

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
ENVIRONMENTAL RESOURCE PERMIT #40-069-114354-1
RAI Submittal

HARTWOOD MARSH ROAD
PHASE II

From 1500 feet east of Hancock Road
to County Line

August 2009

Prepared For:



Lake County Public Works
Engineering Division
437 Ardice Avenue
Eustis, FL 32726

Prepared By:



HNTB Corporation
300 Primera Boulevard
Suite 200
Lake Mary, Florida 32746

HNTB

August 5, 2009

Ms Sandra J Joiner, P E
Department of Water Resources
St Johns River Water Management District
975 Keller Road
Altamonte Springs, FL 32714

Re Hartwood Marsh Road—Phase II
1500 feet East of Hancock Road to Orange County Line
Application Number 40-069-114354-1
Response to Request for Additional Information

X
114354-2
RECEIVED IN
ALTAMONTE SPRINGS
AUG 07 2009
REGULATORY
INFORMATION MGT

Dear Ms Joiner

Please find included the following revised documents to the Hartwood Marsh Road Environmental Resource Permit Application

- Construction Plans
- Response to Request for Additional Information

We offer the following responses to your comments

Comment 1 Comment No 1 of the RAI was not adequately addressed In demonstrating that Pond 3 (interconnected Ponds 3A and 3B) is designed in accordance with District water quality treatment criteria and land locked criteria, please address the following

- a The revised calculations indicate that the basin area and impervious area for Pond 3 are 48.67 acres and 15.89 acres, respectively, which equates to a treatment volume of 4.06 ac-ft The submitted POND recovery analysis, however, was based on a treatment volume of 2.27 ac-ft, which is incorrect Accordingly, please provide a revised POND recovery analysis

*Remediability
inconsistencies*

STAGE / STORAGE CALCULATIONS



MADE BY MSF DATE 30 Sep 08
 CHCK BY BJS 10 Jan 09

PROJECT HARTWOOD MARSH ROAD

POND 3A & 3B

Boring	Approx	Depth to	Estimated	Average	Depth to	Estimated	Average
AB P8	123 25	20 0	103 3	100 86	15	108 25	105 86
AB P9	118 47	20 0	98 5		15	103 47	

Note Above information per pond boring profiles Ardaman & Associates May 2007
 Per Ardaman report groundwater not encountered

AVG SHWT ELEVATION 105 9 Ft (NAVD)

AVG GROUND WATER TABLE ELEVATION 100 9 Ft (NAVD)

AVG EXIST GROUND ELEVATION AT BORING LOCATIONS 110 0 Ft (NAVD) X

NOTE ABOVE INFORMATION PER POND BORINGS PROFILES ARDAMAN & ASSOCIATES JUNE 07

STAGE Ft (NAVD)	AREA AC	AVERAGE AREA AC	INCREMENTAL VOL AF	CUMULATIVE VOL AF
113 0	4 17		0 00	0 00
		4 30		
114 0	4 44		4 30	4 30
		4 58		
115 0	4 72		4 58	8 88
		4 86		
116 0	5 00		4 86	13 74
		5 15		
117 0	5 30		5 15	18 89
		5 44		
118 0	5 59		5 44	24 33
		5 73		
119 0	5 88		5 73	30 06
TOTAL			30 06	

REQUIRED TREATMENT VOLUME 4 06 AF

TOP EL OF TREATMENT VOLUME 113 94 Ft

PERCOLATION RATE 40 Ft/Day or 20 Inches/Hr

FACTOR OF SAFTEY 2 = 20 Ft/Day

EC
118
X
119

Vol
24.33
26.12
30.06

X = 118 31

EC
118
105

Vol
24.33
^

X = 118 31

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Retention Pond Recovery - Refined Method
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Scenario Input Data

Scenario 1 Water Quality

Hydrograph Type Slug Load
Modflow Routing Routed with infiltration

Treatment Volume (ft³) 176854 =

Initial ground water level (ft datum) default 105 90

4.06 ac-ft ✓

<u>Time After Storm Event (days)</u>	<u>Time After Storm Event (days)</u>
0 100	2 000
0 250	2 500
0 500	3 000
1 000	3 500
1 500	4 000

6

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Detailed Results *Scenario 1* *Water Quality*

Elapsed Time (hours)	Inflow Rate (ft /s)	Outside Recharge (ft/day)	Stage Elevation (ft datum)	Infiltration Rate (ft /s)	Overflow Discharge (ft /s)	Cumulative Inflow Volume (ft)	Cumulative Infiltration Volume (ft³)	Cumulative Discharge Volume (ft³)	Flow Type
0 000	29475 6700	0 0000	105 900	0 00000	0 00000	0 0	0 0	0 0	N A
0 002	29475 6700	0 0000	113 944	28 00520	0 00000	176854 0	168 1	0 0	U/P
2 400	0 0000	0 0000				176854 0	176854 0	0 0	dry
6 000	0 0000	0 0000				176854 0	176854 0	0 0	dry
12 000	0 0000	0 0000				176854 0	176854 0	0 0	dry
24 000	0 0000	0 0000				176854 0	176854 0	0 0	dry
36 000	0 0000	0 0000				176854 0	176854 0	0 0	dry
48 000	0 0000	0 0000				176854 0	176854 0	0 0	dry
60 000	0 0000	0 0000				176854 0	176854 0	0 0	dry
72 000	0 0000	0 0000				176854 0	176854 0	0 0	dry
84 000	0 0000	0 0000				176854 0	176854 0	0 0	dry
96 000	0 0000	0 0000				176854 0	176854 0	0 0	dry

← Recovery < 24 hrs

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Scenario Input Data

Scenario 1 25 year/96 hour

Hydrograph Type Slug Load
 Modflow Routing Routed with infiltration

Treatment Volume (ft) 1114479 =

Initial ground water level (ft datum) default 105 90

Handwritten notes:
 25.58 ac ft
 25.66 ac ft
 X
 190

Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)
0 100	3 000	7 500	11 000	14 500
0 250	3 500	8 000	11 500	15 000
0 500	4 000	8 500	12 000	15 500
1 000	4 500	9 000	12 500	16 000
1 500	6 000	9 500	13 000	16 500
2 000	6 500	10 000	13 500	17 000
2 500	7 000	10 500	14 000	

PONDS Version 3 2 0145
Retention Pond Recovery Refined Method
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Detailed Results Scenario 1 25 year/96 hour

Elapsed Time (hours)	Inflow Rate (ft /s)	Outside Recharge (ft/day)	Stage Elevation (ft datum)	Infiltration Rate (ft /s)	Overflow Discharge (ft /s)	Cumulative Inflow Volume (ft)	Cumulative Infiltration Volume (ft)	Cumulative Discharge Volume (ft)	Flow Type
0 000	185746 5000	0 0000	105 900	0 00000	0 00000	0 0	0 0	0 0	NA
0 002	185746 5000	0 0000	118 221	28 03158	0 00000	1114479 0	168 1	0 0	U/P
2 400	0 0000	0 0000	116 840	30 20145	0 00000	1114479 0	328243 4	0 0	U/P
6 000	0 0000	0 0000	115 759	12 46132	0 00000	1114479 0	567982 6	0 0	U/S
12 000	0 0000	0 0000	115 516	2 06728	0 00000	1114479 0	619812 1	0 0	S
24 000	0 0000	0 0000	115 227	1 21324	0 00000	1114479 0	680413 3	0 0	S
36 000	0 0000	0 0000	115 014	0 92253	0 00000	1114479 0	724635 8	0 0	S
48 000	0 0000	0 0000	114 840	0 75756	0 00000	1114479 0	760119 8	0 0	S
60 000	0 0000	0 0000	114 693	0 64925	0 00000	1114479 0	790088 9	0 0	S
72 000	0 0000	0 0000	114 563	0 57169	0 00000	1114479 0	816214 7	0 0	S
84 000	0 0000	0 0000	114 446	0 51290	0 00000	1114479 0	839483 1	0 0	S
96 000	0 0000	0 0000	114 340	0 46649	0 00000	1114479 0	860529 1	0 0	S
108 000	0 0000	0 0000	114 242	0 42590	0 00000	1114479 0	879787 5	0 0	S
144 000	0 0000	0 0000	113 999	0 34912	0 00000	1114479 0	927250 2	0 0	S
156 000	0 0000	0 0000	113 922	0 33348	0 00000	1114479 0	942086 1	0 0	S
168 000	0 0000	0 0000	113 849	0 31478	0 00000	1114479 0	956063 1	0 0	S
180 000	0 0000	0 0000	113 780	0 29822	0 00000	1114479 0	969282 8	0 0	S
192 000	0 0000	0 0000	113 714	0 28343	0 00000	1114479 0	981828 9	0 0	S
204 000	0 0000	0 0000	113 651	0 27014	0 00000	1114479 0	993771 2	0 0	S
216 000	0 0000	0 0000	113 591	0 25811	0 00000	1114479 0	1005169 0	0 0	S
228 000	0 0000	0 0000	113 533	0 24717	0 00000	1114479 0	1016072 0	0 0	S
240 000	0 0000	0 0000	113 477	0 23717	0 00000	1114479 0	1026524 0	0 0	S
252 000	0 0000	0 0000	113 423	0 22798	0 00000	1114479 0	1036563 0	0 0	S
264 000	0 0000	0 0000	113 371	0 21950	0 00000	1114479 0	1046222 0	0 0	S
276 000	0 0000	0 0000	113 321	0 21166	0 00000	1114479 0	1055528 0	0 0	S
288 000	0 0000	0 0000	113 273	0 20437	0 00000	1114479 0	1064509 0	0 0	S
300 000	0 0000	0 0000	113 226	0 19758	0 00000	1114479 0	1073186 0	0 0	S
312 000	0 0000	0 0000	113 180	0 19124	0 00000	1114479 0	1081580 0	0 0	S
324 000	0 0000	0 0000	113 136	0 18530	0 00000	1114479 0	1089709 0	0 0	S
336 000	0 0000	0 0000	113 093	0 17972	0 00000	1114479 0	1097589 0	0 0	S
348 000	0 0000	0 0000	113 051	0 17448	0 00000	1114479 0	1105237 0	0 0	S
360 000	0 0000	0 0000	113 010	0 10697	0 00000	1114479 0	1112664 0	0 0	S
372 000	0 0000	0 0000	112 961	0 02100	0 00000	1114479 0	1114479 0	0 0	S
384 000	0 0000	0 0000	112 911	0 00000	0 00000	1114479 0	1114479 0	0 0	S
396 000	0 0000	0 0000	112 862	0 00000	0 00000	1114479 0	1114479 0	0 0	S
408 000	0 0000	0 0000	112 816			1114479 0	1114479 0	0 0	NA

After 14 days, 25 20 ac-ft Recovered ✓

Remaining . 25 59 - 25 20 = 0 39 ac-ft
 25.66 - 25.1 = 0.46

Add 2nd storm : 25 59 + 0 39 = 25 98 ac-ft
 25 66 + 0 46 = 26 12
 equates to elev 118 29 ft
 " " " 118 31 ft
 pond will not overtop ✓

H t w d M h R d Ph II
 P t D v l p m t
 P d 3A & 3B H t w d
 Hyd i gy N d T m S R p t
 07/09

S m l t n	N d	T m h	V l m ft3	V l m	R t f
25Y96H	POND 3A	57 50	166689 672	1 295	5 170
25Y96H	POND 3A	57 75	171361 938	1 331	5 213
25Y96H	POND 3A	58 00	176073 063	1 367	5 256
25Y96H	POND 3A	58 25	181606 938	1 410	7 041
25Y96H	POND 3A	58 50	188663 625	1 465	8 640
25Y96H	POND 3A	58 75	196745 156	1 528	9 319
25Y96H	POND 3A	59 00	205268 656	1 594	9 622
25Y96H	POND 3A	59 25	215465 594	1 673	13 037
25Y96H	POND 3A	59 50	228692 484	1 776	16 356
25Y96H	POND 3A	59 75	268356 938	2 084	71 788
25Y96H	POND 3A	60 00	356941 375	2 772	125 067
25Y96H	POND 3A	60 25	456915 250	3 549	97 098
25Y96H	POND 3A	60 50	526274 250	4 087	57 033
25Y96H	POND 3A	60 75	567325 375	4 406	34 191
25Y96H	POND 3A	61 00	593065 500	4 606	23 009
25Y96H	POND 3A	61 25	610872 625	4 744	16 562
25Y96H	POND 3A	61 50	624175 500	4 848	12 999
25Y96H	POND 3A	61 75	635233 063	4 934	11 573
25Y96H	POND 3A	62 00	645453 000	5 013	11 138
25Y96H	POND 3A	63 00	678030 750	5 266	6 961
25Y96H	POND 3A	64 00	702954 500	5 460	6 886
25Y96H	POND 3A	65 00	722998 250	5 615	4 250
25Y96H	POND 3A	66 00	738187 000	5 733	4 188
25Y96H	POND 3A	67 00	753288 063	5 851	4 201
25Y96H	POND 3A	68 00	768431 250	5 968	4 212
25Y96H	POND 3A	69 00	781144 750	6 067	2 851
25Y96H	POND 3A	70 00	791351 313	6 146	2 819
25Y96H	POND 3A	71 00	801503 250	6 225	2 821
25Y96H	POND 3A	72 00	811663 250	6 304	2 823
25Y96H	POND 3A	73 00	819459 625	6 364	1 508
25Y96H	POND 3A	74 00	824823 625	6 406	1 472
25Y96H	POND 3A	75 00	830125 688	6 447	1 473
25Y96H	POND 3A	76 00	835432 625	6 488	1 475
25Y96H	POND 3A	77 00	840765 375	6 530	1 488
25Y96H	POND 3A	78 00	846124 750	6 572	1 490
25Y96H	POND 3A	79 00	851489 625	6 613	1 491
25Y96H	POND 3A	80 00	856859 250	6 655	1 492
25Y96H	POND 3A	81 00	862212 500	6 696	1 482
25Y96H	POND 3A	82 00	867548 563	6 738	1 483
25Y96H	POND 3A	83 00	872888 813	6 779	1 484
25Y96H	POND 3A	84 00	878233 500	6 821	1 485
25Y96H	POND 3A	85 00	883582 875	6 862	1 487
25Y96H	POND 3A	86 00	888936 750	6 904	1 488
25Y96H	POND 3A	87 00	894295 125	6 946	1 489
25Y96H	POND 3A	88 00	899657 938	6 987	1 490
25Y96H	POND 3A	89 00	905046 500	7 029	1 503
25Y96H	POND 3A	90 00	910461 375	7 071	1 505
25Y96H	POND 3A	91 00	915881 313	7 113	1 506
25Y96H	POND 3A	92 00	921305 625	7 155	1 507
25Y96H	POND 3A	93 00	926712 875	7 197	1 497
25Y96H	POND 3A	94 00	932102 438	7 239	1 498
25Y96H	POND 3A	95 00	937495 625	7 281	1 499
25Y96H	POND 3A	96 00	942887 250	7 323	1 497
25Y96H	POND 3A	97 00	945655 438	7 345	0 041
25Y96H	POND 3A	98 00	945729 813	7 345	0 000
25Y96H	POND 3A	99 00	945729 813	7 345	0 000
25Y96H	POND 3A	100 00	945729 813	7 345	0 000
25Y96H	POND 3B	0 00	0 000	0 000	0 000
25Y96H	POND 3B	1 00	0 000	0 000	0 000
25Y96H	POND 3B	2 00	0 000	0 000	0 000
25Y96H	POND 3B	3 00	0 000	0 000	0 000
25Y96H	POND 3B	4 00	0 000	0 000	0 000
25Y96H	POND 3B	5 00	0 000	0 000	0 000
25Y96H	POND 3B	6 00	0 000	0 000	0 000
25Y96H	POND 3B	7 00	0 000	0 000	0 000
25Y96H	POND 3B	8 00	0 000	0 000	0 000
25Y96H	POND 3B	9 00	0 000	0 000	0 000
25Y96H	POND 3B	10 00	0 000	0 000	0 000
25Y96H	POND 3B	11 00	0 000	0 000	0 000
25Y96H	POND 3B	12 00	0 000	0 000	0 000
25Y96H	POND 3B	13 00	0 000	0 000	0 000
25Y96H	POND 3B	14 00	0 000	0 000	0 000
25Y96H	POND 3B	15 00	0 000	0 000	0 000
25Y96H	POND 3B	16 00	0 000	0 000	0 000
25Y96H	POND 3B	17 00	0 000	0 000	0 000
25Y96H	POND 3B	18 00	0 000	0 000	0 000
25Y96H	POND 3B	19 00	0 000	0 000	0 000
25Y96H	POND 3B	20 00	0 000	0 000	0 000
25Y96H	POND 3B	21 00	0 000	0 000	0 000
25Y96H	POND 3B	22 00	0 000	0 000	0 000

Total Volume
 = 21 65 ac-ft

Intz 3A + 3B =
 1,118,040 ft³ =
 2566 ac-ft

H t w d M h R d Ph II
 P t D v l p m t
 P d 3A & 3B H t w d
 Hyd l gy N d T m S R p t
 07/09

S m l t	N d	T m h	V l m ft3	V l m	R t f
25Y96H	POND 3B	67 00	122763 914	2 620	1 043
25Y96H	POND 3B	68 00	126536 422	2 700	1 053
25Y96H	POND 3B	69 00	129703 727	2 768	0 707
25Y96H	POND 3B	70 00	132256 672	2 822	0 711
25Y96H	POND 3B	71 00	134824 203	2 877	0 715
25Y96H	POND 3B	72 00	137404 000	2 932	0 718
25Y96H	POND 3B	73 00	139372 297	2 974	0 375
25Y96H	POND 3B	74 00	140725 406	3 003	0 376
25Y96H	POND 3B	75 00	142082 688	3 032	0 378
25Y96H	POND 3B	76 00	143444 078	3 061	0 379
25Y96H	POND 3B	77 00	144815 203	3 090	0 383
25Y96H	POND 3B	78 00	146196 031	3 120	0 384
25Y96H	POND 3B	79 00	147580 953	3 149	0 385
25Y96H	POND 3B	80 00	148969 969	3 179	0 386
25Y96H	POND 3B	81 00	150357 391	3 208	0 384
25Y96H	POND 3B	82 00	151743 172	3 238	0 385
25Y96H	POND 3B	83 00	153132 906	3 268	0 387
25Y96H	POND 3B	84 00	154526 547	3 297	0 388
25Y96H	POND 3B	85 00	155924 094	3 327	0 389
25Y96H	POND 3B	86 00	157325 516	3 357	0 390
25Y96H	POND 3B	87 00	158730 766	3 387	0 391
25Y96H	POND 3B	88 00	160139 875	3 417	0 392
25Y96H	POND 3B	89 00	161558 547	3 447	0 396
25Y96H	POND 3B	90 00	162986 797	3 478	0 397
25Y96H	POND 3B	91 00	164418 875	3 508	0 398
25Y96H	POND 3B	92 00	165854 688	3 539	0 399
25Y96H	POND 3B	93 00	167288 422	3 570	0 397
25Y96H	POND 3B	94 00	168720 031	3 600	0 398
25Y96H	POND 3B	95 00	170155 281	3 631	0 399
25Y96H	POND 3B	96 00	171591 906	3 662	0 399
25Y96H	POND 3B	97 00	172310 000	3 677	0 000
25Y96H	POND 3B	98 00	172310 000	3 677	0 000
25Y96H	POND 3B	99 00	172310 000	3 677	0 000
25Y96H	POND 3B	100 00	172310 000	3 677	0 000

Total Volume
 = 394 ac-ft

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Detailed Results *Scenario 1* *Water Quality*

Elapsed Time (hours)	Inflow Rate (ft ³ /s)	Outside Recharge (ft/day)	Stage Elevation (ft datum)	Infiltration Rate (ft /s)	Overflow Discharge (ft /s)	Cumulative Inflow Volume (ft ³)	Cumulative Infiltration Volume (ft)	Cumulative Discharge Volume (ft)	Flow Type
0 000	29475 6700	0 0000	105 900	0 00000	0 00000	0 0	0 0	0 0	N A
0 002	29475 6700	0 0000	113 944	37 81647	0 00000	176854 0	227 1	0 0	U/P
2 400	0 0000	0 0000				176854 0	176854 0	0 0	dry
6 000	0 0000	0 0000				176854 0	176854 0	0 0	dry
12 000	0 0000	0 0000				176854 0	176854 0	0 0	dry
24 000	0 0000	0 0000				176854 0	176854 0	0 0	dry
36 000	0 0000	0 0000				176854 0	176854 0	0 0	dry
48 000	0 0000	0 0000				176854 0	176854 0	0 0	dry
60 000	0 0000	0 0000				176854 0	176854 0	0 0	dry
72 000	0 0000	0 0000				176854 0	176854 0	0 0	dry
84 000	0 0000	0 0000				176854 0	176854 0	0 0	dry
96 000	0 0000	0 0000				176854 0	176854 0	0 0	dry

← Recovery < 2.4 hrs

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Project Data

Project Name Hartwood Marsh Road Phase II
Simulation Description Pond 3 25yr 96hr Recovery
Project Number 41561 1
Engineer MSF
Supervising Engineer
Date 06 19 2009

minimum permeability for pond 3A total recovery (<14days)

Aquifer Data

Base Of Aquifer Elevation [B] (ft datum)	104 90	✓
Water Table Elevation [WT] (ft datum)	105 90 _i	✓
Horizontal Saturated Hydraulic Conductivity [Kh] (ft/day)	19 50	?
Fillable Porosity [n] (%)	27 00	
Unsaturated Vertical Infiltration Rate [Iv] (ft/day)	18 0	?
Maximum Area For Unsaturated Infiltration [Av] (ft)	250034 4	✓

Geometry Data

Equivalent Pond Length [L] (ft) 1174 0
Equivalent Pond Width [W] (ft) 460 0
Ground water mound is expected to intersect the pond bottom

Stage vs Area Data

Stage (ft datum)	Area (ft)
113 00	181645 2
114 00	193406 4
115 00	205603 2
116 00	217800 0
117 00	230868 0
118 00	263500 4
119 00	256132 8

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Detailed Results *Scenano 1* *25 year/96 hour*

Elapsed Time (hours)	Inflow Rate (ft ³ /s)	Outside Recharge (ft/day)	Stage Elevation (ft datum)	Infiltration Rate (ft ³ /s)	Overflow Discharge (ft /s)	Cumulative Inflow Volume (ft)	Cumulative Infiltration Volume (ft)	Cumulative Discharge Volume (ft)	Flow Type
0 000	185746 5000	0 0000	105 900	0 00000	0 00000	0 0	0 0	0 0	NA
0 002	185746 5000	0 0000	118 167	37 85265	0 00000	1114479 0	227 1	0 0	U/P
2 400	0 0000	0 0000	116 299	36 04026	0 00000	1114479 0	449976 4	0 0	U/P
6 000	0 0000	0 0000	115 586	8 36657	0 00000	1114479 0	604824 6	0 0	U/S
12 000	0 0000	0 0000	115 341	2 06411	0 00000	1114479 0	656604 9	0 0	S
24 000	0 0000	0 0000	115 051	1 20803	0 00000	1114479 0	716993 1	0 0	S
36 000	0 0000	0 0000	114 836	0 91701	0 00000	1114479 0	760978 8	0 0	S
48 000	0 0000	0 0000	114 662	0 75203	0 00000	1114479 0	796222 4	0 0	S
60 000	0 0000	0 0000	114 514	0 64378	0 00000	1114479 0	825954 0	0 0	S
72 000	0 0000	0 0000	114 384	0 56630	0 00000	1114479 0	851845 3	0 0	S
84 000	0 0000	0 0000	114 267	0 50757	0 00000	1114479 0	874882 1	0 0	S
96 000	0 0000	0 0000	114 161	0 46123	0 00000	1114479 0	895699 4	0 0	S
108 000	0 0000	0 0000	114 063	0 42354	0 00000	1114479 0	914732 4	0 0	S
120 000	0 0000	0 0000	113 972	0 39217	0 00000	1114479 0	932293 6	0 0	S
132 000	0 0000	0 0000	113 888	0 36556	0 00000	1114479 0	948615 9	0 0	S
144 000	0 0000	0 0000	113 808	0 34263	0 00000	1114479 0	963877 8	0 0	S
156 000	0 0000	0 0000	113 733	0 32264	0 00000	1114479 0	978219 6	0 0	S
168 000	0 0000	0 0000	113 662	0 30502	0 00000	1114479 0	991754 0	0 0	S
180 000	0 0000	0 0000	113 594	0 28935	0 00000	1114479 0	1004573 0	0 0	S
192 000	0 0000	0 0000	113 529	0 27530	0 00000	1114479 0	1016754 0	0 0	S
204 000	0 0000	0 0000	113 467	0 26263	0 00000	1114479 0	1028359 0	0 0	S
216 000	0 0000	0 0000	113 408	0 25113	0 00000	1114479 0	1039445 0	0 0	S
228 000	0 0000	0 0000	113 351	0 24063	0 00000	1114479 0	1050057 0	0 0	S
240 000	0 0000	0 0000	113 296	0 23101	0 00000	1114479 0	1060236 0	0 0	S
252 000	0 0000	0 0000	113 243	0 22216	0 00000	1114479 0	1070017 0	0 0	S
264 000	0 0000	0 0000	113 192	0 21397	0 00000	1114479 0	1079430 0	0 0	S
276 000	0 0000	0 0000	113 142	0 20638	0 00000	1114479 0	1088503 0	0 0	S
288 000	0 0000	0 0000	113 095	0 19931	0 00000	1114479 0	1097261 0	0 0	S
300 000	0 0000	0 0000	113 048	0 19272	0 00000	1114479 0	1105724 0	0 0	S
312 000	0 0000	0 0000	113 003	0 10133	0 00000	1114479 0	1113912 0	0 0	S
324 000	0 0000	0 0000	112 950	0 00656	0 00000	1114479 0	1114479 0	0 0	S
336 000	0 0000	0 0000	112 899	0 00000	0 00000	1114479 0	1114479 0	0 0	S
348 000	0 0000	0 0000	112 850			1114479 0	1114479 0	0 0	NA

← Recovers with 14 days



FLOOD PLAIN COMPENSATION 10 YEAR

DATE

MADE BY	MSF	22 Apr 09
CHK BY	BJS	25 Ap 09

PROJECT HARTWOOD MARSH ROAD PHASE II

EXCAVATION (ROADWAY CL CONST HARTWOOD MARSH ROAD)

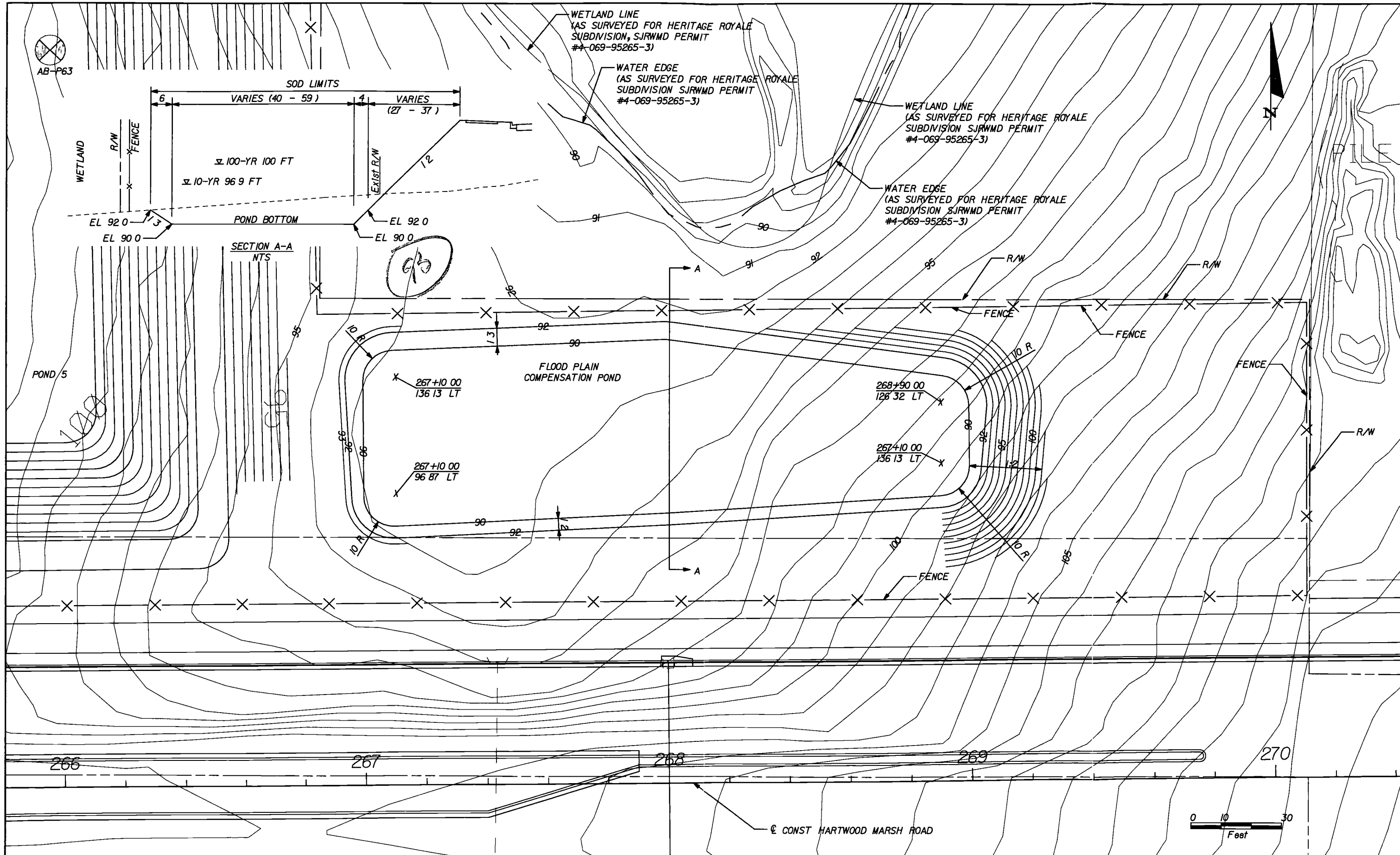
STATION	AREA (AC)	AVERAGE AREA (AC)	INCREMENTAL AREA (AC FT)	CUMULATIVE VOLUME (AC FT)	CUMULATIVE VOLUME (FT 3)	CUMULATIVE VOLUME (CY)
266+00 00	0		0	0	0	0
		0 0051669				
267+00 00	0 010334		0 51669	0 51669	22507 13	833 60
		0 0108103				
268+00 00	0 011287		1 08103	1 59773	69596 93	2577 66
		0 0056434				
269+00 00	0		0 56434	2 16207	94179 59	3488 13

FILL (ROADWAY CL CONST HARTWOOD MARSH ROAD)

STATION	AREA (AC)	AVERAGE AREA (AC)	INCREMENTAL AREA (AC FT)	CUMULATIVE VOLUME (AC FT)	CUMULATIVE VOLUME (FT 3)	CUMULATIVE VOLUME (CY)
266+00 00	0		0	0	0	0
		0 00155				
267+00 00	0 00310		0 15489	0 15489	6747 17	249 90
		0 00270				
268+00 00	0 00230		0 26989	0 42478	18503 54	685 32
		0 00115				
269+00 00	0		0 11500	0 53978	23512 73	870 84

TOTAL EXCAVATION = 3488 13 CY
TOTAL FILL = 2498 72 CY ✓
TOTAL FILL = 0 06 AC FT

Fill 155 ac-ft
r x c = 216 ac-ft



REVISIONS	
DATE	DESCRIPTION

HNTB
 HNTB CORPORATION
 300 PRIMERA BLVD
 SUITE 200
 LAKE MARY FL 32746
 (407) 805-0355
 CERT OF AUTH NO 6500

ENGINEER OF RECORD MELINDA S FISCHL P.E.
 FL REGISTRATION NO 68406



HARTWOOD MARSH ROAD - PHASE II

FLOOD PLAIN COMPENSATION BASIN 5

SHEET NO
34

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Project Data

Project Name Hartwood Marsh Road Phase II
Simulation Description Pond 6 Water Quality Recovery
Project Number 41561 1
Engineer MSF
Supervising Engineer
Date 08 05 2009

Aquifer Data

Base Of Aquifer Elevation [B] (ft datum)	101 30	✓
Water Table Elevation [WT] (ft datum)	102 30	✓
Horizontal Saturated Hydraulic Conductivity [Kh] (ft/day)	15 00	✓
Fillable Porosity [n] (/)	25 00	✓
Unsaturated Vertical Infiltration Rate [Iv] (ft/day)	10 0	✓
Maximum Area For Unsaturated Infiltration [Av] (ft)	50529 6	

Geometry Data

Equivalent Pond Length [L] (ft) 273 0
Equivalent Pond Width [W] (ft) 190 0
Ground water mound is expected to intersect the pond bottom

Stage vs Area Data

Stage (ft datum)	Area (ft)		
113 00	47916 0	= 1 1	✓
114 00	50094 0		
115 00	55321 2	= 1.36	✓
116 00	59241 6		
117 00	63597 6		
118 00	67518 0	= 1.79	✓
119 00	78027 0		

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Scenario Input Data

Scenario 1 Water Quality

Hydrograph Type Slug Load
Modflow Routing Routed with infiltration

Treatment Volume (ft) 35283 6 → 0 81 ✓

Initial ground water level (ft datum) default 102 30

Time After Storm Event (days)	Time After Storm Event (days)
0 100	2 000
0 250	2 500
0 500	3 000
1 000	3 500
1 500	4 000

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Detailed Results *Scenario 1* *Water Quality*

Elapsed Time (hours)	Inflow Rate (ft ³ /s)	Outside Recharge (ft/day)	Stage Elevation (ft datum)	Infiltration Rate (ft /s)	Overflow Discharge (ft /s)	Cumulative Inflow Volume (ft)	Cumulative Infiltration Volume (ft)	Cumulative Discharge Volume (ft ³)	Flow Type
0 000	5880 6000	0 0000	102 300	0 00000	0 00000	0 0	0 0	0 0	N A
0 002	5880 6000	0 0000	113 724	5 54198	0 00000	35283 6	33 3	0 0	U/P
2 400	0 0000	0 0000	--			35283 6	35283 6	0 0	dry
6 000	0 0000	0 0000				35283 6	35283 6	0 0	dry
12 000	0 0000	0 0000				35283 6	35283 6	0 0	dry
24 000	0 0000	0 0000				35283 6	35283 6	0 0	dry
36 000	0 0000	0 0000				35283 6	35283 6	0 0	dry
48 000	0 0000	0 0000				35283 6	35283 6	0 0	dry
60 000	0 0000	0 0000				35283 6	35283 6	0 0	dry
72 000	0 0000	0 0000				35283 6	35283 6	0 0	dry
84 000	0 0000	0 0000				35283 6	35283 6	0 0	dry
96 000	0 0000	0 0000				35283 6	35283 6	0 0	dry

← Recovery < 2 4 hrs

H two d M h R d Ph II
 P t D i p m t
 P d 6 Ha tw od
 Hyd l gy T m S R p t
 05/09

S m l t	N d	T m h	V l u m ft3	V l m	R t f
25Y96H	POND 6	57 50	42109 695	1 231	1 444
25Y96H	POND 6	57 75	43414 871	1 270	1 456
25Y96H	POND 6	58 00	44731 969	1 308	1 471
25Y96H	POND 6	58 25	46462 309	1 359	2 375
25Y96H	POND 6	58 50	48719 484	1 425	2 641
25Y96H	POND 6	58 75	51122 152	1 495	2 698
25Y96H	POND 6	59 00	53566 637	1 567	2 734
25Y96H	POND 6	59 25	56811 453	1 661	4 476
25Y96H	POND 6	59 50	61093 477	1 787	5 039
25Y96H	POND 6	59 75	79019 609	2 311	34 797
25Y96H	POND 6	60 00	114713 758	3 355	44 524
25Y96H	POND 6	60 25	142268 203	4 161	16 709
25Y96H	POND 6	60 50	154245 344	4 511	9 907
25Y96H	POND 6	60 75	161264 969	4 716	5 692
25Y96H	POND 6	61 00	166002 016	4 855	4 835
25Y96H	POND 6	61 25	169718 484	4 963	3 424
25Y96H	POND 6	61 50	172660 844	5 049	3 115
25Y96H	POND 6	61 75	175447 344	5 131	3 078
25Y96H	POND 6	62 00	178214 953	5 212	3 073
25Y96H	POND 6	63 00	187205 844	5 475	1 922
25Y96H	POND 6	64 00	194138 484	5 677	1 929
25Y96H	POND 6	65 00	199716 266	5 841	1 170
25Y96H	POND 6	66 00	203930 578	5 964	1 172
25Y96H	POND 6	67 00	208154 484	6 087	1 175
25Y96H	POND 6	68 00	212387 547	6 211	1 177
25Y96H	POND 6	69 00	215921 891	6 315	0 787
25Y96H	POND 6	70 00	218755 328	6 397	0 787
25Y96H	POND 6	71 00	221590 750	6 480	0 788
25Y96H	POND 6	72 00	224426 984	6 563	0 788
25Y96H	POND 6	73 00	226585 063	6 626	0 411
25Y96H	POND 6	74 00	228064 391	6 670	0 411
25Y96H	POND 6	75 00	229543 875	6 713	0 411
25Y96H	POND 6	76 00	231024 531	6 756	0 411
25Y96H	POND 6	77 00	232512 406	6 800	0 415
25Y96H	POND 6	78 00	234007 469	6 843	0 415
25Y96H	POND 6	79 00	235503 766	6 887	0 416
25Y96H	POND 6	80 00	237001 156	6 931	0 416
25Y96H	POND 6	81 00	238493 625	6 975	0 413
25Y96H	POND 6	82 00	239981 188	7 018	0 413
25Y96H	POND 6	83 00	241469 797	7 062	0 414
25Y96H	POND 6	84 00	242959 563	7 105	0 414
25Y96H	POND 6	85 00	244450 375	7 149	0 414
25Y96H	POND 6	86 00	24594 250	7 192	0 415
25Y96H	POND 6	87 00	247435 203	7 236	0 415
25Y96H	POND 6	88 00	2489 9 250	7 280	0 415
25Y96H	POND 6	89 00	250430 391	7 324	0 419
25Y96H	POND 6	90 00	251938 688	7 368	0 419
25Y96H	POND 6	91 00	253448 063	7 412	0 419
25Y96H	POND 6	92 00	254958 453	7 456	0 420
25Y96H	POND 6	93 00	256463 734	7 500	0 417
25Y96H	POND 6	94 00	257963 906	7 544	0 417
25Y96H	POND 6	95 00	259465 078	7 588	0 417
25Y96H	POND 6	96 00	260961 531	7 632	0 414
25Y96H	POND 6	97 00	261708 266	7 653	0 001
25Y96H	POND 6	98 00	261709 422	7 654	0 000
25Y96H	POND 6	99 00	261709 422	7 654	0 000
25Y96H	POND 6	100 00	261709 422	7 654	0 000

Total Volume
 = 5.99 ac-ft

6.01 ac-ft

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Scenario Input Data

Scenario 1 25 year 96 hour

Hydrograph Type Slug Load
 Modflow Routing Routed with infiltration

Treatment Volume (ft) 260961 5 = 599

Initial ground water level (ft datum) default 102 30

Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)
0 100	3 000	6 500	10 000	13 500
0 250	3 500	7 000	10 500	14 000
0 500	4 000	7 500	11 000	14 500
1 000	4 500	8 000	11 500	
1 500	5 000	8 500	12 000	
2 000	5 500	9 000	12 500	
2 500	6 000	9 500	13 000	

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Detailed Results *Scenario 1* *25 year 96 hour*

Elapsed Time (hours)	Inflow Rate (ft /s)	Outside Recharge (ft/day)	Stage Elevation (ft datum)	Infiltration Rate (ft /s)	Overflow Discharge (ft /s)	Cumulative Inflow Volume (ft)	Cumulative Infiltration Volume (ft)	Cumulative Discharge Volume (ft ³)	Flow Type
0 000	43493 5800	0 0000	102 300	0 00000	0 00000	0 0	0 0	0 0	NA
0 002	43493 5800	0 0000	117 598	5 56527	0 00000	260961 5	33 4	0 0	U/P
2 400	0 0000	0 0000	116 567	7 42196	0 00000	260961 5	65763 3	0 0	U/P
6 000	0 0000	0 0000	114 986	5 54570	0 00000	260961 5	158237 0	0 0	U/P
12 000	0 0000	0 0000	113 811	2 13083	0 00000	260961 5	220797 8	0 0	U/S
24 000	0 0000	0 0000	113 293	0 46486	0 00000	260961 5	246709 8	0 0	S
36 000	0 0000	0 0000	112 850	0 16495	0 00000	260961 5	260961 5	0 0	S
48 000	0 0000	0 0000	112 180	0 00000	0 00000	260961 5	260961 5	0 0	S
60 000	0 0000	0 0000	111 672	0 00000	0 00000	260961 5	260961 5	0 0	S
72 000	0 0000	0 0000	111 262	0 00000	0 00000	260961 5	260961 5	0 0	S
84 000	0 0000	0 0000	110 919	0 00000	0 00000	260961 5	260961 5	0 0	S
96 000	0 0000	0 0000	110 625	0 00000	0 00000	260961 5	260961 5	0 0	S
108 000	0 0000	0 0000	110 367	0 00000	0 00000	260961 5	260961 5	0 0	S
120 000	0 0000	0 0000	110 138	0 00000	0 00000	260961 5	260961 5	0 0	S
132 000	0 0000	0 0000	109 933	0 00000	0 00000	260961 5	260961 5	0 0	S
144 000	0 0000	0 0000	109 746	0 00000	0 00000	260961 5	260961 5	0 0	S
156 000	0 0000	0 0000	109 576	0 00000	0 00000	260961 5	260961 5	0 0	S
168 000	0 0000	0 0000	109 420	0 00000	0 00000	260961 5	260961 5	0 0	S
180 000	0 0000	0 0000	109 275	0 00000	0 00000	260961 5	260961 5	0 0	S
192 000	0 0000	0 0000	109 140	0 00000	0 00000	260961 5	260961 5	0 0	S
204 000	0 0000	0 0000	109 014	0 00000	0 00000	260961 5	260961 5	0 0	S
216 000	0 0000	0 0000	108 897	0 00000	0 00000	260961 5	260961 5	0 0	S
228 000	0 0000	0 0000	108 786	0 00000	0 00000	260961 5	260961 5	0 0	S
240 000	0 0000	0 0000	108 681	0 00000	0 00000	260961 5	260961 5	0 0	S
252 000	0 0000	0 0000	108 583	0 00000	0 00000	260961 5	260961 5	0 0	S
264 000	0 0000	0 0000	108 489	0 00000	0 00000	260961 5	260961 5	0 0	S
276 000	0 0000	0 0000	108 400	0 00000	0 00000	260961 5	260961 5	0 0	S
288 000	0 0000	0 0000	108 315	0 00000	0 00000	260961 5	260961 5	0 0	S
300 000	0 0000	0 0000	108 235	0 00000	0 00000	260961 5	260961 5	0 0	S
312 000	0 0000	0 0000	108 157	0 00000	0 00000	260961 5	260961 5	0 0	S
324 000	0 0000	0 0000	108 083	0 00000	0 00000	260961 5	260961 5	0 0	S
336 000	0 0000	0 0000	108 013	0 00000	0 00000	260961 5	260961 5	0 0	S
348 000	0 0000	0 0000	107 945			260961 5	260961 5	0 0	NA

← Recovery <48 hrs

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Project Data

Project Name Hartwood Marsh Road Phase II
Simulation Description Pond 7 Water Quality Recovery
Project Number 41561 1
Engineer MSF
Supervising Engineer
Date 07 15 2009

Aquifer Data

Base Of Aquifer Elevation [B] (ft datum) 139 40
Water Table Elevation [WT] (ft datum) 140 40
Horizontal Saturated Hydraulic Conductivity [Kh] (ft/day) 20 00
Fillable Porosity [n] (/) 25 00
Unsaturated Vertical Infiltration Rate [Iv] (ft/day) 13 33
Maximum Area For Unsaturated Infiltration [Av] (ft) 40946 4

X 140.39
X 145.39

Geometry Data

Equivalent Pond Length [L] (ft) 265 0
Equivalent Pond Width [W] (ft) 155 0
Ground water mound is expected to intersect the pond bottom

Stage vs Area Data

Stage (ft datum)	Area (ft)
153 00	36154 8
154 00	39639 6
155 00	42688 8
156 00	46173 6
157 00	50094 0
158 00	53578 8
159 00	57499 2
160 00	61419 6
161 00	65775 6

Scenario Input Data

Scenario 1 Water Quality

Hydrograph Type Slug Load
Modflow Routing Routed with infiltration

Treatment Volume (ft) 57063 6

= 131 ✓

Initial ground water level (ft datum) default 140 40

<u>Time After Storm Event (days)</u>	<u>Time After Storm Event (days)</u>
0 100	2 000
0 250	2 500
0 500	3 000
1 000	3 500
1 500	4 000

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Detailed Results *Scenario 1* *Water Quality*

Elapsed Time (hours)	Inflow Rate (ft /s)	Outside Recharge (ft/day)	Stage Elevation (ft datum)	Infiltration Rate (ft /s)	Overflow Discharge (ft /s)	Cumulative Inflow Volume (ft³)	Cumulative Infiltration Volume (ft³)	Cumulative Discharge Volume (ft)	Flow Type
0 000	9510 6000	0 0000	140 400	0 00000	0 00000	0 0	0 0	0 0	N A
0 002	9510 6000	0 0000	154 474	5 57856	0 00000	57063 6	33 5	0 0	U/P
2 400	0 0000	0 0000	153 069	3 79144	0 00000	57063 6	54577 1	0 0	U/P
6 000	0 0000	0 0000				57063 6	57063 6	0 0	dry
12 000	0 0000	0 0000				57063 6	57063 6	0 0	dry
24 000	0 0000	0 0000				57063 6	57063 6	0 0	dry
36 000	0 0000	0 0000				57063 6	57063 6	0 0	dry
48 000	0 0000	0 0000				57063 6	57063 6	0 0	dry
60 000	0 0000	0 0000				57063 6	57063 6	0 0	dry
72 000	0 0000	0 0000				57063 6	57063 6	0 0	dry
84 000	0 0000	0 0000				57063 6	57063 6	0 0	dry
96 000	0 0000	0 0000				57063 6	57063 6	0 0	dry

← Recovery < 6 hrs

H t w d M h R d Ph II
 P t D v l p m t
 P d 7 H t w d
 Hyd l gy T m S R p t
 04/09

S m l t	N d	T m h	V l m ft3	V l m	R t f
25Y96H	POND 7	57 50	46714 711	0 819	1 489
25Y96H	POND 7	57 75	48073 113	0 842	1 530
25Y96H	POND 7	58 00	49465 043	0 867	1 563
25Y96H	POND 7	58 25	51006 141	0 894	1 862
25Y96H	POND 7	58 50	52766 391	0 925	2 050
25Y96H	POND 7	58 75	54744 074	0 959	2 345
25Y96H	POND 7	59 00	56982 809	0 999	2 630
25Y96H	POND 7	59 25	59687 051	1 046	3 379
25Y96H	POND 7	59 50	62947 211	1 103	3 866
25Y96H	POND 7	59 75	71275 359	1 249	14 641
25Y96H	POND 7	60 00	87888 797	1 540	22 277
25Y96H	POND 7	60 25	108068 188	1 894	22 566
25Y96H	POND 7	60 50	130363 445	2 285	26 979
25Y96H	POND 7	60 75	152933 422	2 680	23 176
25Y96H	POND 7	61 00	171317 422	3 002	17 677
25Y96H	POND 7	61 25	184990 766	3 242	12 708
25Y96H	POND 7	61 50	195023 078	3 418	9 586
25Y96H	POND 7	61 75	202671 219	3 552	7 410
25Y96H	POND 7	62 00	208723 609	3 658	6 040
25Y96H	POND 7	63 00	225281 797	3 948	3 159
25Y96H	POND 7	64 00	235774 797	4 132	2 670
25Y96H	POND 7	65 00	243968 531	4 275	1 882
25Y96H	POND 7	66 00	250300 656	4 386	1 636
25Y96H	POND 7	67 00	256159 000	4 489	1 619
25Y96H	POND 7	68 00	261998 766	4 591	1 626
25Y96H	POND 7	69 00	267143 469	4 682	1 232
25Y96H	POND 7	70 00	271353 031	4 755	1 106
25Y96H	POND 7	71 00	275316 188	4 825	1 095
25Y96H	POND 7	72 00	279264 625	4 894	1 098
25Y96H	POND 7	73 00	282524 625	4 951	0 713
25Y96H	POND 7	74 00	284864 688	4 992	0 587
25Y96H	POND 7	75 00	286955 906	5 029	0 575
25Y96H	POND 7	76 00	289025 938	5 065	0 575
25Y96H	POND 7	77 00	291104 813	5 101	0 580
25Y96H	POND 7	78 00	293195 313	5 138	0 582
25Y96H	POND 7	79 00	295291 438	5 175	0 583
25Y96H	POND 7	80 00	297391 125	5 212	0 584
25Y96H	POND 7	81 00	299487 906	5 248	0 581
25Y96H	POND 7	82 00	301579 688	5 285	0 581
25Y96H	POND 7	83 00	303672 469	5 322	0 582
25Y96H	POND 7	84 00	305768 219	5 358	0 583
25Y96H	POND 7	85 00	307867 188	5 395	0 583
25Y96H	POND 7	86 00	309969 313	5 432	0 584
25Y96H	POND 7	87 00	312074 563	5 469	0 585
25Y96H	POND 7	88 00	314182 969	5 506	0 586
25Y96H	POND 7	89 00	316300 813	5 543	0 590
25Y96H	POND 7	90 00	318430 156	5 580	0 592
25Y96H	POND 7	91 00	320564 906	5 618	0 593
25Y96H	POND 7	92 00	322702 969	5 655	0 594
25Y96H	POND 7	93 00	324837 719	5 693	0 592
25Y96H	POND 7	94 00	326967 063	5 730	0 591
25Y96H	POND 7	95 00	329097 094	5 767	0 592
25Y96H	POND 7	96 00	331229 219	5 805	0 592
25Y96H	POND 7	97 00	332579 469	5 828	0 158
25Y96H	POND 7	98 00	332890 688	5 834	0 015
25Y96H	POND 7	99 00	332919 000	5 834	0 000
25Y96H	POND 7	100 00	332919 844	5 834	0 000

Total Volume
 760 ac-ft
 7.64

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Scenario Input Data

Scenario 1 25 year 96 hour

Hydrograph Type Slug Load
 Modflow Routing Routed with infiltration

Treatment Volume (ft) 331229.2 = 7.4 ac-ft

Initial ground water level (ft datum) default 140.40

Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)
0 100	2 700	3 500	7 500	11 500
0 250	2 800	4 000	8 000	12 000
0 500	2 900	4 500	8 500	12 500
1 000	3 000	5 000	9 000	13 000
1 500	3 100	5 500	9 500	13 500
2 000	3 200	6 000	10 000	14 000
2 500	3 300	6 500	10 500	14 500
2 600	3 400	7 000	11 000	

PONDS Version 3 2 0145
Retention Pond Recovery Refined Method
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Detailed Results *Scenario 1* *25 year* *96 hour*

Elapsed Time (hours)	Inflow Rate (ft /s)	Outside Recharge (ft/day)	Stage Elevation (ft datum)	Infiltration Rate (ft /s)	Overflow Discharge (ft /s)	Cumulative Inflow Volume (ft³)	Cumulative Infiltration Volume (ft)	Cumulative Discharge Volume (ft)	Flow Type
0 000	55204 8700	0 0000	140 400	0 00000	0 00000	0 0	0 0	0 0	N A
0 002	55204 8700	0 0000	159 881	5 58071	0 00000	331229 2	33 5	0 0	U/P
2 400	0 0000	0 0000	158 487	9 06687	0 00000	331229 2	81228 8	0 0	U/P
6 000	0 0000	0 0000	156 332	6 66106	0 00000	331229 2	192174 3	0 0	U/P
12 000	0 0000	0 0000	154 632	2 62375	0 00000	331229 2	267669 3	0 0	U/S
24 000	0 0000	0 0000	153 683	0 72201	0 00000	331229 2	305727 1	0 0	S
36 000	0 0000	0 0000	153 033	0 29516	0 00000	331229 2	330051 1	0 0	S
48 000	0 0000	0 0000	152 080	0 01364	0 00000	331229 2	331229 2	0 0	S
60 000	0 0000	0 0000	151 351	0 00000	0 00000	331229 2	331229 2	0 0	S
62 400	0 0000	0 0000	151 214	0 00000	0 00000	331229 2	331229 2	0 0	S
64 800	0 0000	0 0000	151 085	0 00000	0 00000	331229 2	331229 2	0 0	S
67 200	0 0000	0 0000	150 962	0 00000	0 00000	331229 2	331229 2	0 0	S
69 600	0 0000	0 0000	150 845	0 00000	0 00000	331229 2	331229 2	0 0	S
72 000	0 0000	0 0000	150 734	0 00000	0 00000	331229 2	331229 2	0 0	S
74 400	0 0000	0 0000	150 628	0 00000	0 00000	331229 2	331229 2	0 0	S
76 800	0 0000	0 0000	150 526	0 00000	0 00000	331229 2	331229 2	0 0	S
79 200	0 0000	0 0000	150 429	0 00000	0 00000	331229 2	331229 2	0 0	S
81 600	0 0000	0 0000	150 335	0 00000	0 00000	331229 2	331229 2	0 0	S
84 000	0 0000	0 0000	150 245	0 00000	0 00000	331229 2	331229 2	0 0	S
96 000	0 0000	0 0000	149 859	0 00000	0 00000	331229 2	331229 2	0 0	S
108 000	0 0000	0 0000	149 523	0 00000	0 00000	331229 2	331229 2	0 0	S
120 000	0 0000	0 0000	149 227	0 00000	0 00000	331229 2	331229 2	0 0	S
132 000	0 0000	0 0000	148 962	0 00000	0 00000	331229 2	331229 2	0 0	S
144 000	0 0000	0 0000	148 723	0 00000	0 00000	331229 2	331229 2	0 0	S
156 000	0 0000	0 0000	148 506	0 00000	0 00000	331229 2	331229 2	0 0	S
168 000	0 0000	0 0000	148 307	0 00000	0 00000	331229 2	331229 2	0 0	S
180 000	0 0000	0 0000	148 124	0 00000	0 00000	331229 2	331229 2	0 0	S
192 000	0 0000	0 0000	147 955	0 00000	0 00000	331229 2	331229 2	0 0	S
204 000	0 0000	0 0000	147 797	0 00000	0 00000	331229 2	331229 2	0 0	S
216 000	0 0000	0 0000	147 650	0 00000	0 00000	331229 2	331229 2	0 0	S
228 000	0 0000	0 0000	147 513	0 00000	0 00000	331229 2	331229 2	0 0	S
240 000	0 0000	0 0000	147 384	0 00000	0 00000	331229 2	331229 2	0 0	S
252 000	0 0000	0 0000	147 262	0 00000	0 00000	331229 2	331229 2	0 0	S
264 000	0 0000	0 0000	147 147	0 00000	0 00000	331229 2	331229 2	0 0	S
276 000	0 0000	0 0000	147 038	0 00000	0 00000	331229 2	331229 2	0 0	S
288 000	0 0000	0 0000	146 935	0 00000	0 00000	331229 2	331229 2	0 0	S
300 000	0 0000	0 0000	146 837	0 00000	0 00000	331229 2	331229 2	0 0	S
312 000	0 0000	0 0000	146 743	0 00000	0 00000	331229 2	331229 2	0 0	S
324 000	0 0000	0 0000	146 654	0 00000	0 00000	331229 2	331229 2	0 0	S
336 000	0 0000	0 0000	146 568	0 00000	0 00000	331229 2	331229 2	0 0	S
348 000	0 0000	0 0000	146 467	0 00000	0 00000	331229 2	331229 2	0 0	N A

← Recovery < 25 days

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