

**PONDS Version 3.2.0265**  
**Retention Pond Recovery - Refined Method**  
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**Devo Seereeram, Ph.D., P.E.**

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**Project Data**

Project Name: Hancock Road - Pond 3 - Big Sky Subdivision  
Simulation Description: Revised Stormwater Calculations due to Existing Power Line Constraints.  
Project Number:  
Engineer : Mandee Brandt, PE  
Supervising Engineer: Jim Myers, PE  
Date: 05-06-2013

**Aquifer Data**

Base Of Aquifer Elevation, [B] (ft datum): 92.00  
Water Table Elevation, [WT] (ft datum): 93.00  
Horizontal Saturated Hydraulic Conductivity, [Kh] (ft/day): 20.00  
Fillable Porosity, [n] (%): 25.00  
Unsaturated Vertical Infiltration Rate, [Iv] (ft/day): 13.0  
Maximum Area For Unsaturated Infiltration, [Av] (ft<sup>2</sup>): 15112.0

**Geometry Data**

Equivalent Pond Length, [L] (ft): 750.0  
Equivalent Pond Width, [W] (ft): 20.0  
Ground water mound is expected to intersect the pond bottom

**Stage vs Area Data**

Stage (ft datum)	Area (ft <sup>2</sup> )
124.00	3978.0
125.00	6138.0
126.00	7911.0
127.00	9693.0
128.00	11308.0
129.00	16252.0
130.00	21196.0
131.00	26247.0

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**Scenario Input Data**

*Scenario 1 :: 33541.2 ft<sup>3</sup> slug load - Treatment Volume (0.77 ac-ft)*

Hydrograph Type: Slug Load  
 Modflow Routing: Routed with infiltration

Treatment Volume (ft<sup>3</sup>) 33541.2

Initial ground water level (ft datum) 93.00 (default)

Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)
0.100	2.000	5.000	10.000
0.250	2.500	6.000	11.000
0.500	3.000	7.000	12.000
1.000	3.500	8.000	13.000
1.500	4.000	9.000	14.000

*Scenario 2 :: 87120 ft<sup>3</sup> slug load - 25yr/96hr*

Hydrograph Type: Slug Load  
 Modflow Routing: Routed with infiltration

Treatment Volume (ft<sup>3</sup>) 87120

Initial ground water level (ft datum) 93.00 (default)

Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)
0.100	2.000	5.000	10.000
0.250	2.500	6.000	11.000
0.500	3.000	7.000	12.000
1.000	3.500	8.000	13.000
1.500	4.000	9.000	14.000

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**Detailed Results** :: Scenario 1 :: 33541.2 ft<sup>3</sup> slug load - Treatment Volume (0.77 ac-ft)

Elapsed Time	Instantaneous Inflow Rate	Outside Recharge	Stage Elevation	Infiltration Rate	Combined Instantaneous Discharge	Cumulative Inflow	Cumulative Infiltration	Combined Cumulative	
0.000	5590.2000	0.00000	93.00000	0.00000	0	0.000	0.00000	0	N.A.
0.002	5590.2000	0.00000	128.18240	1.83765	0	33541.200	11.02688	0	U/P
2.400	0.0000	0.00000	126.87640	1.42917	0	33541.200	13841.43000	0	U/P
6.000	0.0000	0.00000	124.91380	0.73123	0	33541.200	29004.23000	0	U/P
12.000	0.0000	0.00000	---	---	---	33541.200	33541.20000	0	dry
24.000	0.0000	0.00000	---	---	---	33541.200	33541.20000	0	dry
36.000	0.0000	0.00000	---	---	---	33541.200	33541.20000	0	dry
48.000	0.0000	0.00000	---	---	---	33541.200	33541.20000	0	dry
60.000	0.0000	0.00000	---	---	---	33541.200	33541.20000	0	dry
72.000	0.0000	0.00000	---	---	---	33541.200	33541.20000	0	dry
84.000	0.0000	0.00000	---	---	---	33541.200	33541.20000	0	dry
96.000	0.0000	0.00000	---	---	---	33541.200	33541.20000	0	dry
120.000	0.0000	0.00000	---	---	---	33541.200	33541.20000	0	dry
144.000	0.0000	0.00000	---	---	---	33541.200	33541.20000	0	dry
168.000	0.0000	0.00000	---	---	---	33541.200	33541.20000	0	dry
192.000	0.0000	0.00000	---	---	---	33541.200	33541.20000	0	dry
216.000	0.0000	0.00000	---	---	---	33541.200	33541.20000	0	dry
240.000	0.0000	0.00000	---	---	---	33541.200	33541.20000	0	dry
264.000	0.0000	0.00000	---	---	---	33541.200	33541.20000	0	dry
288.000	0.0000	0.00000	---	---	---	33541.200	33541.20000	0	dry
312.000	0.0000	0.00000	---	---	---	33541.200	33541.20000	0	dry
336.000	0.0000	0.00000	---	---	---	33541.200	33541.20000	0	dry

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**Detailed Results** :: Scenario 2 :: 87120 ft<sup>3</sup> slug load - 25yr/96hr

Elapsed Time	Instantaneous Inflow Rate	Outside Recharge	Stage Elevation	Infiltration Rate	Combined Instantaneous Discharge	Cumulative Inflow	Cumulative Infiltration	Combined Cumulative	
0.000	14520.0000	0.00000	93.00000	0.00000	0	0.000	0.00000	0	N.A.
0.002	14520.0000	0.00000	130.98080	2.27380	0	87120.000	13.64278	0	U/P
2.400	0.00000	0.00000	130.16590	2.27050	0	87120.000	19645.60000	0	U/P
6.000	0.00000	0.00000	128.53290	1.96080	0	87120.000	49007.06000	0	U/P
12.000	0.00000	0.00000	125.26260	0.96859	0	87120.000	80389.23000	0	U/P
24.000	0.00000	0.00000	----	----	----	87120.000	87120.00000	0	dry
36.000	0.00000	0.00000	----	----	----	87120.000	87120.00000	0	dry
48.000	0.00000	0.00000	----	----	----	87120.000	87120.00000	0	dry
60.000	0.00000	0.00000	----	----	----	87120.000	87120.00000	0	dry
72.000	0.00000	0.00000	----	----	----	87120.000	87120.00000	0	dry
84.000	0.00000	0.00000	----	----	----	87120.000	87120.00000	0	dry
96.000	0.00000	0.00000	----	----	----	87120.000	87120.00000	0	dry
120.000	0.00000	0.00000	----	----	----	87120.000	87120.00000	0	dry
144.000	0.00000	0.00000	----	----	----	87120.000	87120.00000	0	dry
168.000	0.00000	0.00000	----	----	----	87120.000	87120.00000	0	dry
192.000	0.00000	0.00000	----	----	----	87120.000	87120.00000	0	dry
216.000	0.00000	0.00000	----	----	----	87120.000	87120.00000	0	dry
240.000	0.00000	0.00000	----	----	----	87120.000	87120.00000	0	dry
264.000	0.00000	0.00000	----	----	----	87120.000	87120.00000	0	dry
288.000	0.00000	0.00000	----	----	----	87120.000	87120.00000	0	dry
312.000	0.00000	0.00000	----	----	----	87120.000	87120.00000	0	dry
336.000	0.00000	0.00000	----	----	----	87120.000	87120.00000	0	dry