From: John Kessler
To: Docket Optical System
Date: 9/18/2008 3:15 PM
Subject: Fwd: FW: Observation Point Locations in Model
Attachments: Summary of Response Time.xls; Hydrographs_Recharge Only.xls

Dear Docket Staff:

Please docket the email and attached files as one under Sentinel (07-AFC-3) and use the phrase in the file name "Applicant's GW modeling to determine impacts to mesquite hummocks".

Please make sure the file scans at < 5 mb.

Thank you,

John

John S. Kessler
CEC - Project Manager
Office: 916-654-4679
Cell: 530-306-5920
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>>> <MICHAEL.CARROLL@LW.com> 9/18/2008 1:09 PM >>>
Hello all. John may have already forwarded this to you, but I wanted to make sure that you all had it. URS has provided John Fio with the coordinates he was looking for. URS has also done some additional analysis, and has provided the results of that analysis as well.

Michael J. Carroll

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From: Bob Hren [mailto:bob_hren@yahoo.com]
Sent: Thursday, September 18, 2008 12:18 PM
To: Carroll, Michael (OC); Mark Turner; KrisHelm1@aol.com
Subject: Fw: Observation Point Locations in Model

Forwarding the information Jim Zhang sent to John Fio on response time from recharge at DWA spreading basins to Mesquite Hummocks.

----- Forwarded Message ----
From: "Jim_Zhang@URSCorp.com" <Jim_Zhang@URSCorp.com>
To: John Fio <jlfio@hydrofocus.com>
Cc: George_Muehleck@URSCorp.com; Dale_Shileikis@URSCorp.com; Liz_Elliott@URSCorp.com; bob_hren@yahoo.com

Sent: Thursday, September 18, 2008 12:11:57 PM
Subject: Re: Observation Point Locations in Model

Hi John,

I hope things are going well with you there.

We ran the flow model to evaluate the response time of Mesquite Hummocks to DWA Recharge. Attached please find the simulation summary and hydrographs.

Please see the notes in the summary table for model simulation inputs.

The row and column number of the four observation points are listed below:

Ob Point	Row #	Column #
MH-1	295	173
MH-2	299	229
MH-3	302	240
MH-4	298	236

Please note that simulated heads at observation points are often not exactly identical to the simulated heads at thse cells (but are close enough) if the observation points are not exactly at the center of the cell - Heads at adjacent cells are also used to interpolate the head at the observation point when OB points are not at the center of the cells.

Let me know should you have question regarding this.

Thanks!

Best Regards,

Jim Zhang, Ph.D, PE
Senior Hydrogeologist
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URS Corporation
1333 Broadway, Suite 900, Oakland, CA 94612
Phone: 510.874.3154 Cell: 415.308.3096
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For more information please go to http://www.lw.com/docs/irs.pdf
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Model Simulated Response Time[1] at Mesquite Hummocks

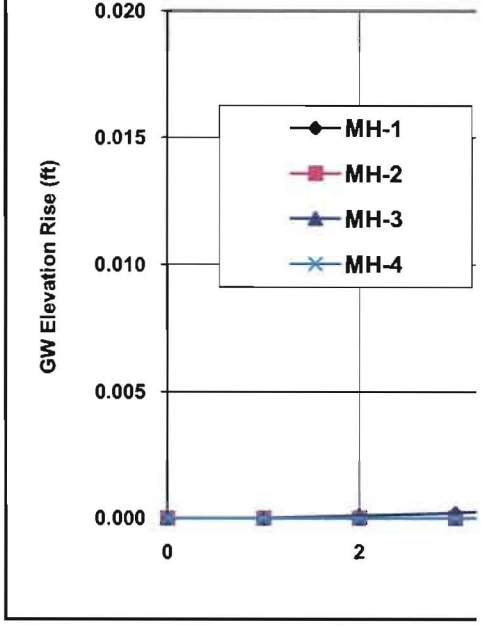
DWA Recharge Only[2]	Model case	Rech_01	Rech_02	Rech_03	Rech_04
	Transmissivity	Tyley T	Tyley T	2X Tyley T	2X Tyley T
	Anisotropy ratio	2	1	2	1
	Simulation stress period	1 month	1 month	1 month	1 month
	Simulation time	10 years	10 years	10 years	10 years
	Response time (months)	4	8	1.5	3
Percolation time from DWA ponds to water table, 450 ft at 4 ft/day	Duration (months)	3.75	3.75	3.75	3.75
Total Delay to Mesquite Hummocks	Months	7.75	11.75	5.25	6.75

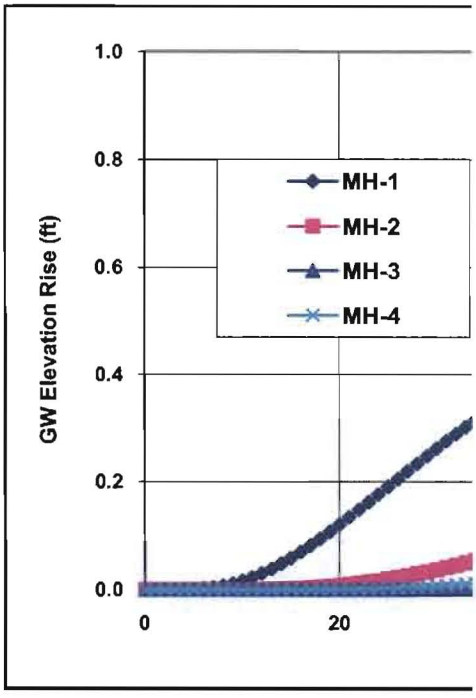
First pumping starts at time = 12 months and pumping impact to Mesquite Hummocks would experience a a further delay of some months.

Note:

1. The response times listed are the modeled time when groundwater elevation changes (rise or drawdown) reaches 0.001 ft at observation point MH-1, after the recharged water reaches the water table in DWA basin.
2. 3000 AF is recharged to the DWA recharge basin in one month, and no more recharge after the first month.

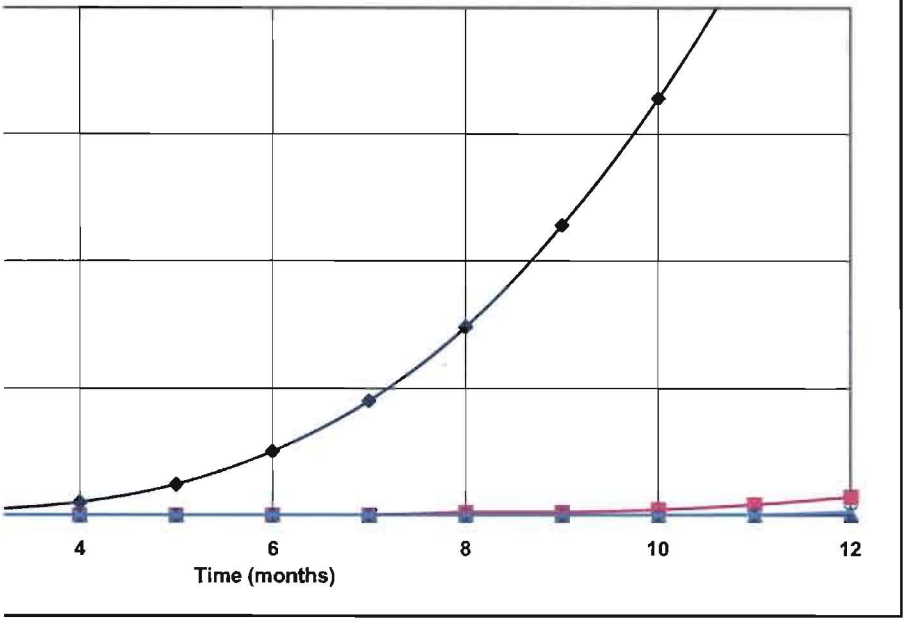
1	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000
4	0.001	0.000	0.000	0.000
5	0.001	0.000	0.000	0.000
6	0.003	0.000	0.000	0.000
7	0.005	0.000	0.000	0.000
8	0.007	0.000	0.000	0.000
9	0.011	0.000	0.000	0.000
10	0.016	0.000	0.000	0.000
11	0.023	0.000	0.000	0.000
12	0.030	0.001	0.000	0.000
13	0.038	0.001	0.000	0.000
14	0.048	0.001	0.000	0.000
15	0.058	0.002	0.000	0.000
16	0.069	0.003	0.000	0.000
17	0.081	0.004	0.000	0.000
18	0.094	0.005	0.000	0.000
19	0.107	0.006	0.000	0.001
20	0.120	0.008	0.000	0.001
21	0.134	0.010	0.000	0.001
22	0.148	0.012	0.000	0.001
23	0.162	0.014	0.000	0.002
24	0.176	0.017	0.000	0.002
25	0.191	0.020	0.000	0.003
26	0.205	0.023	0.000	0.004
27	0.219	0.026	0.000	0.004
28	0.233	0.029	0.000	0.005
29	0.247	0.033	0.000	0.006
30	0.261	0.037	0.000	0.007
31	0.275	0.041	0.001	0.008
32	0.288	0.045	0.001	0.009
33	0.301	0.050	0.001	0.010
34	0.314	0.054	0.001	0.012
35	0.327	0.059	0.002	0.013
36	0.340	0.064	0.002	0.015
37	0.352	0.069	0.002	0.016
38	0.364	0.074	0.003	0.018
39	0.375	0.079	0.003	0.020
40	0.387	0.085	0.003	0.022
41	0.398	0.090	0.004	0.024
42	0.409	0.096	0.005	0.026
43	0.419	0.101	0.005	0.028
44	0.430	0.107	0.006	0.031
45	0.440	0.112	0.006	0.033
46	0.450	0.118	0.007	0.035
47	0.459	0.124	0.008	0.038
48	0.468	0.130	0.009	0.041
49	0.477	0.136	0.009	0.043
50	0.486	0.142	0.010	0.046

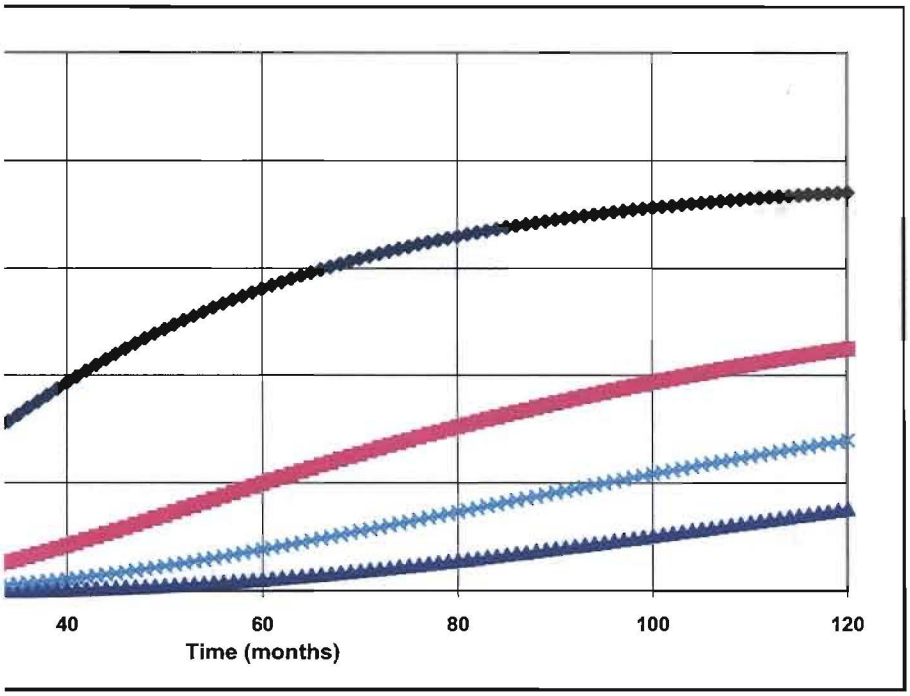




53	0.511	0.159	0.013	0.055
54	0.519	0.165	0.014	0.058
55	0.527	0.171	0.015	0.061
56	0.534	0.177	0.016	0.064
57	0.541	0.183	0.018	0.067
58	0.548	0.188	0.019	0.070
59	0.555	0.194	0.020	0.073
60	0.562	0.200	0.021	0.077
61	0.568	0.205	0.023	0.080
62	0.574	0.211	0.024	0.083
63	0.580	0.217	0.026	0.087
64	0.586	0.222	0.027	0.090
65	0.592	0.228	0.029	0.094
66	0.597	0.233	0.030	0.097
67	0.603	0.239	0.032	0.101
68	0.608	0.244	0.034	0.104
69	0.613	0.250	0.035	0.108
70	0.618	0.255	0.037	0.111
71	0.622	0.260	0.039	0.115
72	0.627	0.265	0.041	0.118
73	0.631	0.270	0.043	0.122
74	0.636	0.275	0.044	0.125
75	0.640	0.280	0.046	0.129
76	0.644	0.285	0.048	0.133
77	0.648	0.290	0.050	0.136
78	0.652	0.295	0.052	0.140
79	0.656	0.300	0.054	0.143
80	0.659	0.305	0.056	0.147
81	0.663	0.309	0.058	0.151
82	0.666	0.314	0.061	0.154
83	0.669	0.318	0.063	0.158
84	0.673	0.323	0.065	0.161
85	0.676	0.327	0.067	0.165
86	0.679	0.332	0.069	0.168
87	0.682	0.336	0.072	0.172
88	0.684	0.340	0.074	0.176
89	0.687	0.345	0.076	0.179
90	0.690	0.349	0.078	0.183
91	0.692	0.353	0.081	0.186
92	0.695	0.357	0.083	0.189
93	0.697	0.361	0.085	0.193
94	0.700	0.365	0.088	0.196
95	0.702	0.369	0.090	0.200
96	0.704	0.372	0.092	0.203
97	0.706	0.376	0.095	0.207
98	0.709	0.380	0.097	0.210
99	0.711	0.384	0.100	0.213
100	0.712	0.387	0.102	0.217
101	0.714	0.391	0.105	0.220
102	0.716	0.394	0.107	0.223

105	0.721	0.404	0.115	0.233
106	0.723	0.408	0.117	0.236
107	0.725	0.411	0.120	0.240
108	0.726	0.414	0.122	0.243
109	0.728	0.418	0.125	0.246
110	0.729	0.421	0.127	0.249
111	0.731	0.424	0.130	0.252
112	0.732	0.427	0.132	0.255
113	0.733	0.430	0.135	0.258
114	0.734	0.433	0.137	0.261
115	0.736	0.436	0.140	0.264
116	0.737	0.438	0.142	0.268
117	0.738	0.441	0.145	0.270
118	0.739	0.444	0.147	0.274
119	0.740	0.447	0.150	0.276
120	0.741	0.450	0.152	0.279


4
6
8
10
12
Time (months)


40
60
80
100
120
Time (months)