

**IMPLICIT**

**y = 3 ft** 3  
**b = 3 ft** 3  
**H<sub>L</sub> = h<sub>1</sub> = 8.2 ft** 8.2 (S dy<sup>2</sup>)<sup>2</sup>+(S dy<sup>2</sup>)/(T dt)  
**H<sub>R</sub> = h<sub>5</sub> = 3.6 ft** 3.6 K and Ss 2.1426 4.143  
**K = 0.02 ft/day T = 0.06 ft<sup>2</sup>/d<sub>x</sub>** 0.06 0.02  
**s = 0.00033 ft<sup>-1</sup> S = 0.001** 1E-03 0.00033

initially, h<sub>1</sub> = h<sub>2</sub> = h<sub>3</sub> = h<sub>4</sub> = h<sub>5</sub> = 8.2 ft

for t>0 h<sub>5</sub> = 3.6 ft change yellow cell to time step size

**Time Increment (days)**

| <b>0.07</b>  |         |         | h1  | h2   | h3   | h4   | h5  |          |          |  | % MB         |
|--------------|---------|---------|-----|------|------|------|-----|----------|----------|--|--------------|
| <b>pre 0</b> |         |         | 8.2 | 8.2  | 8.2  | 8.2  | 8.2 |          |          |  | (in-out)*100 |
| 0            | vol in  | storage | 8.2 | 8.2  | 8.2  | 8.2  | 3.6 | vol out  | in       |  | (in+out)/2   |
| 0.07         | 0.00010 | 0.0047  | 8.2 | 8.13 | 7.90 | 7.02 | 3.6 | 0.004783 | 0.004783 |  |              |
| 0.14         | 0.00028 | 0.0035  | 8.2 | 8.00 | 7.54 | 6.32 | 3.6 | 0.003806 | 0.003806 |  | -2.393E-13   |
| 0.21         | 0.00047 | 0.0027  | 8.2 | 7.86 | 7.22 | 5.88 | 3.6 | 0.003191 | 0.003191 |  | -2.311E-13   |
| 0.28         | 0.00067 | 0.0021  | 8.2 | 7.72 | 6.95 | 5.59 | 3.6 | 0.002781 | 0.002781 |  | -3.119E-13   |
| 0.35         | 0.00084 | 0.0016  | 8.2 | 7.60 | 6.73 | 5.38 | 3.6 | 0.002494 | 0.002494 |  | -3.651E-13   |
| 0.42         | 0.00099 | 0.0013  | 8.2 | 7.49 | 6.55 | 5.23 | 3.6 | 0.002287 | 0.002287 |  | -4.551E-13   |
| 0.49         | 0.00112 | 0.001   | 8.2 | 7.40 | 6.41 | 5.12 | 3.6 | 0.002133 | 0.002133 |  | -4.27E-13    |
| 0.56         | 0.00122 | 0.0008  | 8.2 | 7.33 | 6.30 | 5.04 | 3.6 | 0.002016 | 0.002016 |  | -3.657E-13   |
| 0.63         | 0.00130 | 0.0006  | 8.2 | 7.27 | 6.22 | 4.98 | 3.6 | 0.001927 | 0.001927 |  | -4.727E-13   |
| 0.7          | 0.00137 | 0.0005  | 8.2 | 7.22 | 6.15 | 4.93 | 3.6 | 0.001857 | 0.001857 |  | -3.969E-13   |

|        |     |       |       |       |         |
|--------|-----|-------|-------|-------|---------|
| matrix | 8.2 | -4.14 | 1     | 0     | -17.570 |
|        |     | 1     | -4.14 | 1     | -17.570 |
|        |     | 0     | 1     | -4.14 | 3.6     |
|        |     | -4.14 | 1.00  | 0.00  | -25.770 |
|        |     | 1.00  | -4.14 | 1.00  | -17.570 |
|        |     | 0.00  | 1.00  | -4.14 | -21.170 |

**layout matrix function  
cntrl shift enter**

h=A<sup>-1</sup> R  
Ainverse \* R

|      |    |       |         |        |       |           |
|------|----|-------|---------|--------|-------|-----------|
| 0.07 | h2 | 8.127 | -0.2573 | -0.066 | -0.02 | -25.770   |
|      | h3 | 7.897 | -0.066  | -0.273 | -0.07 | -17.570   |
|      | h4 | 7.016 | -0.0159 | -0.066 | -0.26 | -21.170   |
| 0.14 | h2 | 8.003 | -0.2573 | -0.066 | -0.02 | -25.61275 |
|      | h3 | 7.541 | -0.066  | -0.273 | -0.07 | -16.91959 |
|      | h4 | 6.318 | -0.0159 | -0.066 | -0.26 | -18.63355 |
| 0.21 | h2 | 7.861 | -0.2573 | -0.066 | -0.02 | -25.34784 |
|      | h3 | 7.217 | -0.066  | -0.273 | -0.07 | -16.15842 |
|      | h4 | 5.879 | -0.0159 | -0.066 | -0.26 | -17.13809 |
| 0.28 | h2 | 7.722 | -0.2573 | -0.066 | -0.02 | -25.04321 |
|      | h3 | 6.945 | -0.066  | -0.273 | -0.07 | -15.46402 |
|      | h4 | 5.586 | -0.0159 | -0.066 | -0.26 | -16.19699 |
| 0.35 | h2 | 7.597 | -0.2573 | -0.066 | -0.02 | -24.74502 |
|      | h3 | 6.725 | -0.066  | -0.273 | -0.07 | -14.88144 |
|      | h4 | 5.382 | -0.0159 | -0.066 | -0.26 | -15.56961 |
| 0.42 | h2 | 7.49  | -0.2573 | -0.066 | -0.02 | -24.47688 |
|      | h3 | 6.55  | -0.066  | -0.273 | -0.07 | -14.40957 |

|      |    |       |         |        |       |           |
|------|----|-------|---------|--------|-------|-----------|
| 0.49 | h4 | 5.234 | -0.0159 | -0.066 | -0.26 | -15.13121 |
|      | h2 | 7.401 | -0.2573 | -0.066 | -0.02 | -24.24741 |
|      | h3 | 6.411 | -0.066  | -0.273 | -0.07 | -14.03347 |
| 0.56 | h4 | 5.123 | -0.0159 | -0.066 | -0.26 | -14.81367 |
|      | h2 | 7.328 | -0.2573 | -0.066 | -0.02 | -24.05691 |
|      | h3 | 6.301 | -0.066  | -0.273 | -0.07 | -13.73598 |
| 0.63 | h4 | 5.04  | -0.0159 | -0.066 | -0.26 | -14.57763 |
|      | h2 | 7.27  | -0.2573 | -0.066 | -0.02 | -23.90179 |
|      | h3 | 6.215 | -0.066  | -0.273 | -0.07 | -13.50153 |
| 0.7  | h4 | 4.976 | -0.0159 | -0.066 | -0.26 | -14.39895 |
|      | h2 | 7.224 | -0.2573 | -0.066 | -0.02 | -23.77704 |
|      | h3 | 6.148 | -0.066  | -0.273 | -0.07 | -13.31711 |
|      | h4 | 4.927 | -0.0159 | -0.066 | -0.26 | -14.26201 |

