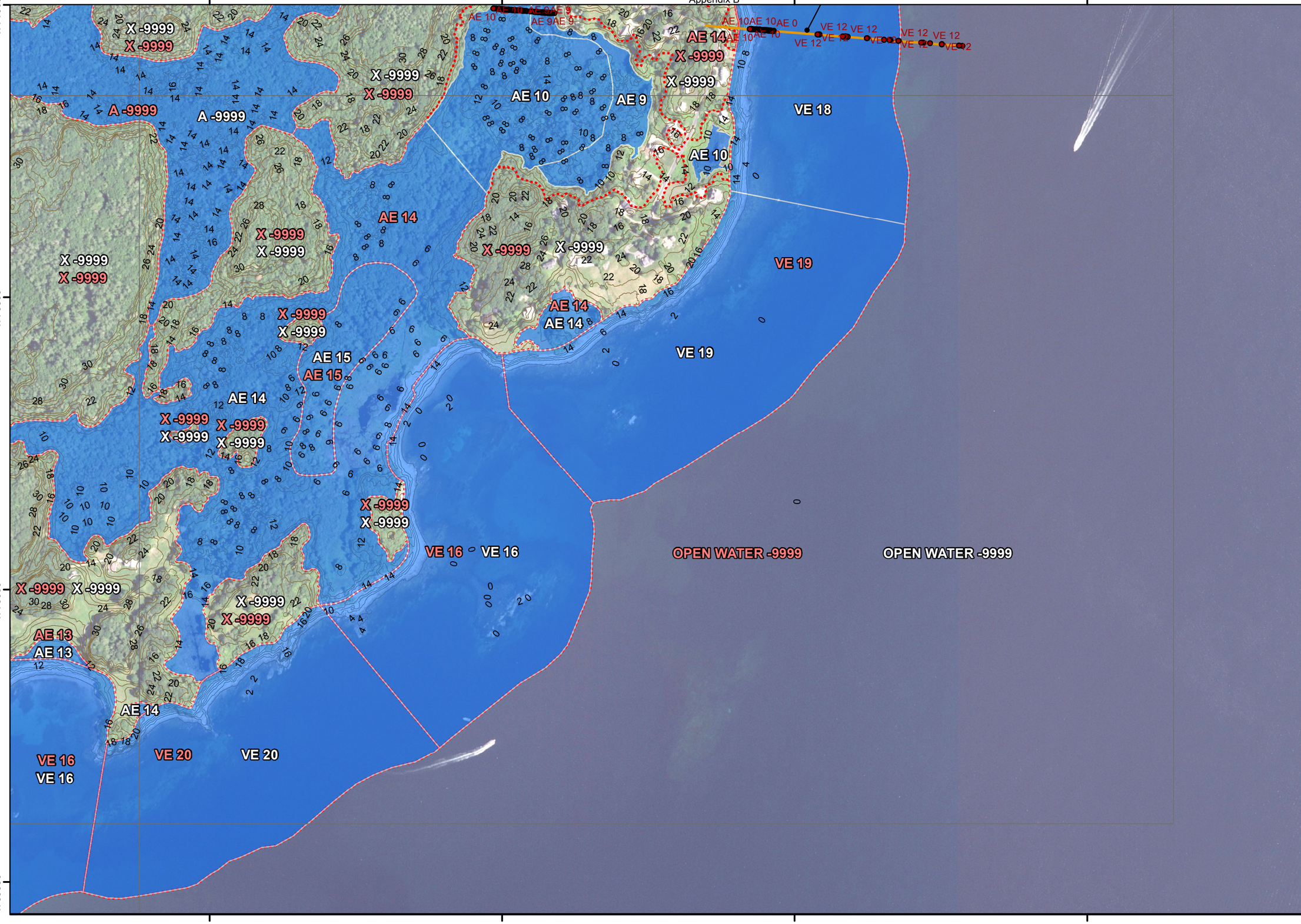
363500 000000 | 364000 000000 | 364500 000000 | 365000 000000

4771000 000000 | 4770500 000000 | 4770000 000000 | 4769500 000000



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Legend & Notes

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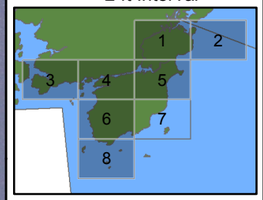
- Elevation Contour -2 ft Interval



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Scale & Orientation

0 250 500

1 inch = 500 feet

Prepared For

Town of Kittery, Maine

Drawn By: SJH
Checked By: NLD
Date: 10/17/18

171.06084 | Oct 2018

Tile 7: Proposed Flood Zones, FEMA Zones, and Hydraulic Data

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361500.000000 362000.000000 362500.000000 363000.000000 363500.000000

4769500.000000 4769000.000000 4768500.000000

AE 16 AE 16 X -9999 X -9999 AE 13 AE 14 AE 13 AE 14 X -9999 X -9999 AE 13 X -9999 VE 16 VE 16 VE 20 VE 20

VE 18 VE 18 VE 16 VE 16 VE 19 VE 19

OPEN WATER -9999 OPEN WATER -9999

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Legend & Notes

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Scale & Orientation

0 250 500

1 inch = 500 feet

Prepared For

Town of Kittery, Maine

Drawn By: SJH
Checked By: NLD
Date: 10/17/18

171.06084 | Oct 2018

Tile 8: Proposed Flood Zones, FEMA Zones, and Hydraulic Data

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Appendix C

363500 000000 | 364000 000000 | 364500 000000 | 365000 000000

4773000 000000 | 4772500 000000 | 4772000 000000

A -9999 | AE 13 AE 14 AE 12 | AE 13 | X -9999 AE 14 | X -9999 | AE 14 AE 14 | AE 14 AE 14 | AE 13 AE 14 | AE 12 | AE 12 X -9999 | AE 13 X -9999 | AE 13 | VE 15 | VE 15 | X -9999 VE 16 | X -9999 | AE 12 | X -9999 | AE 12 | X -9999 | X -9999 | AE 10 X -9999 | X -9999 | AE 10 | X -9999 | X -9999 | X -9999 | AE 14 AE 14 | AE 12 | AE 14 AE 14 | A -9999 | A -9999 | AE 10 | AE 10 | AE 12 | AE 13 | AE 13 | X -9999 | X -9999 | AE 12 | AE 12 | AE 10 | AE 13 | VE 16 VE 16 | AE 14 AE 14 | X -9999 | X -9999 | AE 12 | AE 10 | AE 14 | VE 18 VE 18 | VE 23 VE 23 | YK-15 | AE 9 | AE 9 | VE 19 | VE 19 | AE 10 | AE 15 | AE 10 | AE 9 | AE 13 | AE 11 | AE 14 | OPEN WATER -9999 | OPEN WATER -9999 | AE 10 | AE 10

RANSOM
Consulting Engineers and Scientists

Legend & Notes

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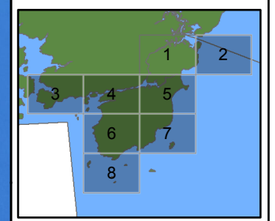
- Proposed Flood Zone, Hazard Zone, and BFE (VE 17)
- WHAFIS Transect Location



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Scale & Orientation

0 250 500

1 inch = 500 feet

Prepared For

Town of Kittery, Maine

Drawn By: SJH
Checked By: NLD
Date: 10/17/18

171.06084 | Oct 2018

Tile 1: Proposed Flood Zones and FEMA Zones

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365000 000000 365500 000000 366000 000000 366500 000000 367000 000000

4773000 000000 4772500 000000 4772000 000000

AE 13
AE 14 X -9999 AE 14 X -9999 AE 14 X -9999 AE 14 X -9999
VE 19 VE 19
X -9999 VE 16 VE 16 X -9999 VE 16
VE 15 VE 15
X -9999 X -9999
AE 14 AE 14
AE 13 AE 13
VE 16 VE 16
X -9999 AE 14 X -9999 AE 14
VE 18 VE 18
VE 23 VE 23
VE 19 VE 19
OPEN WATER -9999 OPEN WATER -9999

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Legend & Notes

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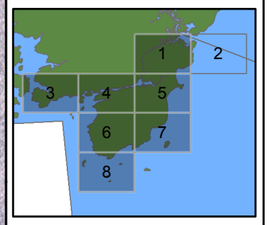

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Scale & Orientation

0 250 500

1 inch = 500 feet

Prepared For

Town of Kittery, Maine

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Date: 10/17/18

171.06084 | Oct 2018

Tile 2: Proposed Flood Zones and FEMA Zones

M:\2017\171.06084\GIS\Maps\Figure_template.mxd

360000.000000 360500.000000 361000.000000 361500.000000

4772000.000000 4771500.000000 4771000.000000

X -9999 X -9999 AE 10 AE 10 VE 12 VE 12 X -9999 AE 10 AE 10 AE 10 X -9999 X -9999 A -9999
VE 12 VE 12 X -9999 X -9999 AE 9 AE 9
AE 10 AE 10 AE 11 AE 11 AE 11 VE 21 VE 21 VE 21 VE 21 VE 13 VE 13 AE 17 AE 18 AE 17 AE 17 AE 17 AE 18 AE 17 AE 18 VE 21 VE 17 VE 31 AE 17 AE 18 YK-05 VE 20 VE 17 AE 17 AE 17 YK-06F VE 19 VE 15 YK-07 VE 24 VE 19 VE 15 VE 15 AE 17 X -9999 AE 17 X -9999 VE 15 AE 18 AE 9 AE 11 AE 18 X -9999 X -9999 VE 15 VE 15 VE 19 VE 19 VE 18 VE 18 AE 18
OPEN WATER -9999 OPEN WATER -9999

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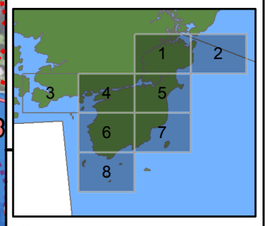
Legend & Notes

FEMA Preliminary Flood Zone, Hazard Zone, and BFE (VE 17)

Proposed Flood Zone, Hazard Zone, and BFE (VE 17)

WHAFIS Transect Location



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Town of Kittery, Maine

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171.06084 | Oct 2018

Tile 3: Proposed Flood Zones and FEMA Zones

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361500.000000 362000.000000 362500.000000 363000.000000 363500.000000

4772000.000000 4771500.000000 4771000.000000

A -9999 A -9999 A -9999 X -9999 X -9999 A -9999 X -9999 X -9999 AE 12 AE 10
AE 9 AE 9 X -9999 X -9999 AE 13 AE 10
AE 9 AE 16 AE 9 X -9999
AE 17 AE 18 AE 18 AE 11 AE 11 A -9999 A -9999
AE 18 AE 11 X -9999 AE 15 X -9999
AE 17 AE 18 YK-07 A -9999
VE 15 VE 15 X -9999 VE 15 AE 17 AE 18 AE 16 AE 16 AE 9 AE 9
VE 24 VE 19 AE 17 X -9999 X -9999 X -9999
VE 19 VE 19 X -9999
AE 16 AE 16 A -9999 A -9999
VE 18 VE 18 A -9999 X -9999

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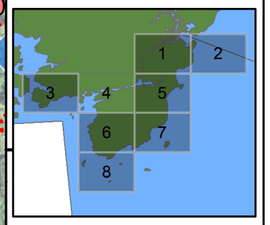
Legend & Notes

FEMA Preliminary Flood Zone, Hazard Zone, and BFE (VE 17)

Proposed Flood Zone, Hazard Zone, and BFE (VE 17)

WHAFIS Transect Location



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0 250 500

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Tile 4: Proposed Flood Zones and FEMA Zones

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363500.000000 364000.000000 364500.000000 365000.000000

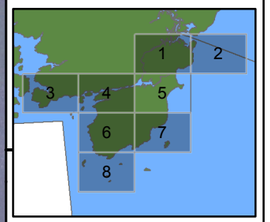
4772000.000000 4771500.000000 4771000.000000

AE 12 AE 10 X -9999 X -9999 X -9999 X -9999 AE 9 AE 9 X -9999 X -9999 AE 14 AE 10 VE 23 VE 23 VE 18 VE 18 AE 10 VE 19 AE 11 AE 15 YK-15 AE 10 AE 13 AE 10 AE 14 AE 9 AE 9 AE 13 X -9999 X -9999 X -9999 AE 14 A -9999 A -9999 AE 9 VE 19 AE 13 A -9999 A -9999 AE 13 AE 14 OPEN WATER -9999 OPEN WATER -9999 X -9999 AE 14 X -9999 AE 14 AE 14 VE 18 YK-14 AE 14 AE 10 A -9999 A -9999 X -9999 X -9999 AE 14 X -9999 AE 9 X -9999 AE 10

RANSOM Consulting Engineers and Scientists

Legend & Notes

- FEMA Preliminary Flood Zone, Hazard Zone, and BFE (VE 17)
- Proposed Flood Zone, Hazard Zone, and BFE (VE 17)
- WHAFIS Transect Location



Notes

1. Imagery downloaded from NOAA Digital Coast Data Access Veiwer August 2018. Imagery date is 2015.
2. Elevation contours downloaded from the Maine Geolibrary Data Catalog in August 2018. Contour interval is 2 feet.
3. The map projection and grid are UTM Zone 19 North.
4. The vertical datum is NAVD88.

Scale & Orientation

0 250 500

1 inch = 500 feet

Prepared For

Town of Kittery, Maine

Drawn By: SJH
Checked By: NLD
Date: 10/17/18

171.06084 | Oct 2018

Tile 5: Proposed Flood Zones and FEMA Zones

M:\2017\171.06084\GIS\Maps\Figure_template.mxd

361500.000000 362000.000000 362500.000000 363000.000000 363500.000000

4771000.000000 4770500.000000 4770000.000000 4769500.000000

VE 19 VE 19 X -9999 AE 16 AE 16 A -9999 A -9999 X -9999 A -9999 A -9999 X -9999 X -9999 X -9999 X -9999 X -9999 VE 18 VE 18 AE 16 AE 16 X -9999 X -9999 A -9999 A -9999 AE 14 AE 14 AE 13 AE 13 AE 13 AE 13 X -9999 X -9999 X -9999 X -9999 X -9999 X -9999 AE 14 AE 14 X -9999 X -9999 AE 14 AE 14 VE 16 VE 16 VE 20 VE 20 OPEN WATER -9999 OPEN WATER -9999 AE 13 AE 13 VE 16 VE 16 VE 19 VE 19 OPEN WATER -9999 OPEN WATER -9999

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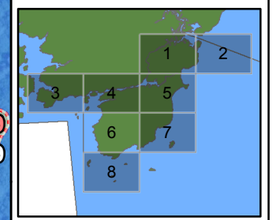

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Scale & Orientation

0 250 500

1 inch = 500 feet

Prepared For

Town of Kittery, Maine

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Tile 6: Proposed Flood Zones and FEMA Zones

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Appendix C

363500 000000 | 364000 000000 | 364500 000000 | 365000 000000

4771000 000000 | 4770500 000000 | 4770000 000000 | 4769500 000000

X -9999 X -9999 | X -9999 X -9999 | AE 14 | YK-14 | X -9999 X -9999 | A -9999 | A -9999 | AE 10 | AE 9 | VE 18 | AE 10 | AE 14 | X -9999 X -9999 | X -9999 X -9999 | X -9999 | X -9999 | VE 19 | AE 14 AE 14 | AE 15 AE 15 | VE 19 | AE 14 | X -9999 X -9999 | X -9999 X -9999 | X -9999 X -9999 | X -9999 X -9999 | VE 16 | VE 16 | OPEN WATER -9999 | OPEN WATER -9999 | X -9999 X -9999 | X -9999 X -9999 | AE 13 AE 13 | AE 14 | VE 16 VE 16 | VE 20 | VE 20

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Legend & Notes

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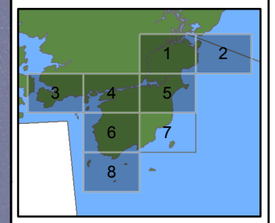

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Scale & Orientation

0 250 500

1 inch = 500 feet

Prepared For

Town of Kittery, Maine

Drawn By: SJH
Checked By: NLD
Date: 10/17/18

171.06084 | Oct 2018

Tile 7: Proposed Flood Zones and FEMA Zones

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361500.000000 362000.000000 362500.000000 363000.000000 363500.000000

4769500.000000 4769000.000000 4768500.000000

AE 16 AE 16 X -9999 X -9999 AE 14 AE 13 AE 14 AE 13 X -9999 X -9999 AE 13 AE 13 X -9999 VE 16 VE 16 VE 20 VE 20 VE 18 VE 18 VE 16 VE 16 VE 19 VE 19 OPEN WATER -9999 OPEN WATER -9999

RANSOM Consulting Engineers and Scientists

Legend & Notes

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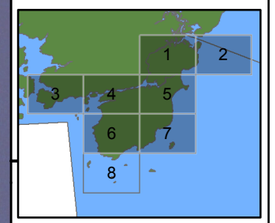

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Scale & Orientation

0 250 500

1 inch = 500 feet

Prepared For

Town of Kittery, Maine

Drawn By: SJH
Checked By: NLD
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Tile 8: Proposed Flood Zones and FEMA Zones

M:\2017\171.06084\GIS\Maps\Figure_template.mxd

Transect ID	1-D Wave Model					Runup Model Input												Runup Model Output					
	Start x	TWL	Hs	Per (s)	Max Setup	X(toe)	Z(toe)	X(top)	Z(top)	Slope	Setup (toe)	Hs (toe)	Per (s) (toe)	γ_{berm}	γ_{rough}	γ_{beta}	γ_{perm}	TAW Elev.	Runup2 Elev.	TAW Msg‡	RUNUP2 Msg§	Method Used	RUNUP
YK-05	-150.00	8.85	3.25	6.26	0.17	10.00	2.77	43.00	15.18	0.38	-0.05	3.59	6.34	0.99	0.75	1.00	1.00	17.36	17.48	1	0	TAW	17.36
YK-06	-398.00	8.85	5.86	9.61	0.84	0.00	0.01	46.00	12.30	0.27	-0.02	5.99	9.71	1.00	0.85	1.00	1.00	20.88	23.91	1	0	TAW	20.88
YK-06F	-383.00	8.85	5.86	9.62	0.74	0.00	0.01	53.00	11.98	0.23	-0.01	5.97	9.73	0.96	0.75	1.00	1.00	18.78	27.96	1	-1	TAW	18.78
YK-07	-659.00	8.85	2.85	7.09	0.46	9.00	3.02	29.50	17.50	0.71	-0.05	3.48	7.12	1.00	0.85	1.00	1.00	19.49	15.67	1	0	TAW	19.49
YK-14	-276.00	9.02	12.28	14.03	1.20	80.00	3.19	159.00	15.45	0.16	0.60	5.05	13.87	0.95	0.80	1.00	1.00	22.17	17.57	1	0	TAW	22.17
YK-15	-228.00	9.11	8.18	13.06	1.12	-10.00	-1.31	90.00	15.67	0.17	0.19	6.11	12.79	0.97	1.00	1.00	1.00	21.65	22.45	0	0	R2	22.45

‡ Taw messages: 0=Not Valid, 1=Valid
§ Runup2 Messages: 0=No Messages, -1=non-fatal error, 1=Runup2 failed
*All Distance units are feet, elevations are feet NAVD88