



Water Appropriation Permit Applications

Individual Non-Irrigation

Prepared for
Poly Met Mining, Inc.



POLYMET
MINING

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Table 5-3 Estimated Pumping Summary: by Individual Permit

Individual Permit	Maximum Daily Rate ⁽¹⁾ (gpm)	Maximum Monthly Rate ⁽¹⁾⁽²⁾ (gpm)	Maximum Annual Rate ⁽¹⁾⁽³⁾ (gpm)	Maximum Annual Volume ⁽⁴⁾ (MG)	Average Annual Rate ⁽⁵⁾ (gpm)
East Pit	2,340 ⁽⁶⁾	1,900	1,900	1,000	200 – 800
Central Pit	1,300 ⁽⁶⁾	1,300	1,300	700	50 – 250
West Pit	2,640 ⁽⁶⁾	1,500	1,500	800	150 – 550
Mine Site Infrastructure ⁽⁷⁾	20,250 ⁽⁸⁾	2,250	2,250	1,200	50 – 500
Plant Site Infrastructure ⁽⁷⁾	3,750 ⁽⁹⁾	1,300	1,300	675	250 – 300
Colby Lake	3,400 ⁽¹⁰⁾	3,400 ⁽¹¹⁾	3,400	1,800	550-2,000

- (1) Maximum daily, monthly, and annual pumping rates for the Individual Permits occur in different time periods. Rates cannot be summed.
- (2) Highest monthly value of all installations included in permit have been combined: P90 for pit dewatering, operation of the Category 1 Stockpile Groundwater Containment System, precipitation collected in lined features; runoff collected from compacted features, and Colby Lake needs; engineering estimate for other installations with uncertainty factors applied, and rounded up to the nearest 50 gpm.
- (3) To be conservative, maximum annual rate is set equal to maximum monthly rate.
- (4) Maximum annual volume is calculated from the maximum annual rate, rounded up to the nearest 25 MG.
- (5) Range of the average monthly P50 values, on an annual basis, over the years of the appropriation, plus any appropriations associated with scheduled overburden stripping, rounded up to the nearest 50 gpm. This information is provided for context.
- (6) Maximum daily rate based on the design pump capacity.
- (7) See Appendix C for details on the installations that contribute to the maximum rate, the uncertainty factors applied to the flow from each installation, and the rounding that was applied.
- (8) Maximum daily rate is driven by design pump capacities, but also includes short-term construction dewatering that lasts less than one month. To be conservative, all short-term dewatering installations scheduled for a given month are assumed to occur concurrently.
- (9) Maximum daily rate is driven by short-term construction dewatering that lasts less than one month. To be conservative, all short-term dewatering installations scheduled for a given month are assumed to occur concurrently.
- (10) Maximum daily rate set equal to maximum monthly rate, because rate was estimated in GoldSim on a monthly basis.
- (11) Maximum monthly rate includes P90 Goldsim estimate of primary make-up water demands, and engineering estimates of other make-up water demands, See Table 5-6 for details. .

Table 5-4 Estimated Pumping by Installation: Mine Site Infrastructure Permit

Installations	Pumping Schedule	Maximum Daily Rate (gpm)	Total Volume ⁽¹⁾ (MG)
Ore Surge Pile foundation, sumps, and overflow ponds construction	Intermittent, pre-operation construction	200 ⁽²⁾	30
Construction of new buildings	Intermittent, pre-operation construction	50 ⁽²⁾	5
Mine water pond construction	Intermittent, pre-operation construction to Mine Year 6	200 ⁽²⁾	40
Stormwater pond construction	Intermittent, pre-operation construction to Mine Year 2	750 ⁽²⁾	35
Category 4 Waste Rock Stockpile foundation, sumps, and overflow ponds construction	Intermittent, pre-operation construction to Mine Year 3	850 ⁽²⁾	50
Category 2/3 Waste Rock Stockpile foundation, sumps, and overflow ponds construction	Intermittent, pre-operation construction to Mine Year 6	1,525 ⁽²⁾	135
Category 1 Waste Rock Stockpile foundation construction	Intermittent, Pre-operation construction to Mine Year 6	3,375 ⁽²⁾	45
Category 1 Stockpile Groundwater Containment System construction	Intermittent, pre-operation construction to Mine Year 5	275 ⁽²⁾	80
Category 1 Stockpile Groundwater Containment System operation	Continuous, Mine Years 1 to 21	14,400 ⁽³⁾	3,115
Category 2/3 Waste Rock Stockpile liner mine water drainage (collected precipitation)	Continuous, Mine Years 1 to 19	430 ⁽³⁾	1,115
Category 2/3 Waste Rock Stockpile underdrain operation, if needed	Continuous, Mine Years 1 to 19	50 ⁽²⁾	185
Category 4 Waste Rock Stockpile liner mine water drainage (collected precipitation)	Continuous, Mine Years 1 to 11	130 ⁽³⁾	230
Category 4 Waste Rock Stockpile underdrain operation, if needed	Continuous, Mine Years 1 to 11	25 ⁽²⁾	40
Ore Surge Pile liner mine water drainage (collected precipitation)	Continuous, Mine Years 1 to 20	80 ⁽³⁾	255
Ore Surge Pile underdrain operation, if needed	Continuous, Mine Years 1 to 20	25 ⁽²⁾	85
Haul Roads, OSLA and RTH mine water runoff (collected runoff and precipitation)	Continuous, Mine Years 1 to 20	470 ⁽³⁾	795