



STATE OF
COLORADO

Ebert - DNR, Jared <jared.ebert@state.co.us>

M-1980-183 Quarterly Water Monitoring

Joshua Oliver <joliver@brannan1.com>

Mon, Oct 28, 2019 at 12:20 PM

To: "Ebert - DNR, Jared" <jared.ebert@state.co.us>

Cc: Fred Marvel <fmarvel@brannan1.com>, Alex Schatz <aschatz@brannan1.com>, Kurt Thurmman <kthurmann@brannan1.com>

Mr. Ebert,

Please find the attached quarterly groundwater monitoring report for Brannan's Pit 29 M-1980-183 site.

Please let me know if there are any questions.

Joshua Oliver

Environmental Manager



joliver@brannan1.com

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4 attachments



M-1980-183 Q3 2019 Report.pdf

196K



MW 1-4 Piezometer Depth to Groundwater - Table.pdf

202K



MW 1-4 Piezometer Depth to Groundwater- Graph.pdf

185K



MW-4 and Reservoir Graph 10-21-2019.pdf

666K



October 28, 2019
Colorado Division of Reclamation, Mining and Safety
ATTN: Jared Ebert
1313 Sherman St. Suite 215
Denver, CO 80203

Re: M-1980-183 Quarterly Groundwater Monitoring Results Submission

Mr. Ebert,

Attached is the quarterly groundwater level monitoring for Brannan Sand and Gravel Company's Pit 29 facility for 3rd Quarter 2019.

The hydrologic balance is still being kept in check by the French drain as verified by the readings from MW-4. There have not been any offsite impacts associated with hydrologic balance issues observed since the construction of the French drain.

MW-1 leveled off at about 15.4 ft. bgs this quarter, continuing the slight high trend that was present in Q2. There are no known offsite impacts at this time and this well will continue to be monitored. MW-2 groundwater levels are within normal range and are showing trends of increasing depth over the quarter.

Please let me know if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Josh Oliver", with a stylized flourish at the end.

Joshua Oliver
Environmental Manager
Brannan Sand and Gravel Company, L.L.C.
(303) 472-1736
joliver@brannan1.com

Brannan Pit #29				
Water Level Measurements				
Date Month-Year	Depth to Water (ft)			
	MW-1 OUT	MW-2 OUT	MW-3 OUT	MW-4 OUT
12/1/2005	21.50	22.50	11	N/A
1/1/2006	23.00	23.00	13	N/A
3/1/2006	22.00	20.00	11.5	N/A
5/1/2006	21.50	20.00	10.5	N/A
6/1/2010	20.50	17.70	N/A	N/A
9/1/2010	20.00	18.90	N/A	21.40
12/1/2010	20.90	23.17	N/A	26.25
3/1/2011	20.57	19.40	N/A	24.66
6/1/2011	19.40	15.74	N/A	21.80
9/1/2011	18.94	18.63	N/A	21.08
12/1/2011	20.20	21.10	N/A	21.15
3/1/2012	20.95	10.30	N/A	17.75
6/1/2012	20.89	18.47	N/A	14.09
9/12/2012	20.97	19.21	N/A	5.64
11/12/2012	-	-	N/A	4.84
12/12/2012	21.79	20.54	N/A	5.67
4/13/2013	22.84	18.16	N/A	5.61
4/22/2013	22.55	19.70	N/A	5.30
6/13/2013	22.48	18.78	N/A	5.60
9/1/2013	21.66	19.15	N/A	4.52
12/13/2013	23.19	20.60	N/A	5.60
3/14/2014	24.15	16.75	N/A	6.09
6/14/2014	23.32	17.76	N/A	5.18
9/14/2014	22.91	18.80	N/A	4.64
11/14/2014	23.60	19.62	N/A	5.22
12/1/2014	24.85	20.48	N/A	6.02
3/31/2015	26.87	17.50	N/A	6.78
6/15/2015	21.79	16.69	N/A	4.79
9/15/2015	19.94	17.75	N/A	5.27
12/15/2015	21.42	19.15	N/A	6.54
4/6/2016	23.11	20.06	N/A	9.15
7/13/2016	20.66	18.64	N/A	6.33
8/30/2016	20.61	19.86	N/A	9.01
9/27/2016	20.78	20.37	N/A	8.77
10/31/2016	20.53	20.91	N/A	9.09
11/21/2016	20.58	21.05	N/A	9.05
12/28/2016	21.61	21.93	N/A	9.15
1/26/2017	22.49	22.31	N/A	9.20
2/27/2017	23.44	22.60	N/A	9.20
3/28/2017	23.35	19.78	N/A	9.19
5/22/2017	21.12	19.25	N/A	8.90
6/14/2017	20.76	18.88	N/A	8.91

7/17/2017	19.68	18.60	N/A	8.94
8/11/2017	19.81	19.5	N/A	8.11
9/11/2017	19.97	19.60	N/A	8.96
10/16/2017	20.42	20.30	N/A	8.99
11/21/2017	22.48	21.58	N/A	9.12
12/19/2017	22.39	22.14	N/A	9.06
1/19/2018	23.32	22.58	N/A	9.22
2/16/2018	23.90	22.81	N/A	9.27
3/12/2018	24.48	23.00	N/A	9.38
4/30/2018	22.80	20.19	N/A	9.22
5/21/2018	21.95	19.75	N/A	9.18
6/22/2018	20.80	19.08	N/A	9.05
7/12/2018	20.50	19.24	N/A	9.06
8/15/2018	20.60	19.83	N/A	9.01
9/5/2018	21.75	20.11	NA	9.05
10/18/2018	17.95	20.81	NA	9.05
11/19/2018	17.04	21.48	NA	9.15
12/14/2018	17.34	21.87	NA	9.20
2/28/2019	18.21	22.49	NA	9.30
3/28/2019	18.44	22.61	NA	9.31
4/30/2019	18.52	19.60	NA	9.23
5/31/2019	16.18	19.12	NA	9.12
6/20/2019	15.56	18.57	NA	9.05
7/18/2019	15.19	17.86	NA	9.00
9/27/2019	15.29	19.29	NA	9.01
10/21/2019	15.40	19.69	NA	9.01



