

April 10, 2024

Daryl Reed, Hydrogeologist
Montana Department of Environmental Quality
1225 Cedar St
P.O. Box 200901
Helena, MT 59620-0901

**RE: CONTRACT NO. 415008-TO-21, BUTTE MINE FLOODING—MARCH 2024 MONTHLY REPORT, BMFOU
CONSENT DECREE 02-35-BU-SEH**

Dear Daryl:

Enclosed is the March 2024 monthly report for Contract No. 415008-TO-21, Butte Mine Flooding CD Monitoring. The report is being sent in partial fulfillment of the terms contained in the Butte Mine Flooding Operable Unit Consent Decree-02-35-BU-SEH and briefly discusses the major activities undertaken during the month and presents data from monitoring activities.

Common Sense Engineering and Surveying completed the monthly Berkeley Pit water elevation survey on April 2, 2024; the water elevation was 5355.93. Based on water-level data from mine shafts and deep bedrock wells, the Berkeley Pit pumping project that began on September 26, 2019 continues to control the water-level in the Pit and surrounding bedrock monitoring sites. Since the inception of pumping, the Berkeley Pit water-level has decreased 0.12-ft.

Figures referenced in the report are attached at the end of the report. If you have questions about the project, or the enclosed report, do not hesitate to contact me. Electronic copies of the report (text only) and water-level data have been sent to the required parties, per Appendix C of the Consent Decree.

Sincerely,



Ted Duaine
Hydrogeologist

Enclosures

xc: Jason Rappe, EPA (all report - elec. only) Chapin Storrar, CDM (elec. only)
Mark Thompson, MR (all report - elec. only) Karen Maloughney, BSB (elec. only)
Dan Janney, MR (elec. only) Abby Peltomaa, BSB (elec. only)



Loren Burmeister, AR (elec. only)
Dave Griffis, AR (all report - elec. only)
Irene Montero, AR (elec. only)
Rich Keeland, Aspect (elec. only)
Rayelynn Brandl, CFWEP (elec. only)
Fritz Daily (elec. only)
Eric Hassler, BSB (elec. only)
Garrett Smith, DEQ-HRB (elec. only)
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Gary Icopini, MBMG (elec. only)
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Adam Logar, PTS (elec. only)
Jeremy Fleege, MR (all report - elec. only)
Mike Harvie, MR (elec. only)
Steve Walsh (all report – elec. only)



MBMG Butte Mine Flooding Monthly Report
 BMFOU Consent Decree 02-35-BU-SEH
 Remedial Action–Monitoring Program
 Contract No. 415008-TO-21
 March 2024

The Montana Bureau of Mines and Geology (MBMG) continued to perform monitoring and sampling activities for the Butte Mine Flooding Operable Unit (BMFOU), per the conditions of the 2002 Consent Decree (CD) as outlined in the Remedial Action Monitoring Program. Normal monthly activities include alluvial and bedrock water-level monitoring, monitoring of surface-water flows in the Horseshoe Bend Drainage/Capture System (HsB/CS), HsB/CS water-quality sampling, and report preparation. Additional activities included the submission of the Draft 2023 Data Summary Report for agency review and preparations for spring semi-annual water quality sampling.

Horseshoe Bend/Capture System

The implementation of the Berkeley Pit and Discharge Pilot Project (Pilot Project) system and associated water treatment options modified water handling in the HsB drainage/precipitation plant areas. Figure 1 contains the March 2024 flow data. The signal to noise ratio was 41, indicating high quality data collection.

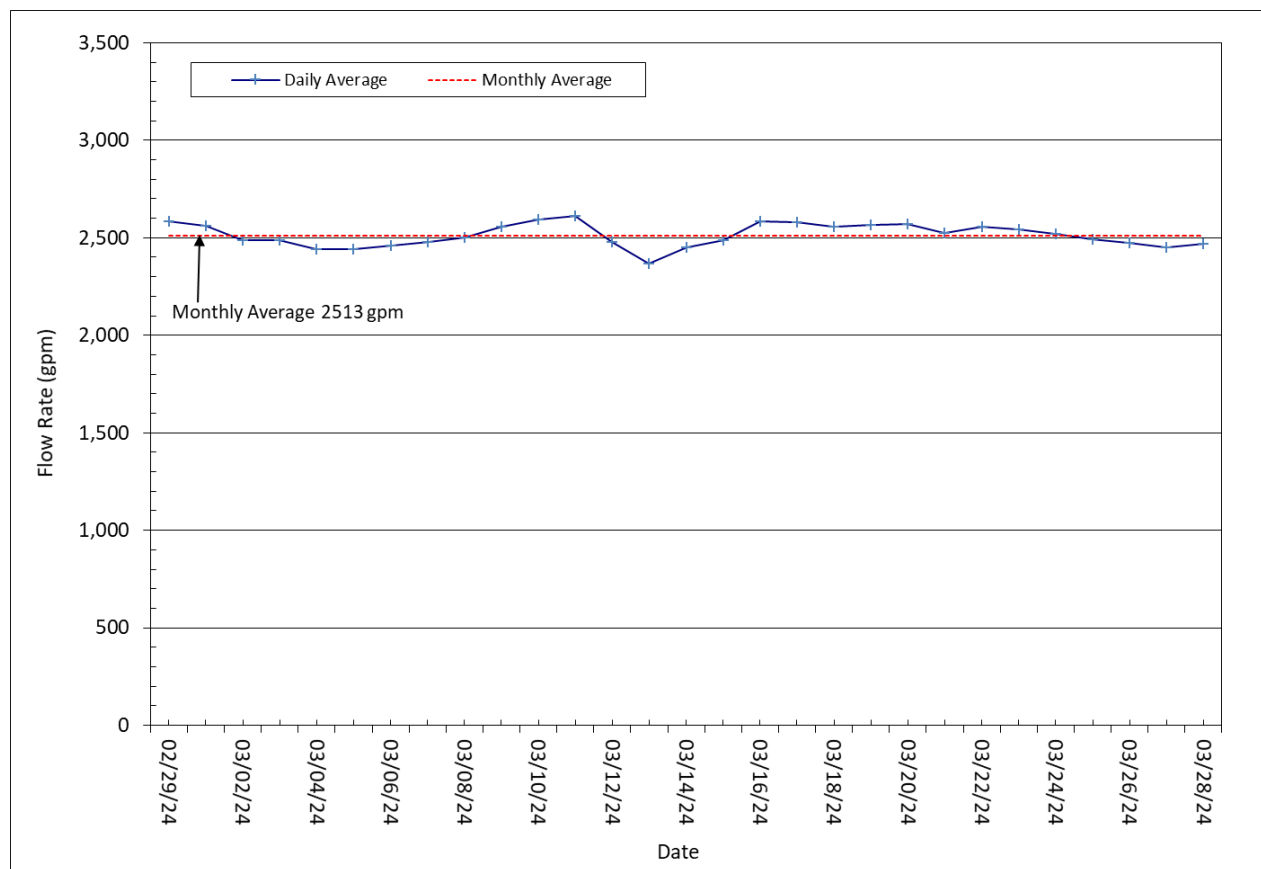


Figure 1. Horseshoe Bend/Capture System flow data.

Attachment 1 contains a summary of monthly flow statistics for the HsB/CS and attachment 2 is the long-term flow hydrograph for this area.

East Camp Alluvial System Monitoring

The East Camp alluvial groundwater monitoring system consists of the LP- and MR97-series wells located

within the active mine area, and AMC, GS, AMW, and BMF05-series wells. All of the wells associated with the four latter groups are located outside and to the south of the active mine area, with the exception of wells AMC-5 and AMC-15, which are within the active mine area. Well AMC-10 has been dry since its installation and well LP-15 was not measured due to winterization of the well pump and discharge pipe. The water-level was unchanged in well AMC-6. Table 1 summarizes the water-level changes for the alluvial wells and presents the maximum water-level increase and decrease within each group. Water levels in basin alluvial wells (wells outside the active mine area) increased in a majority of sites this month.

Well Series (No. Wells)	No. Wells Water Level Increased	No. Wells Water Level Decreased	Max. Water-Level Increase	Max. Water-Level Decrease
LP (14)	9	4	0.75	-0.14
MR97 (3)	3	0	0.73	—
AMC (7)	4	1	0.17	-0.05
GS (4)	1	3	0.03	-0.13
AMW (3)	1	2	0.65	-0.05
BMF05 (4)	3	1	0.09	-0.06

Table 1. East Camp Alluvial Well Water-Level Changes.

Hydrographs for wells LP-1-LP-2-LP-4, LP-9-LP-10, and LP-14-LP-15-LP-16, showing the long-term trends are included. These wells are reflective of the general alluvial system within the active mine area and show greater variability, the result of historic and current mine operations and seasonal trends.

Twenty-four alluvial wells within the East Camp System are equipped with pressure transducers to record water-level changes every hour. These detailed records provide information on the daily and seasonal changes that occur within the regional groundwater system. Copies of the monthly and long-term hydrographs for each of these sites are attached.

Figure 2 shows daily average water level elevations for wells LP-14, AMC-8, and BMF05-3. Well LP-14 is located on the southern edge of the mine property, well AMC-8 is just south of LP-14 outside the mine area, and well BMF05-3 is farther south in the basin. Wells LP-14 and AMC-8 have shown periodic influences from mining activities while well BMF05-3 is outside the area of influence of current or historic mining activity. A decreasing water-level trend (long-term) is noticeable in wells LP-14 and AMC-8 from 2012 thru mid-2023. Water-level responses in both wells are similar; while water levels in well BMF05-3 depict a more seasonal trend. Above average summer 2023 precipitation resulted in increasing water-levels during the summer and fall in all three wells. Water levels continued to rise in wells LP-14 and AMC-8 through the winter and early spring, while the water-level in well BMF05-3 shows a more seasonal trend. The influence of irrigation wells near BMF05-3 during the summer and fall months are apparent on well-transducer hydrographs.

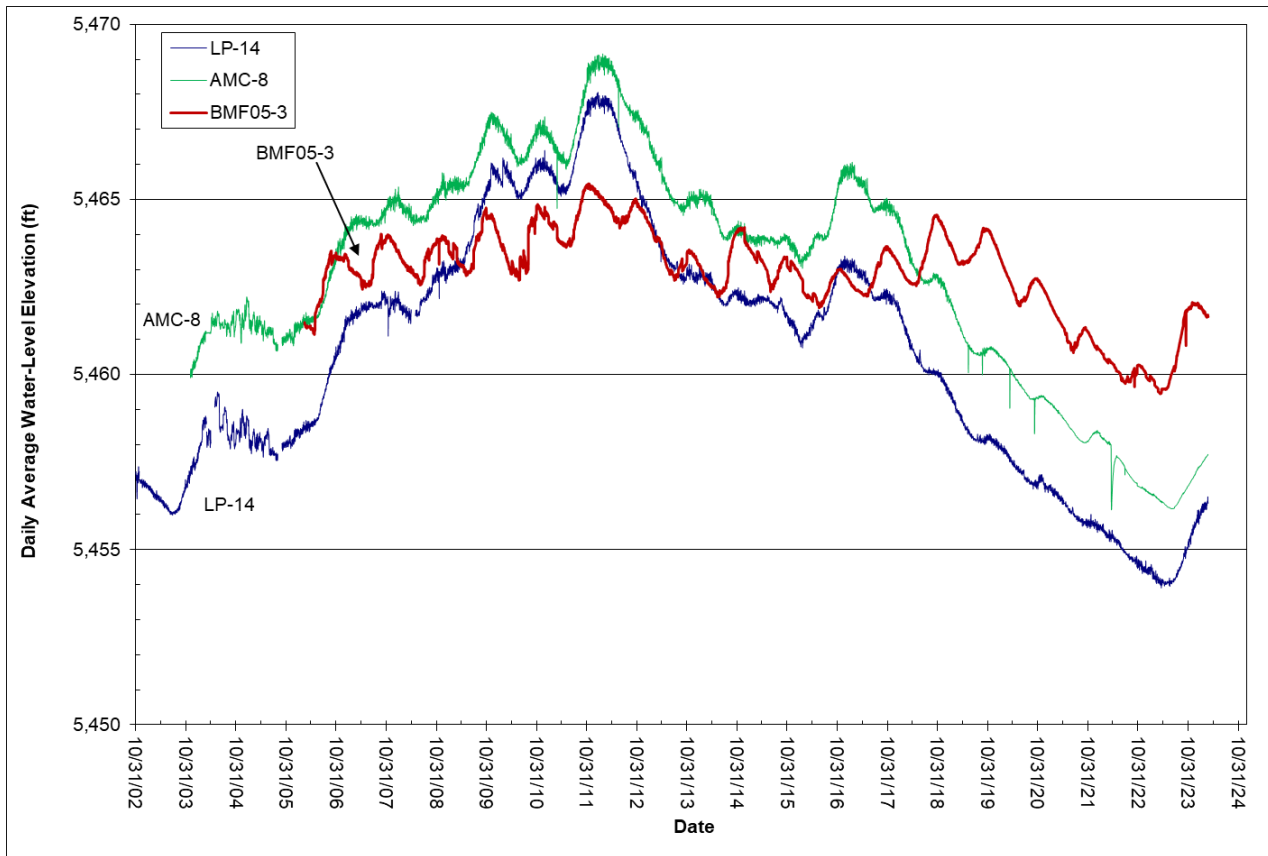


Figure 2. Hydrograph showing water-level elevations for alluvial wells LP-14, AMC-8, and BMF05-3.

The GS-series wells are two pairs of nested wells, a shallow and a deep well, within the alluvial aquifer. Figure 3 is a hydrograph showing the water levels for wells GS-44S and GS-44D. The water-level changes shown on this graph are similar to those for the GS-46S and GS-46D nested wells; water levels increase from snowmelt in late spring and precipitation during the summer followed by water-level declines in the fall and winter. Water-levels had been trending down the past 4-years, possibly due to below normal annual precipitation. Water-levels rose from May through October 2023 following above average precipitation; however, they remain about 1-ft below the long-term spring-summer levels. Water-levels began to decrease in November 2023 as precipitation and lawn watering lessened, continuing a seasonal downward trend, through March 2024.

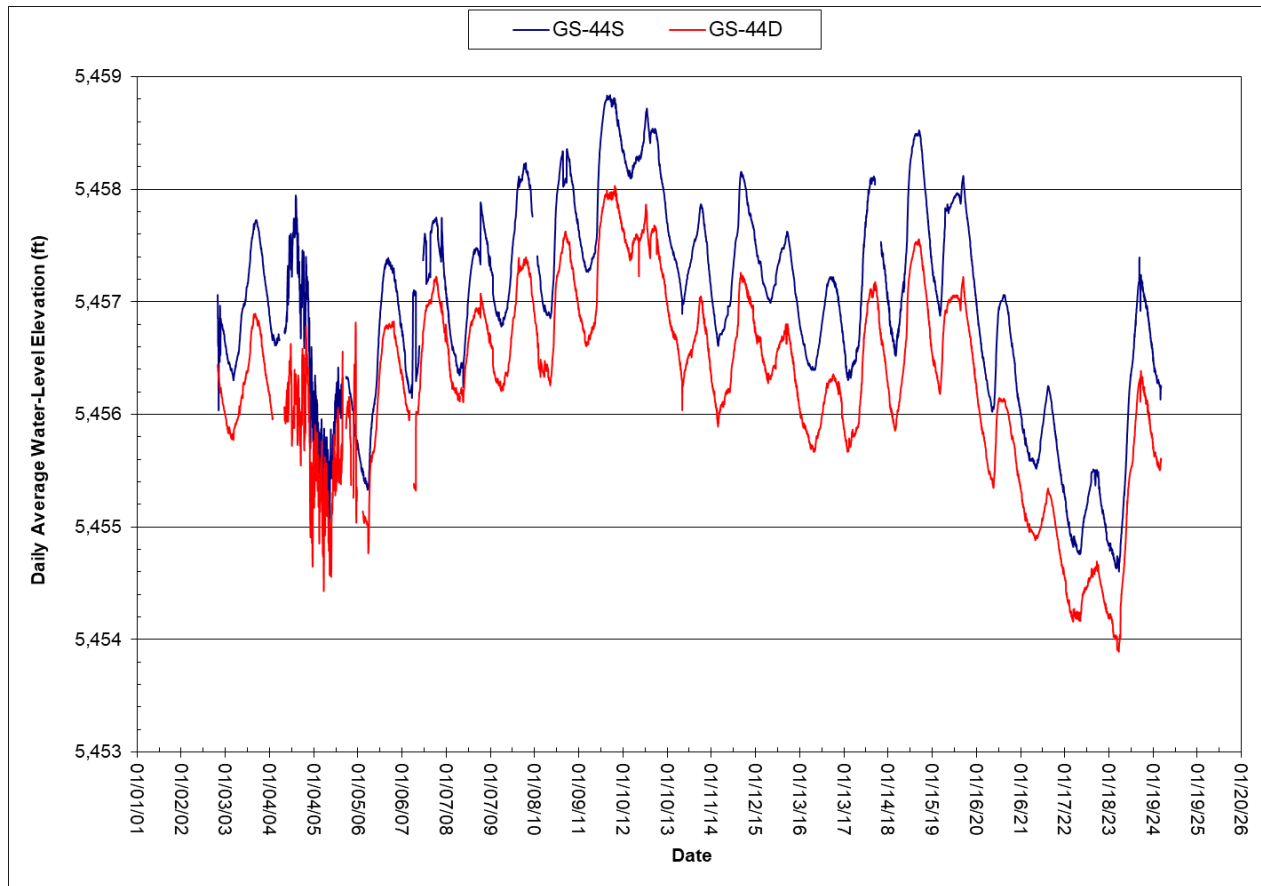


Figure 3. Hydrograph showing water-level elevations for alluvial wells GS-44S and GS-44D.

East Camp Mine and Bedrock System

The East Camp bedrock system consists of six underground mines, 10 bedrock wells within the active mine area, and three bedrock wells outside the active mine area. The latter three wells are located at Hebgen, Parrot, and Belmont parks. The Berkeley Pit is part of the East Camp bedrock monitoring system.

The 1994 Record of Decision (ROD) and 2002 CD established the maximum level that water in the East Camp bedrock system is allowed to rise, and is based upon fourteen compliance points within that system. Under the conditions contained in the CD, the water level in the bedrock system cannot exceed the Protective Water Level (PWL) of 5,410 ft elevation at any of the compliance points, ensuring that the water level in the Berkeley Pit remains the lowest point within the East Camp bedrock system. Table 2 contains recent monthly water levels for the 14 compliance points and the Berkeley Pit, and the depth below the PWL. Currently, the water level is highest in the Pilot Butte Mine, with the water level 28.79 ft below the PWL.

Compliance Point	Monthly Water Level (ft)	Depth Below PWL (ft)
Anselmo Mine	5,377.19	32.81
Granite Mountain Well	5,370.55	39.45
Pilot Butte Mine	5,381.21	28.79
Kelley Mine	5,368.48	41.52
Lexington Mine	5,376.94	33.06
Steward Mine	5,373.04	36.96
Belmont Well #2	5,367.16	42.84
Well A	5,368.42	41.58
Well C	5,363.44	46.56
Well D-1	5,366.31	43.69
Well D-2	5,367.84	42.16
Well G	5,372.84	37.16
Well J	5,358.37	51.63
Berkeley Pit	5,355.93	54.07
Continental Pit	Not Monitored During Active Mining	

Table 2. Compliance Points Monthly Water-Level Elevation and Depth below Protective Water Level (PWL).

Table 3 summarizes the water-level changes for the past month within the East Camp bedrock system, along with the maximum changes within each group of monitoring sites. Monthly water level changes continue to be minor in the majority of East Camp mines and bedrock wells; the Pilot Project appears to be controlling the water-level changes throughout this system. The influence of the Pilot Project on bedrock system water-levels is shown in Figure 4 that compares water-level elevations for the Berkeley Pit and selected East Camp mines and bedrock well G since 2017; the PWL is shown for comparison purposes.

Monitoring Sites (No. Mines/Wells)	No. Sites Water Level Increased	No. Sites Water Level Decreased	Max. Water-Level Increase	Max. Water-Level Decrease
Mine Shafts (6) (includes Well GM-1)	2	4	0.13	-0.14
Bedrock Wells within Active Mine Area (10)**	4	6	2.07	-0.15
Bedrock Wells outside Active Mine Area (3)	0	3	—	-0.67

**Includes Belmont Well #2.

Table 3. East Camp Bedrock Water-Level Changes.

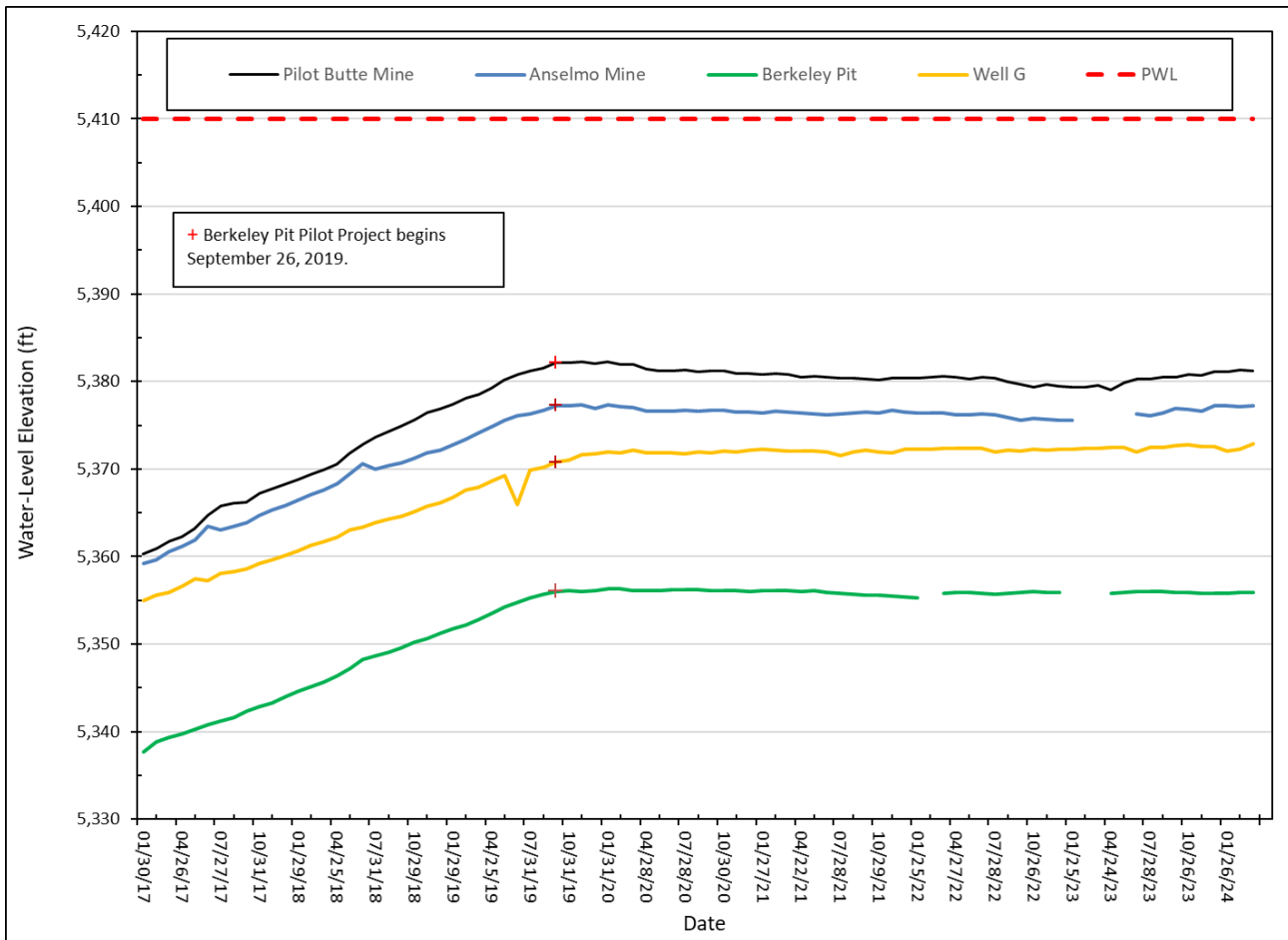


Figure 4. Hydrograph showing influence of Berkeley Pit pumping project on water-level elevations in selected East Camp bedrock sites.

Within the East Camp bedrock system, 11 wells and 6 mine shafts (includes Granite Mountain Mine replacement well – GM-1) are equipped with pressure transducers that record hourly water-level changes. Copies of the monthly and long-term hydrographs for each site are attached at the end of the report. Figure 5 is a hydrograph showing a comparison of daily average water-level elevations for wells A, C, and G.

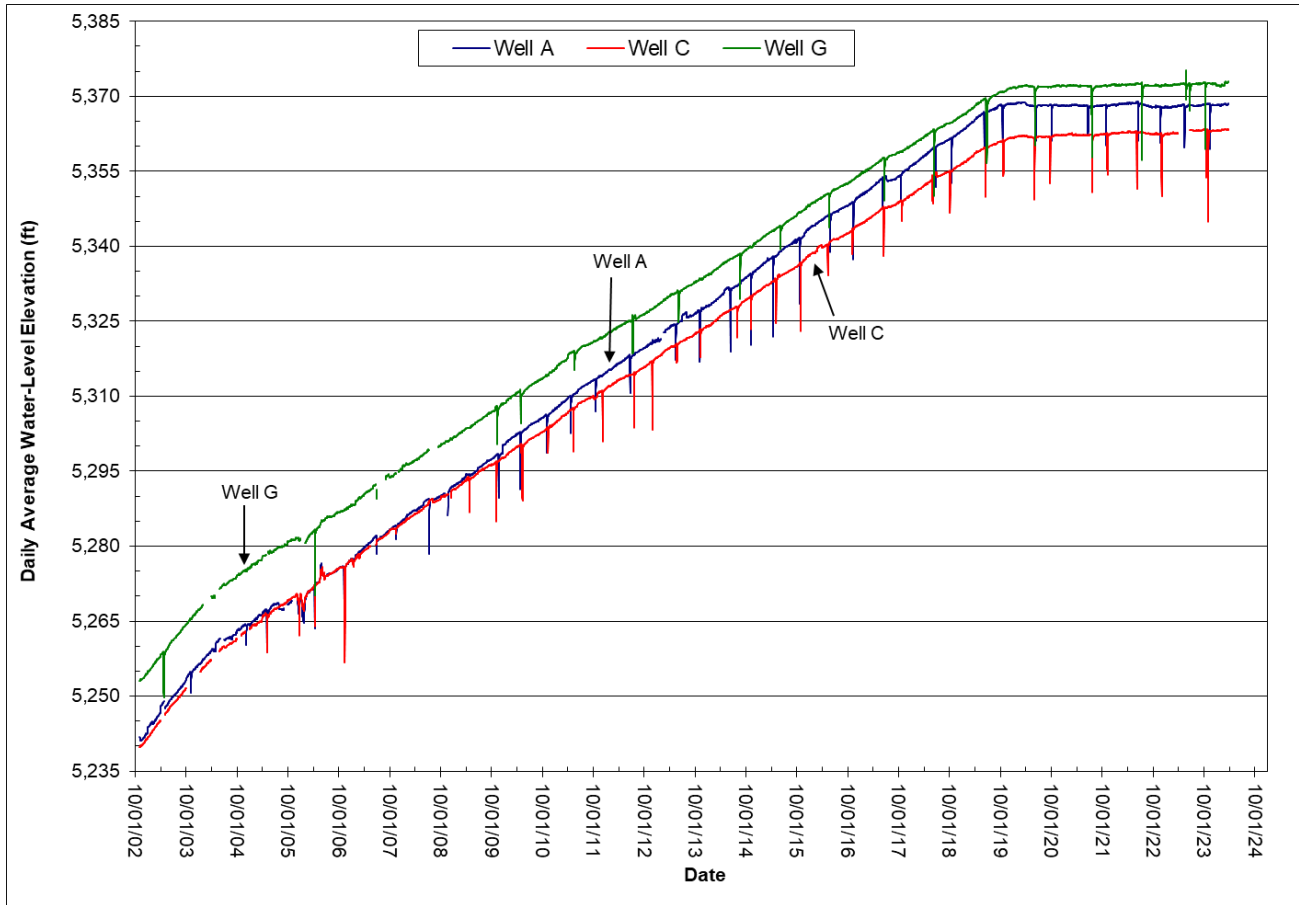


Figure 5. Hydrograph showing water-level elevations for bedrock wells A, C, and G.

West Camp System

The West Camp monitoring system consists of three underground mines: Emma, Ophir, Travona, and six monitoring wells. Table 4 summarizes the water-level changes for the past month within the West Camp bedrock system, along with the maximum changes within each group of monitoring sites.

Monitoring Sites (No. Mines/Wells)	No. Sites Water Level Increased	No. Sites Water Level Decreased	Max. Water-Level Increase	Max. Water-Level Decrease
Mine Shafts (3)	0	3	—	-0.08
Bedrock Wells (6)	3	3	1.92	-2.17

Table 4. West Camp Bedrock Water-Level Changes.

The ROD and CD established a PWL for the West Camp bedrock system of 5,435 ft, as measured at well BMF96-1D; the current water level is more than 14 ft. below the West Camp’s compliance point. Water levels in

the West Camp underground mine system are controlled by pumping groundwater from well WCP-1, which is completed in the Travona Mine 800-level workings (approx. 500 ft below ground surface). More than 23 acre-ft of water was pumped this past month, with pumping rates varying between 180 and 200 gpm. Periodic Butte Priority Soils related maintenance activities influenced pumping rates throughout the month. Monthly transducer hydrographs show water-level variations due to changes in pumping rates.

Six monitoring wells and two mines in the West Camp are equipped with pressure transducers that record water-level changes every hour. Two of the wells (BMF96-1D and BMF96-1S) are located adjacent to the WCP-1, with well BMF96-1D completed in the same mine workings as WCP-1; well BMF96-1S is completed in the shallow, weathered bedrock. Figure 6 is a hydrograph showing daily average water levels for the two mines and well BMF96-1D through March 2024. The water-level variations seen in these sites are the direct result of pumping rate changes related to Butte Priority Soils activities. The Travona Mine transducer experienced problems, therefore, no continuous water level data are available this month.

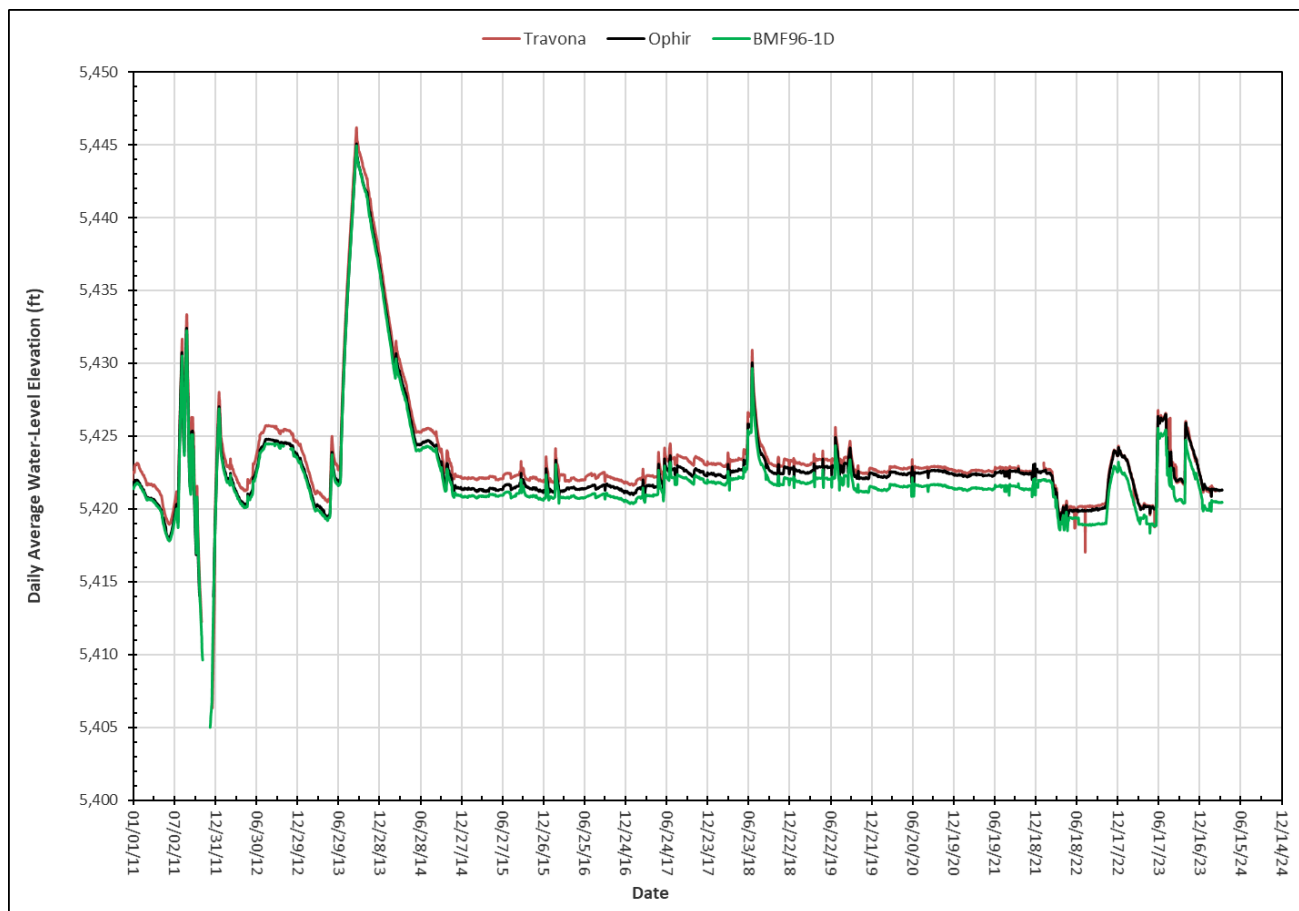


Figure 6. Water-level comparisons for the West Camp underground system.

Outer Camp System

The Outer Camp monitoring system consists of two underground mines and a bedrock well near each mine. Water levels increased in two sites and decreased in two sites during March 2024. The Outer Camp has no

PWL or compliance monitoring points. Water levels in this area are considered to be at or near pre-mining levels. Continuous water levels are monitored in the Orphan Boy and Marget Ann mines and Tech well by pressure transducers.

In addition to the four groundwater-monitoring sites, a seep (spring), referred to as the Green Seep, is monitored for the quantity of water flowing from it. Figure 7 shows the flow rate since the new flume installation in November 2019. The discharge rate at the end of March 2024 was 98 gpm.

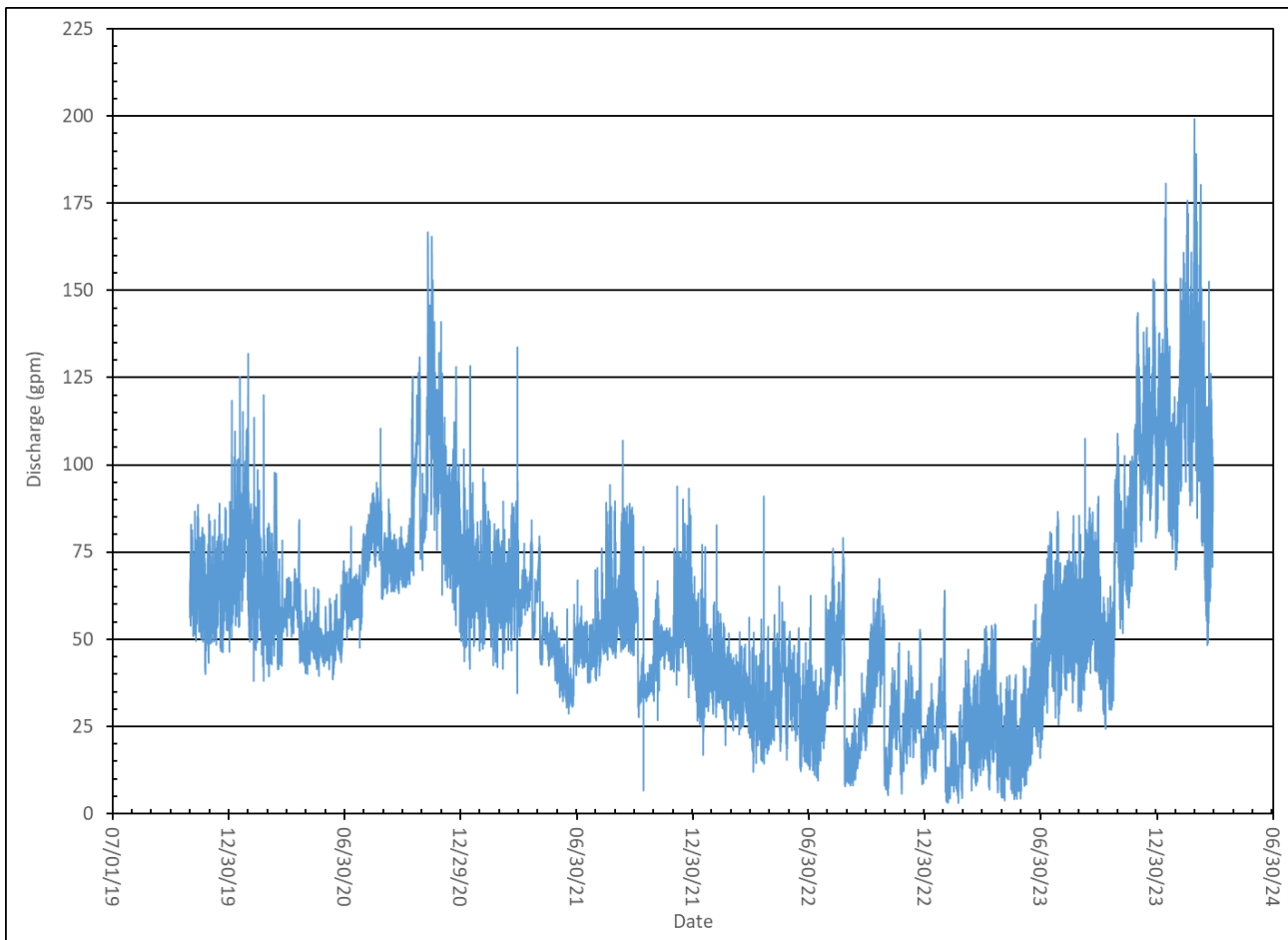
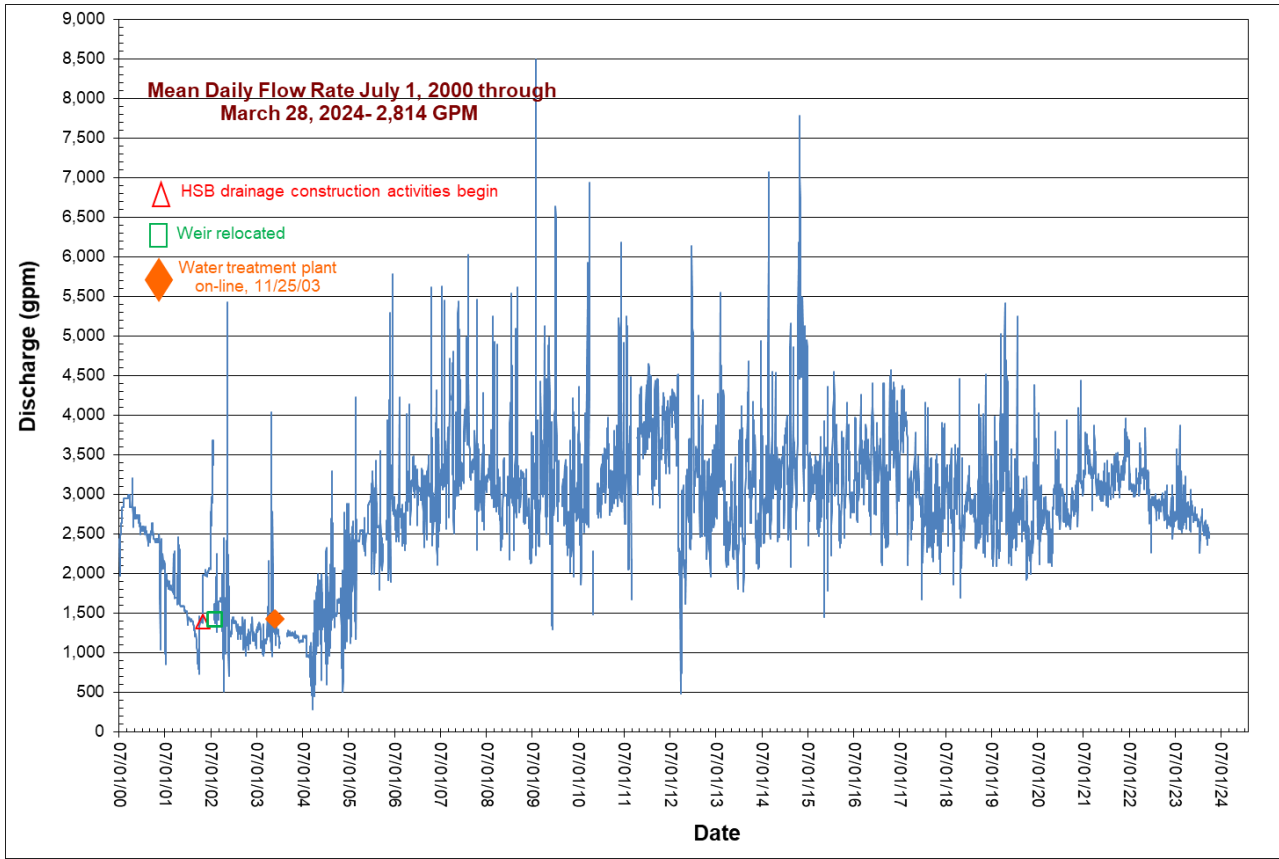


Figure 7. Green Seep flow rate, October 2019-March 2024.

Water-Quality Sampling

The monthly water sample was collected from the HsB/CS. Copies of results through February 2024 (sample collected 02/28/24) are attached at the end of the report.

Attachment 2. Long-term flow hydrograph for the Horseshoe Bend/Capture System Area.



Montana Bureau of Mines and Geology
 1997 Alluvial Wells - Periodic Water-Level Measurements
 Montana Resources, Butte, MT

GWIC ID	166372			166373			166374			166375		
	97-1			97-2			97-3			97-4		
Date	SWL	Elevation*	Change	SWL	Elevation*	Change	SWL	Elevation*	Change	SWL	Elevation*	Change
	MP-ToS(ft)	5561.35	(ft)	MP-CT(ft)	5577.42	(ft)	MP-CT(ft)	5591.18	(ft)	MP-CT(ft)	5576.80	(ft)
01/25/22	48.91	5512.44	-0.13	31.88	5545.54	-0.28	9.42	5581.76	0.16	26.51	5550.29	1.44
02/24/22	49.03	5512.32	-0.12	32.18	5545.24	-0.30	9.40	5581.78	0.02	26.87	5549.93	-0.36
03/29/22	48.88	5512.47	0.15	32.31	5545.11	-0.13	9.31	5581.87	0.09	27.36	5549.44	-0.49
04/26/22	49.11	5512.24	-0.23	32.45	5544.97	-0.14	10.29	5580.89	-0.98	27.96	5548.84	-0.60
05/26/22	48.63	5512.72	0.48	32.65	5544.77	-0.20	10.89	5580.29	-0.60	28.30	5548.50	-0.34
06/28/22	48.02	5513.33	0.61	32.60	5544.82	0.05	11.21	5579.97	-0.32	28.30	5548.50	0.00
07/28/22	48.24	5513.11	-0.22	32.80	5544.62	-0.20	11.51	5579.67	-0.30	28.39	5548.41	-0.09
08/26/22	48.21	5513.14	0.03	32.89	5544.53	-0.09	11.68	5579.50	-0.17	NR		
09/28/22	48.85	5512.50	-0.64	33.06	5544.36	-0.17	11.84	5579.34	-0.16	28.56	5548.24	-0.17
10/25/22	49.31	5512.04	-0.46	33.26	5544.16	-0.20	12.00	5579.18	-0.16	28.63	5548.17	-0.07
11/30/22	49.84	5511.51	-0.53	33.57	5543.85	-0.31	11.60	5579.58	0.40	28.90	5547.90	-0.27
12/30/22	49.86	5511.49	-0.02	33.45	5543.97	0.12	11.47	5579.71	0.13	28.74	5548.06	0.16
01/27/23	50.02	5511.33	-0.16	33.77	5543.65	-0.32	11.41	5579.77	0.06	28.76	5548.04	-0.02
03/01/23	49.76	5511.59	0.26	33.90	5543.52	-0.13	11.96	5579.22	-0.55	28.81	5547.99	-0.05
03/28/23	49.44	5511.91	0.32	33.69	5543.73	0.21	11.66	5579.52	0.30	28.77	5548.03	0.04
04/26/23	49.31	5512.04	0.13	33.31	5544.11	0.38	10.25	5580.93	1.41	28.42	5548.38	0.35
05/31/23	49.18	5512.17	0.13	33.15	5544.27	0.16	10.24	5580.94	0.01	28.34	5548.46	0.08
06/25/23	48.63	5512.72	0.55	32.92	5544.50	0.23	10.29	5580.89	-0.05	28.01	5548.79	0.33
07/26/23	48.22	5513.13	0.41	33.04	5544.38	-0.12	10.61	5580.57	-0.32	28.30	5548.50	-0.29
08/29/23	48.48	5512.87	-0.26	32.94	5544.48	0.10	10.04	5581.14	0.57	28.26	5548.54	0.04
09/29/23	48.73	5512.62	-0.25	32.85	5544.57	0.09	9.15	5582.03	0.89	28.09	5548.71	0.17
10/31/23	49.52	5511.83	-0.79	33.31	5544.11	-0.46	9.92	5581.26	-0.77	N/A		
11/29/23	50.08	5511.27	-0.56	33.61	5543.81	-0.30	10.18	5581.00	-0.26	28.75	5548.05	-0.66
12/27/23	50.46	5510.89	-0.38	33.92	5543.50	-0.31	10.56	5580.62	-0.38	P&A		
01/31/24	50.41	5510.94	0.05	33.69	5543.73	0.23	10.65	5580.53	-0.09	P&A		
02/28/24	50.36	5510.99	0.05	33.60	5543.82	0.09	10.58	5580.60	0.07	P&A		
03/28/24	50.30	5511.05	0.06	33.55	5543.87	0.05	9.85	5581.33	0.73	P&A		
Total Change			-2.87			-8.55			-3.59			0.16

* Elevations are based on MR survey data using AMC datum, corrected to USGS.

Montana Bureau of Mines and Geology
 East Camp Alluvial Water-Level Elevations
 Site Name/Monthly Elevations

DATE MO/YR (MP Elev.)	LP-01 SWL (FT) TD-200'	ELEV. (FT) SI-177-197' 5619.70	MO. DIFF (FT)	LP-02 SWL (FT) TD-162'	ELEV. (FT) SI-129.5-159.5' 5624.70	MO. DIFF (FT)	LP-03 SWL (FT) TD-55.20'	ELEV. (FT) SI-32-52' 5566.00	MO. DIFF (FT)	LP-04 SWL (FT) TD-150'	ELEV. (FT) SI-128-148' 5585.50	MO. DIFF (FT)	LP-05 SWL (FT) TD-231'	ELEV. (FT) SI-189-229' 5583.90	MO. DIFF (FT)	LP-06 SWL (FT) TD-115'	ELEV. (FT) SI-92.2-112.2' 5713.18	MO. DIFF (FT)	
Jan-22	147.66	5472.04	-0.49	148.51	5476.19	-0.47	P&A			108.76	5476.74	-0.30	135.63	5448.27	-0.76	P&A			
Feb-22	147.92	5471.78	-0.26	148.57	5476.13	-0.06	P&A			108.89	5476.61	-0.13	135.81	5448.09	-0.18	P&A			
Mar-22	148.19	5471.51	-0.27	148.75	5475.95	-0.18	P&A			109.09	5476.41	-0.20	135.82	5448.08	-0.01	P&A			
Apr-22	148.75	5470.95	-0.56	149.36	5475.34	-0.61	P&A			109.40	5476.10	-0.31	136.46	5447.44	-0.64	P&A			
May-22	149.36	5470.34	-0.61	149.88	5474.82	-0.52	P&A			109.86	5475.64	-0.46	136.87	5447.03	-0.41	P&A			
Jun-22	149.98	5469.72	-0.62	150.42	5474.28	-0.54	P&A			110.32	5475.18	-0.46	137.37	5446.53	-0.50	P&A			
Jul-22	150.42	5469.28	-0.44	150.82	5473.88	-0.40	P&A			110.68	5474.82	-0.36	137.79	5446.11	-0.42	P&A			
Aug-22	150.78	5468.92	-0.36	151.04	5473.66	-0.22	P&A			110.96	5474.54	-0.28	138.13	5445.77	-0.34	P&A			
Sep-22	151.41	5468.29	-0.63	151.54	5473.16	-0.50	P&A			110.41	5475.09	0.55	137.82	5446.08	0.31	P&A			
Oct-22	151.60	5468.10	-0.19	149.67	5475.03	1.87	P&A			111.62	5473.88	-1.21	138.74	5445.16	-0.92	P&A			
Nov-22	152.06	5467.64	-0.46	152.02	5472.68	-2.35	P&A			111.94	5473.56	-0.32	139.28	5444.62	-0.54	P&A			
Dec-22	152.50	5467.20	-0.44	152.37	5472.33	-0.35	P&A			112.26	5473.24	-0.32	139.65	5444.25	-0.37	P&A			
Yearly Change			-5.33			-4.33						-3.80			-4.78				
Jan-23	153.05	5466.65	-0.55	152.84	5471.86	-0.47	P&A			112.61	5472.89	-0.35	140.22	5443.68	-0.57	P&A			
Feb-23	153.42	5466.28	-0.37	153.12	5471.58	-0.28	P&A			112.95	5472.55	-0.34	140.43	5443.47	-0.21	P&A			
Mar-23	154.03	5465.67	-0.61	153.58	5471.12	-0.46	P&A			113.21	5472.29	-0.26	141.04	5442.86	-0.61	P&A			
Apr-23	154.62	5465.08	-0.59	154.13	5470.57	-0.55	P&A			113.62	5471.88	-0.41	141.64	5442.26	-0.60	P&A			
May-23	154.77	5464.93	-0.15	153.69	5471.01	0.44	P&A			113.62	5471.88	0.00	141.74	5442.16	-0.10	P&A			
Jun-23	155.28	5464.42	-0.51	154.00	5470.70	-0.31	P&A			113.89	5471.61	-0.27	142.22	5441.68	-0.48	P&A			
Jul-23	155.56	5464.14	-0.28	153.85	5470.85	0.15	P&A			114.01	5471.49	-0.12	142.57	5441.33	-0.35	P&A			
Aug-23	156.02	5463.68	-0.46	154.03	5470.67	-0.18	P&A			114.21	5471.29	-0.20	142.93	5440.97	-0.36	P&A			
Sep-23	156.15	5463.55	-0.13	153.84	5470.86	0.19	P&A			114.15	5471.35	0.06	142.97	5440.93	-0.04	P&A			
Oct-23	156.89	5462.81	-0.74	154.16	5470.54	-0.32	P&A			114.17	5471.33	-0.02	143.56	5440.34	-0.59	P&A			
Nov-23	156.78	5462.92	0.11	153.55	5471.15	0.61	P&A			114.15	5471.35	0.02	143.44	5440.46	0.12	P&A			
Dec-23	157.31	5462.39	-0.53	154.19	5470.51	-0.64	P&A			114.24	5471.26	-0.09	143.85	5440.05	-0.41	P&A			
Yearly Change			-4.81			-1.82						-1.98			-4.20				
Jan-24	157.51	5462.19	-0.20	154.28	5470.42	-0.09	P&A			114.04	5471.46	0.20	143.97	5439.93	-0.12	P&A			
Feb-24	157.69	5462.01	-0.18	153.99	5470.71	0.29	P&A			114.04	5471.46	0.00	144.83	5439.07	-0.86	P&A			
Mar-24	157.77	5461.93	-0.08	154.13	5470.57	-0.14	P&A			113.91	5471.59	0.13	144.08	5439.82	0.75	P&A			
Apr-24							P&A									P&A			
May-24							P&A									P&A			
Jun-24							P&A									P&A			
Jul-24							P&A									P&A			
Aug-24							P&A									P&A			
Sep-24							P&A									P&A			
Oct-24							P&A									P&A			
Nov-24							P&A									P&A			
Dec-24							P&A									P&A			
Yearly Change			-0.46			0.06						0.33			-0.23				

Montana Bureau of Mines and Geology
 East Camp Alluvial Water-Level Elevations
 Site Name/Monthly Elevations

DATE MO/YR (MP Elev.)	LP-07 SWL (FT) TD-101.50'	ELEV. (FT) SI-93-98'	MO. DIFF (FT)	LP-08 SWL (FT) TD-100'	ELEV. (FT) SI-81-96'	MO. DIFF (FT)	LP-09 SWL (FT) TD-107'	ELEV. (FT) SI-82-102'	MO. DIFF (FT)	LP-10 SWL (FT) TD-169'	ELEV. (FT) SI-132-162'	MO. DIFF (FT)	LP-11 SWL (FT) TD-284'	ELEV. (FT) SI-247-277'	MO. DIFF (FT)	LP-12 SWL (FT) TD-133'	ELEV. (FT) SI-110-130'	MO. DIFF (FT)	
		5617.00			5577.29			5561.52			5609.12			5609.61			5543.82		
Jan-22	98.22	5518.78	0.01	88.46	5488.83	-0.39	90.25	5471.27	-0.10	134.21	5474.91	-0.34	P&A			87.90	5455.92	-0.05	
Feb-22	98.27	5518.73	-0.05	89.03	5488.26	-0.57	90.36	5471.16	-0.11	134.17	5474.95	0.04	P&A			87.98	5455.84	-0.08	
Mar-22	98.22	5518.78	0.05	89.60	5487.69	-0.57	90.56	5470.96	-0.20	134.20	5474.92	-0.03	P&A			88.16	5455.66	-0.18	
Apr-22	98.21	5518.79	0.01	89.80	5487.49	-0.20	90.43	5471.09	0.13	134.27	5474.85	-0.07	P&A			87.88	5455.94	0.28	
May-22	98.22	5518.78	-0.01	90.52	5486.77	-0.72	90.80	5470.72	-0.37	134.45	5474.67	-0.18	P&A			88.22	5455.60	-0.34	
Jun-22	98.26	5518.74	-0.04	91.19	5486.10	-0.67	90.94	5470.58	-0.14	134.68	5474.44	-0.23	P&A			88.33	5455.49	-0.11	
Jul-22	98.26	5518.74	0.00	91.83	5485.46	-0.64	91.17	5470.35	-0.23	134.78	5474.34	-0.10	P&A			88.51	5455.31	-0.18	
Aug-22	98.21	5518.79	0.05	92.43	5484.86	-0.60	91.50	5470.02	-0.33	134.75	5474.37	0.03	P&A			88.63	5455.19	-0.12	
Sep-22	98.25	5518.75	-0.04	93.05	5484.24	-0.62	91.56	5469.96	-0.06	134.55	5474.57	0.20	P&A			88.76	5455.06	-0.13	
Oct-22	98.28	5518.72	-0.03	93.64	5483.65	-0.59	91.79	5469.73	-0.23	134.06	5475.06	0.49	P&A			88.93	5454.89	-0.17	
Nov-22	98.21	5518.79	0.07	94.12	5483.17	-0.48	91.81	5469.71	-0.02	NR			P&A			88.93	5454.89	0.00	
Dec-22	98.24	5518.76	-0.03	94.61	5482.68	-0.49	92.22	5469.30	-0.41	132.90	5476.22	1.16	P&A			89.03	5454.79	-0.10	
Yearly Change			-0.01			-6.54			-2.07				0.97						-1.18
Jan-23	98.25	5518.75	-0.01	94.88	5482.41	-0.27	92.92	5468.60	-0.70	132.94	5476.18	-0.04	P&A			88.97	5454.85	0.06	
Feb-23	98.24	5518.76	0.01	94.91	5482.38	-0.03	92.51	5469.01	0.41	133.45	5475.67	-0.51	P&A			89.40	5454.42	-0.43	
Mar-23	98.24	5518.76	0.00	94.92	5482.37	-0.01	92.39	5469.13	0.12	134.03	5475.09	-0.58	P&A			89.31	5454.51	0.09	
Apr-23	98.25	5518.75	-0.01	94.92	5482.37	0.00	92.81	5468.71	-0.42	134.35	5474.77	-0.32	P&A			89.56	5454.26	-0.25	
May-23	98.26	5518.74	-0.01	98.81	5478.48	-3.89	92.85	5468.67	-0.04	134.52	5474.60	-0.17	P&A			89.57	5454.25	-0.01	
Jun-23	98.27	5518.73	-0.01	98.81	5478.48	0.00	92.91	5468.61	-0.06	134.60	5474.52	-0.08	P&A			89.55	5454.27	0.02	
Jul-23	98.27	5518.73	0.00	98.81	5478.48	0.00	92.90	5468.62	0.01	134.71	5474.41	-0.11	P&A			89.53	5454.29	0.02	
Aug-23	98.29	5518.71	-0.02	98.82	5478.47	-0.01	92.63	5468.89	0.27	134.86	5474.26	-0.15	P&A			89.37	5454.45	0.16	
Sep-23	98.27	5518.73	0.02	98.80	5478.49	0.02	92.48	5469.04	0.15	134.76	5474.36	0.10	P&A			89.13	5454.69	0.24	
Oct-23	98.29	5518.71	-0.02	98.81	5478.48	-0.01	93.89	5467.63	-1.41	134.91	5474.21	-0.15	P&A			88.85	5454.97	0.28	
Nov-23	98.26	5518.74	0.03	98.79	5478.50	0.02	92.46	5469.06	1.43	134.81	5474.31	0.10	P&A			88.49	5455.33	0.36	
Dec-23	98.23	5518.77	0.03	98.78	5478.51	0.01	92.72	5468.80	-0.26	134.93	5474.19	-0.12	P&A			88.33	5455.49	0.16	
Yearly Change			0.01			-4.17			-0.50				-2.03						0.70
Jan-24	98.22	5518.78	0.01	94.46	5482.83	4.32	92.65	5468.87	0.07	134.90	5474.22	0.03	P&A			87.99	5455.83	0.34	
Feb-24	98.22	5518.78	0.00	94.42	5482.87	0.04	92.94	5468.58	-0.29	134.71	5474.41	0.19	P&A			87.96	5455.86	0.03	
Mar-24	98.24	5518.76	-0.02	94.18	5483.11	0.24	92.86	5468.66	0.08	134.72	5474.40	-0.01	P&A			87.81	5456.01	0.15	
Apr-24													P&A						
May-24													P&A						
Jun-24													P&A						
Jul-24													P&A						
Aug-24													P&A						
Sep-24													P&A						
Oct-24													P&A						
Nov-24													P&A						
Dec-24													P&A						
Yearly Change			-0.01			4.60			-0.14				0.21						0.52

Montana Bureau of Mines and Geology
 East Camp Alluvial Water-Level Elevations
 Site Name/Monthly Elevations

DATE MO/YR (MP Elev.)	LP-13 ELEV.		MO. DIFF (FT)	LP-14 ELEV.		MO. DIFF (FT)	LP-15 ELEV.		MO. DIFF (FT)	LP-16 ELEV.		MO. DIFF (FT)	*LP-17 ELEV.		MO. DIFF (FT)	LP-17R ELEV.		MO. DIFF (FT)	
	SWL (FT)	SI-219-239' (FT)		SWL (FT)	SI-85-105' (FT)		SWL (FT)	SI-218.3-238.3' (FT)		SWL (FT)	SI-103.4-123.4' (FT)		SWL (FT)	SI-201-226' (FT)		SWL (FT)	SI-17-221' (FT)		
		5543.05			5525.68			5526.36			5519.88			5623.34			5621.54		5619.09
Jan-22	92.09	5450.96	-0.07	70.77	5455.59	-0.05	NR			95.02	5424.86	-0.04	P&A				179.33	5439.76	-0.10
Feb-22	92.14	5450.91	-0.05	70.87	5455.49	-0.10	NR			94.98	5424.90	0.04	P&A				179.31	5439.78	0.02
Mar-22	92.25	5450.80	-0.11	71.05	5455.31	-0.18	NR			95.13	5424.75	-0.15	P&A				179.51	5439.58	-0.20
Apr-22	91.43	5451.62	0.82	70.74	5455.62	0.31	NR			94.43	5425.45	0.70	P&A				178.93	5440.16	0.58
May-22	92.44	5450.61	-1.01	71.10	5455.26	-0.36	NR			95.06	5424.82	-0.63	P&A				179.44	5439.65	-0.51
Jun-22	92.50	5450.55	-0.06	71.22	5455.14	-0.12	NR			95.09	5424.79	-0.03	P&A				179.44	5439.65	0.00
Jul-22	92.70	5450.35	-0.20	71.43	5454.93	-0.21	NR			95.16	5424.72	-0.07	P&A				179.61	5439.48	-0.17
Aug-22	92.74	5450.31	-0.04	71.58	5454.78	-0.15	NR			95.19	5424.69	-0.03	P&A				179.64	5439.45	-0.03
Sep-22	92.65	5450.40	0.09	71.65	5454.71	-0.07	NR			95.14	5424.74	0.05	P&A				179.68	5439.41	-0.04
Oct-22	92.91	5450.14	-0.26	71.81	5454.55	-0.16	NR			95.61	5424.27	-0.47	P&A				179.91	5439.18	-0.23
Nov-22	93.09	5449.96	-0.18	71.79	5454.57	0.02	NR			95.65	5424.23	-0.04	P&A				179.86	5439.23	0.05
Dec-22	93.11	5449.94	-0.02	71.90	5454.46	-0.11	NR			96.15	5423.73	-0.50	P&A				179.95	5439.14	-0.09
Yearly Change			-1.09			-1.18			0.00			-1.17					0.00		-0.72
Jan-23	92.74	5450.31	0.37	71.75	5454.61	0.15	NR			95.25	5424.63	0.90	P&A				179.63	5439.46	0.32
Feb-23	93.51	5449.54	-0.77	72.25	5454.11	-0.50	NR			96.12	5423.76	-0.87	P&A				180.33	5438.76	-0.70
Mar-23	93.48	5449.57	0.03	72.14	5454.22	0.11	NR			95.98	5423.90	0.14	P&A				180.12	5438.97	0.21
Apr-23	93.56	5449.49	-0.08	72.35	5454.01	-0.21	NR			96.10	5423.78	-0.12	P&A				180.44	5438.65	-0.32
May-23	93.50	5449.55	0.06	72.35	5454.01	0.00	NR			96.89	5422.99	-0.79	P&A				180.40	5438.69	0.04
Jun-23	93.38	5449.67	0.12	72.25	5454.11	0.10	NR			95.76	5424.12	1.13	P&A				180.31	5438.78	0.09
Jul-23	93.24	5449.81	0.14	72.17	5454.19	0.08	NR			95.67	5424.21	0.09	P&A				180.26	5438.83	0.05
Aug-23	93.00	5450.05	0.24	71.89	5454.47	0.28	NR			95.45	5424.43	0.22	P&A				180.10	5438.99	0.16
Sep-23	92.70	5450.35	0.30	71.59	5454.77	0.30	NR			95.31	5424.57	0.14	P&A				179.91	5439.18	0.19
Oct-23	92.35	5450.70	0.35	71.21	5455.15	0.38	NR			95.05	5424.83	0.26	P&A				179.73	5439.36	0.18
Nov-23	91.97	5451.08	0.38	70.79	5455.57	0.42	NR			94.71	5425.17	0.34	P&A				179.35	5439.74	0.38
Dec-23	91.98	5451.07	-0.01	70.61	5455.75	0.18	NR			94.67	5425.21	0.04	P&A				179.30	5439.79	0.05
Yearly Change			1.13			1.29			0.00			1.48					0.00		0.65
Jan-24	91.70	5451.35	0.28	70.24	5456.12	0.37	NR			94.47	5425.41	0.20	P&A				179.03	5440.06	0.27
Feb-24	91.82	5451.23	-0.12	70.24	5456.12	0.00	NR			94.65	5425.23	-0.18	P&A				179.20	5439.89	-0.17
Mar-24	91.67	5451.38	0.15	69.95	5456.41	0.29	NR			94.45	5425.43	0.20	P&A				178.90	5440.19	0.30
Apr-24													P&A						
May-24													P&A						
Jun-24													P&A						
Jul-24													P&A						
Aug-24													P&A						
Sep-24													P&A						
Oct-24													P&A						
Nov-24													P&A						
Dec-24													P&A						
Yearly Change			0.31			0.66			0.00			0.22					0.00		0.40

**Montana Bureau of Mines and Geology
Butte Mine Flooding Monitoring**

GWIC ID	DATE	4597			4604			4611		
		AMC-5			AMC-6			AMC-8		
		SWL	Elevation	Mo Change	SWL	Elevation	Mo Change*	SWL	Elevation	Mo Change
			5509.21			5492.48	5489.62		5524.03	
	01/26/21	73.44	5435.77	-0.17	33.32	5456.30	-0.15	64.09	5459.94	-0.09
	02/25/21	73.61	5435.60	-0.17	33.34	5456.28	-0.02	64.24	5459.79	-0.15
	03/30/21	73.67	5435.54	-0.06	33.49	5456.13	-0.15	64.37	5459.66	-0.13
	04/22/21	73.58	5435.63	0.09	33.74	5455.88	-0.25	64.53	5459.50	-0.16
	05/27/21	73.93	5435.28	-0.35	33.87	5455.75	-0.13	64.65	5459.38	-0.12
	06/28/21	73.96	5435.25	-0.03	33.97	5455.65	-0.10	64.83	5459.20	-0.18
	07/27/21	73.97	5435.24	-0.01	33.96	5455.66	0.01	64.99	5459.04	-0.16
	08/31/21	73.94	5435.27	0.03	33.84	5455.78	0.12	65.14	5458.89	-0.15
	09/27/21	73.94	5435.27	0.00	33.85	5455.77	-0.01	65.23	5458.80	-0.09
	10/27/21	74.05	5435.16	-0.11	33.96	5455.66	-0.11	65.19	5458.84	0.04
	11/30/21	74.59	5434.62	-0.54	34.58	5455.04	-0.62	65.48	5458.55	-0.29
	01/05/22	74.21	5435.00	0.38	34.34	5455.28	0.24	64.92	5459.11	0.56
Annual WL Change				-0.94			-1.17			-0.92
	01/25/22	74.25	5434.96	-0.04	34.42	5455.20	-0.08	65.02	5459.01	-0.10
	02/23/22	74.34	5434.87	-0.09	34.55	5455.07	-0.13	65.11	5458.92	-0.09
	03/29/22	74.40	5434.81	-0.06	34.63	5454.99	-0.08	65.22	5458.81	-0.11
	04/25/22	74.36	5434.85	0.04	34.67	5454.95	-0.04	66.74	5457.29	-1.52
	05/26/22	74.42	5434.79	-0.06	34.79	5454.83	-0.12	65.69	5458.34	1.05
	06/28/22	74.41	5434.80	0.01	34.73	5454.89	0.06	65.75	5458.28	-0.06
	07/28/22	74.31	5434.90	0.10	34.69	5454.93	0.04	65.93	5458.10	-0.18
	08/31/22	74.17	5435.04	0.14	34.16	5455.46	0.53	66.13	5457.90	-0.20
	09/28/22	73.96	5435.25	0.21	33.95	5455.67	0.21	66.31	5457.72	-0.18
	10/25/22	74.03	5435.18	-0.07	33.95	5455.67	0.00	66.39	5457.64	-0.08
	11/30/22	74.07	5435.14	-0.04	34.47	5455.15	-0.52	66.51	5457.52	-0.12
	12/30/22	74.11	5435.10	-0.04	34.41	5455.21	0.06	66.58	5457.45	-0.07
Annual WL Change				0.10			-0.07			-1.66
	01/27/23	74.03	5435.18	0.08	34.39	5455.23	0.02	66.66	5457.37	-0.08
	02/21/23	74.14	5435.07	-0.11	34.38	5455.24	0.01	66.71	5457.32	-0.05
	03/29/23	74.18	5435.03	-0.04	34.50	5455.12	-0.12	66.85	5457.18	-0.14
	04/24/23	74.04	5435.17	0.14	33.91	5455.71	0.59	66.94	5457.09	-0.09
	05/26/23	73.83	5435.38	0.21	33.79	5455.83	0.12	67.03	5457.00	-0.09
	06/28/23	73.70	5435.51	0.13	33.41	5456.21	0.38	67.10	5456.93	-0.07
	07/28/23	73.55	5435.66	0.15	33.18	5456.44	0.23	67.08	5456.95	0.02
	08/31/23	73.46	5435.75	0.09	33.71	5455.91	-0.53	66.80	5457.23	0.28
	09/27/23	73.22	5435.99	0.24	33.39	5456.23	0.32	66.65	5457.38	0.15
	10/31/23	73.11	5436.10	0.11	32.16	5457.46	1.23	66.52	5457.51	0.13
	11/30/23	72.92	5436.29	0.19	32.10	5457.52	0.06	66.26	5457.77	0.26
	12/30/23	72.95	5436.26	-0.03	32.11	5457.51	-0.01	66.08	5457.95	0.18
Annual WL Change				1.16			2.30			0.50
	01/29/24	72.86	5436.35	0.09	33.60	5456.02	-1.49	65.87	5458.16	0.21
	02/27/24	72.72	5436.49	0.14	32.61	5457.01	0.99	65.72	5458.31	0.15
	03/29/24	72.55	5436.66	0.17	32.61	5457.01	0.00	65.55	5458.48	0.17
	04/24/24									
	05/26/24									
	06/28/24									
	07/28/24									
	08/31/24									
	09/27/24									
	10/31/24									
	11/30/24									
	12/30/24									
Annual WL Change				0.40			-0.50			0.53

* Well AMC-06 measuring point elevation changed Oct 04, re-surveyed Jan-10

**Montana Bureau of Mines and Geology
Butte Mine Flooding Monitoring**

GWIC ID	155569			4656			4673		
	DATE	AMC-10		AMC-12			AMC-13		
	SWL	Elevation	Mo Change	SWL	Elevation	Mo Change	SWL	Elevation	Mo Change
		5511.26			5479.58			5475.34	
	01/26/21	DRY		23.29	5456.29	-0.17	21.11	5454.23	-0.18
	02/25/21	DRY		23.44	5456.14	-0.15	21.28	5454.06	-0.17
	03/30/21	DRY		23.84	5455.74	-0.40	21.37	5453.97	-0.09
	04/22/21	DRY		24.01	5455.57	-0.17	21.36	5453.98	0.01
	05/27/21	DRY		24.05	5455.53	-0.04	21.36	5453.98	0.00
	06/28/21	DRY		24.04	5455.54	0.01	21.26	5454.08	0.10
	07/27/21	DRY		23.93	5455.65	0.11	21.15	5454.19	0.11
	08/31/21	DRY		23.89	5455.69	0.04	20.96	5454.38	0.19
	09/27/21	DRY		23.99	5455.59	-0.10	21.07	5454.27	-0.11
	10/27/21	DRY		24.15	5455.43	-0.16	21.22	5454.12	-0.15
	11/30/21	DRY		24.38	5455.20	-0.23	21.46	5453.88	-0.24
	01/05/22	DRY		24.55	5455.03	-0.17	21.66	5453.68	-0.20
Annual WL Change			0.00			-1.43			-0.73
	01/25/22	DRY		24.66	5454.92	-0.11	21.80	5453.54	-0.14
	02/23/22	DRY		24.79	5454.79	-0.13	21.89	5453.45	-0.09
	03/29/22	DRY		24.86	5454.72	-0.07	21.97	5453.37	-0.08
	04/25/22	DRY		24.95	5454.63	-0.09	22.02	5453.32	-0.05
	05/26/22	DRY		24.88	5454.70	0.07	22.05	5453.29	-0.03
	06/28/22	DRY		24.80	5454.78	0.08	21.79	5453.55	0.26
	07/28/22	DRY		24.64	5454.94	0.16	21.76	5453.58	0.03
	08/31/22	DRY		24.69	5454.89	-0.05	21.68	5453.66	0.08
	09/28/22	DRY		24.46	5455.12	0.23	21.65	5453.69	0.03
	10/25/22	DRY		24.38	5455.20	0.08	21.59	5453.75	0.06
	11/30/22	DRY		24.49	5455.09	-0.11	21.88	5453.46	-0.29
	12/30/22	DRY		24.46	5455.12	0.03	22.02	5453.32	-0.14
Annual WL Change			0.00			0.09			-0.36
	01/27/23	DRY		24.55	5455.03	-0.09	22.09	5453.25	-0.07
	02/21/23	DRY		24.53	5455.05	0.02	22.18	5453.16	-0.09
	03/29/23	DRY		24.62	5454.96	-0.09	22.28	5453.06	-0.10
	04/24/23	DRY		24.39	5455.19	0.23	22.02	5453.32	0.26
	05/26/23	DRY		23.99	5455.59	0.40	21.37	5453.97	0.65
	06/28/23	DRY		23.42	5456.16	0.57	20.92	5454.42	0.45
	07/28/23	DRY		23.12	5456.46	0.30	20.79	5454.55	0.13
	08/31/23	DRY		22.60	5456.98	0.52	20.40	5454.94	0.39
	09/27/23	DRY		22.26	5457.32	0.34	20.11	5455.23	0.29
	10/31/23	DRY		22.25	5457.33	0.01	20.17	5455.17	-0.06
	11/30/23	DRY		22.28	5457.30	-0.03	20.37	5454.97	-0.20
	12/30/23	DRY		22.53	5457.05	-0.25	20.54	5454.80	-0.17
Annual WL Change			0.00			1.93			1.48
	01/29/24	DRY		22.77	5456.81	-0.24	20.78	5454.56	-0.24
	02/27/24	DRY		22.87	5456.71	-0.10	20.86	5454.48	-0.08
	03/29/24	DRY		22.92	5456.66	-0.05	20.80	5454.54	0.06
	04/24/24								
	05/26/24								
	06/28/24								
	07/28/24								
	08/31/24								
	09/27/24								
	10/31/24								
	11/30/24								
	12/30/24								
Annual WL Change			0.00			-0.39			-0.26

**Montana Bureau of Mines and Geology
Butte Mine Flooding Monitoring**

GWIC ID	4702			5018			5034			
	DATE	AMC-15		AMC-23		AMC-24		SWL	Elevation	Mo Change
		SWL	Elevation	Mo Change	SWL	Elevation	Mo Change			
			5559.00			5448.26			5452.03	
	01/26/21	93.95	5465.05	-0.28	8.63	5439.63	0.11	10.95	5441.08	-0.02
	02/25/21	93.90	5465.10	0.05	8.73	5439.53	-0.10	11.04	5440.99	-0.09
	03/30/21	94.30	5464.70	-0.40	8.32	5439.94	0.41	10.65	5441.38	0.39
	04/22/21	94.35	5464.65	-0.05	8.35	5439.91	-0.03	10.74	5441.29	-0.09
	05/27/21	94.61	5464.39	-0.26	7.76	5440.50	0.59	10.45	5441.58	0.29
	06/28/21	94.88	5464.12	-0.27	8.83	5439.43	-1.07	11.05	5440.98	-0.60
	07/27/21	95.27	5463.73	-0.39	8.76	5439.50	0.07	10.97	5441.06	0.08
	08/31/21	95.47	5463.53	-0.20	8.43	5439.83	0.33	10.83	5441.20	0.14
	09/27/21	95.72	5463.28	-0.25	8.60	5439.66	-0.17	10.91	5441.12	-0.08
	10/27/21	95.60	5463.40	0.12	8.47	5439.79	0.13	10.78	5441.25	0.13
	11/30/21	95.69	5463.31	-0.09	8.61	5439.65	-0.14	10.90	5441.13	-0.12
	01/05/22	95.55	5463.45	0.14	8.54	5439.72	0.07	10.90	5441.13	0.00
Annual WL Change				-1.88			0.20			0.03
	01/25/22	95.80	5463.20	-0.25	8.59	5439.67	-0.05	10.92	5441.11	-0.02
	02/23/22	96.07	5462.93	-0.27	8.20	5440.06	0.39	10.61	5441.42	0.31
	03/29/22	95.94	5463.06	0.13	8.22	5440.04	-0.02	10.66	5441.37	-0.05
	04/25/22	96.08	5462.92	-0.14	8.54	5439.72	-0.32	10.82	5441.21	-0.16
	05/26/22	96.29	5462.71	-0.21	8.31	5439.95	0.23	10.69	5441.34	0.13
	06/28/22	96.43	5462.57	-0.14	7.87	5440.39	0.44	10.54	5441.49	0.15
	07/28/22	96.70	5462.30	-0.27	8.18	5440.08	-0.31	10.65	5441.38	-0.11
	08/31/22	96.95	5462.05	-0.25	8.13	5440.13	0.05	10.68	5441.35	-0.03
	09/28/22	97.06	5461.94	-0.11	8.05	5440.21	0.08	10.62	5441.41	0.06
	10/25/22	97.05	5461.95	0.01	8.25	5440.01	-0.20	10.56	5441.47	0.06
	11/30/22	97.11	5461.89	-0.06	8.26	5440.00	-0.01	11.07	5440.96	-0.51
	12/30/22	97.25	5461.75	-0.14	8.04	5440.22	0.22	12.64	5439.39	-1.57
Annual WL Change				-1.70			0.50			-1.74
	01/27/23	97.32	5461.68	-0.07	8.25	5440.01	-0.21	10.74	5441.29	1.90
	02/21/23	97.16	5461.84	0.16	8.21	5440.05	0.04	10.78	5441.25	-0.04
	03/29/23	97.52	5461.48	-0.36	7.80	5440.46	0.41	10.48	5441.55	0.30
	04/24/23	97.41	5461.59	0.11	7.62	5440.64	0.18	10.28	5441.75	0.20
	05/26/23	97.55	5461.45	-0.14	8.64	5439.62	-1.02	10.93	5441.10	-0.65
	06/28/23	97.65	5461.35	-0.10	8.20	5440.06	0.44	10.54	5441.49	0.39
	07/28/23	97.68	5461.32	-0.03	8.51	5439.75	-0.31	10.82	5441.21	-0.28
	08/31/23	97.50	5461.50	0.18	8.20	5440.06	0.31	10.68	5441.35	0.14
	09/27/23	97.16	5461.84	0.34	8.00	5440.26	0.20	10.59	5441.44	0.09
	10/31/23	96.91	5462.09	0.25	8.00	5440.26	0.00	10.61	5441.42	-0.02
	11/30/23	96.48	5462.52	0.43	8.88	5439.38	-0.88	11.11	5440.92	-0.50
	12/30/23	96.08	5462.92	0.40	8.88	5439.38	0.00	11.11	5440.92	0.00
Annual WL Change				1.17			-0.84			1.53
	01/29/24	95.91	5463.09	0.17	8.87	5439.39	0.01	11.11	5440.92	0.00
	02/27/24	95.82	5463.18	0.09	8.60	5439.66	0.27	10.94	5441.09	0.17
	03/29/24	95.68	5463.32	0.14	8.32	5439.94	0.28	10.72	5441.31	0.22
	04/24/24									
	05/26/24									
	06/28/24									
	07/28/24									
	08/31/24									
	09/27/24						0.00			
	10/31/24									
	11/30/24									
	12/30/24									
Annual WL Change				0.40			0.56			0.39

**Montana Bureau of Mines and Geology
Butte Mine Flooding Monitoring**

GWIC ID	150401 GS-41S			150402 GS-41D			150409 GS-44S		
	SWL	ELEV. 5491.90	Mo. Diff (ft)	SWL	ELEV. 5491.30	Mo. Diff 5491.39	SWL	ELEV. 5476.20	Mo. Diff 5478.45
01/26/22	P&A			P&A			23.28	5455.17	-0.16
02/22/22	P&A			P&A			23.45	5455.00	-0.17
03/28/22	P&A			P&A			23.57	5454.88	-0.12
04/25/22	P&A			P&A			23.65	5454.80	-0.08
05/25/22	P&A			P&A			23.68	5454.77	-0.03
06/27/22	P&A			P&A			23.39	5455.06	0.29
07/27/22	P&A			P&A			23.22	5455.23	0.17
08/31/22	P&A			P&A			23.07	5455.38	0.15
09/29/22	P&A			P&A			23.04	5455.41	0.03
10/26/22	P&A			P&A			23.10	5455.35	-0.06
11/28/22	P&A			P&A			23.32	5455.13	-0.22
12/29/22	P&A			P&A			23.51	5454.94	-0.19
Yearly Change			0.00			0.00			-0.39
01/25/23	P&A			P&A			23.61	5454.84	-0.10
02/21/23	P&A			P&A			23.71	5454.74	-0.10
03/28/23	P&A			P&A			23.81	5454.64	-0.10
04/24/23	P&A			P&A			23.64	5454.81	0.17
05/25/23	P&A			P&A			23.13	5455.32	0.51
06/27/23	P&A			P&A			22.41	5456.04	0.72
07/27/23	P&A			P&A			22.05	5456.40	0.36
08/31/23	P&A			P&A			21.60	5456.85	0.45
09/27/23	P&A			P&A			21.23	5457.22	0.37
10/26/23	P&A			P&A			21.10	5457.35	0.13
11/28/23	P&A			P&A			21.52	5456.93	-0.42
12/29/23	P&A			P&A			21.74	5456.71	-0.22
Yearly Change			0.00			0.00			1.77
01/29/24	P&A			P&A			22.04	5456.41	-0.30
02/27/24	P&A			P&A			22.19	5456.26	-0.15
03/28/24	P&A			P&A			22.21	5456.24	-0.02
04/24/24	P&A			P&A					
05/25/24	P&A			P&A					
06/27/24	P&A			P&A					
07/27/24	P&A			P&A					
08/31/24	P&A			P&A					
09/27/24	P&A			P&A					
10/26/24	P&A			P&A					
11/28/24	P&A			P&A					
12/29/24	P&A			P&A					
Yearly Change			0.00			0.00			-0.47

Measuring point elevations changed October 2008 for wells GS-44S, GS-44D, GS-46S, and GS-46D

**Montana Bureau of Mines and Geology
Butte Mine Flooding Monitoring**

GWIC ID	150411 GS-44D			150412 GS-46S			150413 GS-46D		
	SWL	ELEV.	Mo. Diff	SWL	ELEV.	Mo. Diff	SWL	ELEV.	Mo. Diff
		5476.20	5478.48		5483.80	5486.18		5484.00	5486.32
01/26/22	24.05	5454.43	-0.17	29.21	5456.97	-0.15	29.22	5457.10	-0.15
02/22/22	24.18	5454.30	-0.13	29.38	5456.80	-0.17	29.36	5456.96	-0.14
03/28/22	24.24	5454.24	-0.06	29.51	5456.67	-0.13	29.49	5456.83	-0.13
04/25/22	24.29	5454.19	-0.05	29.61	5456.57	-0.10	29.51	5456.81	-0.02
05/25/22	24.32	5454.16	-0.03	29.65	5456.53	-0.04	29.57	5456.75	-0.06
06/27/22	24.08	5454.40	0.24	29.58	5456.60	0.07	29.52	5456.80	0.05
07/27/22	24.00	5454.48	0.08	29.46	5456.72	0.12	29.47	5456.85	0.05
08/31/22	23.92	5454.56	0.08	29.25	5456.93	0.21	29.28	5457.04	0.19
09/29/22	23.83	5454.65	0.09	29.02	5457.16	0.23	29.09	5457.23	0.19
10/26/22	23.87	5454.61	-0.04	28.95	5457.23	0.07	29.01	5457.31	0.08
11/28/22	24.06	5454.42	-0.19	29.04	5457.14	-0.09	29.10	5457.22	-0.09
12/29/22	24.21	5454.27	-0.15	29.20	5456.98	-0.16	29.25	5457.07	-0.15
Yearly Change			-0.33			-0.14			-0.18
01/25/23	24.28	5454.20	-0.07	29.23	5456.95	-0.03	29.35	5456.97	-0.10
02/21/23	24.36	5454.12	-0.08	29.42	5456.76	-0.19	29.42	5456.90	-0.07
03/28/23	24.46	5454.02	-0.10	29.56	5456.62	-0.14	29.90	5456.42	-0.48
04/24/23	24.45	5454.03	0.01	29.57	5456.61	-0.01	29.56	5456.76	0.34
05/25/23	23.79	5454.69	0.66	29.27	5456.91	0.30	29.30	5457.02	0.26
06/27/23	23.14	5455.34	0.65	28.71	5457.47	0.56	29.16	5457.16	0.14
07/27/23	22.93	5455.55	0.21	28.14	5458.04	0.57	28.33	5457.99	0.83
08/31/23	22.51	5455.97	0.42	27.70	5458.48	0.44	27.85	5458.47	0.48
09/27/23	22.17	5456.31	0.34	27.25	5458.93	0.45	27.38	5458.94	0.47
10/26/23	22.19	5456.29	-0.02	27.06	5459.12	0.19	27.21	5459.11	0.17
11/28/23	22.39	5456.09	-0.20	27.17	5459.01	-0.11	27.29	5459.03	-0.08
12/29/23	22.58	5455.90	-0.19	27.31	5458.87	-0.14	27.40	5458.92	-0.11
Yearly Change			1.63			1.89			1.85
01/29/24	22.85	5455.63	-0.27	27.53	5458.65	-0.22	27.56	5458.76	-0.16
02/27/24	22.92	5455.56	-0.07	27.68	5458.50	-0.15	27.70	5458.62	-0.14
03/28/24	22.89	5455.59	0.03	27.81	5458.37	-0.13	27.79	5458.53	-0.09
04/24/24									
05/25/24									
06/27/24									
07/27/24									
08/31/24									
09/27/24									
10/26/24									
11/28/24									
12/29/24									
Yearly Change			-0.31			-0.50			-0.39

Measuring point elevations changed October 2008 for wells GS-44S, GS-44D, GS-46S, and GS-46D

**Montana Bureau of Mines and Geology
Butte Mine Flooding Monitoring**

GWIC ID	137598			247722			166182		
	AMW-8	5499.98		AMW-20			AMW-22		
	SWL	ELEV.	Mo. Diff	SWL	Elev	Mo. Diff	SWL	ELEV.	Mo. Diff
		5496.34	5496.05	5486.78	5487.27	(ft)	5497.42	5505.14	(ft)
01/26/22	44.54	5455.44	-0.19	30.33	5456.94	-0.05	41.87	5455.55	-0.14
02/22/22	44.70	5455.28	-0.16	30.51	5456.76	-0.18	42.01	5455.41	-0.14
03/28/22	44.84	5455.14	-0.14	30.37	5456.9	0.14	42.10	5455.32	-0.09
04/25/22	44.89	5455.09	-0.05	30.37	5456.9	0.00	42.20	5455.22	-0.10
05/25/22	44.93	5455.05	-0.04	30.48	5456.79	-0.11	42.27	5455.15	-0.07
06/27/22	44.92	5455.06	0.01	30.09	5457.18	0.39	42.39	5455.03	-0.12
07/27/22	44.81	5455.17	0.11	29.71	5457.56	0.38	42.41	5455.01	-0.02
08/31/22	44.75	5455.23	0.06	29.68	5457.59	0.03	42.37	5455.05	0.04
09/29/22	44.71	5455.27	0.04	29.83	5457.44	-0.15	49.68	5455.46	0.41
10/26/22	44.61	5455.37	0.10	29.95	5457.32	-0.12	49.60	5455.54	0.08
11/28/22	44.59	5455.39	0.02	29.82	5457.45	0.13	49.64	5455.50	-0.04
12/29/22	44.52	5455.46	0.07	29.41	5457.86	0.41	49.66	5455.48	-0.02
Yearly Change			-0.17			0.87			-0.21
01/25/23	44.48	5455.50	0.04	28.48	5458.79	0.93	49.69	5455.45	-0.03
02/21/23	44.40	5455.58	0.08	28.73	5458.54	-0.25	49.67	5455.47	0.02
03/28/23	44.57	5455.41	-0.17	28.85	5458.42	-0.12	49.78	5455.36	-0.11
04/24/23	44.36	5455.62	0.21	28.28	5458.99	0.57	49.78	5455.36	0.00
05/25/23	44.01	5455.97	0.35	28.43	5458.84	-0.15	49.69	5455.45	0.09
06/27/23	43.68	5456.30	0.33	28.04	5459.23	0.39	49.39	5455.75	0.30
07/27/23	43.31	5456.67	0.37	27.98	5459.29	0.06	49.09	5456.05	0.30
08/31/23	42.96	5457.02	0.35	27.54	5459.73	0.44	48.66	5456.48	0.43
09/27/23	42.54	5457.44	0.42	27.61	5459.66	-0.07	48.18	5456.96	0.48
10/26/23	42.54	5457.44	0.00	27.85	5459.42	-0.24	47.82	5457.32	0.36
11/28/23	42.25	5457.73	0.29	27.89	5459.38	-0.04	47.66	5457.48	0.16
12/29/23	42.30	5457.68	-0.05	28.09	5459.18	-0.20	47.61	5457.53	0.05
Yearly Change			2.22			1.32			2.05
01/29/24	42.49	5457.49	-0.19	28.19	5459.08	-0.10	47.67	5457.47	-0.06
02/27/24	42.60	5457.38	-0.11	28.29	5458.98	-0.10	47.68	5457.46	-0.01
03/28/24	42.65	5457.33	-0.05	27.64	5459.63	0.65	47.69	5457.45	-0.01
04/24/24									
05/25/24									
06/27/24									
07/27/24									
08/31/24									
09/27/24									
10/26/24									
11/28/24									
12/29/24									
Yearly Change			-0.35			0.45			-0.08

**Montana Bureau of Mines and Geology
Butte Mine Flooding Monitoring**

GWIC ID	222920 BMF05-1			222921 BMF05-2			224152 BMF05-3		
	SWL	ELEV.	Mo. Diff (ft)	SWL	ELEV.	Mo. Diff (ft)	SWL	ELEV. ¹⁾	Mo. Diff (ft)
		5481.95			5504.96		5501.29	5500.17	
01/26/22	26.26	5455.69	-0.18	46.42	5458.54	-0.07	39.47	5460.70	-0.12
02/22/22	26.39	5455.56	-0.13	46.50	5458.46	-0.08	39.67	5460.50	-0.20
03/28/22	26.47	5455.48	-0.08	46.48	5458.48	0.02	39.74	5460.43	-0.07
04/25/22	26.58	5455.37	-0.11	46.50	5458.46	-0.02	39.85	5460.32	-0.11
05/25/22	26.65	5455.30	-0.07	46.71	5458.25	-0.21	40.05	5460.12	-0.20
06/27/22	26.49	5455.46	0.16	46.91	5458.05	-0.20	40.11	5460.06	-0.06
07/27/22	26.37	5455.58	0.12	47.09	5457.87	-0.18	40.39	5459.78	-0.28
08/31/22	26.24	5455.71	0.13	47.13	5457.83	-0.04	40.31	5459.86	0.08
09/29/22	26.09	5455.86	0.15	47.04	5457.92	0.09	40.05	5460.12	0.26
10/26/22	26.04	5455.91	0.05	46.41	5458.55	0.63	40.91	5459.26	-0.86
11/28/22	26.06	5455.89	-0.02	47.01	5457.95	-0.60	39.97	5460.20	0.94
12/29/22	26.02	5455.93	0.04	47.02	5457.94	-0.01	40.14	5460.03	-0.17
Yearly Change			0.06			-0.67			-0.79
01/25/23	25.95	5456.00	0.07	47.18	5457.78	-0.16	40.35	5459.82	-0.21
02/21/23	25.71	5456.24	0.24	47.28	5457.68	-0.10	40.39	5459.78	-0.04
03/28/23	26.03	5455.92	-0.32	47.46	5457.50	-0.18	40.57	5459.60	-0.18
04/24/23	25.69	5456.26	0.34	47.45	5457.51	0.01	40.59	5459.58	-0.02
05/25/23	25.44	5456.51	0.25	47.43	5457.53	0.02	40.36	5459.81	0.23
06/27/23	24.97	5456.98	0.47	47.42	5457.54	0.01	40.22	5459.95	0.14
07/27/23	24.75	5457.20	0.22	46.89	5458.07	0.53	39.97	5460.20	0.25
08/31/23	24.38	5457.57	0.37	46.36	5458.60	0.53	39.33	5460.84	0.64
09/27/23	24.04	5457.91	0.34	46.98	5457.98	-0.62	38.75	5461.42	0.58
10/26/23	23.93	5458.02	0.11	46.50	5458.46	0.48	38.34	5461.83	0.41
11/28/23	23.97	5457.98	-0.04	45.43	5459.53	1.07	38.22	5461.95	0.12
12/29/23	24.12	5457.83	-0.15	45.33	5459.63	0.10	38.16	5462.01	0.06
Yearly Change			1.90			1.69			1.98
01/29/24	24.26	5457.69	-0.14	45.40	5459.56	-0.07	38.28	5461.89	-0.12
02/27/24	24.36	5457.59	-0.10	45.42	5459.54	-0.02	38.49	5461.68	-0.21
03/28/24	24.27	5457.68	0.09	45.39	5459.57	0.03	38.55	5461.62	-0.06
04/24/24									
05/25/24									
06/27/24									
07/27/24									
08/31/24									
09/27/24									
10/26/24									
11/28/24									
12/29/24									
Yearly Change			-0.15			-0.06			-0.39

1) Measuring point elevation changed April 2006 when well fitted with surface

**Montana Bureau of Mines and Geology
Butte Mine Flooding Monitoring**

GWIC ID	224153		
	BMF05-4		
	SWL	ELEV.	Mo. Diff
		5542.37	(ft)
01/26/22	79.12	5463.25	-0.21
02/22/22	79.34	5463.03	-0.22
03/28/22	79.27	5463.10	0.07
04/25/22	79.40	5462.97	-0.13
05/25/22	79.64	5462.73	-0.24
06/27/22	79.78	5462.59	-0.14
07/27/22	80.12	5462.25	-0.34
08/31/22	80.34	5462.03	-0.22
09/29/22	80.35	5462.02	-0.01
10/26/22	80.29	5462.08	0.06
11/28/22	80.31	5462.06	-0.02
12/29/22	80.45	5461.92	-0.14
Yearly Change			-1.54
01/25/23	80.55	5461.82	-0.10
02/21/23	80.43	5461.94	0.12
03/28/23	80.73	5461.64	-0.30
04/24/23	80.69	5461.68	0.04
05/25/23	80.77	5461.60	-0.08
06/27/23	80.85	5461.52	-0.08
07/27/23	80.88	5461.49	-0.03
08/31/23	80.65	5461.72	0.23
09/27/23	80.24	5462.13	0.41
10/26/23	79.90	5462.47	0.34
11/28/23	79.45	5462.92	0.45
12/29/23	79.08	5463.29	0.37
Yearly Change			1.37
01/29/24	78.93	5463.44	0.15
02/27/24	78.83	5463.54	0.10
03/28/24	78.75	5463.62	0.08
04/24/24			
05/25/24			
06/27/24			
07/27/24			
08/31/24			
09/27/24			
10/26/24			
11/28/24			
12/29/24			
Yearly Change			0.33

⤵ mount cap.

Montana Bureau of Mines and Geology

Bedrock Water-Level Elevations

East Camp Mines and Bedrock Wells

Site Name/Monthly Elevations

DATE MO/YR (MP Elev)	ANSELMO* SWL (FT)	ELEV (FT)	MO. DIFF (FT)	BELMONT SWL (FT)	ELEV (FT)	MO. DIFF (FT)	BERKELEY PIT ELEV (FT)(1)	MO. DIFF (FT)	GRANITE MTN MINE SWL (FT)	ELEV (FT)	MO. DIFF (FT)	GRANITE MTN WELL SWL (FT)	ELEV (FT)	MO. DIFF (FT)	KELLEY SWL (FT)	ELEV (FT)	MO. DIFF (FT)	STEWARD SWL (FT)	ELEV (FT)	MO. DIFF (FT)
	5783.80	5782.10			5604.00					6051.80			6084.52		5877.52	5905.34	5906.27		5856.45	
Jan-22	405.73	5376.37	-0.15	NA			5355.29	-0.13	Abandoned			714.45	5370.07	0.11	538.22	5368.05	0.08	484.01	5372.44	0.05
Feb-22	405.75	5376.35	-0.02	NA			NA		Abandoned			714.33	5370.19	0.12	538.10	5368.17	0.12	483.93	5372.52	0.08
Mar-22	405.71	5376.39	0.04	NA			5355.83	0.54	Abandoned			714.42	5370.10	-0.09	538.16	5368.11	-0.06	484.03	5372.42	-0.10
Apr-22	405.88	5376.22	-0.17	NA			5355.90	0.07	Abandoned			714.54	5369.98	-0.12	538.40	5367.87	-0.24	484.46	5371.99	-0.43
May-22	405.90	5376.20	-0.02	NA			5355.89	-0.01	Abandoned			714.57	5369.95	-0.03	538.43	5367.84	-0.03	484.41	5372.04	0.05
Jun-22	405.82	5376.28	0.08	NA			5355.80	-0.09	Abandoned			714.35	5370.17	0.22	538.50	5367.77	-0.07	484.41	5372.04	0.00
Jul-22	405.92	5376.18	-0.10	NA			5355.74	-0.06	Abandoned			714.66	5369.86	-0.31	538.83	5367.44	-0.33	484.69	5371.76	-0.28
Aug-22	406.27	5375.83	-0.35	NA			5355.77	0.03	Abandoned			715.08	5369.44	-0.42	539.17	5367.10	-0.34	485.09	5371.36	-0.40
Sep-22	406.51	5375.59	-0.24	NA			5355.89	0.12	Abandoned			715.20	5369.32	-0.12	539.35	5366.92	-0.18	485.15	5371.30	-0.06
Oct-22	406.31	5375.79	0.20	NA			5355.96	0.07	Abandoned			715.23	5369.29	-0.03	539.31	5366.96	0.04	485.09	5371.36	0.06
Nov-22	406.42	5375.68	-0.11	NA			5355.87	-0.09	Abandoned			715.03	5369.49	0.20	539.22	5367.05	0.09	485.02	5371.43	0.07
Dec-22	406.49	5375.61	-0.07	NA			5355.94	0.07	Abandoned			715.20	5369.32	-0.17	539.16	5367.11	0.06	485.16	5371.29	-0.14
Yearly Change			-0.91					0.52			0.00			-0.64			-0.86			-1.10
Jan-23	406.58	5375.52	-0.09	NA			Ice -NR		Abandoned			715.19	5369.33	0.01	539.15	5367.12	0.01	485.11	5371.34	0.05
Feb-23	NR			NA			Ice -NR		Abandoned			715.22	5369.30	-0.03	539.19	5367.08	-0.04	485.15	5371.30	-0.04
Mar-23	NR			NA			Ice -NR		Abandoned			714.86	5369.66	0.36	539.14	5367.13	0.05	485.06	5371.39	0.09
Apr-23	NR			NA			5355.83	-0.11	Abandoned			714.76	5369.76	0.10	538.78	5367.49	0.36	484.86	5371.59	0.20
May-23	NR			NA			5355.91	0.08	Abandoned			714.69	5369.83	0.07	538.86	5367.41	-0.08	484.74	5371.71	0.12
Jun-23	405.85	5376.25	0.73	NA			5355.99	0.08	Abandoned			714.37	5370.15	0.32	538.48	5367.79	0.38	484.47	5371.98	0.27
Jul-23	406.00	5376.10	-0.15	NA			5355.99	0.00	Abandoned			714.74	5369.78	-0.37	538.68	5367.59	-0.20	484.67	5371.78	-0.20
Aug-23	405.69	5376.41	0.31	NA			5355.97	-0.02	Abandoned			714.52	5370.00	0.22	538.42	5367.85	0.26	484.27	5372.18	0.40
Sep-23	405.17	5376.93	0.52	NA			5355.90	-0.07	Abandoned			714.12	5370.40	0.40	537.88	5368.39	0.54	483.82	5372.63	0.45
Oct-23	405.30	5376.80	-0.13	NA			5355.85	-0.05	Abandoned			713.96	5370.56	0.16	537.65	5368.62	0.23	483.53	5372.92	0.29
Nov-23	405.53	5376.57	-0.23	NA			5355.77	-0.08	Abandoned			714.05	5370.47	-0.09	537.77	5368.50	-0.12	483.49	5372.96	0.04
Dec-23	404.91	5377.19	0.62	NA			5355.79	0.02	Abandoned			714.21	5370.31	-0.16	537.86	5368.41	-0.09	483.56	5372.89	-0.07
Yearly Change			1.58					-0.15			0.00			0.99			1.30			1.60
Jan-24	404.91	5377.19	0.00	NA			5355.83	0.04	Abandoned			714.26	5370.26	-0.05	537.96	5368.31	-0.10	483.59	5372.86	-0.03
Feb-24	404.93	5377.17	-0.02	NA			5355.85	0.02	Abandoned			714.10	5370.42	0.16	537.65	5368.62	0.31	483.31	5373.14	0.28
Mar-24	404.91	5377.19	0.02	NA			5355.93	0.08	Abandoned			713.97	5370.55	0.13	537.79	5368.48	-0.14	483.41	5373.04	-0.10
Apr-24									Abandoned											
May-24									Abandoned											
Jun-24									Abandoned											
Jul-24									Abandoned											
Aug-24									Abandoned											
Sep-24									Abandoned											
Oct-24									Abandoned											
Nov-24									Abandoned											
Dec-24									Abandoned											
Yearly Change			0.00					0.14			0.00			0.24			0.07			0.15

* Measuring point elevation changed 3/91.

Dec 1992 Kelley Mine SWL is 1/21/93 measurement.

Kelley Mine measuring point changed 6/99; 11/08 measuring point elevation change.

(1) 12/97 Berkeley Pit water level adjusted based upon Cashell Engineers survey data. Correction lowered water-level 1.11ft.

Montana Bureau of Mines and Geology

Bedrock Water-Level Elevations

East Camp Mines and Bedrock Wells

Site Name/Monthly Elevations

DATE	WELL A	ELEV	MO. DIFF	WELL B	ELEV	MO. DIFF	WELL C	ELEV	MO. DIFF	WELL D-1	ELEV	MO. DIFF	WELL D-2	ELEV	MO. DIFF	WELL E	ELEV	MO. DIFF	WELL F	ELEV	MO. DIFF
MO/YR	SWL (FT)	(FT)	(FT)	SWL (FT)	(FT)	(FT)	SWL (FT)	(FT)	(FT)	SWL (FT)	(FT)	(FT)	SWL (FT)	(FT)	(FT)	SWL (FT)	(FT)	(FT)	SWL (FT)	(FT)	(FT)
(MP Elev)		5525.00	5526.51		5557.82			5578.00			5591.54			5579.50			5562.40			5487.48	
Jan-22	158.14	5368.37	0.03	137.71	5420.11	-0.50	215.41	5362.59	-0.02	225.31	5366.23	-0.19	213.88	5365.62	-0.07	152.28	5410.12	-0.50	35.77	5451.71	-0.09
Feb-22	157.95	5368.56	0.19	137.72	5420.10	-0.01	215.27	5362.73	0.14	225.11	5366.43	0.20	213.62	5365.88	0.26	152.26	5410.14	0.02	35.92	5451.56	-0.15
Mar-22	157.83	5368.68	0.12	137.97	5419.85	-0.25	215.13	5362.87	0.14	224.92	5366.62	0.19	213.45	5366.05	0.17	152.27	5410.13	-0.01	35.97	5451.51	-0.05
Apr-22	157.95	5368.56	-0.12	138.28	5419.54	-0.31	215.29	5362.71	-0.16	225.06	5366.48	-0.14	213.68	5365.82	-0.23	152.62	5409.78	-0.35	35.89	5451.59	0.08
May-22	157.91	5368.60	0.04	138.69	5419.13	-0.41	215.23	5362.77	0.06	225.21	5366.33	-0.15	213.75	5365.75	-0.07	152.92	5409.48	-0.30	36.02	5451.46	-0.13
Jun-22	158.07	5368.44	-0.16	139.89	5417.93	-1.20	215.25	5362.75	-0.02	225.18	5366.36	0.03	213.73	5365.77	0.02	153.30	5409.10	-0.38	36.03	5451.45	-0.01
Jul-22	158.31	5368.20	-0.24	139.22	5418.60	0.67	215.44	5362.56	-0.19	225.27	5366.27	-0.09	213.78	5365.72	-0.05	153.49	5408.91	-0.19	35.92	5451.56	0.11
Aug-22	158.51	5368.00	-0.20	139.34	5418.48	-0.12	215.52	5362.48	-0.08	225.37	5366.17	-0.10	213.96	5365.54	-0.18	153.69	5408.71	-0.20	35.71	5451.77	0.21
Sep-22	158.68	5367.83	-0.17	139.96	5417.86	-0.62	215.58	5362.42	-0.06	225.60	5365.94	-0.23	214.12	5365.38	-0.16	153.98	5408.42	-0.29	35.68	5451.80	0.03
Oct-22	158.78	5367.73	-0.10	139.98	5417.84	-0.02	215.41	5362.59	0.17	225.44	5366.10	0.16	213.94	5365.56	0.18	153.90	5408.50	0.08	35.64	5451.84	0.04
Nov-22	159.10	5367.41	-0.32	140.79	5417.03	-0.81	215.47	5362.53	-0.06	225.45	5366.09	-0.01	214.10	5365.40	-0.16	154.22	5408.18	-0.32	35.58	5451.90	0.06
Dec-22	158.56	5367.95	0.54	140.44	5417.38	0.35	215.46	5362.54	0.01	225.43	5366.11	0.02	214.07	5365.43	0.03	154.36	5408.04	-0.14	35.44	5452.04	0.14
Yearly Change			-0.39			-3.23			-0.07			-0.31			-0.26			-2.58			0.24
Jan-23	158.56	5367.95	0.00	140.81	5417.01	-0.37	215.44	5362.56	0.02	225.50	5366.04	-0.07	214.23	5365.27	-0.16	154.92	5407.48	-0.56	35.31	5452.17	0.13
Feb-23	158.53	5367.98	0.03	140.72	5417.10	0.09	215.38	5362.62	0.06	225.56	5365.98	-0.06	214.19	5365.31	0.04	154.81	5407.59	0.11	36.52	5450.96	-1.21
Mar-23	158.43	5368.08	0.10	141.09	5416.73	-0.37	215.31	5362.69	0.07	225.55	5365.99	0.01	214.20	5365.30	-0.01	155.35	5407.05	-0.54	35.49	5451.99	1.03
Apr-23	158.34	5368.17	0.09	141.24	5416.58	-0.15	215.32	5362.68	-0.01	225.62	5365.92	-0.07	214.19	5365.31	0.01	155.62	5406.78	-0.27	35.54	5451.94	-0.05
May-23	158.49	5368.02	-0.15	141.75	5416.07	-0.51	214.99	5363.01	0.33	225.46	5366.08	0.16	214.01	5365.49	0.18	155.80	5406.60	-0.18	35.33	5452.15	0.21
Jun-23	158.29	5368.22	0.20	141.77	5416.05	-0.02	214.81	5363.19	0.18	225.40	5366.14	0.06	214.03	5365.47	-0.02	156.11	5406.29	-0.31	35.95	5451.53	-0.62
Jul-23	158.47	5368.04	-0.18	141.91	5415.91	-0.14	214.89	5363.11	-0.08	225.56	5365.98	-0.16	214.12	5365.38	-0.09	156.26	5406.14	-0.15	35.64	5451.84	0.31
Aug-23	158.39	5368.12	0.08	141.93	5415.89	-0.02	214.89	5363.11	0.00	225.55	5365.99	0.01	214.14	5365.36	-0.02	156.48	5405.92	-0.22	34.40	5453.08	1.24
Sep-23	158.03	5368.48	0.36	141.77	5416.05	0.16	214.59	5363.41	0.30	225.13	5366.41	0.42	213.77	5365.73	0.37	156.40	5406.00	0.08	33.84	5453.64	0.56
Oct-23	158.11	5368.40	-0.08	142.09	5415.73	-0.32	214.70	5363.30	-0.11	225.28	5366.26	-0.15	213.91	5365.59	-0.14	156.91	5405.49	-0.51	33.57	5453.91	0.27
Nov-23	158.11	5368.40	0.00	142.21	5415.61	-0.12	214.81	5363.19	-0.11	225.13	5366.41	0.15	213.90	5365.60	0.01	156.87	5405.53	0.04	33.41	5454.07	0.16
Dec-23	158.29	5368.22	-0.18	142.34	5415.48	-0.13	214.87	5363.13	-0.06	225.34	5366.20	-0.21	214.01	5365.49	-0.11	157.13	5405.27	-0.26	33.54	5453.94	-0.13
Yearly Change			0.27			-1.90			0.59			0.09			0.06			-2.77			1.90
Jan-24	158.24	5368.27	0.05	142.35	5415.47	-0.01	214.83	5363.17	0.04	225.33	5366.21	0.01	214.06	5365.44	-0.05	157.32	5405.08	-0.19	33.65	5453.83	-0.11
Feb-24	158.07	5368.44	0.17	142.26	5415.56	0.09	214.60	5363.40	0.23	225.21	5366.33	0.12	213.73	5365.77	0.33	157.20	5405.20	0.12	33.80	5453.68	-0.15
Mar-24	158.09	5368.42	-0.02	142.25	5415.57	0.01	214.56	5363.44	0.04	225.23	5366.31	-0.02	211.66	5367.84	2.07	157.36	5405.04	-0.16	33.83	5453.65	-0.03
Apr-24																					
May-24																					
Jun-24																					
Jul-24																					
Aug-24																					
Sep-24																					
Oct-24																					
Nov-24																					
Dec-24																					
Yearly Change			0.20			0.09			0.31			0.11			2.35			-0.23			-0.29

SWL - Static water-level, in feet, below ground surface
 ELEV - Water-level elevation, in feet USGS Datum)
 NA - No water-level available due to access problems or obstructions
 East Camp-Bdr-Sites-SWL-2021-24

Montana Bureau of Mines and Geology

Bedrock Water-Level Elevations

East Camp Mines and Bedrock Wells

Site Name/Monthly Elevations

DATE MO/YR (MP Elev)	WELL G SWL (FT)	ELEV (FT)	MO. DIFF (FT)	WELL H SWL (FT)	ELEV (FT)	MO. DIFF (FT)	WELL J SWL (FT)	ELEV (FT)	MO. DIFF (FT)	LEXINGTON SWL (FT)	ELEV (FT)	MO. DIFF (FT)	PILOT BUTTE SWL (FT)	ELEV (FT)	MO. DIFF (FT)	BELMONT 1 SWL (FT)	ELEV (FT)	MO. DIFF (FT)	BELMONT 2 SWL (FT)	ELEV (FT)	MO. DIFF (FT)
		5537.56			5572.82			5530.03	5530.99		6216.59			6056.98			5600.82			5602.72	
Jan-22	165.35	5372.21	-0.07	Plugged&abandoned			172.09	5358.90	0.06	839.89	5376.70	0.10	676.57	5380.41	0.03	132.83	5467.99	-0.61	235.52	5367.20	0.06
Feb-22	165.29	5372.27	0.06	Plugged&abandoned			171.95	5359.04	0.14	839.78	5376.81	0.11	676.45	5380.53	0.12	134.70	5466.12	-1.87	235.67	5367.05	-0.15
Mar-22	165.19	5372.37	0.10	Plugged&abandoned			171.86	5359.13	0.09	839.80	5376.79	-0.02	676.42	5380.56	0.03	138.68	5462.14	-3.98	235.49	5367.23	0.18
Apr-22	165.15	5372.41	0.04	Plugged&abandoned			171.98	5359.01	-0.12	839.89	5376.70	-0.09	676.51	5380.47	-0.09	143.94	5456.88	-5.26	235.50	5367.22	-0.01
May-22	165.23	5372.33	-0.08	Plugged&abandoned			172.03	5358.96	-0.05	839.98	5376.61	-0.09	676.67	5380.31	-0.16	148.19	5452.63	-4.25	235.77	5366.95	-0.27
Jun-22	165.18	5372.38	0.05	Plugged&abandoned			171.97	5359.02	0.06	839.86	5376.73	0.12	676.51	5380.47	0.16	133.84	5466.98	14.35	235.57	5367.15	0.20
Jul-22	165.66	5371.90	-0.48	Plugged&abandoned			172.38	5358.61	-0.41	840.11	5376.48	-0.25	676.64	5380.34	-0.13	134.46	5466.36	-0.62	235.99	5366.73	-0.42
Aug-22	165.44	5372.12	0.22	Plugged&abandoned			172.66	5358.33	-0.28	840.49	5376.10	-0.38	677.00	5379.98	-0.36	138.34	5462.48	-3.88	236.40	5366.32	-0.41
Sep-22	165.49	5372.07	-0.05	Plugged&abandoned			172.78	5358.21	-0.12	840.83	5375.76	-0.34	677.33	5379.65	-0.33	138.80	5462.02	-0.46	236.61	5366.11	-0.21
Oct-22	165.32	5372.24	0.17	Plugged&abandoned			172.73	5358.26	0.05	840.89	5375.70	-0.06	677.60	5379.38	-0.27	136.94	5463.88	1.86	236.33	5366.39	0.28
Nov-22	165.41	5372.15	-0.09	Plugged&abandoned			172.72	5358.27	0.01	840.64	5375.95	0.25	677.35	5379.63	0.25	136.37	5464.45	0.57	236.25	5366.47	0.08
Dec-22	165.28	5372.28	0.13	Plugged&abandoned			172.72	5358.27	0.00	840.81	5375.78	-0.17	677.54	5379.44	-0.19	139.97	5460.85	-3.60	236.29	5366.43	-0.04
Yearly Change			0.00						-0.57			-0.82			-0.94			-7.75			-0.71
Jan-23	165.30	5372.26	-0.02	Plugged&abandoned			172.67	5358.32	0.05	840.86	5375.73	-0.05	677.64	5379.34	-0.10	140.35	5460.47	-0.38	236.29	5366.43	0.00
Feb-23	165.18	5372.38	0.12	Plugged&abandoned			172.77	5358.22	-0.10	840.81	5375.78	0.05	677.62	5379.36	0.02	137.15	5463.67	3.20	236.25	5366.47	0.04
Mar-23	165.18	5372.38	0.00	Plugged&abandoned			172.59	5358.40	0.18	840.80	5375.79	0.01	677.44	5379.54	0.18	137.69	5463.13	-0.54	236.21	5366.51	0.04
Apr-23	165.13	5372.43	0.05	Plugged&abandoned			172.25	5358.74	0.34	840.56	5376.03	0.24	677.98	5379.00	-0.54	139.02	5461.80	-1.33	236.13	5366.59	0.08
May-23	165.08	5372.48	0.05	Plugged&abandoned			172.47	5358.52	-0.22	840.47	5376.12	0.09	677.07	5379.91	0.91	144.23	5456.59	-5.21	235.71	5367.01	0.42
Jun-23	165.63	5371.93	-0.55	Plugged&abandoned			172.29	5358.70	0.18	840.22	5376.37	0.25	676.71	5380.27	0.36	129.34	5471.48	14.89	235.35	5367.37	0.36
Jul-23	165.11	5372.45	0.52	Plugged&abandoned			172.61	5358.38	-0.32	840.37	5376.22	-0.15	676.75	5380.23	-0.04	130.20	5470.62	-0.86	235.99	5366.73	-0.64
Aug-23	165.05	5372.51	0.06	Plugged&abandoned			172.56	5358.43	0.05	840.25	5376.34	0.12	676.48	5380.50	0.27	127.81	5473.01	2.39	235.80	5366.92	0.19
Sep-23	164.85	5372.71	0.20	Plugged&abandoned			172.12	5358.87	0.44	839.75	5376.84	0.50	676.51	5380.47	-0.03	116.58	5484.24	11.23	235.10	5367.62	0.70
Oct-23	164.79	5372.77	0.06	Plugged&abandoned			172.15	5358.84	-0.03	839.59	5377.00	0.16	676.19	5380.79	0.32	117.17	5483.65	-0.59	235.15	5367.57	-0.05
Nov-23	164.95	5372.61	-0.16	Plugged&abandoned			172.42	5358.57	-0.27	839.65	5376.94	-0.06	676.31	5380.67	-0.12	120.52	5480.30	-3.35	235.07	5367.65	0.08
Dec-23	165.04	5372.52	-0.09	Plugged&abandoned			172.47	5358.52	-0.05	839.84	5376.75	-0.19	675.89	5381.09	0.42	127.62	5473.20	-7.10	235.35	5367.37	-0.28
Yearly Change			0.24						0.25			0.97			1.65			12.35			0.94
Jan-24	165.46	5372.10	-0.42	Plugged&abandoned			172.42	5358.57	0.05	839.82	5376.77	0.02	675.91	5381.07	-0.02	135.09	5465.73	-7.47	235.40	5367.32	-0.05
Feb-24	165.27	5372.29	0.19	Plugged&abandoned			172.40	5358.59	0.02	839.51	5377.08	0.31	675.68	5381.30	0.23	135.70	5465.12	-0.61	235.36	5367.36	0.04
Mar-24	164.72	5372.84	0.55	Plugged&abandoned			172.62	5358.37	-0.22	839.65	5376.94	-0.14	675.77	5381.21	-0.09	135.94	5464.88	-0.24	235.56	5367.16	-0.20
Apr-24				Plugged&abandoned																	
May-24				Plugged&abandoned																	
Jun-24				Plugged&abandoned																	
Jul-24				Plugged&abandoned																	
Aug-24				Plugged&abandoned																	
Sep-24				Plugged&abandoned																	
Oct-24				Plugged&abandoned																	
Nov-24				Plugged&abandoned																	
Dec-24				Plugged&abandoned																	
Yearly Change			0.32						-0.15			0.19			0.12			-8.32			-0.21

SWL - Static water-level, in feet, below ground surface
ELEV - Water-level elevation, in feet USGS Datum)
NA - No water-level available due to access problems or obstructions
East Camp-Bdr-Sites-SWL-2021-24

**Montana Bureau of Mines and Geology
Butte Mine Flooding Monitoring**

GWIC ID	Agency	4647 Parrot Park Well			157638 Belmont Well #1			4644 Hebgen Park Well			
		Date (mm/dd/yy)	SWL(ft) (mp=ct)	Elev(ft) 5520.66	Diff (ft)**	SWL(ft) (mp=ct)	Elev(ft) 5600.82	Diff (ft)**	SWL(ft) (mp=ct)	Elev(ft) 5516.15	Diff (ft)**
MBMG		01/03/22	119.52	5401.14	0.29	132.22	5468.60	-0.32	31.91	5484.24	-0.12
MBMG		01/24/22	119.79	5400.87	-0.27	132.83	5467.99	-0.61	31.98	5484.17	-0.07
MBMG		02/24/22	120.03	5400.63	-0.24	134.70	5466.12	-1.87	32.42	5483.73	-0.44
MBMG		03/29/22	120.27	5400.39	-0.24	138.68	5462.14	-3.98	32.81	5483.34	-0.39
MBMG		04/26/22	120.45	5400.21	-0.18	143.94	5456.88	-5.26	32.88	5483.27	-0.07
MBMG		05/25/22	120.77	5399.89	-0.32	148.19	5452.63	-4.25	33.11	5483.04	-0.23
MBMG		06/27/22	121.02	5399.64	-0.25	133.84	5466.98	14.35	32.69	5483.46	0.42
MBMG		07/27/22	120.87	5399.79	0.15	134.46	5466.36	-0.62	31.99	5484.16	0.70
MBMG		08/25/22	120.91	5399.75	-0.04	138.34	5462.48	-3.88	31.42	5484.73	0.57
MBMG		09/28/22	119.18	5401.48	1.73	138.80	5462.02	-0.46	30.90	5485.25	0.52
MBMG		10/26/22	117.83	5402.83	1.35	136.94	5463.88	1.86	30.50	5485.65	0.40
MBMG		11/28/22	117.76	5402.90	0.07	136.37	5464.45	0.57	30.62	5485.53	-0.12
MBMG		12/29/22	118.00	5402.66	-0.24	139.97	5460.85	-3.60	30.29	5485.86	0.33
MBMG		01/25/23	118.43	5402.23	-0.43	140.35	5460.47	-0.38	30.73	5485.42	-0.44
MBMG		02/28/23	118.16	5402.50	0.27	137.15	5463.67	3.20	30.76	5485.39	-0.03
MBMG		03/28/23	118.46	5402.20	-0.30	137.69	5463.13	-0.54	31.61	5484.54	-0.85
MBMG		04/26/23	119.83	5400.83	-1.37	139.02	5461.80	-1.33	31.13	5485.02	0.48
MBMG		05/26/23	125.00	5395.66	-5.17	144.23	5456.59	-5.21	29.90	5486.25	1.23
MBMG		06/28/23	120.04	5400.62	4.96	129.34	5471.48	14.89	26.51	5489.64	3.39
MBMG		07/25/23	119.73	5400.93	0.31	130.20	5470.62	-0.86	24.95	5491.20	1.56
MBMG		08/28/23	118.21	5402.45	1.52	127.81	5473.01	2.39	22.81	5493.34	2.14
MBMG		09/27/23	118.88	5401.78	-0.67	116.58	5484.24	11.23	21.83	5494.32	0.98
MBMG		10/23/23	113.51	5407.15	5.37	117.17	5483.65	-0.59	21.24	5494.91	0.59
MBMG		11/28/23	112.85	5407.81	0.66	120.52	5480.30	-3.35	20.94	5495.21	0.30
MBMG		12/28/23	113.37	5407.29	-0.52	127.62	5473.20	-7.10	21.49	5494.66	-0.55
MBMG		01/29/24	114.11	5406.55	-0.74	135.09	5465.73	-7.47	22.17	5493.98	-0.68
MBMG		02/27/24	114.69	5405.97	-0.58	135.70	5465.12	-0.61	22.51	5493.64	-0.34
MBMG		03/28/24	115.36	5405.30	-0.67	135.94	5464.88	-0.24	22.93	5493.22	-0.42
TOTAL CHANGE ==>				FROM 11/94==>	5.15	FROM 8/96 ==>		-47.02			-1.51

Montana Bureau of Mines and Geology
Butte Mine Flooding
West Camp Water-Levels

SITE NAME/MONTHLY ELEVATIONS															
DATE	TRAVONA	ELEV	MO. DIFF	EMMA	ELEV	MO. DIFF	OPHIR	ELEV	MO. DIFF	WELL 21	ELEV	MO. DIFF	CHESTER STEELE	ELEV	MO. DIFF
MO/YR	SWL (FT)	(FT)	(FT)	SWL (FT)	(FT)	(FT)	SWL (FT)	(FT)	(FT)	SWL (FT)	(FT)	(FT)	SWL (FT)	(FT)	(FT)
(MP Elev)		5590.60	5591.98		5636.80			5530.29	5533.16		5471.50			5629.57	
01/26/21	169.44	5422.54	-0.03	215.14	5421.66	0.01	110.87	5422.29	-0.01				46.43	5583.14	-2.79
02/25/21	169.46	5422.52	-0.02	215.17	5421.63	-0.03	110.89	5422.27	-0.02				49.47	5580.10	-3.04
03/30/21	169.37	5422.61	0.09	215.13	5421.67	0.04	110.84	5422.32	0.05				51.75	5577.82	-2.28
04/30/21	169.38	5422.60	-0.01	215.14	5421.66	-0.01	110.86	5422.30	-0.02				53.92	5575.65	-2.17
05/26/21	169.41	5422.57	-0.03	215.16	5421.64	-0.02	110.88	5422.28	-0.02				55.69	5573.88	-1.77
06/25/21	169.19	5422.79	0.22	214.96	5421.84	0.20	110.68	5422.48	0.20				43.27	5586.30	12.42
07/26/21	169.17	5422.81	0.02	214.91	5421.89	0.05	110.56	5422.60	0.12				38.36	5591.21	4.91
08/30/21	169.12	5422.86	0.05	214.79	5422.01	0.12	110.54	5422.62	0.02				37.89	5591.68	0.47
10/01/21	169.16	5422.82	-0.04	214.82	5421.98	-0.03	110.58	5422.58	-0.04				41.53	5588.04	-3.64
10/29/21	169.37	5422.61	-0.21	215.51	5421.29	-0.69	110.70	5422.46	-0.12				43.43	5586.14	-1.90
11/30/21	169.41	5422.57	-0.04	215.07	5421.73	0.44	110.73	5422.43	-0.03				45.67	5583.90	-2.24
12/29/21	169.23	5422.75	0.18	214.93	5421.87	0.14	110.51	5422.65	0.22				48.47	5581.10	-2.80
Yearly Change			0.18			0.22			0.35			0.00			-4.83
01/24/22	169.21	5422.77	0.02	214.83	5421.97	0.10	110.53	5422.63	-0.02				51.28	5578.29	-2.81
02/22/22	169.39	5422.59	-0.18	215.05	5421.75	-0.22	110.80	5422.36	-0.27				54.11	5575.46	-2.83
03/29/22	172.14	5419.84	-2.75	217.50	5419.30	-2.45	113.21	5419.95	-2.41				57.35	5572.22	-3.24
04/25/22	172.31	5419.67	-0.17	217.93	5418.87	-0.43	113.67	5419.49	-0.46				59.93	5569.64	-2.58
05/25/22	171.88	5420.10	0.43	217.48	5419.32	0.45	113.30	5419.86	0.37				46.69	5582.88	13.24
06/27/22	171.82	5420.16	0.06	217.47	5419.33	0.01	113.33	5419.83	-0.03				43.47	5586.10	3.22
07/26/22	171.79	5420.19	0.03	217.44	5419.36	0.03	113.25	5419.91	0.08				44.37	5585.20	-0.90
08/30/22	171.81	5420.17	-0.02	217.46	5419.34	-0.02	113.26	5419.90	-0.01				43.85	5585.72	0.52
09/29/22	171.77	5420.21	0.04	217.40	5419.40	0.06	113.15	5420.01	0.11				43.71	5585.86	0.14
10/27/22	171.73	5420.25	0.04	217.21	5419.59	0.19	113.26	5419.90	-0.11				43.28	5586.29	0.43
11/28/22	168.00	5423.98	3.73	214.35	5422.45	2.86	109.37	5423.79	3.89				45.51	5584.06	-2.23
12/29/22	168.10	5423.88	-0.10	213.67	5423.13	0.68	109.31	5423.85	0.06				48.74	5580.83	-3.23
Yearly Change			1.13			1.26			1.20			0.00			-0.27
01/26/23	168.67	5423.31	-0.57	214.30	5422.50	-0.63	109.86	5423.30	-0.55				51.58	5577.99	-2.84
02/27/23	170.31	5421.67	-1.64	216.05	5420.75	-1.75	111.55	5421.61	-1.69				54.29	5575.28	-2.71
03/29/23	171.91	5420.07	-1.60	216.57	5420.23	-0.52	113.14	5420.02	-1.59				57.29	5572.28	-3.00
04/24/23	171.74	5420.24	0.17	216.40	5420.40	0.17	113.00	5420.16	0.14				57.89	5571.68	-0.60
05/25/23	171.94	5420.04	-0.20	216.56	5420.24	-0.16	113.18	5419.98	-0.18				42.09	5587.48	15.80
06/27/23	165.76	5426.22	6.18	210.37	5426.43	6.19	107.07	5426.09	6.11				37.61	5591.96	4.48
07/26/23	168.29	5423.69	-2.53	212.86	5423.94	-2.49	109.19	5423.97	-2.12				38.33	5591.24	-0.72
08/30/23	169.95	5422.03	-1.66	214.58	5422.22	-1.72	111.07	5422.09	-1.88				32.39	5597.18	5.94
09/27/23	170.15	5421.83	-0.20	215.69	5421.11	-1.11	111.14	5422.02	-0.07				32.96	5596.61	-0.57
10/27/23	166.76	5425.22	3.39	212.40	5424.40	3.29	107.91	5425.25	3.23				34.30	5595.27	-1.34
11/28/23	168.76	5423.22	-2.00	214.34	5422.46	-1.94	109.74	5423.42	-1.83				36.86	5592.71	-2.56
12/29/23	170.73	5421.25	-1.97	216.35	5420.45	-2.01	111.61	5421.55	-1.87				39.49	5590.08	-2.63
Yearly Change			-2.63			-2.68			-2.30			0.00			9.25
01/29/24	170.84	5421.14	-0.11	216.44	5420.36	-0.09	111.85	5421.31	-0.24				43.52	5586.05	-4.03
02/27/24	170.76	5421.22	0.08	216.35	5420.45	0.09	111.86	5421.30	-0.01				44.87	5584.70	-1.35
03/29/24	170.84	5421.14	-0.08	216.42	5420.38	-0.07	111.90	5421.26	-0.04				47.04	5582.53	-2.17
04/24/24															
05/25/24															
06/27/24															
07/26/24															
08/30/24															
09/27/24															
10/27/24															
11/28/24															
12/29/24															
Yearly Change			-0.11			-0.07			-0.29			0.00			-7.55

SWL - STATIC WATER LEVEL, IN FEET, BELOW GROUND SURFACE(MP)
ELEV - WATER LEVEL ELEVATION, IN FEET, ABOVE MEAN SEA LEVEL (USGS DATUM)
NA - NO WATER LEVELS AVAILABLE DUE TO ACCESS PROBLEMS OR OBSTRUCTIONS
Ophir Mine Elevation changed April 2005 after casing repair.

**Montana Bureau of Mines and Geology
Butte Mine Flooding
West Camp Water-Levels**

GWIC ID	WCPW-1 184133	Chester Steele 4773		WC Extraction Well Data									
		Date	SWL (gs)	Elev. (ft) 5471.35	Change	SWL (gs)	Elev. (ft) 5629.57	Change (ft)	Reading	Diff (gallons)	Daily Avg. Pump Rate (gallons)	Pump Rate (gpm)	Monthly Average Pumpin g Rate (gpm)
01/28/19	NA			42.59	5586.98	-3.10	NA	8,583,077	268,221	186	186	8,583,077	26.34
03/05/19	NA			45.79	5583.78	-3.20	NA	10,162,827	282,301	196	196	10,162,827	31.19
03/25/19	NA			47.47	5582.10	-1.68	NA	7,602,952	380,148	264	264	7,602,952	23.33
04/25/19	NA			45.59	5583.98	1.88	NA	7,673,019	247,517	172	172	7,673,019	23.55
05/28/19	NA			45.78	5583.79	-0.19	NA	10,187,867	308,723	214	214	10,187,867	31.27
07/01/19	NA			42.79	5586.78	2.99	NA	8,624,140	253,651	176	176	8,624,140	26.47
07/30/19	NA			30.45	5599.12	12.34	NA	8,326,070	287,106	199	199	8,326,070	25.55
08/26/19	NA			31.01	5598.56	-0.56	NA	11,633,818	430,882	299	299	11,633,818	35.70
10/01/19	NA			33.79	5595.78	-2.78	NA	9,513,964	264,277	184	184	9,513,964	29.20
10/30/19	NA			36.19	5593.38	-2.40	NA	12,327,151	425,074	295	295	12,327,151	37.83
11/21/19	NA			37.65	5591.92	-1.46	NA	9,002,193	409,191	284	284	9,002,193	27.63
12/26/19	NA			40.54	5589.03	-2.89	NA	8,280,727	236,592	164	164	8,280,727	25.41
02/04/20	NA			44.19	5585.38	-3.65	NA	9,818,407	245,460	170	170	9,818,407	30.13
02/25/20	NA			46.26	5583.31	-2.07	NA	7,368,612	350,886	244	244	7,368,612	22.61
03/25/20	NA			48.52	5581.05	-2.26	NA	6,857,893	236,479	164	164	6,857,893	21.05
04/27/20	NA			48.11	5581.46	0.41	NA	8,653,938	262,241	182	182	8,653,938	26.56
05/26/20	NA			37.85	5591.72	10.26	NA	6,609,362	227,909	158	158	6,609,362	20.28
06/26/20	NA			38.79	5590.78	-0.94	NA	6,699,732	216,120	150	150	6,699,732	20.56
07/27/20	NA			38.85	5590.72	-0.06	NA	9,424,716	304,023	211	211	9,424,716	28.92
08/27/20	NA			37.02	5592.55	1.83	NA	8,530,360	275,173	191	191	8,530,360	26.18
09/28/20	NA			37.89	5591.68	-0.87	NA	10,759,773	336,243	234	234	10,759,773	33.02
10/27/20	NA			38.72	5590.85	-0.83	NA	8,558,923	295,135	205	205	8,558,923	26.27
11/30/20	NA			40.99	5588.58	-2.27	NA	8,245,469	242,514	168	168	8,245,469	25.30
12/28/20	NA			43.64	5585.93	-2.65	NA	9,659,662	344,988	240	240	9,659,662	29.64
01/26/21	NA			46.43	5583.14	-2.79	NA	7,150,126	246,556	171	171	7,150,126	21.94
02/25/21	NA			49.47	5580.10	-3.04	NA	6,738,616	224,621	156	156	6,738,616	20.68
03/30/21	NA			51.75	5577.82	-2.28	NA	6,775,165	205,308	143	143	6,775,165	20.79
05/03/21	NA			53.92	5575.65	-2.17	NA	8,283,460	243,631	169	169	8,283,460	25.42
05/26/21	NA			55.69	5573.88	-1.77	NA	6,309,148	274,311	190	190	6,309,148	19.36
06/25/21	NA			43.27	5586.30	12.42	NA	7,866,722	262,224	182	182	7,866,722	24.14
07/27/21	NA			38.36	5591.21	4.91	NA	6,939,261	216,852	151	151	6,939,261	21.30
08/30/21	NA			37.89	5591.68	0.47	NA	9,651,763	283,875	197	197	9,651,763	29.62
10/01/21	NA			41.53	5588.04	-3.64	NA	7,819,062	244,346	170	170	7,819,062	24.00
10/29/21	NA			43.43	5586.14	-1.90	NA	7,541,316	269,333	187	187	7,541,316	23.14
11/30/21	NA			45.67	5583.90	-2.24	NA	8,761,266	273,790	190	190	8,761,266	26.89
12/29/21	NA			48.47	5581.10	-2.80	NA	6,669,610	229,987	160	160	6,669,610	20.47
01/26/22	NA			51.28	5578.29	-2.81	NA	6,587,706	235,275	163	163	6,587,706	20.22
02/22/22	NA			54.11	5575.46	-2.83	NA	6,529,127	241,820	168	168	6,529,127	20.04
03/28/22	NA			57.35	5572.22	-3.24	NA	8,421,985	247,705	172	172	8,421,985	25.85
04/25/22	NA			59.93	5569.64	-2.58	NA	6,048,967	216,035	150	150	6,048,967	18.56
05/25/22	NA			46.69	5582.88	13.24	NA	5,624,388	187,480	130	130	5,624,388	17.26
06/27/22	NA			43.47	5586.10	3.22	NA	7,133,329	216,161	150	150	7,133,329	21.89
07/26/22	NA			44.37	5585.20	-0.90	NA	6,174,725	212,922	148	148	6,174,725	18.95
08/25/22	NA			43.85	5585.72	0.52	NA	8,343,055	278,102	193	193	8,343,055	25.60
09/29/22	NA			43.71	5585.86	0.14	NA	7,351,985	210,057	146	146	7,351,985	22.56
10/26/22	NA			43.28	5586.29	0.43	NA	7,655,033	283,520	197	197	7,655,033	23.49
11/28/22	NA			45.51	5584.06	-2.23	NA	7,842,844	237,662	165	165	7,842,844	24.07
12/29/22	NA			48.74	5580.83	-3.23	NA	6,630,305	213,881	149	149	6,630,305	20.35
01/26/23	NA			51.58	5577.99	-2.84	NA	6,688,093	238,860	166	166	6,688,093	20.52
02/27/23	NA			54.29	5575.28	-2.71	NA	8,349,800	260,931	181	181	8,349,800	25.62
03/28/23	NA			57.29	5572.28	-3.00	NA	6,484,019	223,587	155	155	6,484,019	19.90
04/24/23	NA			57.89	5571.68	-0.60	NA	5,932,475	219,721	153	153	5,932,475	18.21
05/28/23	NA			42.09	5587.48	15.80	NA	6,281,716	184,756	128	128	6,281,716	19.28
06/28/23	NA			37.61	5591.96	4.48	NA	6,279,918	202,578	141	141	6,279,918	19.27
07/28/23	NA			38.33	5591.24	-0.72	NA	7,983,883	266,129	185	185	7,983,883	24.50
08/28/23	NA			32.39	5597.18	5.94	NA	12,014,515	387,565	269	269	12,014,515	36.87
09/27/23	NA			32.96	5596.61	-0.57	NA	10,599,761	353,325	245	245	10,599,761	32.53
10/25/23	NA			34.30	5595.27	-1.34	NA	9,098,877	324,960	226	226	9,098,877	27.92
11/28/23	NA			36.86	5592.71	-2.56	NA	12,170,779	357,964	249	249	12,170,779	37.35
12/28/23	NA			39.49	5590.08	-2.63	NA	9,621,840	320,728	223	223	9,621,840	29.53
01/29/24	NA			43.52	5586.05	-4.03	NA	10,765,157	336,411	234	234	10,765,157	33.04
02/27/24	NA			44.87	5584.70	-1.35	NA	7,873,618	271,504	189	189	7,873,618	24.16
03/29/24	NA			47.04	5582.53	-2.17	NA	7,616,532	245,695	171	171	7,616,532	23.37

MP elevations
changed 7/99
(BMF96-1D)
and 7/04
(BMF96-4)

**Montana Bureau of Mines and Geology
Butte Mine Flooding
West Camp Water-Levels**

GWIC ID	Comments
	<p>Date</p> <p>01/28/19 Flow data from Pioneer records. Q~211 gpm. 03/05/19 Flow data from Pioneer records. Q~201 gpm. 03/25/19 Flow data from Pioneer records. Q~187 gpm. 04/25/19 Flow data from Pioneer records. Q~191 gpm. 05/28/19 Flow data from Pioneer records. Q~203 gpm. 07/01/19 Flow data from Pioneer records. Q~214 gpm. 07/30/19 Flow data from Pioneer records. Q~210 gpm. 08/26/19 Flow data from Pioneer records. Q~224 gpm. 10/01/19 Flow data from Pioneer records. Q~236 gpm. 10/30/19 Flow data from Pioneer records. Q~242 gpm. 11/21/19 Flow data from Pioneer records. Q~223 gpm. 12/26/19 Flow data from Pioneer records. Q~205 gpm.</p>
	<p>02/04/20 Flow data from Pioneer records. Q~195 gpm. 02/25/20 Flow data from Pioneer records. Q~183 gpm. 03/25/20 Flow data from Pioneer records. Q~169 gpm. 04/27/20 Flow data from Pioneer records. Q~173 gpm. 05/26/20 Flow data from Pioneer records. Q~164 gpm. 06/26/20 Flow data from Pioneer records. Q~167 gpm. 07/27/20 Flow data from Pioneer records. Q~187 gpm. 08/27/20 Flow data from Pioneer records. Q~212 gpm. 09/28/20 Flow data from Pioneer records. Q~213 gpm. 10/27/20 Flow data from Pioneer records. Q~212 gpm. 11/30/20 Flow data from Pioneer records. Q~204 gpm. 12/28/20 Flow data from Pioneer records. Q~191 gpm. 01/26/21 Flow data from Pioneer records. Q~177 gpm. 02/25/21 Flow data from Pioneer records. Q~167 gpm. 03/30/21 Flow data from Pioneer records. Q~168 gpm. 05/03/21 Flow data from Pioneer records. Q~164 gpm. 05/26/21 Flow data from Pioneer records. Q~156 gpm. 06/25/21 Flow data from Pioneer records. Q~156 gpm. 07/27/21 Flow data from Pioneer records. Q~161 gpm. 08/30/21 Flow data from Pioneer records. Q~178 gpm. 10/01/21 Flow data from Pioneer records. Q~184 gpm. 10/29/21 Flow data from Pioneer records. Q~181 gpm. 11/30/21 Flow data from Pioneer records. Q~171 gpm. 12/29/21 Flow data from Pioneer records. Q~169 gpm. 01/26/22 Flow data from Pioneer records. Q~163 gpm. 02/22/22 Flow data from Pioneer records. Q~162 gpm. 03/28/22 Flow data from Pioneer records. Q~167 gpm. 04/25/22 Flow data from Pioneer records. Q~150 gpm. 05/25/22 Flow data from Pioneer records. Q~139 gpm. 06/27/22 Flow data from Pioneer records. Q~142 gpm. 07/26/22 Flow data from Pioneer records. Q~153 gpm. 08/25/22 Flow data from Pioneer records. Q~166 gpm. 09/29/22 Flow data from Pioneer records. Q~182 gpm. 10/26/22 Flow data from Pioneer records. Q~190 gpm. 11/28/22 Flow data from Pioneer records. Q~153 gpm. 12/29/22 Flow data from Pioneer records. Q~164 gpm. 01/26/23 Flow data from Pioneer records. Q~166 gpm. 02/27/23 Flow data from Pioneer records. Q~166 gpm. 03/28/23 Flow data from Pioneer records. Q~161 gpm. 04/24/23 Flow data from Pioneer records. Q~147 gpm. 05/28/23 Flow data from Pioneer records. Q~152 gpm. 06/28/23 Flow data from Pioneer records. Q~123 gpm. 07/28/23 Flow data from Pioneer records. Q~198 gpm. 08/28/23 Flow data from Pioneer records. Q~241 gpm. 09/27/23 Flow data from Pioneer records. Q~263 gpm. 10/25/23 Flow data from Pioneer records. Q~226 gpm. 11/28/23 Flow data from Pioneer records. Q~241 gpm. 12/28/23 Flow data from Pioneer records. Q~239 gpm. 01/29/24 Flow data from Pioneer records. Q~212 gpm. 02/27/24 Flow data from Pioneer records. Q~203 gpm. 03/29/24 Flow data from Pioneer records. Q~192 gpm.</p>
MP elevations changed 7/99 (BMF96-1D) and 7/04 (BMF96-4)	

MBMG Outer Camp																
GWIC ID	4732			4725				892116				4822				
DATE	MAS	Elev	Diff	MAS	Well	Elev	Diff	S-4	Tech Well	Elev	Diff	Tech Well	Orphan Boy	Elev	Diff	Orphan Boy
(mmddyy)	SWL (ft)	(ft)	(ft)	Yearly	S-4	(ft)	(ft)	Yearly	SWL (ft)	(ft)	(ft)	Yearly	SWL (ft)	(ft)	(ft)	Yearly
				Change	SWL (ft)			Change				Change				Change
		6304.00				6290				5650.00	5651.86			5689.66	5691.25	
01/24/22	75.82	6228.18	-0.26		NR				75.69	5576.17	0.02		110.41	5580.84	-0.18	
02/18/22	76.23	6227.77	-0.41		54.61	6235.39	-0.85		75.91	5575.95	-0.22		110.61	5580.64	-0.20	
03/31/22	76.61	6227.39	-0.38		55.14	6234.86	-0.53		76.16	5575.70	-0.25		110.70	5580.55	-0.09	
04/27/22	76.75	6227.25	-0.14		55.49	6234.51	-0.35		76.24	5575.62	-0.08		110.85	5580.40	-0.15	
05/25/22	77.11	6226.89	-0.36		56.17	6233.83	-0.68		76.33	5575.53	-0.09		110.99	5580.26	-0.14	
06/30/22	77.15	6226.85	-0.04		56.56	6233.44	-0.39		75.58	5576.28	0.75		110.98	5580.27	0.01	
07/29/22	77.21	6226.79	-0.06		56.94	6233.06	-0.38		75.07	5576.79	0.51		110.95	5580.30	0.03	
08/31/22	77.37	6226.63	-0.16		55.95	6234.05	0.99		74.93	5576.93	0.14		111.01	5580.24	-0.06	
09/28/22	77.64	6226.36	-0.27		55.99	6234.01	-0.04		74.82	5577.04	0.11		111.01	5580.24	0.00	
10/26/22	77.69	6226.31	-0.05		56.19	6233.81	-0.20		74.96	5576.90	-0.14		110.98	5580.27	0.03	
11/28/22	77.68	6226.32	0.01		56.47	6233.53	-0.28		75.26	5576.60	-0.30		111.90	5579.35	-0.92	
12/29/22	77.84	6226.16	-0.16		56.92	6233.08	-0.45		75.93	5575.93	-0.67		111.30	5579.95	0.60	
Yearly Change				-2.28				-3.16				-0.22				-1.07
01/26/23	77.99	6226.01	-0.15		NR				76.41	5575.45	-0.48		111.72	5579.53	-0.42	
02/27/23	77.87	6226.13	0.12		NR				76.86	5575.00	-0.45		111.87	5579.38	-0.15	
03/31/23	77.89	6226.11	-0.02		NR				77.24	5574.62	-0.38		112.21	5579.04	-0.34	
04/24/23	77.67	6226.33	0.22		54.94	6235.06	1.98		76.58	5575.28	0.66		111.94	5579.31	0.27	
05/25/23	74.50	6229.50	3.17		55.59	6234.41	-0.65		75.78	5576.08	0.80		111.36	5579.89	0.58	
06/30/23	72.62	6231.38	1.88		53.85	6236.15	1.74		75.70	5576.16	0.08		110.99	5580.26	0.37	
07/29/23	71.16	6232.84	1.46		52.21	6237.79	1.64		74.81	5577.05	0.89		110.81	5580.44	0.18	
08/31/23	69.89	6234.11	1.27		50.42	6239.58	1.79		73.50	5578.36	1.31		109.79	5581.46	1.02	
09/27/23	69.57	6234.43	0.32		49.93	6240.07	0.49		72.52	5579.34	0.98		109.15	5582.10	0.64	
10/26/23	69.39	6234.61	0.18		49.45	6240.55	0.48		72.72	5579.14	-0.20		109.15	5582.10	0.00	
11/28/23	69.54	6234.46	-0.15		49.23	6240.77	0.22		73.60	5578.26	-0.88		109.90	5581.35	-0.75	
12/29/23	69.99	6234.01	-0.45		49.46	6240.54	-0.23		72.29	5579.57	1.31		110.08	5581.17	-0.18	
Yearly Change				7.85				7.46				3.64				1.22
01/29/24	70.34	6233.66	-0.35		49.76	6240.24	-0.30		75.04	5576.82	-2.75		110.65	5580.60	-0.57	
02/27/24	70.67	6233.33	-0.33		NR				74.63	5577.23	0.41		109.85	5581.40	0.80	
03/31/24	70.89	6233.11	-0.22		50.03	6239.97	-0.27		73.57	5578.29	1.06		108.75	5582.50	1.10	
04/24/24																
05/25/24																
06/30/24																
07/29/24																
08/31/24																
09/27/24																
10/26/24																
11/28/24																
12/29/24																
Yearly Change				-0.90				-0.57				-1.28				1.33

Orphan Boy Mine elevation changed following February 2005 survey, due to installation of casing into mine shaft for monitoring purposes.

Butte Mine Flooding Outer Camp Water-Levels

Periodic Monitoring

ORPHAN BOY AREA

DATE (mmddyy)	Orphan Boy SWL(ft)	Orphan Boy		Yearly Change	Seep Flow (gpm)	Yearly Average (gpm)
		Elevation* (ft)	Mo. Diff. (ft)			
		5689.66	5691.25			
01/30/20	108.97	5582.28	-1.00		87.2	
02/25/20	107.15	5584.10	1.82		51.0	
03/24/20	106.22	5585.03	0.93		59.0	
04/27/20	105.74	5585.51	0.48		43.7	
05/26/20	105.74	5585.51	0.00		47.2	
06/26/20	105.81	5585.44	-0.07		51.0	
07/27/20	105.71	5585.54	0.10		68.0	
08/27/20	105.76	5585.49	-0.05		72.0	
09/28/20	105.93	5585.32	-0.17		77.0	
10/27/20	107.44	5583.81	-1.51		87.0	
11/30/20	110.22	5581.03	-2.78		72.0	
12/28/20	111.35	5579.90	-1.13	-3.38	68.0	65.3
01/26/21	111.95	5579.30	-0.60		77.0	
02/25/21	112.52	5578.73	-0.57		51.0	
03/30/21	112.84	5578.41	-0.32		77.0	
04/23/21	111.28	5579.97	1.56		77.0	
05/26/21	110.74	5580.51	0.54		44.0	
06/25/21	110.18	5581.07	0.56		44.0	
07/27/21	109.82	5581.43	0.36		44.0	
08/30/21	109.60	5581.65	0.22		77.0	
09/29/21	109.66	5581.59	-0.06		43.7	
10/29/21	110.99	5580.26	-1.33		37.1	
11/30/21	110.47	5580.78	0.52		47.2	
01/03/22	110.23	5581.02	0.24	1.12	51.0	55.8
01/24/22	110.41	5580.84	-0.18		47.0	
02/18/22	110.61	5580.64	-0.20		40.3	
03/31/22	110.70	5580.55	-0.09		28.0	
04/27/22	110.85	5580.40	-0.15		28.0	
05/25/22	110.99	5580.26	-0.14		33.9	
06/30/22	110.98	5580.27	0.01		33.9	
07/29/22	110.95	5580.30	0.03		31.0	
08/31/22	111.01	5580.24	-0.06		18.5	
09/28/22	111.01	5580.24	0.00		18.5	
10/26/22	110.98	5580.27	0.03		18.5	
11/28/22	111.90	5579.35	-0.92		23.0	
12/29/22	111.30	5579.95	0.60	-1.07	25.5	28.8
01/26/23	111.72	5579.53	-0.42		23.0	
02/27/23	111.87	5579.38	-0.15		16.3	
03/31/23	112.21	5579.04	-0.34		28.0	
04/24/23	111.94	5579.31	0.27		16.4	
05/25/23	111.36	5579.89	0.58		20.7	
06/30/23	110.99	5580.26	0.37		25.5	
07/29/23	110.81	5580.44	0.18		63.0	
08/31/23	109.79	5581.46	1.02		51.0	
09/27/23	109.15	5582.10	0.64		59.0	
10/26/23	109.15	5582.10	0.00		59.0	
11/28/23	109.90	5581.35	-0.75		77.0	
12/29/23	110.08	5581.17	-0.18	1.22	82.0	43.4
01/29/24	110.65	5580.60	-0.57		77.0	
02/27/24	109.85	5581.40	0.80		140.0	
03/31/24	108.75	5582.50	1.10		98.0	

**Montana Bureau of Mines and Geology
Horseshoe Bend Drainage
Water Quality Data**

04/10/24
Horseshoe Bend Drainage
M#:125744

Collector/ Lab Analysis	Date (mm/dd/yy)	Time (HRS)	PHYSICAL PARAMETERS FIELD					DISSOLVED CONCENTRATION LAB											DISSOLVED CONCENTRATION						
			Discharge (gpm)	pH	SC (uMHOS)	Temp (C)	Eh (MV)	pH	SC (uMHOS)	Hardness (mg/l)	Alkalinity (mg/l)	Ca (mg/l)	Mg (mg/l)	Na (mg/l)	K (mg/l)	Fe (mg/l)	Mn (mg/l)	SiO ₂ (mg/l)	HCO ₃ (mg/l)	CO ₃ (mg/l)	Cl (mg/l)	SO ₄ (mg/l)	NO ₂ -N (mg/l)	NO ₃ -N (mg/l)	F (mg/l)
MBMG	07/29/21	12:45	3,535	3.36	4,655	18.0	629	2.84	5,080	1,951	0.0	413	224	77	9.9	165	83	72.0	0.0	0.0	14.5	4,580	<0.05	<0.05	20.22
MBMG	09/02/21	14:25	3,370	3.03	4,390	14.3	639	2.84	4,940	1,899	0.0	423	205	78	10.5	144	78	63.5	0.0	0.0	14.6	4,304	<0.05	<0.05	17.04
MBMG	09/28/21	11:00	3,370	3.24	4,605	11.4	640	2.68	5,030	2,063	0.0	442	233	87	12.6	141	88	69.0	0.0	0.0	15.0	4,626	<0.05	<0.05	20.57
MBMG	10/27/21	11:10	3,875	3.18	4,315	7.0	641	2.68	4,430	1,806	0.0	411	189	83	12.3	141	72	68.5	0.0	0.0	14.6	3,703	<0.05	<0.05	7.14
MBMG	12/07/21	9:50	3,620	2.79	4,805	4.0	646	2.78	4,680	2,060	0.0	448	229	88	12.2	166	97	63.1	0.0	0.0	15.6	4,220	<0.05	<0.05	9.23
MBMG	01/05/22	14:18	3,205	2.81	4,080	2.4	631	2.73	4,280	1,880	0.0	439	190	85	12.6	132	74	62.5	0.0	0.0	14.8	3,795	<0.05	<0.05	8.15
MBMG	01/27/22	10:14	3,205	2.44	4,130	2.8	655	2.87	4,275	1,895	0.0	446	190	89	13.2	123	73	63.3	0.0	0.0	15.2	3,807	<0.05	<0.05	8.34
MBMG	02/25/22	10:42	3,205	2.75	4,250	2.9	637	2.81	4,420	1,966	0.0	451	204	82	12.8	139	78	64.7	0.0	0.0	14.4	3,759	<0.05	<0.05	9.90
MBMG	04/01/22	11:35	3,205	2.84	4,445	6.8	634	2.66	4,640	1,821	0.0	408	195	77	12.2	143	80	67.1	0.0	0.0	15.0	3,686	<0.05	0.27	11.70
MBMG	04/28/22	17:04	3,205	3.07	4,375	11.5	638	2.83	4,515	1,947	0.0	443	204	87	15.6	149	84	67.6	0.0	0.0	17.4	3,491	<0.05	0.49	13.55
MBMG	06/01/22	10:01	3,535	3.03	4,280	11.2	645	2.70	4,485	1,846	0.0	428	189	85	12.7	132	77	63.2	0.0	0.0	15.2	3,603	<0.05	<0.05	9.75
MBMG	07/01/22	11:24	3,205	2.98	4,375	13.8	678	2.61	4,550	1,878	0.0	444	187	91	14.4	115	75	62.4	0.0	0.0	15.8	3,462	<0.05	<0.05	11.45
MBMG	08/03/22	9:06	3,205	3.06	4,290	13.9	690	2.87	4,550	1,934	0.0	448	198	85	16.4	117	76	63.3	0.0	0.0	15.5	3,520	<0.05	0.18	8.12
MBMG	08/24/22	8:28	3,290	3.01	4,345	14.1	681	2.75	4,665	1,899	0.0	433	199	94	14.7	116	80	64.0	0.0	0.0	15.0	3,724	0.24	0.20	8.71
MBMG	09/27/22	7:55	3,205	2.95	4,250	11.1	676	2.78	4,620	1,892	0.0	440	193	85	12.6	121	74	61.0	0.0	0.0	15.1	3,747	<0.005	0.16	6.92
MBMG	10/27/22	10:40	3,205	2.77	4,275	6.1	651	2.83	4,720	1,963	0.0	457	200	88	13.8	137	76	61.9	0.0	0.0	15.0	3,432	<0.05	0.18	7.08
MBMG	11/30/22	8:45	3,045	4.21	4,430	2.3	506	3.16	4,645	1,939	0.0	456	195	91	15.4	134	75	64.3	0.0	0.0	16.7	3,539	<0.05	0.34	11.69
MBMG	12/30/22	8:40	2,730	3.10	4,360	4.6	626	2.81	4,700	1,955	0.0	457	198	91	13.0	128	76	63.1	0.0	0.0	15.4	3,499	<0.05	0.20	11.71
MBMG	01/27/23	11:23	2,885	3.19	4,445	6.0	624	2.96	4,755	1,936	0.0	444	201	82	14.0	126	79	67.9	0.0	0.0	16.1	3,600	<0.05	0.29	12.42
MBMG	03/01/23	8:50	2,730	3.25	4,385	3.9	615	2.83	4,755	1,873	0.0	436	190	87	12.8	136	75	66.2	0.0	0.0	15.4	3,350	0.23	0.25	11.14
MBMG	03/29/23	8:45	2,650	3.34	4,295	5.7	615	2.98	4,650	1,777	0.0	414	181	82	12.1	141	72	66.9	0.0	0.0	16.6	3,459	<0.05	0.40	11.22
MBMG	04/26/23	9:25	2,885	3.54	4,195	8.0	606	3.17	4,640	1,891	0.0	446	189	88	13.4	127	75	65.1	0.0	0.0	16.8	3,297	<0.05	0.33	11.56
MBMG	05/23/23	10:20	2,730	3.28	4,375	12.1	674	3.83	4,325	1,930	0.0	449	197	89	14.2	127	72	61.3	0.0	0.0	15.5	3,282	<0.05	0.33	11.88
MBMG	06/26/23	8:38	2,805	3.27	4,505	12.5	702	2.82	4,455	1,964	0.0	453	203	86	15.4	118	77	60.1	0.0	0.0	16.2	3,344	0.25	0.44	12.70
MBMG	07/27/23	9:05	2,730	3.19	4,470	14.2	677	2.90	4,420	2,012	0.0	465	207	89	13.3	117	75	66.1	0.0	0.0	16.3	3,379	0.25	0.37	12.30
MBMG	09/06/23	12:08	2,730	3.60	4,320	13.0	682	2.83	4,385	1,943	0.0	456	195	88	14.2	109	72	62.6	0.0	0.0	16.7	3,385	0.22	0.28	11.27
MBMG	09/25/23	10:35	2,965	3.09	4,490	11.8	682	2.76	4,650	2,126	0.0	478	227	86	14.9	125	83	66.1	0.0	0.0	16.6	3,550	<0.05	0.25	11.96
MBMG	10/17/23	9:10	2,885	4.04	4,425	12.5	639	2.62	4,740	1,993	0.0	438	218	84	13.2	151	80	66.3	0.0	0.0	16.9	3,731	0.12	5.46	14.10
MBMG	11/29/23	8:24	2,730	3.02	4,335	4.3	650	2.94	4,530	1,986	0.0	433	198	86	13.1	130	75	68.8	0.0	0.0	17.2	3,520	<0.05	<0.05	12.96
MBMG	01/02/24	10:30	2,650	2.40	4,325	3.3	667	2.68	4,540	1,965	0.0	449	205	89	13.8	128	80	68.6	0.0	0.0	17.8	3,515	<0.05	<0.05	13.20
MBMG	01/31/24	8:30	2,650	2.61	4,335	5.9	660	2.76	4,570	1,951	0.0	445	204	84	13.9	123	83	69.3	0.0	0.0	17.2	3,441	<0.05	0.26	11.66
MBMG	02/28/24	8:40	2,575	3.15	4,645	4.1	638	2.93	4,660	2,026	0.0	461	212	86	14.3	131	82	66.0	0.0	0.0	17.4	3,502	<0.05	0.40	12.40
Mean Value			2,874	3.25	5,208	11.1	566	3.00	5,673	2,425	0	441	321	78	9.5	284	117	77	0.0	0.0	15.40	5,256	1.1	0.4	16.79
Maximum Value			6,350	5.65	9,010	22.9	821	3.96	11,540	3,763	15	555	655	100	16.4	937	361	102	0.0	0.0	33.60	13,453	9.8	5.5	48.61
Minimum Value			820	1.52	1,523	2.2	286	2.14	3,920	1,777	0	384	106	61	1.5	97	72	56	0.0	0.0	8.69	3,010	0.1	0.1	1.24
Number Readings			295	292	296	295	289	294	293	299	297	300	300	300	299	300	300	292	292	292	228	292	31	72	285

nd/na - not measured or analyzed

**Montana Bureau of Mines and Geology
Horseshoe Bend Drainage
Water Quality Data**

04/10/24
Horseshoe Bend Drainage
M#:125744

DISSOLVED CONCENTRATION

Collector/ Lab Analysis	Date (mm/dd/yy)	Al (ug/l)	Ag (ug/l)	As (ug/l)	B (ug/l)	Be (ug/l)	Cd (ug/l)	Cr (ug/l)	Co (ug/l)	Cu (ug/l)	Hg (ug/L)	Li (ug/l)	Mo (ug/l)	Ni (ug/l)	Pb (ug/l)	Se (ug/l)	Sr (ug/l)	Ti (ug/l)	Tl (ug/l)	U (ug/l)	V (ug/l)	Zn (ug/l)	Zr (ug/l)
MBMG	07/29/21	134,278	<1.0	<1.0	104.5	15.1	646	11.3	531	22,888	<0.01	101.6	<1.0	395	2.7	<1.0	844	48.0	<1.0	182	<1.0	152,862	3.01
MBMG	09/02/21	116,172	<1.0	<1.0	117.8	13.5	635	10.9	485	24,654	<0.01	100.2	<1.0	355	2.8	<1.0	962	35.2	<1.0	185	<1.0	144,623	5.99
MBMG	09/28/21	130,698	<1.0	2.0	249.2	19.2	797	11.7	646	28,023	<0.005	103.5	<1.0	492	4.1	6.67	1,163	68.9	<1.0	217	<1.0	171,966	7.59
MBMG	10/27/21	108,554	<0.7	2.5	252.2	12.4	603	9.0	462	29,757	<0.01	71.7	<0.07	359	3.2	5.13	1,039	63.0	<0.7	151	<0.7	135,676	2.20
MBMG	12/07/21	123,247	<1.0	7.1	121.5	16.1	773	10.5	560	26,896	<0.01	92.0	<1.0	420	3.4	6.01	1,083	38.3	<1.0	182	7.57	182,671	<1.0
MBMG	01/05/22	102,742	<1.0	4.4	73.5	16.7	860	12.0	527	36,966	<0.005	90.3	2.15	382	5.3	5.27	1,147	33.5	<1.0	171	6.69	137,037	3.46
MBMG	01/27/22	101,446	<1.0	9.9	72.1	16.6	785	10.3	522	38,830	0.005	91.4	2.01	366	5.6	5.66	1,166	31.8	<1.0	163	11.55	135,114	3.08
MBMG	02/25/22	112,147	<1.0	7.0	<5.0	13.5	669	<1.0	505	42,840	0.008	61.5	<1.0	346	3.9	5.13	1,096	43.6	<1.0	158	72.17	141,070	<1.0
MBMG	04/01/22	125,979	<1.0	10.2	92.8	12.8	663	11.3	533	43,978	<0.005	65.9	<1.0	360	4.2	8.25	1,128	74.9	<1.0	172	<1.0	147,873	2.46
MBMG	04/28/22	122,744	<1.0	9.3	8.8	14.1	695	12.2	544	46,168	<0.005	64.9	2.42	356	4.7	8.66	1,194	63.4	<1.0	164	<1.0	149,333	<1.0
MBMG	06/01/22	110,301	<1.0	7.2	12.6	14.1	731	5.1	503	43,205	0.007	74.1	<1.0	367	3.9	5.44	1,089	64.6	<1.0	163	90.34	140,819	<1.0
MBMG	07/01/22	104,027	<1.0	2.9	9.0	13.3	696	<1.0	502	42,155	0.010	65.6	<1.0	355	4.7	4.98	1,156	62.4	<1.0	147	88.66	136,327	<1.0
MBMG	08/03/22	116,169	<1.0	5.3	14.4	15.0	723	3.3	493	39,442	0.007	69.1	<1.0	341	5.2	5.23	1,051	44.5	<1.0	160	139.2	146,632	<1.0
MBMG	08/24/22	119,543	<1.0	3.7	103.0	15.2	737	4.2	494	39,684	<0.005	71.9	<1.0	339	5.2	6.13	1,033	34.8	<1.0	164	93.24	142,833	<1.0
MBMG	09/27/22	111,491	<1.0	4.8	<5.0	13.9	681	5.8	472	42,597	<0.005	66.0	<1.0	339	4.7	5.62	1,070	42.9	<1.0	152	<1.0	134,147	<1.0
MBMG	10/27/22	115,469	<1.0	7.4	<5.0	14.6	680	5.0	491	40,478	<0.005	63.8	<1.0	344	9.9	6.16	1,187	47.7	<1.0	158	<1.0	137,308	<1.0
MBMG	11/30/22	108,664	<1.0	4.8	98.7	12.8	670	2.5	498	43,450	<0.005	83.6	<1.0	338	6.7	5.26	1,215	56.3	<1.0	154	<1.0	137,776	<1.0
MBMG	12/30/22	108,155	<1.0	5.3	96.3	14.6	693	4.3	515	45,319	<0.005	79.1	2.03	349	20.0	4.55	1,754	50.3	<1.0	152	<1.0	138,458	<1.0
MBMG	01/27/23	122,590	<1.0	4.3	27.8	16.0	733	7.8	553	48,674	<0.005	88.7	2.31	371	17.3	6.38	1,204	76.8	<1.0	170	4.72	154,361	<1.0
MBMG	03/01/23	120,050	<1.0	2.9	82.8	14.0	714	<1.0	515	41,882	<0.005	72.5	<1.0	343	10.2	5.54	1,110	53.0	<1.0	153	<1.0	140,386	<1.0
MBMG	03/29/23	107,463	<1.0	5.0	88.3	13.9	679	3.5	499	39,266	<0.005	71.3	<1.0	324	9.3	<1.0	1,149	57.7	<1.0	158	<1.0	131,866	<1.0
MBMG	04/26/23	106,810	<1.0	<1.0	39.1	14.0	620	<1.0	495	29,326	<0.005	59.8	<1.0	349	10.1	6.65	1,316	74.4	<1.0	160	<1.0	140,907	<1.0
MBMG	05/23/23	104,810	<1.0	3.7	43.6	15.8	615	7.1	552	25,415	0.006	76.3	<1.0	371	11.8	9.35	1,331	66.8	<1.0	176	<1.0	133,802	<1.0
MBMG	06/26/23	114,475	<1.0	6.2	6.4	13.0	673	<1.0	526	37,471	0.031	56.0	<1.0	351	9.8	6.42	1,320	75.0	<1.0	175	<1.0	137,548	<1.0
MBMG	07/27/23	109,004	<1.0	4.5	40.0	15.4	757	7.0	528	45,879	0.006	71.3	<1.0	353	16.0	8.07	1,446	94.6	<1.0	191	<1.0	139,478	<1.0
MBMG	09/06/23	112,853	<1.0	5.9	22.1	14.2	633	14.6	506	49,527	<0.005	87.1	2.96	339	7.8	5.78	1,258	61.8	<1.0	174	<1.0	132,956	<1.0
MBMG	09/25/23	128,761	<1.0	11.0	23.3	15.5	723	<1.0	595	51,469	<0.005	67.6	3.84	388	8.3	13.41	1,481	69.3	<1.0	202	<1.0	155,993	<1.0
MBMG	10/17/23	147,931	2.97	14.1	<5.0	14.9	639	4.4	594	49,180	<0.005	64.0	2.33	380	8.2	9.15	1,269	53.2	<1.0	201	<1.0	148,625	<1.0
MBMG	11/29/23	120,284	<1.0	9.8	10.3	14.4	689	11.1	543	47,531	<0.005	65.1	2.72	375	8.8	9.51	1,314	68.8	<1.0	177	<1.0	137,470	1.25
MBMG	01/02/24	125,338	<1.0	7.9	100.3	13.9	681	5.7	549	52,217	<0.005	64.7	3.47	386	4.7	7.86	1,201	69.7	<1.0	169	<1.0	148,521	2.22
MBMG	01/31/24	130,121	2.27	9.0	66.7	14.0	703	10.1	566	52,273	<0.005	64.5	4.19	355	9.5	10.07	1,296	75.8	<1.0	163	<1.0	152,991	2.59
MBMG	02/28/24	130,242	<1.0	15.6	<5.0	7.3	711	10.9	509	55,661	0.007	62.7	<1.0	326	28.7	8.42	1,330	116.6	<1.0	176	4.36	151,180	<1.0
	Mean Value	213,650	6	10.8	110	25.2	1,116	34.4	800	38,899	0.009	127	5	568	5.2	14	1,012	61.8	3.15	305	14.2	244,001	6
	Maximum Valu	657,448	27	66.5	513	52.9	2,151	224.6	1,429	101,000	0.031	703	33	1,165	59.1	148	1,754	157	13.20	664	139.2	434,103	23
	Minimum Valu	92,344	1	0.9	1	7.3	595	2.5	340	10,485	0.001	7	1	148	0.6	2	587	1.3	0.23	105	0.8	131,866	1.0
	Number Readin	296	32	215	190	272	302	236	302	302	10	296	77	300	147	223	297	186	10	282	122	302	58

nd/na - not measured or analyzed