



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Bureau of Mining Programs

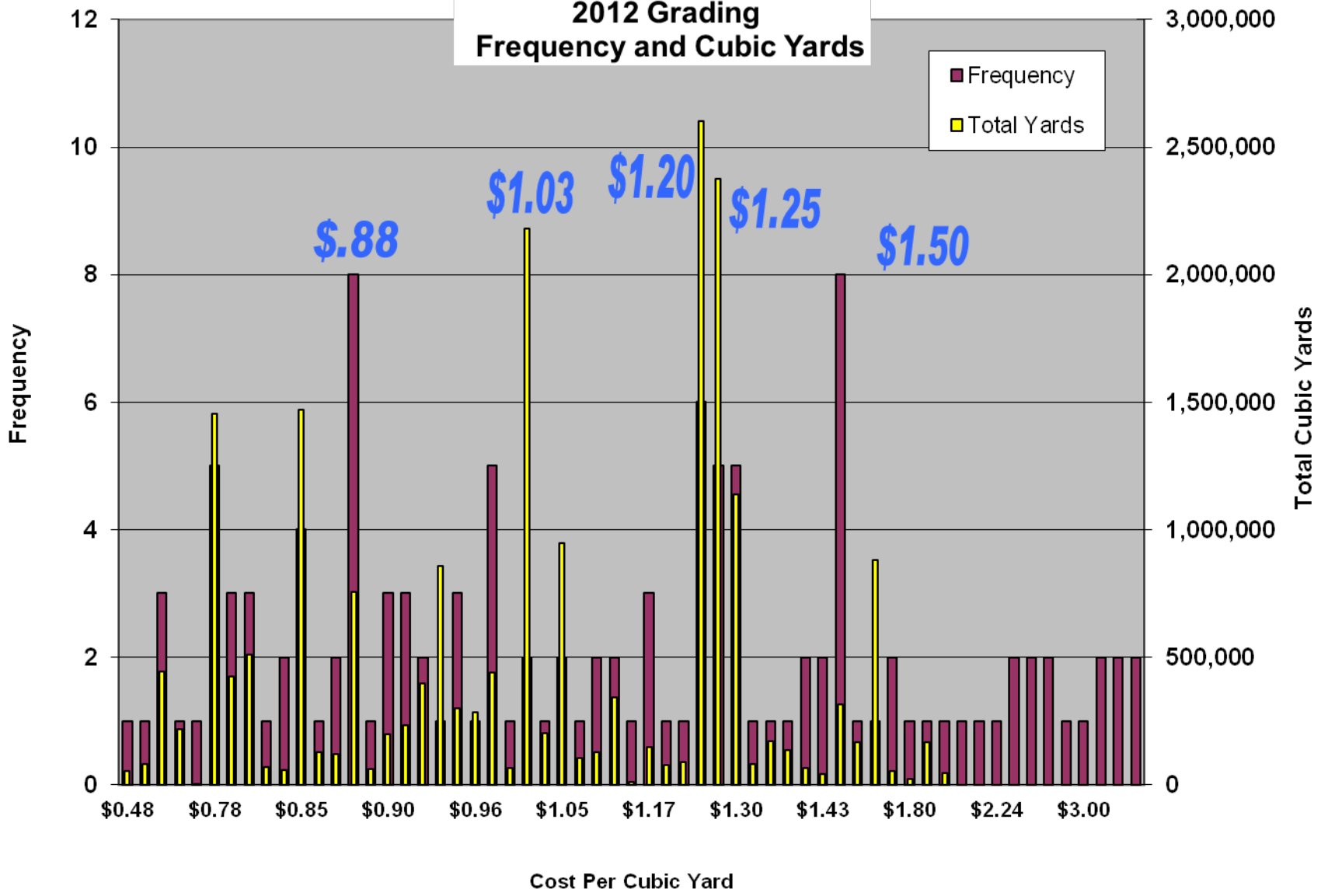
2013 Bond Rate Guidelines for the Calculation of Land Reclamation Bonds on Coal Mining Operations

MRAB Meeting
January 10, 2013

2012 AML Reclamation Grading Costs - 3 Lowest Project Bids

	DESCRIPTION	QUANTITIES	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL		
Reclamation Project	Task	Cubic Yards	Cost per CY	Low Project Bid	Cost per CY	2nd Project Bid	Cost per CY	3rd Project Bid		
OSM 35(3752)102.1	Grading									
	A) Grading Area A	13,500	\$0.88	\$11,880.00	\$1.40	\$18,900.00	\$1.30	\$17,550.00		
	B) Grading Area A to	50,260	\$1.40	\$70,364.00	\$2.00	\$100,520.00	\$1.70	\$85,442.00		
	C) Grading Area B	169,500	\$0.95	\$161,025.00	\$1.35	\$228,825.00	\$1.30	\$220,350.00		
OSM 40(2240)101.1	Grading	21,600	\$2.50	\$54,000.00	\$3.50	\$75,600.00	\$1.80	\$38,880.00		
OSM 49(3237)101.1	Grading									
	A) Grading Area A	42,470	\$1.17	\$49,689.90	\$1.50	\$63,705.00	\$1.20	\$50,964.00		
	B) Grading Area B	66,550	\$1.17	\$77,863.50	\$1.25	\$83,187.50	\$1.00	\$66,550.00		
	C) Grading Area C	139,670	\$1.11	\$155,033.70	\$1.20	\$167,604.00	\$1.20	\$167,604.00		
	D) Grading Area D	201,890	\$1.11	\$224,097.90	\$1.04	\$209,965.60	\$1.20	\$242,268.00		
	E) Grading Area E	11,100	\$1.15	\$12,765.00	\$1.50	\$16,650.00	\$1.50	\$16,650.00		
	F) Grading Area F	36,070	\$1.17	\$42,201.90	\$1.30	\$46,891.00	\$1.50	\$54,105.00		
OSM 11(0777)101.1	Grading	282,523	\$0.96	\$271,222.08	\$0.85	\$240,144.55	\$0.85	\$240,144.55		
OSM 17(6802)101.1	Grading									
	(A) Area "A"	129,000	\$0.78	\$100,620.00	\$0.80	\$103,200.00	\$0.86	\$110,940.00		
	(B) Area "B"	342,000	\$0.78	\$266,760.00	\$0.80	\$273,600.00	\$0.92	\$314,640.00		
	(C) Area "C"	3,800	\$1.20	\$4,560.00	\$1.50	\$5,700.00	\$0.75	\$2,850.00		
OSM 40(3219)101.1	Grading									
	A) Grading Area A to	165,900	\$1.55	\$257,145.00	\$1.50	\$248,850.00	\$1.83	\$303,597.00		
	B) Grading Area B	880,600	\$1.05	\$924,630.00	\$1.30	\$1,144,780.00	\$1.62	\$1,426,572.00		
OSM 16(6030)101.1	Grading	857,000	\$0.78	\$668,460.00	\$0.85	\$728,450.00	\$0.94	\$805,580.00		
19		7,020,652	\$0.97	\$6,820,773.31	\$1.12	\$7,859,133.46	\$1.21	\$8,518,931.69	\$1.10	\$7,732,946.15

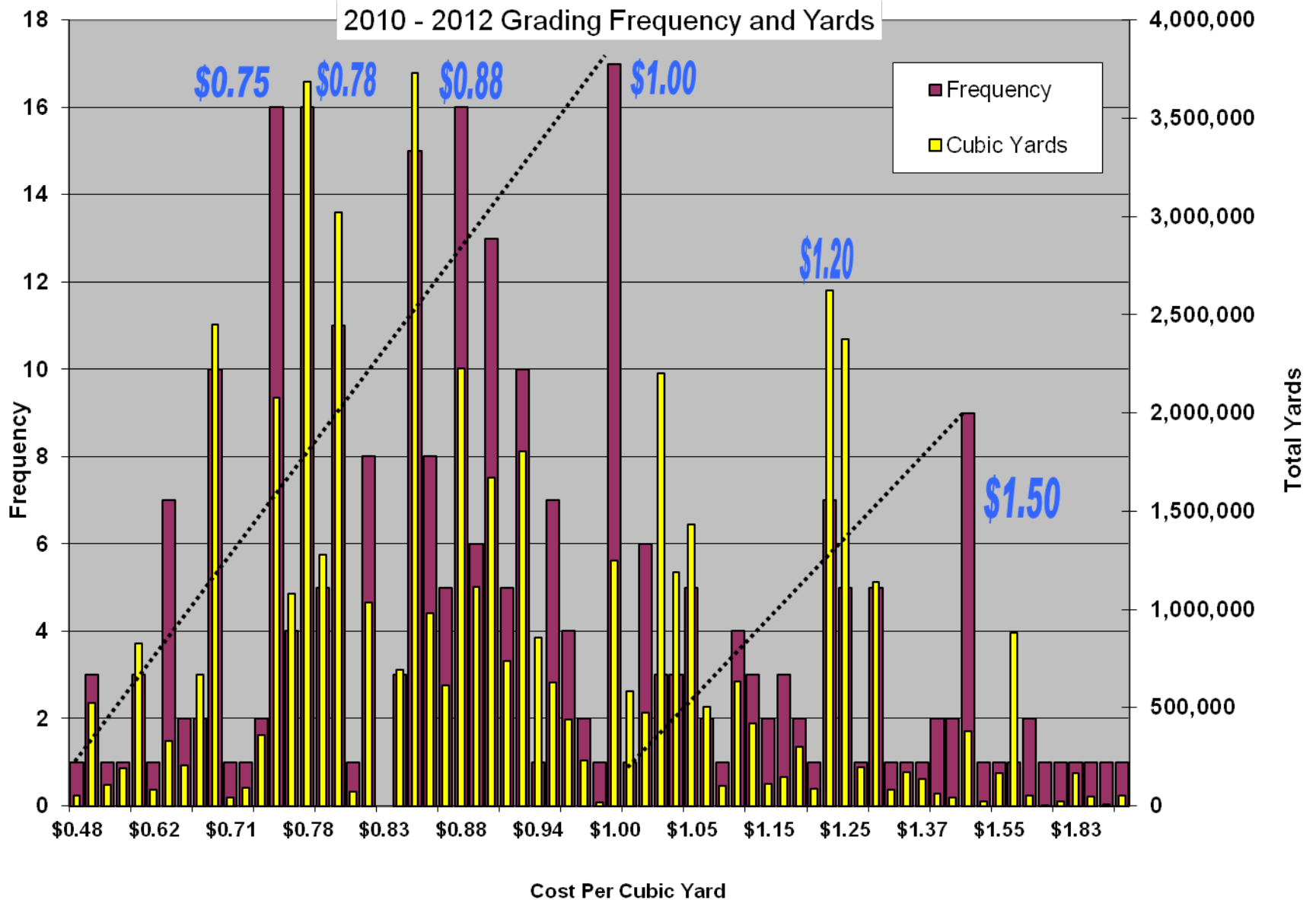
2012 Grading Frequency and Cubic Yards



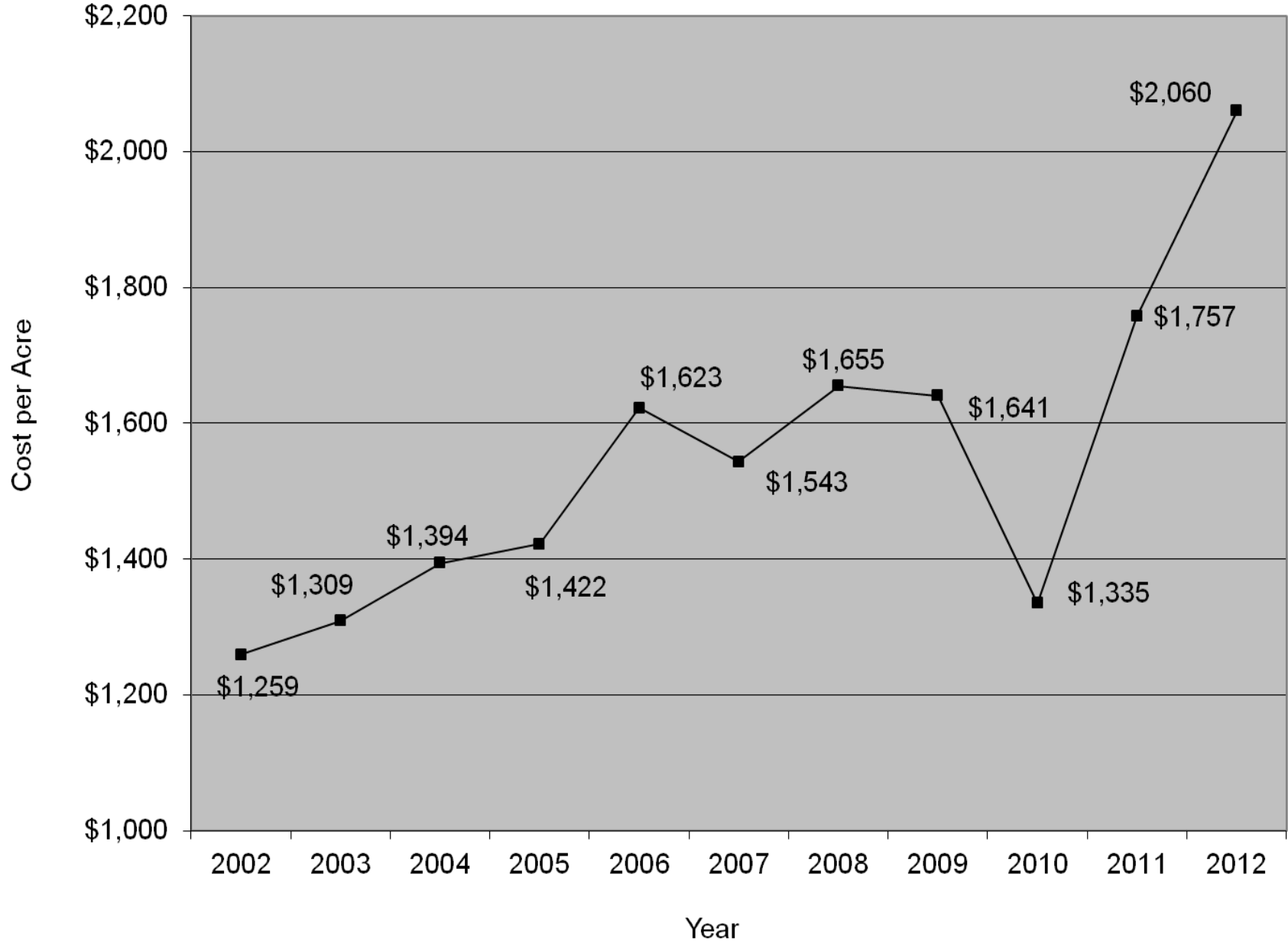
Total Grading Costs for 2010 - 2012

Unit Cost	2010 Total CY	2010 Freq	2011 Total CY	2012 Freq	2012 Total CY	2012 Freq	Combined Total CY	Combined Freq			
\$0.70	1,605,960	3	400,152	4	443,715	3	2,449,827	10	\$1,714,879		
\$0.75	856,149	4	1,216,520	11	3,800	1	2,076,469	16	\$1,557,352		
\$0.77	676,000	2	405,053	2			1,081,053	4	\$832,411		
\$0.78	1,892,910	6	340,335	5	1,454,726	5	3,687,971	16	\$2,876,617		
\$0.79	403,405	1	451,405	1	424,182	3	1,278,992	5	\$1,010,404		
\$0.80	1,936,971	4	572,260	4	511,596	3	3,020,827	11	\$2,416,662		
\$0.81					70,000	1	70,000	1	\$56,700		
\$0.82			976,495	6	57,339	2	1,033,834	8	\$847,744		
\$0.83	691,650	3							\$580,986		
\$0.84			193,705	1			691,650	3	\$3,168,786		
\$0.85	1,654,339	6	608,075	5	1,469,961	4	3,732,375	15	\$3,168,786		
\$0.86	631,199	5	218,370	2	129,000	1	978,569	8	\$841,569		
\$0.87	299,000	1	195,500	2	117,782	2	612,282	5	\$532,685		
\$0.88	912,520	3	558,636	5	757,222	8	2,228,378	16	\$1,960,973		
\$0.89	892,574	4	162,000	1	59,458	1	1,114,032	6	\$991,488		
\$0.90	859,390	3	610,500	7	198,800	3	1,668,690	13	\$1,500,152		
\$0.91	505,200	2			231,307	3	736,507	5	\$670,221		
\$0.92	886,700	1	520,550	7	395,900	2	1,803,150	10	\$1,658,898		
\$0.94					857,000	1	857,000	1	\$805,580		
\$0.95			332,010	4	298,500	3	630,510	7	\$598,985		
\$0.96			158,500	3	282,523	1	441,023	4	\$423,382		
\$0.97	229,000	2					229,000	2	\$222,130		
\$0.99			17,500	1			17,500	1	\$17,325		
\$1.00	114,500	1	696,070	11	440,550	5	1,251,120	17	\$1,251,120	35,175,256	\$0.91
\$1.01	582,120	1					582,120	1	\$587,941		
\$1.02	224,500	1	182,260	4	66,000	1	472,760	6	\$482,215		
\$1.03			23,760	1	2,179,600	2	2,203,360	3	\$2,269,461		
\$1.04	886,700	1	101,650	1	201,890	1	1,190,240	3	\$1,237,850		
\$1.05	421,950	2	66,000	1	946,600	2	1,434,550	5	\$1,506,278		
\$1.06	76,200	1	429,000	1			505,200	2	\$535,512		
\$1.08					104,000	1	104,000	1	\$112,320		
\$1.10	429,000	1	76,200	1	125,615	2	630,815	4	\$693,897		
\$1.11	76,200	1			341,560	2	417,760	3	\$463,714		
\$1.43					42,650	2	42,650	2	\$60,990		
\$1.50			66,000	1	313,090	8	379,090	9	\$568,635	8,272,245	\$1.25

2010 - 2012 Grading Frequency and Yards



Revegetation Trend



Summary of Calculated Bond Rates by Task

Proposed Rates

	Unit	2010 wgt ave	2010 amt	2011 wgt ave	2011 amt	2012 wgt ave	2012 amt	10-12 Weighted	2011	2012	2013
Grading1	Yd	\$0.86	7,275,224	\$0.82	3,452,835	\$1.10	7,020,652.0	\$0.95	\$0.80	\$0.75	\$0.90
Grading2	Yd								\$1.00	\$1.00	\$1.25
Select Grading	Acre			\$1,545.00	11.7				\$1,050.00	\$1,075.00	\$1,075.00
Reveg	Acre	\$1,335.25	715.5	\$1,757.21	328.6	\$2,060.37	296.6	\$1,599.09	\$1,470.00	\$1,500.00	\$1,600.00
Trees	each	\$2.55	18,334.0	\$2.27	55,190.0	\$2.29	77,090.0				
Ditch Ex	Yd	\$4.93	17,457.0	\$6.96	6,125.0	\$7.25	79,710.0	\$6.84	\$4.25	\$5.00	\$6.80
Jute	sq yd	\$3.70	4,407.0	\$2.95	1,305.0	\$4.18	5,510.0	\$3.85	\$3.50	\$3.50	\$3.80
HV Erosion	sq yd	\$2.86	17,000.0	\$3.94	1,835.0	\$4.13	31,920.0	\$3.70	\$3.00	\$3.00	\$3.70
AASHTO No. 1	Ton	\$17.43	200.0	\$30.18	1,470.0	\$27.52	830.0	\$28.28	\$24.00	\$30.00	\$28.00
AASHTO No. 57	Ton	\$17.35	51.0	\$25.99	24.0	\$30.71	537.0	\$29.41	\$25.00	\$25.00	\$30.00
R3	Ton			\$25.83	55.0	\$35.55	110.0	\$32.31	\$26.00	\$26.00	\$32.00
R4	Ton	\$22.50	1,540.0	\$27.63	1,500.0	\$29.09	373.0	\$25.48	\$20.00	\$21.00	\$25.00
R5	Ton	\$23.17	1,980.0	\$34.33	95.0	\$41.42	186.0	\$25.14	\$20.00	\$23.00	\$25.00
Geotex	sq yd	\$2.59	520.0	\$3.03	2,760.0	\$2.69	2,935.0	\$2.83	\$1.75	\$3.00	\$2.80
PVC lining	sq yd			\$12.18	1,200.0			\$12.18	\$12.00	\$12.00	\$12.00
Lime	Ton	\$38.42	2,072.5	\$44.96	1,756.7	\$43.91	655.0	\$41.78			
Subdrain	foot	\$15.60	12,360.0	\$22.07	1,050.0	\$17.09	3,215.0	\$16.30	\$16.00	\$16.00	\$16.30
Mulch	Acre	\$650.80	547.0	\$779.15	337.8	\$763.38	265.7	\$714.48			
Seed Bed Prep	Acre	\$177.12	550.1	\$213.05	356.6	\$216.83	274.2	\$197.19			
Seed	Acre	\$227.73	593.2	\$300.27	467.2	\$116.54	281.2	\$229.69			

	2011	2011	2012	2012	2013	2013
Reveg Tot	\$1,470.00	\$1,470.00	\$1,500.00	\$1,500.00	\$1,600.00	\$1,600.00
Mulch	\$625.00	\$625.00	\$665.00	\$665.00	\$700.00	\$700.00
Seed Bed	\$195.00	\$195.00	\$195.00	\$195.00	\$200.00	\$200.00
Seed	\$195.00		\$220.00		\$230.00	
	\$455.00	\$650.00	\$420.00	\$640.00	\$470.00	\$700.00
	Pasture	w/Seed	Pasture	w/seed	Pasture	w/seed



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