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PART 5: RUNUP2

        for transect: CM-134-1

Station locations shifted by: 163.76 feet from their
original location to set the shoreline to
elevation 0 for RUNUP2 input


_____RUNUP2 INPUT CONVERSIONS_____
        for transect: CM-134-1

Incident significant wave height: 2.21 feet

Peak wave period: 3.30 seconds

Mean wave height: 1.39 feet

Local Depth below SWEL: 22.43 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 = 22.43
    Period, T = 2.80
    Waveheight, H = 1.39
Deep water wavelength, L0 (ft)
    L0 = g*T*T/twopi
    L0 = 32.17*2.80*2.80/6.28 = 40.29
Deep water wave celerity, C0 (ft/s)
    C0 = L0/T
    C0 = 40.29/2.80 = 14.36
Angular frequency, sigma (rad/s)
    sigma = twopi/T
    sigma = 6.28/2.80 = 2.24
Hunts (1979) approximation for Celerity C1H (ft/s) at Depth D (ft)
    y = sigma.*sigma.*D./g
    y = 2.24*2.24*22.43/32.17 = 3.50
    C1H = sqrt( g.*D./(y+1./(1 + 0.6522.*y + 0.4622.*y.^2 + 0.0864.*y.^4 +0.0675.*y.^5)) )
    C1H = 14.33
Shoaling Coefficient KsH
    KsH = sqrt(C0/C1H)
    KsH = sqrt(14.36/14.33) = 1.00
Deepwater Wave Height H0_H (ft)
    H0_H = H/KsH
    H0_H = 1.39/1.00 = 1.38

Deepwater mean wave height: 1.38 feet

_____END RUNUP2 CONVERSIONS_____

_____RUNUP2 RESULTS_____
        for transect: CM-134-1

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:
1.32
1.32
1.32
1.38
1.38
1.38
1.45
1.45
1.45

RUNUP2 mean wave periods:
2.66
2.80
2.95
2.66
2.80
2.95
2.66
2.80
2.95

RUNUP2 runup above SWEL:
0.72
0.76
0.79
0.73
0.77
0.81
0.76
0.79
0.83

RUNUP2 Mean runup height above SWEL: 0.77 feet

RUNUP2 2-percent runup height above SWEL: 1.70 feet

RUNUP2 2-percent runup elevation: 10.60 feet-NAVD88

RUNUP2 Messages:
No Messages

_____END RUNUP2 RESULTS_____


_____ACES BEACH RUNUP_____

Incident significant wave height: 2.21 feet

Significant wave height deshoaled using Hunt equation

Deepwater significant wave height: 1.94 feet

Peak wave period: 3.30 seconds

Average beach Slope: 1:28.27 (H:V)

ACES RUNUP CALCULATED USING 'Aces_Beach_Runup.m'

ACES Beach 2-percent runup height above SWEL: 1.11 feet

ACES Beach 2-percent runup elevation: 10.01 feet-NAVD88

ACES BEACH RUNUP is valid
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_____END ACES BEACH RESULTS_____

PART 5 COMPLETE_____