



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Bureau of Mining Programs

2015 Bond Rate Guidelines for the Calculation of Land Reclamation Bonds on Coal Mining Operations

MRAB Meeting

July 17, 2014

2014 AML Reclamation Grading Costs

2014 AML Reclamation Grading Costs - 3 Lowest Project Bids

Reclamation Project	DESCRIPTION	QUANTITIES	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL		
			Cost per CY	Low Project Bid	Cost per CY	2nd Project Bid	Cost per CY	3rd Project Bid		
OSM 14(6811)101.1	Grading	208,000	\$0.85	\$176,800.00	\$0.88	\$183,040.00	\$0.92	\$191,360.00		
OSM 17(7070,7066)101.1	Grading									
	(A) Site "A"	18,832	\$0.80	\$15,065.60	\$1.00	\$18,832.00	\$1.60	\$30,131.20		
	(B) Site "B"	531,275	\$0.77	\$409,081.75	\$0.88	\$467,522.00	\$0.82	\$435,645.50		
	(C) From Site "B" to Site "A"	7,000	\$11.00	\$77,000.00	\$7.74	\$54,180.00	\$7.45	\$52,150.00		
OSM 14(6787)101.1	Grading	749,000	\$0.80	\$599,200.00	\$0.86	\$644,140.00	\$0.90	\$674,100.00		
OSM 16(3458)101.1	Grading	33,400	\$1.00	\$33,400.00	\$1.00	\$33,400.00	\$0.90	\$30,060.00		
OSM 30(2791)102.1	D. Grading Areas	42,000	\$1.00	\$42,000.00	\$2.40	\$100,800.00	\$4.00	\$168,000.00		
OSM 14(4565)101.1	Grading									
	A. Standard Grading	591,250	\$0.68	\$402,050.00	\$0.84	\$496,650.00	\$0.85	\$502,562.50		
OSM 26(1080)102.1	Grading	2,400	\$1.13	\$2,712.00	\$5.00	\$12,000.00	\$3.00	\$7,200.00		
7		2,183,157	\$0.80	\$1,757,309.35	\$0.92	\$2,010,564.00	\$0.96	\$2,091,209.20	\$0.89	\$1,953,027.52
	Omit line in red	1,968,157	\$0.76	\$1,503,509.35	\$0.90	\$1,773,344.00	\$0.94	\$1,847,699.20	\$0.87	\$1,708,184.18

2012 - 2014 Grading Costs (less than 500)

Total Grading Costs for 2012 - 2014

Unit Cost	2012 Total CY	2012 Freq	2013 Total CY	2013 Freq	2014 Total CY	2014 Freq	Combined Total CY	Combined Freq			
\$0.40			131,110	4			131,110	4	\$52,444		
\$0.48	53,900	1					53,900	1	\$25,872		
\$0.50			136,610	4			136,610	4	\$68,305		
\$0.62	81,900	1	172,000	1			253,900	2	\$157,418		
\$0.68					591,250	1	591,250	1	\$402,050		
\$0.70	443,715	3	1,726,947	4			2,170,662	7	\$1,519,463		
\$0.73	218,000	1					218,000	1	\$159,140		
\$0.74			34,400	2			34,400	2	\$25,456		
\$0.75	3,800	1	291,420	3			295,220	4	\$221,415		
\$0.77					531,275	1	531,275	1	\$409,082		
\$0.78	1,454,726	5					1,454,726	5	\$1,134,686		
\$0.79	424,182	3					424,182	3	\$335,104		
\$0.80	511,596	3	1,556,657	6	767,832	2	2,836,085	11	\$2,268,868		
\$0.81	70,000	1					70,000	1	\$56,700		
\$0.82	57,339	2	286,000	2	531,275	1	874,614	5	\$717,183		
\$0.83	156,950	1					156,950	1	\$496,650		
\$0.84					591,250	1	591,250	1	\$2,451,454		
\$0.85	1,638,161	6	450,050	6	799,250	2	2,887,461	14	\$2,451,454		
\$0.86	129,000	1	183,000	1	749,000	1	1,061,000	3	\$912,460		
\$0.87	117,782	2					117,782	2	\$102,470		
\$0.88	757,222	8	483,950	4	739,275	2	1,980,447	14	\$1,742,793		
\$0.89	59,458	1	317,460	3			376,918	4	\$335,457		
\$0.90	301,600	4	1,976,107	6	782,400	2	3,060,107	12	\$2,751,036	20,307,849	\$0.93
\$0.91	231,307	3	26,040	1			257,347	4	\$234,186		
\$0.92	461,300	3	339,000	2	208,000	1	1,008,300	6	\$927,636		
\$0.94	857,000	1	244,300	2			1,101,300	3	\$1,035,222		
\$0.95	298,500	3	352,050	4			650,550	7	\$618,023		
\$0.96	282,523	1	355,000	2			637,523	3	\$612,022		
\$0.97			57,750	1			57,750	1	\$56,018		
\$0.98	102,800	1	111,170	2			213,970	3	\$209,691		
\$0.99			210,000	2			210,000	2	\$207,900		
\$1.00	440,550	5	79,900	5	127,632	4	648,082	14	\$648,082	24,961,561	\$0.94

2012 - 2014 Grading Costs (greater than 500)

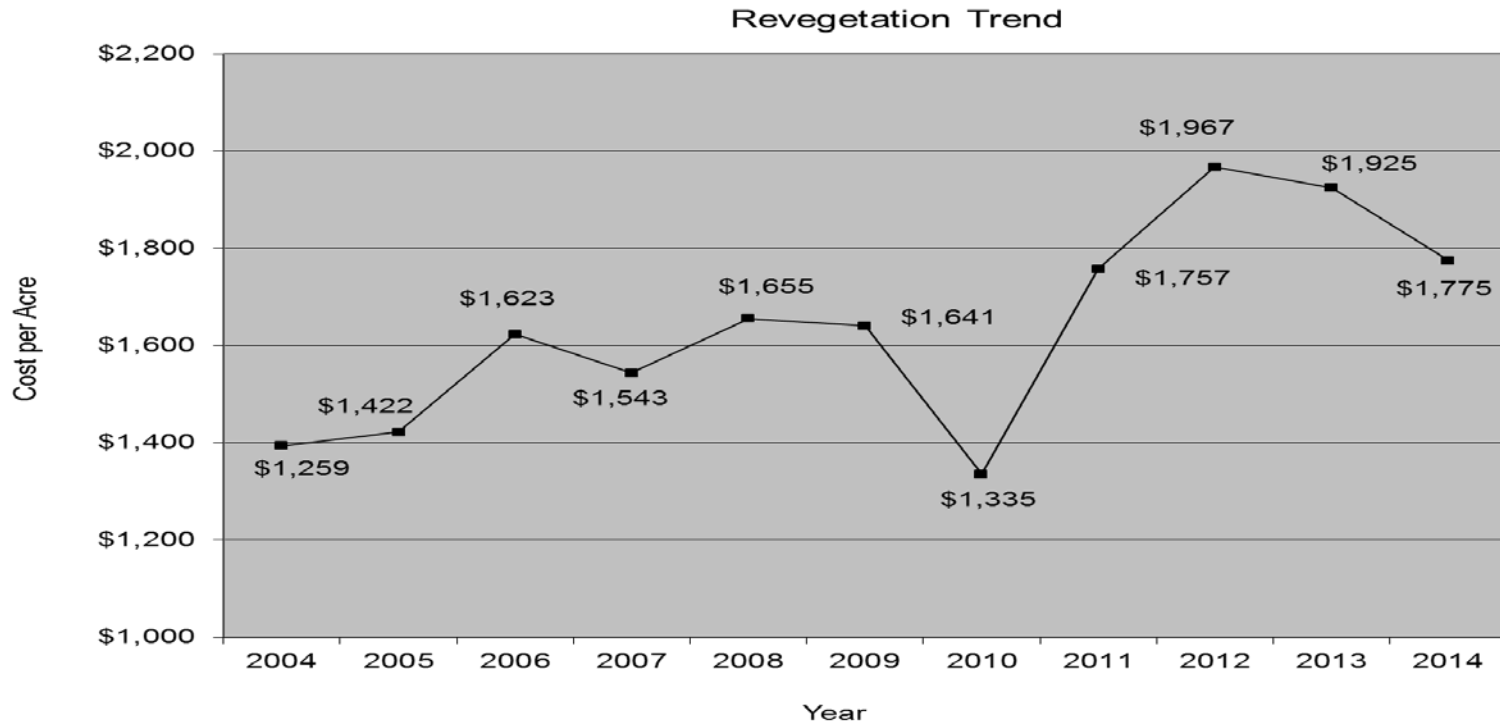
Total Grading Costs for 2012 - 2014

Unit Cost	2012 Total CY	2012 Freq	2013 Total CY	2013 Freq	2014 Total CY	2014 Freq	Combined Total CY	Combined Freq					
\$1.01			17,310	1			17,310	1					\$17,483
\$1.02	66,000	1					66,000	1					\$67,320
\$1.03	2,179,600	2					2,179,600	2					\$2,244,988
\$1.04	358,840	2					358,840	2					\$373,194
\$1.05	946,600	2					946,600	2					\$993,930
\$1.07			57,960	2			57,960	2					\$62,017
\$1.08	104,000	1	199,000	1			303,000	2					\$327,240
\$1.09			49,180	1			49,180	1					\$53,606
\$1.10	282,565	3	62,170	2			344,735	5					\$379,209
\$1.11	341,560	2					341,560	2					\$379,132
\$1.12			461,900	10			461,900	10					\$517,328
\$1.13					2,400	1	2,400	1					\$2,712
\$1.15	11,100	1					11,100	1					\$12,765
\$1.17	145,090	3					145,090	3					\$169,755
\$1.18	77,700	1					77,700	1					\$91,686
\$1.19	89,400	1					89,400	1					\$106,386
\$1.20	2,668,500	7	8,800	1			2,677,300	8					\$3,212,760
\$1.25	2,373,250	5	8,800	1			2,382,050	6					\$2,977,563
\$1.27			2,920	2			2,920	2					\$3,708
\$1.30	1,139,670	5					1,139,670	5					\$1,481,571
\$1.31	81,900	1	1,090	1			82,990	2					\$108,717
\$1.35	169,500	1					169,500	1					\$228,825
\$1.37	135,400	1					135,400	1					\$185,498
\$1.38			11,850	1			11,850	1					\$16,353
\$1.40	63,760	2	8,970	4			72,730	6					\$101,822
\$1.43	42,650	2					42,650	2					\$60,990
\$1.50	313,090	8	24,130	2			337,220	10					\$505,830
\$1.55	165,900	1					165,900	1					\$257,145
\$1.60					18,832	1	18,832	1					\$30,131
\$1.62	880,600	1					880,600	1					\$1,426,572
													\$13,554,677
													\$1.21

2012- 2014 Grading Costs (greater that 500 cont.)

\$1.70	51,660	2					51,660	2	\$87,822			
\$1.75			65,750	1			65,750	1	\$115,063			
\$1.80	21,600	1					21,600	1	\$38,880			
\$1.83	165,900	1					165,900	1	\$303,597			
\$1.85	45,750	1					45,750	1	\$84,638			
\$1.95	7,600	1					7,600	1	\$14,820			
\$2.00	50,260	1	65,750	1			116,010	2	\$232,020			
\$2.24	6,300	1					6,300	1	\$14,112			
\$2.30			130	1			130	1	\$299			
\$2.40					42,000	1	42,000	1	\$100,800			
\$2.50	26,450	2					26,450	2	\$66,125			
\$2.72	213,100	2					213,100	2	\$579,632			
\$2.75	18,300	2					18,300	2	\$50,325			
\$2.95	7,600	1					7,600	1	\$22,420			
\$3.00	7,600	1	22,790	3	2,400	1	32,790	5	\$98,370			
\$3.50	59,400	2					59,400	2	\$207,900			
\$3.59	47,150	2					47,150	2	\$169,269			
\$4.00					42,000	1	42,000	1	\$168,000			
\$4.20			1,090	1			1,090	1	\$4,578			
\$4.60			780	1			780	1	\$3,588			
\$5.00					2,400	1	2,400	1	\$12,000			
\$6.00	47,150	2					47,150	2	\$282,900		14,592,897	\$1.31

10-Year Revegetation Cost Trend



2012-2014 Bond Rate Data 2015 Projected with Current Data

Summary of Calculated Bond Rates by Task

	Unit	2012 wgt ave	2012 amt	2013 wgt ave	2013 amt	2014 wgt ave	2014 amt	12-14 Weighted	2015
Grading1	Yd	\$1.10	7,345,802.0	\$0.87	3,709,847	\$0.87	1,968,157	\$1.00	\$0.95
Grading2	Yd								\$1.30
Select Grading	Acre								
Reveg	Acre	\$1,967.28	296.6	\$1,924.54	332.0	\$1,775.04	253.2	\$1,895.99	\$1,900.00
Trees	each	\$2.29	77,090.0	\$2.16	66,570.0				
Mulch	Acre	\$763.38	265.7	\$788.81	352.5	\$763.19	252.3	\$773.62	
Seed Bed Prep	Acre	\$216.83	274.2	\$205.98	352.5	\$274.23	208.2	\$226.56	
Seed	Acre	\$267.74	369.9	\$256.68	352.5	\$408.17	367.5	\$311.51	

	2013	2013	2014	2014	2015	2015
Reveg Tot	\$1,600.00	\$1,600.00	\$1,800.00	\$1,800.00	\$1,900.00	\$1,900.00
Mulch	\$700.00	\$700.00	\$800.00	\$800.00	\$775.00	\$775.00
Seed Bed	\$200.00	\$200.00	\$215.00	\$215.00	\$225.00	\$225.00
Seed	\$260.00		\$280.00		\$300.00	
	\$440.00	\$700.00	\$505.00	\$785.00	\$600.00	\$900.00
	Pasture	w/seed	Pasture	w/seed	Pasture	w/seed



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Bureau of Mining Programs

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