



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Bureau of Mining Programs

2020 Bond Rate Guidelines for the Calculation of Land Reclamation Bonds on Coal Mining Operations

MRAB Meeting
January 23, 2020

2019 AML Reclamation Grading Costs

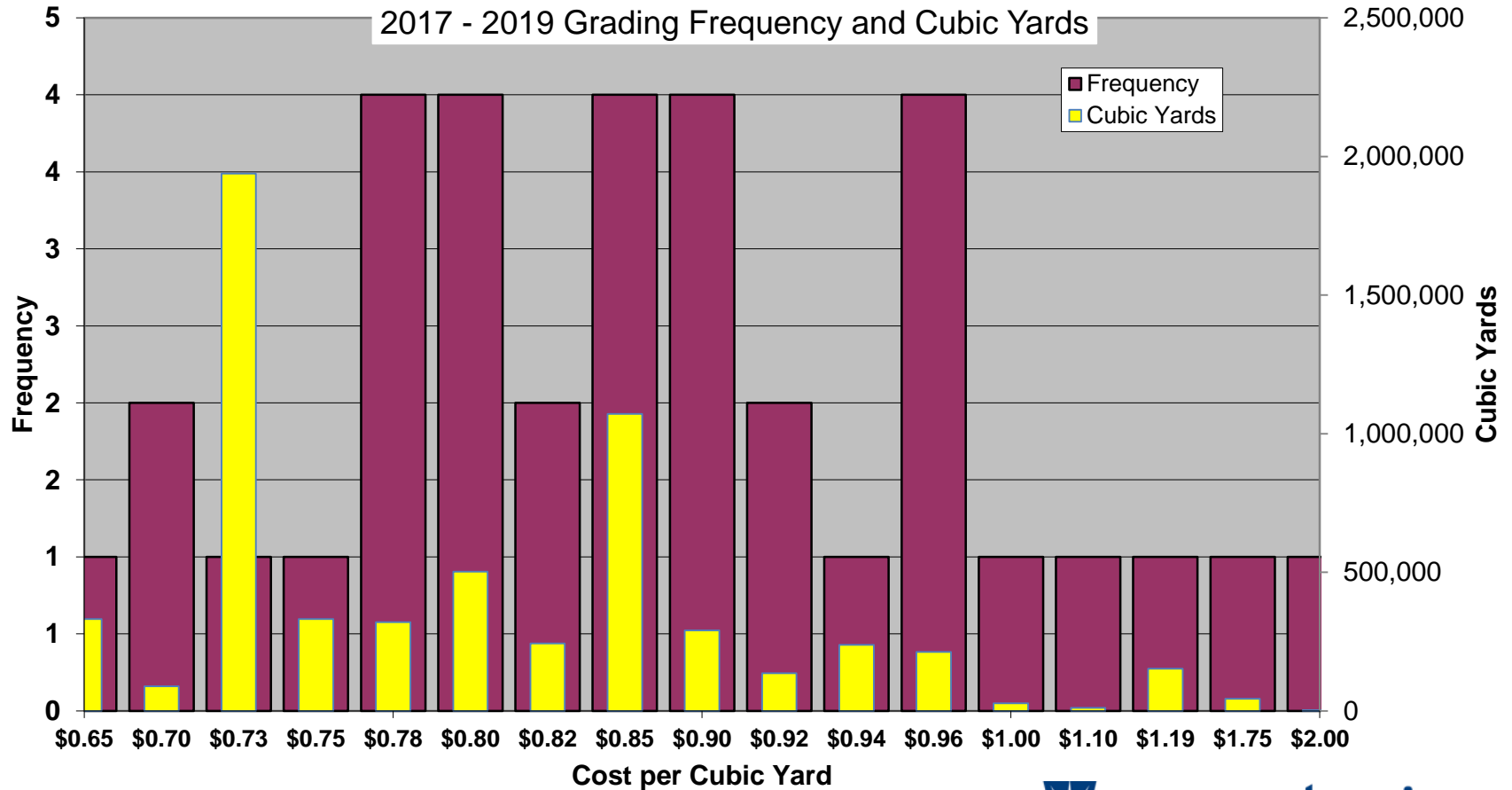
- 4 reclamation projects with 2,070,030 total cubic yards
- Cost per cubic yard ranged from \$0.80 to \$2.00
- low bid average at \$0.88
- Current 2017 – 2019 low bid weighted average at \$0.79 for 500 ft. or less

2017-2019 AML Reclamation Grading

Low Bid Grading Costs for 2017 - 2019

Unit Cost	2017 CY	2017 Freq	2018 CY	2018 Freq	2019 CY	2019 Freq	Combined Total CY	Combined Freq	Total Cost	Selected CY	Ave Cost CY
\$0.65	331,473	1					331,473	1	\$215,457		
\$0.70	88,127	2					88,127	2	\$61,689		
\$0.73			1,937,857	1			1,937,857	1	\$1,414,636		
\$0.75	331,473	1					331,473	1	\$248,605		
\$0.78	187,200	2	132,700	2			319,900	4	\$249,522		
\$0.80					502,200	4	502,200	4	\$401,760		
\$0.82	243,475	2					243,475	2	\$199,650		
\$0.85			129,261	2	942,220	2	1,071,481	4	\$909,687		
\$0.90	265,620	3	24,180	1			289,800	4	\$260,530		
\$0.92	136,000	2					136,000	2	\$125,120		
\$0.94					238,000	1	238,000	1	\$223,720		
\$0.96			212,900	4			212,900	4	\$204,384	5,702,686	\$0.79
\$1.00					27,120	1	27,120	1	\$27,120	5,729,806	\$0.79
\$1.10	10,761	1					10,761	1	\$11,837	5,740,567	\$0.79
\$1.19					152,000	1	152,000	1	\$180,880	5,561,094	\$0.81
\$1.75			44,000	1			44,000	1	\$77,000	206,761	\$1.30
\$2.00					2,490	1	2,490	1	\$4,980	209,251	\$1.31

2017 -2019 AML Reclamation Grading



Haulage AML Reclamation Grading Refuse Disposal and Underground

Low Bid Grading Costs for Haulage

Unit Cost	Project 1	Project 2	Combined Total CY	Total Cost	Total Cubic Yards
\$1.18	153,000		153,000	\$180,540	8,110,097
\$1.25	16,000		16,000	\$20,000	
\$1.75	36,000		36,000	\$63,000	
\$1.93	2,147,000		2,147,000	\$4,143,710	
\$1.97	1,355,097		1,355,097	\$2,669,541	
\$2.08	193,000	55,000	248,000	\$515,840	
\$2.82	429,000		429,000	\$1,209,780	
\$2.90	173,000		173,000	\$501,700	
\$3.19	2,404,000		2,404,000	\$7,668,760	
\$3.42	399,000	750,000	1,149,000	\$3,929,580	

\$2.58 Average Cost Per Cubic Yard

Haulage AML Reclamation Grading Refuse Disposal and Underground

- Selected haulage low bid reclamation projects with 8,110,097 total cubic yards
- Cost per cubic yard ranged from \$1.18 to \$3.42
- low bid average at \$2.58 for 1,000 ft up to 1 mile

2019 AML Reclamation Revegetation

- 5 reclamation projects with 262.3 acres revegetation
- Cost per acre of the low bid ranged from \$847.66 to \$2,574.66
- 3 year weighted average of low bid was \$1,830.07

2019 AML Reclamation Mulch, Seed Bed Preparation and Seed

- Mulch cost per acre low bid weighted average \$918.36.
- 3 year weighted average of Mulch cost is \$892.14.
- Seed Bed Prep cost per acre low bid weighted average \$220.06
- 3 year weighted average of Seed Bed Prep is \$218.56.
- Seed cost per acre of low bid weighed average \$371.16.
- 3 year weighted average of Seed is \$379.74.

2017-2019 Bond Rate Data 2020 Projected with Current Data

Unit	2017 wgt ave	2017 amt	2018 wgt ave	2018 amt	2019 wgt ave	2019 amt	17-19 Weighted	2018	2019	2020
Grading up to 500 ft CY	\$0.82	1,262,656	\$0.78	2,431,698	\$0.88	2,070,030	\$0.83	\$0.85	\$0.90	\$0.80
Grading Haul over 500 ft CY								\$1.55	\$1.50	\$1.30
Select Grading Haul 1000 ft up to 1 mile Refuse and Underground CY								\$1,700.00	\$1,700.00	\$1,700.00
										\$2.50

2017-2019 Bond Rate Data 2020 Projected with Current Data

	2018	2018	2019	2019	2020	2020
Reveg Tot	\$2,000.00	\$2,000.00	\$2,000.00	\$2,000.00	\$1,830.00	\$1,830.00
Mulch	\$870.00	\$870.00	\$880.00	\$880.00	\$900.00	\$900.00
Seed Bed	\$250.00	\$250.00	\$280.00	\$280.00	\$220.00	\$220.00
Seed	\$270.00		\$290.00		\$370.00	
	\$610.00	\$880.00	\$550.00	\$840.00	\$340.00	\$710.00
	Pasture	w/seed	Pasture	w/seed	Pasture	w/seed



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Bruce Carl
Bureau of Mining Programs
717-783-3516
brcarl@pa.gov