



October 28, 2022

Eric Scott
Division of Reclamation, Mining and Safety
1313 Sherman Street, Room 215
Denver, CO 80203

RE: DRMS Annual Report - Groundwater Monitoring Report & Map
Site: Ragsdale Reservoirs, DRMS Permit M-2020-007

Dear Eric:

L.G. Everist, Inc. respectfully submits this Groundwater Monitoring Report with attachments as part of the **DRMS Annual Report for Ragsdale Reservoirs, Permit M-2020-007**. The online annual report was completed and the annual permit fee was paid online on 10/13/22. In the cover letter submitted with the annual report, we noted that the annual groundwater monitoring data and map would be submitted under separate cover. Please add this Groundwater Monitoring Report to the 2022 DRMS Annual Report for Ragsdale Reservoirs. Thank you.

The DRMS permit for Ragsdale Reservoirs was approved and issued on October 14, 2020. The Weld County Use by Special Review for Mining Permit USR20-0030 was approved December 9, 2020, and the resolution was signed on January 6, 2021.

During 2021, L.G. Everist started the mine site preparation, and stripped parts of Phase 1A and parts of Phase 3 (for the plant site). In January 2022, the mining and processing operations began with mining in Phase 1A (for future settling and freshwater ponds). In summer, we started mining in Phase 1, which will be reclaimed as a water storage reservoir. All mine activity is currently only on the West side of the site - between US Highway 85 (eastern boundary of this area) and the South Platte River (western boundary of this area). For more details on the current mining activity, see the annual report.

This groundwater monitoring report includes monitoring well data and a map with locations of the groundwater monitoring wells (MW = monitoring well) installed around the permitted areas. The groundwater monitoring wells were installed in October-2019. Data from the wells is collected monthly. The 2-year baseline time period for the original monitoring wells runs from November-2019 through October-2021. The trigger point allowance range for the monitoring wells is the range between the high baseline levels +3 feet to the low baseline levels -3 feet.

The groundwater monitoring data included in this report is from the beginning of monitoring, November-2019, through September-2022. The majority of the monitoring wells have maintained groundwater levels within their baseline ranges and trigger point allowance ranges. But some wells exceeded their ranges in 2022. For any wells that have exceeded their ranges, we have investigated the data and mitigated as needed. Data and notes for all wells follow below and on attached tables.

West side monitoring Wells: MW-01, MW-01A, MW-02, MW-03, MW-04, MW-05, MW-06, MW-07

MW-01 - remained within its baseline range. This well was mined through, and replaced by MW-01A in November-2021. MW-01A is approximately 350 feet northeast of where MW-01 was located.

MW-01A, MW-02 - since February-2022 for MW-01A, and since April-2022 for MW-02, these wells have exceeded their baseline ranges (or trigger point allowance ranges). The decrease in groundwater levels near MW-01A well was likely due to the dewatering in Phase 1A. For MW-02, the decrease could be caused by the dewatering in Phase 1A, or it could also be a result of non-irrigation in the area. We dewatered Phase 1A so that it could be mined "dry" with loader and excavators, rather than "wet" with a dredge or dragline. We are almost done mining this phase, and then it will become a settling pond for the life of the mine, and the groundwater levels should return to their original levels.



L.G. EVERIST, INC.

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In late May-2022 to June-2022, a neighbor called, Mr. McPeck, and said the well at the house on his property located north of our operations in Phase 1A was running low. The shallow house well is located about 840 feet away from MW-01A - so outside of the 600-foot DWR mitigation requirement. At this greater distance, it is not certain that the dropping water levels were caused by LGE's pumping, but we addressed the complaint and have worked with the McPecks to solve the well/water level issue.

We started by having Quality Well and Pump visit and test the house well (June 1). Quality Well found that the well had a static water level of 17 feet, and was only 18 feet deep. The well's permit had the depth at 30 feet. The well was constructed in 1914, then permitted with a "Late Registration" in 1994. Quality primed the pump and then ran it, and the well went dry within minutes. So, the well was almost dry - and it could be from various reasons, such as: from the age of the well and silts filling the ground surrounding it, or from its very shallow depth and natural groundwater levels decreasing, or from our pumping of groundwater over 800 feet away. The exact cause or causes was not determined. (Note: No other neighbors complained of their wells running low or dry.)

Even though it wasn't proven that the decrease of groundwater levels was caused by our mining activity, we decided to replace the McPeck's well at our company's expense. After an exhaustive search, we found a drilling company who would drill a replacement well, and got on their very long wait list. In the meantime, starting June 7, we supplied the McPecks with aboveground water tanks (refilled every 2-3 days), and an electric pump at the house. We continued to supply water for the McPecks through the summer and early fall. The drilling company finally drilled the McPeck's replacement well last week (10/18-21/22). The McPecks now have a new house well (drilled to approximately 60 feet) and new pump system.

MW-03, MW-04, MW-05, MW-06, MW-07 - have remained within their baseline ranges. No issues to discuss.

East side monitoring Wells: MW-08, MW-09, MW-10, MW-11, MW-12, MW-13, MW-14

MW-08, MW-09, MW-10, MW-11A - since April-2022 or later, these wells have exceeded their baseline ranges (or trigger point allowance ranges), but L.G. Everist does not have any mine activity in the East side of the permit area, which is located on the east side of US Highway 85. Therefore, the fluctuating water levels in these wells are not caused by LGE operations. The fluctuations may be caused by various things, including, but not limited to the climate, irrigation ditches, county road work, and agricultural activity, including irrigated areas and dry-up areas. Also, there have been no complaints to LGE or to the property owner (Cannon trust). LGE will continue to monitor these wells monthly, and if the levels remain different from the original 2-year baseline (or change more), a new baseline may have to be established prior to mining in the East side.

MW-12, MW-13, MW-14 - have remained within their baseline ranges. No issues to discuss.

We will continue to check all our monitoring wells monthly and check in with the McPecks on a regular basis to make sure the water levels in their new well are remaining stable.

If you have questions, feel free to contact me at 303-286-2247, or lmshults@lgeverist.com.

Sincerely,

Lynn Mayer Shults
Regulatory Manager

Attachments:

- Ragsdale Reservoirs - Groundwater Monitoring Data
- Ragsdale Reservoirs - Groundwater Monitoring Wells Map

L.G. Everist, Inc. - Ragsdale Reservoirs (M-2020-007) - Groundwater Monitoring Well Data

	west	west	west	west	west	west	west	west	east	east	east	east	east	east	east
MONITOR WELL NO.	MW-01	MW-01A	MW-02	MW-03	MW-04	MW-05	MW-06	MW-07	MW-08	MW-09	MW-10	MW-11	MW-12	MW-13	MW-14
NORTHING, FT	1,295,898.65	1,296,201.95	1,295,942.41	1,295,534.63	1,293,275.39	1,291,109.84	1,291,668.25	1,292,861.73	1,296,713.39	1,294,323.43	1,294,309.42	1,296,788.30	1,299,372.37	1,299,433.15	1,298,160.70
EASTING, FT	3,193,257.54	3,193,425.03	3,192,033.57	3,189,747.26	3,189,910.84	3,192,292.95	3,193,454.29	3,193,446.12	3,194,014.82	3,194,377.76	3,195,616.77	3,195,447.13	3,196,042.42	3,193,591.30	3,193,833.97
ELEVATION (TOG), FT	4,863.20	4,862.79	4,850.19	4,849.64	4,853.85	4,859.84	4,873.22	4,869.74	4,862.89	4,868.27	4,869.58	4,865.88	4,862.42	4,856.35	4,859.34
CASING HEIGHT, FT	2.90	2.89	2.39	2.94	3.12	2.99	3.10	3.03	2.79	2.92	2.92	2.86	3.03	3.33	2.90
ELEVATION (TOC), FT	4,866.10	4,865.68	4,852.58	4,852.58	4,856.98	4,862.83	4,876.32	4,872.77	4,865.68	4,871.19	4,872.50	4,868.75	4,865.45	4,859.68	4,862.24

for MW-01A, use MW-01 high & low
until MW-01A has 2-yr baseline

from Feb-2021 - use updated Elevation (TOC) for MW12
(case replaced 02/22/21 and TOC changed)

4,865.69

HIGH (baseline max + 3 ft)	4,854.31	4,854.31	4,849.80	4,846.69	4,849.66	4,859.78	4,862.16	4,861.58	4,855.27	4,860.07	4,862.17	4,857.34	4,857.98	4,852.69	4,853.69
LOW (baseline min - 3 ft)	4,844.45	4,844.45	4,841.82	4,838.78	4,841.76	4,851.02	4,852.17	4,848.96	4,844.63	4,848.09	4,848.95	4,844.95	4,848.60	4,841.36	4,842.95

11/06/19	4,850.10		4,846.35	4,842.98	4,846.30	4,855.73	4,857.50	4,855.07	4,850.43	4,854.24	4,856.40	4,851.63	4,854.30	4,847.63	4,848.96
12/09/19	4,849.16		4,845.60	4,843.18	4,846.45	4,854.53	4,856.52	4,854.11	4,849.73	4,853.16	4,854.90	4,850.70	4,854.65	4,847.60	4,849.24
01/13/20	4,847.77		4,844.89	4,842.80	4,846.23	4,854.19	4,855.62	4,852.91	4,848.33	4,851.74	4,853.60	4,849.58	4,852.64	4,845.57	4,846.94
02/10/20	4,847.45		4,844.82	4,842.83	4,846.35	4,854.03	4,855.17	4,852.48	4,847.63	4,851.19	4,852.72	4,848.62	4,852.30	4,844.68	4,846.09
03/12/20	4,848.32		4,845.52	4,843.02	4,846.33	4,854.43	4,856.28	4,852.79	4,847.74	4,851.09	4,851.95	4,847.95	4,853.15	4,844.46	4,846.14
04/30/20	4,848.58		4,846.07	4,842.56	4,845.78	4,854.62	4,855.22	4,853.05	4,847.88	4,851.34	4,852.50	4,848.89	4,852.67	4,844.73	4,846.29
05/29/20	4,849.93		4,846.47	4,842.90	4,846.07	4,856.01	4,857.44	4,855.80	4,849.53	4,853.25	4,854.65	4,850.60	4,853.24	4,846.07	4,847.02
06/25/20	4,850.09		4,846.21	4,843.57	4,846.62	4,856.08	4,858.17	4,857.33	4,850.63	4,855.37	4,857.15	4,852.70	4,853.69	4,848.00	4,848.99
07/20/20	4,850.22		4,846.10	4,842.77	4,846.03	4,855.31	4,858.51	4,857.90	4,851.16	4,857.07	4,857.79	4,853.13	4,853.82	4,848.31	4,849.55
08/27/20	4,850.21		4,846.23	4,842.36	4,845.63	4,855.33	4,858.39	4,857.58	4,850.89	4,855.90	4,857.75	4,851.65	4,853.70	4,848.67	4,849.39
09/11/20	4,851.31		4,846.60	4,842.49	4,844.76	4,855.67	4,858.54	4,857.99	4,850.83	4,855.67	4,857.25	4,852.24	4,853.40	4,848.09	4,849.29
10/28/20	4,849.42		4,846.00	4,842.68	4,846.00	4,854.70	4,857.14	4,854.82	4,849.98	4,853.95	4,856.11	4,851.36	4,853.05	4,846.96	4,848.39
11/04/20	4,849.16		4,845.92	4,842.83	4,846.19	4,854.72	4,857.02	4,854.41	4,849.45	4,853.77	4,855.49	4,850.51	4,852.94	4,846.46	4,847.99
12/18/20	4,848.20		4,845.59	4,842.94	4,846.27	4,854.18	4,855.53	4,853.11	4,848.26	4,851.87	4,853.31	4,849.13	4,852.59	4,845.13	4,846.62
01/14/21	4,848.23		4,846.06	4,842.56	4,845.87	4,854.64	4,855.18	4,851.96	4,847.67	4,851.28	4,852.49	4,848.24	4,851.85	4,844.36	4,845.95
02/22/21	4,849.16		4,846.22	4,841.78	4,845.04	4,854.89	4,855.47	4,853.23	4,848.34	4,851.48	4,852.11	4,848.46	4,851.60	4,844.94	4,846.67
03/04/21	4,848.75		4,845.92	4,842.90	4,846.22	4,854.02	4,855.18	4,853.01	4,848.19	4,851.38	4,852.16	4,848.44	4,852.10	4,844.77	4,846.56
04/26/21	4,848.95		4,846.19	4,842.65	4,845.83	4,854.92	4,856.36	4,855.12	4,848.74	4,852.17	4,853.02	4,849.94	4,852.48	4,844.97	4,847.25
05/24/21	4,849.92		4,846.37	4,843.43	4,846.59	4,855.43	4,857.22	4,856.76	4,849.80	4,853.95	4,854.93	4,851.06	4,853.44	4,845.83	4,847.96
06/22/21	4,850.42		4,846.70	4,843.69	4,846.66	4,855.87	4,858.97	4,853.99	4,850.76	4,854.64	4,857.23	4,853.07	4,854.10	4,847.67	4,849.09
07/16/21	4,850.76		4,846.64	4,843.09	4,846.18	4,855.94	4,858.63	4,857.14	4,851.57	4,855.52	4,858.57	4,854.34	4,854.77	4,848.51	4,849.95
08/19/21	4,851.18		4,846.80	4,842.67	4,845.87	4,855.87	4,859.10	4,858.32	4,852.14	4,856.64	4,859.17	4,854.31	4,854.98	4,848.57	4,850.12
09/16/21	4,850.89		4,846.68	4,842.27	4,845.59	4,856.78	4,859.16	4,858.58	4,852.27	4,856.65	4,858.91	4,854.22	4,854.64	4,849.69	4,850.69
10/26/21	4,850.32		4,846.69	4,842.66	4,845.69	4,855.74	4,857.90	4,855.79	4,850.93	4,854.98	4,857.35	4,852.57	4,853.98	4,848.16	4,847.32
11/22/21	destroyed	4,848.26	4,846.29	4,842.97	4,846.00	4,855.02	4,856.66	4,854.18	4,849.36	4,853.00	4,855.31	4,850.80	4,853.11	4,846.97	4,848.33
12/02/21		4,847.67	4,846.02	4,842.89	4,845.94	4,854.85	4,856.43	4,853.80	4,848.73	4,852.33	4,854.56	4,850.13	4,852.74	4,846.49	4,847.66
01/21/22		4,845.65	4,845.57	4,841.69	4,845.02	4,855.41	4,856.08	4,853.25	4,846.68	4,850.32	4,851.69	4,847.58	4,851.74	4,845.27	4,846.36
02/09/22		4,844.37	4,844.58	4,842.60	4,845.76	4,854.52	4,855.37	4,852.56	4,846.00	4,849.83	4,851.40	4,847.11	4,851.59	4,844.90	4,847.29
03/04/22		4,842.90	4,843.50	4,842.69	4,845.88	4,854.14	4,854.63	4,851.65	4,844.86	4,848.94	4,850.70	4,846.23	4,851.47	4,843.83	4,844.69
04/19/22		4,838.27	4,841.50	4,841.90	4,845.12	4,854.52	4,854.60	4,850.33	4,842.78	4,847.17	4,849.73	4,845.44	4,853.78	4,843.23	4,843.83
05/11/22		4,837.34	4,841.24	4,841.87	4,845.09	4,854.91	4,854.83	4,850.99	4,842.47	4,846.88	4,850.37	4,846.57	4,856.58	4,844.13	4,844.11
6/9 & 6/22/22		4,833.98	4,839.31	4,842.15	4,845.48	4,855.37	4,855.84	4,851.71	4,840.61	4,845.30	4,849.38	4,844.20	4,855.22	4,843.74	4,843.31
7/6, 7/19 & 7/26/22		4,833.33	4,838.25	4,841.98	4,845.37	4,855.50	4,855.86	4,852.12	4,840.35	4,844.48	4,848.66	4,843.93	4,853.25	4,845.03	4,843.71
08/22/22		4,833.92	4,839.30	4,842.62	4,845.66	4,855.69	4,855.89	4,852.38	4,839.92	4,844.86	4,848.44	4,842.84	4,852.88	4,845.24	4,843.45
09/23/22		4,835.25	4,839.27	4,841.94	4,845.35	4,855.24	4,855.87	4,852.21	4,840.54	4,845.80	4,848.87	4,842.93	4,852.63	4,845.18	4,843.64



RAGSDALE
MONITORING WELLS



L. G. EVERIST, INC.
We Deliver Solutions!
FORT LUPTON, CO

DRAWN BY	AMK
SCALE	NTS
DATE	10/20/2022

DRAWING NO.

L01

REV.

