```
PART 5: RUNUP2
        for transect: CM-158-1
Station locations shifted by: -0.64 feet from their
original location to set the shoreline to
elevation 0 for RUNUP2 input
              _RUNUP2 INPUT CONVERSIONS_
        for transect: CM-158-1
Incident significant wave height: 1.75 feet
Peak wave period: 2.70 seconds
Mean wave height: 1.10 feet
Local Depth below SWEL: 28.45 feet
Mean wave height deshoaled using Hunt approximation for
celerity assuming constant wave energy flux.
 References: R.G. Dean and R.A. Dalrymple. 2000. Water
             Wave Mechanics for Engineers and Scientists. World
              Scientific Publishing Company, River Edge New Jersy
             USACE (1985), Direct Methods for Calculating Wavelength, CETN-1-17
             US Army Engineer Waterways Experiment Station Coastel Engineering
             Research Center, Vicksburg, MS
             also see Coastal Engineering Manual Part II-3
             for discussion of shoaling coefficient
    Depth, D = 28.45
    Period, T = 2.29
    Waveheight, H = 1.10
Deep water wavelength, L0 (ft)
    L0 = g*T*T/twopi
    L0 = 32.17*2.29*2.29/6.28 = 26.97
Deep water wave celerity, CO (ft/s)
    C0 = L0/T
    C0 = 26.97/2.29 = 11.75
Angular frequency, sigma (rad/s)
    sigma = twopi/T
    sigma = 6.28/2.29 = 2.74
Hunts (1979) approximation for Celerity C1H (ft/s) at Depth D (ft)
    y = sigma.*sigma.*D./g
    y = 2.74*2.74*28.45/32.17 = 6.63
    \texttt{C1H} = \texttt{sqrt}( \texttt{g.*D.}/(\texttt{y+1.}/(\texttt{1} + \texttt{0.6522.*y} + \texttt{0.4622.*y.^2} + \texttt{0.0864.*y.^4} + \texttt{0.0675.*y.^5})) \ )
    C1H = 11.75
Shoaling Coefficient KsH
    KsH = sqrt(C0/C1H)
    KsH = sqrt(11.75/11.75) = 1.00
Deepwater Wave Height HO_H (ft)
    H0_H = H/KsH
    H0_H = 1.10/1.00 = 1.10
Deepwater mean wave height: 1.10 feet
              END RUNUP2 CONVERSIONS
              RUNUP2 RESULTS
        for transect: CM-158-1
RUNUP2 SWEL:
8.80
```

8.80 8.80 8.80

```
8.80
8.80
8.80
8.80
RUNUP2 deepwater mean wave heights:
1.04
1.04
1.04
1.10
1.10
1.10
1.15
1.15
1.15
RUNUP2 mean wave periods:
2.18
2.29
2.41
2.18
2.29
2.41
2.18
2.29
2.41
RUNUP2 runup above SWEL:
1.17
1.18
1.19
1.24
1.25
1.26
1.30
1.31
1.32
RUNUP2 Mean runup height above SWEL: 1.25 feet
RUNUP2 2-percent runup height above SWEL: 2.74 feet
RUNUP2 2-percent runup elevation: 11.54 feet-NAVD88
RUNUP2 Messages:
No Messages
             __END RUNUP2 RESULTS_
              ___ACES BEACH RUNUP_
Incident significant wave height: 1.75 feet
Significant wave height deshoaled using Hunt equation
Deepwater significant wave height: 1.54 feet
Peak wave period: 2.70 seconds
Average beach Slope: 1:3.35 (H:V)
ACES RUNUP CALCULATED USING 'Aces_Beach_Runup.m'
ACES Beach 2-percent runup height above SWEL: 3.76 feet
ACES Beach 2-percent runup elevation: 12.56 feet-NAVD88
!!!ACES BEACH RUNUP is NOT valid
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8.80

END ACES B
PART 5 COMPLETE