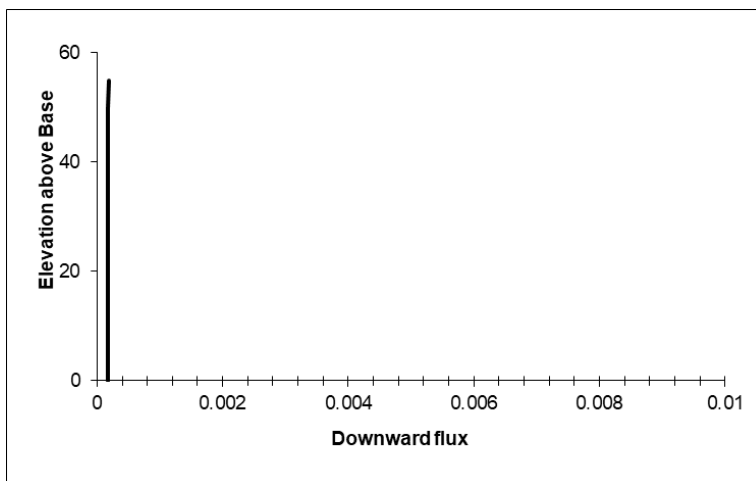
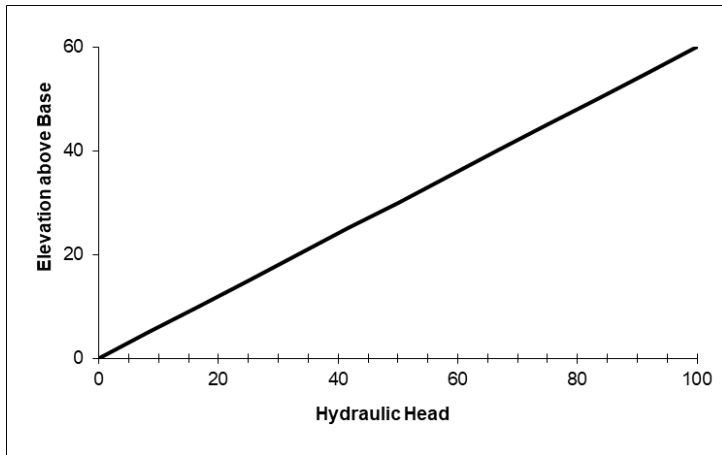


John Hubbell
1/24/22
HWRS 482

Homework 1

- Homogeneous using all k zone 3

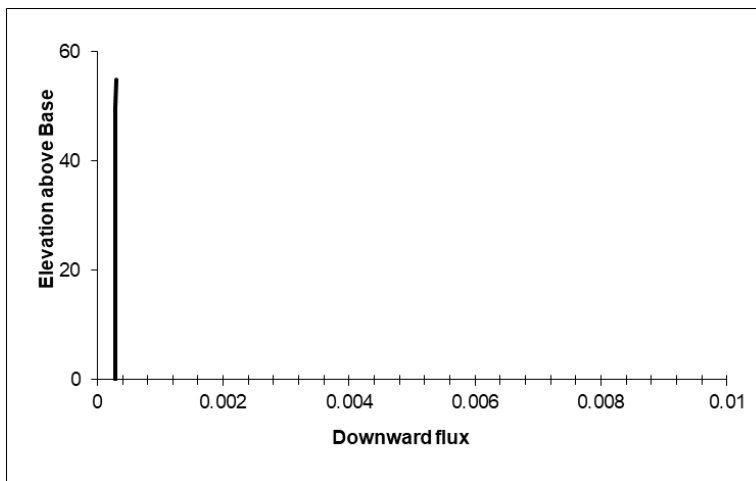
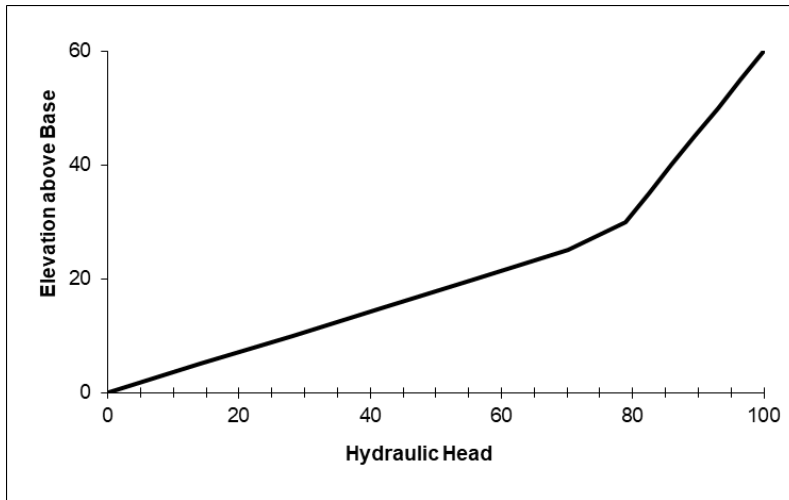


Direct solution for flux		
	K	num cells
zone 1	0.0004	0
zone 2	0.01	0
zone 3	0.0001	12
Keq	0.0001	
q	0.000167	

z	K zone cell	K cell	H	q	zone 1	zone 2	zone 3
60	3	1E-04	100		0	0	1
55	3	1E-04	91.6625	0.00017	0	0	1
50	3	1E-04	83.3256	0.00017	0	0	1
45	3	1E-04	74.9895	0.00017	0	0	1
40	3	1E-04	66.6542	0.00017	0	0	1
35	3	1E-04	58.3199	0.00017	0	0	1
30	3	1E-04	49.9866	0.00017	0	0	1
25	3	1E-04	41.6541	0.00017	0	0	1
20	3	1E-04	33.3225	0.00017	0	0	1
15	3	1E-04	24.9914	0.00017	0	0	1
10	3	1E-04	16.6608	0.00017	0	0	1
5	3	1E-04	8.33041	0.00017	0	0	1
0	3	1E-04	0	0.00017	0	0	1

Map of node and cell numbers		
	node	cell
1	-	1
2	-	2
3	-	3
4	-	4
5	-	5
6	-	6
7	-	7
8	-	8
9	-	9
10	-	10
11	-	11
12	-	12
13	-	13

- Heterogenous using k zone 1 and 3



Direct solution for flux													Map of node and cell numbers			
zone 1	K	num cells	z	K zone cell	K cell	H	q	zone 1	zone 2	zone 3			node	cell		
zone 1	0.0004	6.5	60	1	4E-04	100		1	0	0			1	-	1	
zone 2	0.01	0	55	1	4E-04	96.4872	0.00028	1	0	0			2	-	2	
zone 3	0.0001	5.5	50	1	4E-04	92.9749	0.00028	1	0	0			3	-	3	
			45	1	4E-04	89.4633	0.00028	1	0	0			4	-	4	
Keq	0.000168		40	1	4E-04	85.9526	0.00028	1	0	0			5	-	5	
q	0.000281		35	1	4E-04	82.4428	0.00028	1	0	0			6	-	6	
			30	1	4E-04	78.9339	0.00028	1	0	0			7	-	7	
			25	3	1E-04	70.1626	0.00028	0	0	1			8	-	8	
			20	3	1E-04	56.1293	0.00028	0	0	1			9	-	9	
			15	3	1E-04	42.0965	0.00028	0	0	1			10	-	10	
			10	3	1E-04	28.0642	0.00028	0	0	1			11	-	11	
			5	3	1E-04	14.0321	0.00028	0	0	1			12	-	12	
			0	3	1E-04	0	0.00028	0	0	1			13	-	13	