

APPENDIX A

FINANCIAL FEASIBILITY ANALYSIS SUPPORTING TABLES

Table 1
Diamond Valley GID Financial Feasibility
Committed Water Rights by Manner of Use for Basin 153

DRAFT

Manner Of Use	Committed Water Rights as of April 10, 2013			Percent of Total
	Underground	Other Ground	Total	
	<i>Figures in Annual Acre-Feet</i>			
Commercial	2.79		2.79	0.0%
Domestic	33.60		33.60	0.0%
Irrigation (DLE)	12,098.32		12,098.32	9.1%
Irrigation	114,022.87		114,022.87	86.1%
Mining and Milling	2,909.24	398.19	3,307.43	2.5%
Municipal	1,678.91		1,678.91	1.3%
Quasi-Municipal	483.34		483.34	0.4%
Stockwater	858.72		858.72	0.6%
Total	132,087.79	398.19	132,485.98	100.0%
Total Irrigation	126,121.19	-	126,121.19	95.2%
Stand Alone Irrigation [1]	56,033.61		56,033.61	
Primary	70,087.58		70,087.58	
Supplementary to Primary [2]	41,302.00		41,302.00	

Source: State Engineer Hydrographic Area Summary for Basin 153

"comm"

[1] No supplemental rights associated with these rights.

[2] These water rights automatically relinquished with primary rights.

Table 2**Diamond Valley GID Financial Feasibility***DRAFT***5-Year Historical Use of Acreage with Permitted and Certificated Irrigation Water Rights**

Year	Duty	Total Permitted Acres	Irrigated Acres [2]		Acreage Out of Crop Production
			Wet	Dry	
		[1]	[3]	[4]	[5]
	<i>acre-feet</i>	<i>acres</i>	<i>acres</i>	<i>acres</i>	<i>acres</i>
2006	126,610	30,753	24,026	3,679	3,048
2007	126,867	32,234	24,255	4,640	3,338
2008	127,042	32,296	24,220	5,219	2,857
2009	126,873	31,839	24,435	4,670	2,734
2010	128,128	32,225	24,608	4,689	2,928
2011	127,475	32,021	24,477	4,993	2,551
2012	126,262	31,707	25,234	4,911	1,561
Average Annual		31,868	24,465	4,686	2,717
Percent of Average		100%	77%	15%	9%

Source: Nevada State Engineer Crop Inventories for Diamond Valley.

"use sum"

[1] Total land acreage with permitted and certificated water rights.

[2] Permitted acres irrigated in the given year. A portion of irrigated acres are wet (receiving water) and a portion are dry (not receiving water).

[3] Permitted and irrigated acres receiving water in the given year.

[4] Portion of irrigated properties not receiving water, such as corners of pivot fields.

[5] Permitted acres unirrigated in the given year.

Table 3
Diamond Valley GID Financial Feasibility
Estimated 2013 Use of Irrigation Water Rights

DRAFT

Item		Total	Irrigated Land		Acreage Out of Crop Production
		Permitted	Wet	Dry	
Average Acres (2006-2012)	a	31,868	24,465	4,686	2,717
Duty (acre-feet per acre) [1]	b	3.98	3.98	3.98	3.98
Average Water Rights (acre-feet)	c = a*b	126,902	97,423	18,660	10,819
Percent of Total	d	100%	77%	15%	9%
Average Pumpage (acre-feet per acre) [2]	e		3.20	(alfalfa)	
Average Acre-Feet Pumped	f = a*e		78,288		
Consumptive Use (acre-feet per acre) [2]	g		2.50	(alfalfa)	
Consumptive Use	h = a*g	78%	61,163		
Recharge	i = f-h	22%	17,126		
April 10, 2013 Committed Rights [3]	j	126,120	<i>estimate</i> 96,820	<i>estimate</i> 18,550	<i>estimate</i> 10,750
Estimated Current Permitted Acres	k = j/b	31,670	24,310	4,660	2,700
Estimated 2013 Acre-Feet Pumped	l = k*e		77,790		
Estimated 2013 Consumptive Use (acre feet)	m = k*g		60,780		
Estimated 2013 Recharge (acre feet)	n = l-m		17,010		

Source: State Engineer hydrographic area summary for Basin 153, crop inventories for Diamond Valley, and HEC.

"curr sum"

[1] Per the crop inventory reports for Diamond Valley.

[2] In 2009 the State Engineer's office estimated pumpage between 3.01 and 3.19 acre-feet per acre in Diamond Valley. The State Engineer's office is now using satellite imagery and data to calculate Evapotranspiration and Net Irrigation Water Requirements for each basin in the State. The official current figures for Diamond Valley are 3.20 acre-feet of water applied per acre, of which 2.5 acre-feet is consumptive use (not returned to the aquifer).

[3] Total committed irrigation rights was 126,120 on April 10, 2013. Percentages of average annual water rights (line d) applied to total committed irrigation rights.

Table 4
Diamond Valley GID Financial Feasibility
Calculation of Total Irrigation Water Rights that Need to be Retired

DRAFT

Item		Committed Water Rights	source
Irrigation Right Holders			
<u>Dry Rights</u>			
		Acre-Feet	
Land Out of Production		10,750	
Dry Portions of Irrigated Land		18,550	
Subtotal Dry Rights	x	29,300	
<u>Wet Rights</u>			
Pumped		77,790	Table 3
Excess Duty [1]		19,020	see footnote
Subtotal Wet Rights	y	96,820	
Subtotal Irrigation Committed Water Rights	z = x+y	126,120	
<hr/>			
Perennial Yield (Acre Feet)	a	30,000	State Engineer
Other Uses [2]	b	6,360	Table 1
Perennial Yield Remaining for Irrigation	c = a-b	23,640	
Percentage of Pumpage Consumed	d	78%	Table 3
Sustainable Annual Irrigation Pumpage (Acre Feet)	e = c/d	30,260	
Percentage of Duty Pumped [1]	f	80%	see footnote
Irrigation Rights to Support Sustainable Pumpage (Acre Feet)	g = e/f	37,660	
Wet Rights that need to be retired	h = y-g	59,160	(equates to pumping 47,530 acre feet)
Dry Rights that need to be retired	x	29,300	
Total Irrigation Rights to be Retired	l = h+x	88,460	

Source: HEC.

"retire"

[1] Duty averages 3.98 acre-feet but only 3.20 acre-feet is estimated to be pumped; therefore approximately 80% of duty is used and 20% is excess duty. See calculation:

3.98 duty
3.20 pumpage
0.78 excess duty
20% excess duty as % of duty
80% duty pumped as % of duty

[2] Does not include domestic wells.

Table 5
Diamond Valley GID Financial Feasibility
Summary of Needed Reduction in Annual Irrigation Pumpage

DRAFT

Item	Source		Total
Approximate 2013 Irrigation Pumpage	Table 4	a	77,790
Sustainable Annual Irrigation Pumpage	Table 4	b	30,260
Reduction in Annual Pumpage Required		c = a-b	47,530
Sustainable Percentage of Estimated 2013 Irrigation Pumpage		d = b/a	38.9%
Total Permitted Acres	Table 3	e	31,670
Estimated 2013 Acres in Production	Table 3	f	24,310
Perennial Yield Available for Irrigation	Table 4	g	23,640
Consumptive Use (acre-feet per acre)	Table 3	h	2.50
Sustainable Irrigated Acres		i = g/h	9,456
Acres to be Taken out of Crop Production		j = f-i	14,854
Acres to be Paid for Water Rights		k = e-i	22,214
Sustainable Permitted Acres as % of Total		l = i/e	29.9%
Sustainable Permitted Acres as % of Acres in Production		m = i/f	38.9%

Source: Diamond Valley Crop Inventory reports 2006-2012 and HEC.

"land out"

Table 6
Diamond Valley GID Financial Feasibility *DRAFT*
Annual Production and Yield of Alfalfa Hay, Eureka County

Year	Alfalfa Hay	
	Production, Measured in Tons	Yield in Tons per Acre
1992	87,000	4.70
1993	72,000	4.24
1994	77,000	4.81
1995	72,000	4.50
1996	80,000	4.70
1997	71,156	4.10
1998	70,000	4.10
1999	70,000	5.50
2000	93,000	4.60
2001	79,000	4.70
2002	75,000	4.70
2003	75,318	4.30
2004	75,000	4.80
2005	68,000	4.30
2006	62,000	4.70
2007	65,000	4.70
2008	75,000	4.30
2009	106,164	4.90
2010	104,000	4.05
2011	86,000	4.30
2012	93,000	3.85
Average	78,840	4.52

Source: USDA National Agricultural Statistics Service.

"prodn"

Table 7
Diamond Valley GID Financial Feasibility
Nevada Average Monthly Price of Alfalfa Hay per Ton

DRAFT

Month	Nevada Alfalfa Price Received in \$/Ton [1]																									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013		
JAN	\$110	\$107	\$81	\$83	\$104	\$95	\$102	\$104	\$107	\$100	\$81	\$97	\$118	\$97	\$91	\$102	\$119	\$120	\$160	\$182	\$100	\$145	\$235	\$196		
FEB	\$110	\$102	\$73	\$85	\$102	\$99	\$93	\$117	\$109	\$89	\$83	\$94	\$117	\$94	\$90	\$106	\$125	\$118	\$170	\$175	\$105	\$143	\$233	\$205		
MAR	\$107	\$101	\$77	\$83	\$106	\$97	\$92	\$114	\$111	\$80	\$84	\$90	\$117	\$95	\$88	\$112	\$120	\$119	\$170	\$169	\$101	\$151	\$226	\$203		
APR	\$106	\$103	\$70	\$88	\$104	\$100	\$95	\$116	\$105	\$75	\$83	\$100	\$112	\$90	\$90	\$100	\$128	\$119	\$180	\$175	\$97	\$160	\$215	\$202		
MAY	\$106	\$98	\$64	\$91	\$102	\$95	\$93	\$119	\$106	\$72	\$82	\$99	\$104	\$93	\$90	\$102	\$123	\$127	\$181	\$150	\$93	\$165	\$225	\$202		
JUN	\$110	\$94	\$75	\$95	\$100	\$95	\$103	\$105	\$116	\$67	\$90	\$101	\$108	\$96	\$99	\$113	\$121	\$127	\$173	\$136	\$91	\$175	\$215			
JUL	\$110	\$86	\$76	\$94	\$93	\$98	\$100	\$105	\$117	\$91	\$96	\$111	\$110	\$100	\$103	\$122	\$119	\$138	\$195	\$110	\$110	\$198	\$209			
AUG	\$106	\$85	\$77	\$94	\$92	\$96	\$97	\$108	\$119	\$87	\$90	\$108	\$104	\$95	\$101	\$127	\$109	\$141	\$196	\$96	\$120	\$219	\$200			
SEP	\$105	\$78	\$74	\$92	\$94	\$96	\$99	\$102	\$107	\$84	\$93	\$110	\$102	\$89	\$97	\$114	\$108	\$144	\$199	\$104	\$120	\$220	\$203			
OCT	\$105	\$78	\$76	\$91	\$97	\$100	\$96	\$100	\$99	\$82	\$92	\$119	\$98	\$88	\$98	\$118	\$112	\$148	\$189	\$99	\$122	\$216	\$202			
NOV	\$105	\$78	\$82	\$98	\$97	\$100	\$97	\$106	\$103	\$86	\$92	\$122	\$100	\$94	\$103	\$122	\$118	\$150	\$192	\$105	\$132	\$225	\$210			
DEC	\$105	\$82	\$88	\$104	\$104	\$98	\$104	\$111	\$101	\$81	\$92	\$118	\$101	\$87	\$102	\$128	\$117	\$156	\$189	\$102	\$139	\$230	\$205			
Average	\$107	\$91	\$76	\$92	\$100	\$97	\$98	\$109	\$108	\$83	\$88	\$106	\$108	\$93	\$96	\$114	\$118	\$134	\$183	\$134	\$111	\$187	\$215	\$202		
Median	\$106	\$90	\$76	\$92	\$101	\$98	\$97	\$107	\$107	\$83	\$90	\$105	\$106	\$94	\$98	\$114	\$119	\$133	\$185	\$123	\$108	\$187	\$213	\$202		
% change median		-15%	-16%	20%	10%	-3%	-1%	10%	0%	-22%	8%	16%	1%	-11%	4%	16%	5%	11%	40%	-34%	-13%	73%	14%			
Average Annual Increase 1996 - 2012																								total change	annual % change	
Average Annual Increase 1990 - 2012																									\$116	5.0%
Average Annual Increase 2002-2012																									\$107	3.2%
																									\$107	7.2%
Average Eureka County / Diamond Valley Hay Prices																									\$204	[2]

Source: USDA/NASS QuickStats, Diamond Valley Hay Co., Alfalfa Hay and Production Inventory.

"prices"

[1] Average prices at point of first sale for all grades and qualities sold.

[2] 2012 prices recorded by the Diamond Valley Hay Co:

	1st cut	2nd cut	3rd cut
Horse	\$225	\$220	\$200
Cow		\$170	

Table 8
Diamond Valley GID Financial Feasibility *DRAFT*
Financial Model Key Assumptions

Assumption for Alfalfa Hay		Value
Yield (Tons) per Acre [1]	Table 6	4.52
Price per Ton [2]	Table 7	\$204
Annual Income per Acre		\$920
Quarter Section (acres)		160
One Pivot (acres)		125
Total Irrigated Acres		24,310
Equivalent 125 acre Pivots		194

Source: USDA National Agricultural Statistics Service, and HEC. *"assumps"*

[1] Average annual yield Eureka County 1992-2012.

[2] Observed 2012 Diamond Valley average hay price.

Table 9
Diamond Valley GID Financial Feasibility
Estimated Net Farming Income per Acre in Diamond Valley

DRAFT

Item		Value
		<i>2013 \$'s</i>
Yield per Wet Irrigated Acre	a	4.52
Estimated Total Wet Irrigated Acres	b	24,310
Approximate Annual Hay Tonnage	c = a*b	109,800
Annual Average Income per Wet Acre	d	\$920
Estimated Total Average Annual Farming Income	e = b*d	\$22,371,784
Average Cost as Percentage of Revenue [1]	f	84%
Annual Average Expenses per Wet Acre	g = d*f	\$776
Estimated Total Average Annual Farming Expenses	h = b*g	\$18,869,143
Estimated Annual Total Net Farming Income	i = e-h	\$3,502,641
Net Farming Income per Acre	j = i/b	\$144
Average Fixed Cost plus Net income as Percentage of Revenue [1]	k	50%
Estimated Payment per Acre for Set-Aside Land [2]	l = d*k	\$461

Source: University of Nevada Cooperative Extension, Fact Sheet 97-03,
 "Alfalfa Production Costs for the Diamond Valley, Nevada Area".

"hay ind"

[1] UNR Cooperative Extension fact sheet estimates:	<u>1996</u>	<u>2006</u>
Yield per Acre (tons)	5.00	6.00
Price per Ton	\$94	\$100
Total Revenue per Acre	\$470	\$600
Estimated Cost per Acre	\$387	\$519
Cost as % of Revenue	82%	86%
Variable Cost per Acre	\$247	\$283
Fixed Cost per Acre	\$139	\$236
Estimated Net Farm Income per Acre	\$83	\$81
Fixed cost plus profit as % of Revenue	47%	53%

[2] Represents high-end cost per acre assuming farmers must cease all agricultural activity on the property.

Table 10**Diamond Valley GID Financial Feasibility**

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Estimated Value of an Irrigated Acre and an Acre-Foot Water Right in Diamond Valley

Discount Factor	Time					
	5 years	10 years	15 years	25 years	50 years	perpetuity
	<i>Net Farm Operating Income per Acre [1] \$144</i>					
3%	\$660	\$1,229	\$1,720	\$2,509	\$3,707	\$4,803
4%	\$641	\$1,169	\$1,602	\$2,251	\$3,095	\$3,602
5%	\$624	\$1,113	\$1,496	\$2,031	\$2,630	\$2,882
6%	\$607	\$1,060	\$1,399	\$1,842	\$2,271	\$2,401
7%	\$591	\$1,012	\$1,312	\$1,679	\$1,988	\$2,058
8%	\$575	\$967	\$1,233	\$1,538	\$1,763	\$1,801
Median Value	\$615	\$1,087	\$1,447	\$1,936	\$2,451	\$2,642
Weight	0%	5%	15%	30%	10%	40%
Estimated Farmed Land Acre Value (Weighted Average of Median Values)						\$2,150
Average Acre-feet Duty per Acre						3.98
Calculated Value per Acre-Foot						\$540

Source: HEC.

"value foot"

Table 11
Diamond Valley GID Financial Feasibility
Estimated Value of Irrigation per Acre in Diamond Valley

DRAFT

Item	Value
Estimated Irrigated Land Value per Acre	\$2,150
Estimated Market Value of 1st Class Cultivated Land [1]	\$800
Estimated Irrigated Land Value less Land Value	\$1,350
4th Class Cultivated Land as % of 1st Class Cultivated Land [2]	38.8%
Estimated Market Value of 4th Class Cultivated Land (rounded)	\$300
Estimated Loss in Land Value due to Loss of Irrigation	\$500
Estimated Value of Irrigation per Acre	\$1,650

Source: University of Nevada Cooperative Extension, Fact Sheets 97-03 and 07-09 and Bulletin No. 203 'Agricultural Land Calculations', Nevada Department of Taxation.

"land value"

[1] As stated in Fact Sheet 07-09 the land market value for 2006 was approximately \$800 per acre.

[2] Based on assessed values:

	Cultivated Land Value (A.V.)		4th Class as % of 1st Class
	1st Class	4th Class	
2011	\$176.00	\$68.00	38.6%
2012	\$175.00	\$68.00	38.9%
2013	\$177.00	\$69.00	39.0%
2014	\$178.00	\$69.00	38.8%
2015	\$188.00	\$73.25	39.0%
Average of 4th Class as a Percentage of 1st Class			38.8%

Table 12
Diamond Valley GID Financial Feasibility
Estimated Total Program Cost 2013 \$'s

DRAFT

Methodology	Source/ Assumption	Calculation	Total
High Range			
High Range Cost per Acre of Land [1]	Table 10	a	\$2,150
Acres of Land to Retire	Table 5	b	22,214
High Range Program Cost (rounded)		c = a*b	\$47,760,100
Low Range			
Low Range Cost per Acre of Land [2]	Table 11	d	\$1,650
Acres of Land to Retire	Table 5	e	22,214
Low Range Program Cost (rounded)		f = d*e	\$36,653,100
Mean Cost per Acre of Land (rounded)		g = average(a,d)	\$1,900
Calculated Potential Range of Total Program Cost		\$36,653,100 to	\$47,760,100
Estimated Program Cost (rounded)			\$42,207,000

Source: HEC.

"prog cost"

[1] The high range cost assumes the median value of water rights per acre and assumes that the land has no

Table 13
Diamond Valley GID Financial Feasibility
Example Set-Aside Program

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Item	Fiscal Year Ending									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
	1	2	3	4	5	6	7	8	9	10
Target Water Pumpage Reduction	778	778	778	778	778	778	778	778	778	778
Acres per Equivalent Pivot	125	125	125	125	125	125	125	125	125	125
Number of Equivalent Pivots Set Aside [1]	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94
% of Equivalent Pivots Set Aside	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Acres Set-Aside	243	243	243	243	243	243	243	243	243	243
Estimated Payment per Acre	\$461	\$461	\$461	\$461	\$461	\$461	\$461	\$461	\$461	\$461
Payments for Set-Aside	\$112,187	\$112,154	\$112,154	\$112,154	\$112,154	\$112,154	\$112,154	\$112,154	\$112,154	\$112,154

Source: HEC.

"aside prog"

[1] There are 194 equivalent 125-acre pivots in Diamond Valley.

[2] For calculation of estimated payment per acre see Table 9

Table 14
Diamond Valley GID Financial Feasibility *DRAFT*
Estimated GID Start-up Costs

Expense Type	Estimated Cost
Outside Services	
Professional Fees	\$25,000
County Expenses	
Attorney	\$0
Natural Resources	\$0
Total Estimated GID Start-up Costs	\$25,000

Source: HEC.

"start cost"

Table 15
Diamond Valley GID Financial Feasibility
Estimated Annual Ongoing Expenses

DRAFT
Pay as You Go

Expense Type		Estimated Cost (2013 \$'s)
Interlocal Agreement (County Provided Services)		
County Attorney	[1]	\$0
County Assessor	[1]	\$0
County Auditor	[1]	\$0
County Natural Resources Department	[1]	\$0
Subtotal Interlocal Agreement		\$0
Professional Services		
Auditor	[1]	\$0
Water Rights and Monitoring Manager	[2]	\$15,000
Planning, Hydrology, Other		\$15,000
Legal Services	[3]	\$0
Subtotal Professional Services		\$30,000
Direct Expenses		
Board Reimbursement	[1]	\$0
Supplies		\$1,000
Subtotal Expenses Prior to Debt Service		\$31,000
Debt Service		\$0
Total Estimated Annual Expenses		\$31,000

Source: HEC.

"tot cost"

[1] Cost absorbed by the County.

[2] GID will relinquish the rights. Cost associated with preparation of documents for State Engineer plus filing fees (\$250 each).

[3] Potential for outside legal services, potentially if set-aside program.

Table 16
Diamond Valley GID Financial Feasibility
Comparison of Total Costs with Financing

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Cost Component	Total	
	CoBANK Loan	GO Bond
Program Costs	\$42,207,000	\$42,207,000
Capitalized Interest [1]	\$0	\$844,140
Issuance Costs [2]	\$0	\$1,688,280
Flat Fee [3]	\$500	\$0
Reserve Fund [4]	\$3,515,000	\$3,554,000
Estimated Loan/Bond Size	\$45,722,500	\$48,293,420
Rounding	\$4,500	\$3,580
Loan/Bond Size Adjusted for Rounding	\$45,727,000	\$48,297,000
Estimated Annual Debt Service	\$3,515,000	\$3,554,000
Principal	\$42,207,000	\$42,207,000
Interest	\$28,093,000	\$28,873,000
Total Payments	\$70,300,000	\$71,080,000
Total Cost per Ag Acre with Financing	\$1,296	\$1,310
Total Cost per Ag Acre Pay as you Go	\$778	\$778
Financing Charge per Acre	\$518	\$532
Multiplier for Financing Charge	1.67	1.68

Source: HEC.

"proceed bond"

Loan/Bond Terms:	CoBANK	GO Bond
Interest Rate	4.50%	4.00%
Years	20 years	20 years
Bond Factor	1.0834	1.1443

[1] Assumes 6 months capitalized interest for a GO Bond.

[2] Assumes 4% issuance costs for a GO Bond.

[3] Flat fee for a CoBANK loan.

[4] One year of debt service (can be used for last payment).

Table 17
Diamond Valley GID Financial Feasibility
Financing Example

DRAFT

Cost Component	CoBANK Loan
<i>Assumption: Take 12 Pivots out of Production</i>	
Total Acres Retired	1,500
Approximate Water Rights Relinquished	5,973
Cost per Acre	\$1,900
Total Cost (Proceeds)	\$2,850,000
Capitalized Interest	\$0
Issuance Costs	\$0
Flat Fee	\$500
Reserve Fund	\$237,500
Estimated Loan Size	\$3,088,000
Rounding	\$1,000
Loan Size Adjusted for Rounding	\$3,089,000
Estimated Annual Debt Service	\$237,500
Principal	\$2,850,000
Interest (Financing Charge)	\$1,900,000
Total Payments	\$4,750,000
Source: HEC.	<i>"ex loan"</i>
Loan Terms:	<u>CoBANK</u>
Interest Rate	4.50%
Years	20 years
Bond Factor	1.084

Table 18
Diamond Valley GID Financial Feasibility
Method 1: Estimated 2014 Parcel Charge per Acre of Property

DRAFT
Pay as You Go

Item	Value	
GID Participating Acres	31,670	acres
Total Acres	31,670	
Target Timeframe for Program	50	years
Total Agricultural Acres to Retire	22,214	
Acres Retired with Debt	0	
Acres Retired with Cash	22,214	
Agricultural Acres Retired per Year	444	acres
Price per Acre	\$1,900	Table 12
Program Cost per Year	\$844,132	
plus Operating Expenses	\$31,000	Table 15
Total Program Cost Per Year	\$875,132	
County Annual Program Contribution	\$633,105	
GID Participants	\$242,027	
GID Participant Cost per Acre	\$7.64	
plus delinquency and administration	\$0.76	
Total GID Participant Cost per Acre	\$8.41	
Loan/Bond Costs per Acre per Year	\$0.00	
Cost per Agricultural Acre with Financing	\$8.41	
Six Quarter Sections	960	acres
Six Quarter Sections Annual Payment	\$8,070	

Source: HEC.

"parcel chrg"

[1] The majority of water rights have a duty of 4 acre-feet per acre.

[2] GID Participant Contribution is remaining annual cost after county contribution multiplied by 10% to cover delinquencies and administrative charges.

Table 19
Diamond Valley GID Financial Feasibility
County Contribution as Percentage of Annual Net Mining Proceeds

DRAFT

	County Mining Net Proceeds Revenue	
2008	\$4,819,007	
2009	\$12,285,483	
2010	\$8,185,994	
2011	\$14,512,293	
2012	\$11,811,751	
2013	\$12,219,989	estimate
2014	\$12,795,383	estimate
Contribution to GID Program	\$633,105	
Contribution as % of estimated 2014 proceeds	4.9%	
Average Annual Proceeds 2008-2012	\$10,322,906	
Contribution as % of Historical Average Annual Proceeds	6.1%	

Source: Eureka County.

"mining"

Table 20
Diamond Valley GID Financial Feasibility
Method 1: Projected GID Revenue with Parcel Charges

Pay as You Go

DRAFT

Item	Fiscal Year Ending																			
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Total Acres in Program																				
Total Agricultural Acres [1]	31,670	31,226	30,781	30,337	29,893	29,449	29,004	28,560	28,116	27,671	27,227	26,783	26,339	25,894	25,450	25,006	24,562	24,117	23,673	23,229
Domestic Property Acres [2]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Acres	31,670	31,226	30,781	30,337	29,893	29,449	29,004	28,560	28,116	27,671	27,227	26,783	26,339	25,894	25,450	25,006	24,562	24,117	23,673	23,229
Agricultural Acres Retired																				
Debt Purchase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cash Purchase	444	444	444	444	444	444	444	444	444	444	444	444	444	444	444	444	444	444	444	444
Cumulative Agricultural Acres Retired	444	889	1,333	1,777	2,221	2,666	3,110	3,554	3,999	4,443	4,887	5,331	5,776	6,220	6,664	7,108	7,553	7,997	8,441	8,886
Approximate Water Rights Relinquished	1,769	3,538	5,308	7,077	8,846	10,615	12,384	14,154	15,923	17,692	19,461	21,230	22,999	24,769	26,538	28,307	30,076	31,845	33,615	35,384
GID Income with Prepayments																				
County Annual Program Contribution	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105
GID Program Prepayment from Retired Acres	\$183,004	\$179,270	\$175,535	\$171,800	\$168,065	\$164,330	\$160,596	\$156,861	\$153,126	\$149,391	\$145,656	\$141,922	\$138,187	\$134,452	\$130,717	\$126,983	\$123,248	\$119,513	\$115,778	\$112,043
GID Participant Contribution [3]	\$266,230	\$262,495	\$258,760	\$255,025	\$251,291	\$247,556	\$243,821	\$240,086	\$236,351	\$232,617	\$228,882	\$225,147	\$221,412	\$217,678	\$213,943	\$210,208	\$206,473	\$202,738	\$199,004	\$195,269
Total GID Income	\$1,082,339	\$1,074,869	\$1,067,400	\$1,059,930	\$1,052,461	\$1,044,991	\$1,037,522	\$1,030,052	\$1,022,582	\$1,015,113	\$1,007,643	\$1,000,174	\$992,704	\$985,235	\$977,765	\$970,296	\$962,826	\$955,356	\$947,887	\$940,417

Source: HEC.

"parcel flow"

[1] Agricultural acreage reduced each year by number of agricultural acres retired.

[2] Although not currently modeled, domestic property acreage would increase one acre for every farm enterprise that ceases.

[3] GID Participant Contribution is remaining annual cost after county contribution multiplied by 10% to cover delinquencies and administrative charges.

Table 21
Diamond Valley GID Financial Feasibility
Method 2: Estimated 2014 Ad Valorem Tax Revenues

DRAFT

Revenue Source	Source	Estimated 2014 Revenue
Ad Valorem Taxes		
Cultivated Agricultural Property Total Assessed Value		\$9,770,617
Rate per \$100 Assessed Value	see footnote	\$1.87
Estimated Agricultural Property Annual Revenue (rounded)		\$182,300
Delinquency and Administrative Charges		10%
Ad Valorem Taxes Available for GID Operations		\$164,000
County Contribution	HEC estimate	\$633,105
Total Base Year Revenues		\$797,105

Source: Eureka County Assesor and HEC.

"tot rev"

Tax rate capped by Legislature at	\$3.6400
Eureka unincorporated tax rate is currently	\$1.7743
Tax rate remaining for future use	\$0.0000
D.V. GID Tax Rate	\$1.8657

Table 22
Diamond Valley GID Financial Feasibility
Method 2: Projected Ad Valorem Tax Revenue

DRAFT

	Fiscal Year Ending																			
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Agricultural Property																				
Beginning Assessed Value (A.V.) (\$100's)	\$97,706	\$99,331	\$100,982	\$102,661	\$104,368	\$106,103	\$107,867	\$109,661	\$111,484	\$113,338	\$115,222	\$117,138	\$119,085	\$121,065	\$123,078	\$125,124	\$127,205	\$129,319	\$131,470	\$133,655
Annual Percentage Increase [1]	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%
Ag. GID Tax Rate per \$100 A.V. - NO SET ASIDE	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87
Agricultural Property Estimated Revenue	\$182,290	\$185,321	\$188,402	\$191,535	\$194,719	\$197,957	\$201,248	\$204,594	\$207,996	\$211,454	\$214,969	\$218,544	\$222,177	\$225,871	\$229,626	\$233,444	\$237,326	\$241,271	\$245,283	\$249,361
less delinquency and administrative charges	\$18,229	\$18,532	\$18,840	\$19,153	\$19,472	\$19,796	\$20,125	\$20,459	\$20,800	\$21,145	\$21,497	\$21,854	\$22,218	\$22,587	\$22,963	\$23,344	\$23,733	\$24,127	\$24,528	\$24,936
Net Ad Valorem Tax Revenue	\$164,061	\$166,789	\$169,562	\$172,381	\$175,247	\$178,161	\$181,123	\$184,135	\$187,196	\$190,308	\$193,473	\$196,689	\$199,959	\$203,284	\$206,664	\$210,100	\$213,593	\$217,144	\$220,755	\$224,425

Source: 2014-15 Agricultural Land Values Open Space Property Procedures, Bulletin No. 203, Nevada Department of Taxation, Eureka County Assessor's Office and HEC.

"av"

[1] Average Annual Percentage Increase Calculation:

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>Increase 2011 - 2015</u>
First Class Cultivated Land Value	\$176	\$175	\$177	\$178	\$188	\$12 1.7%

Table 23
Diamond Valley GID Financial Feasibility
Comparison of Program Target Achievement within 50 Years

BASE CASE - Scenario A: Agricultural Users Only, Pay as You Go, No Set Aside DRAFT

Summary Program Item	5 Years		10 Years		20 Years		30 Years		40 Years		50 Years		TARGET
	Parcel Charges	Ad Valorem Tax Revenue	Parcel Charges	Ad Valorem Tax Revenue	Parcel Charges	Ad Valorem Tax Revenue	Parcel Charges	Ad Valorem Tax Revenue	Parcel Charges	Ad Valorem Tax Revenue	Parcel Charges	Ad Valorem Tax Revenue	
Land Out of Crop Production [1]	2,221	2,031	4,443	4,100	8,886	8,367	13,328	12,831	17,771	17,527	Method 1 22,214	Method 2 22,496	22,214
Water Rights Relinquished (acre-feet)	8,846	8,087	17,692	16,327	35,384	33,318	53,076	51,094	70,768	69,793	88,459	89,583	88,460
Reduced Pumpage (acre-feet)	4,753	4,345	9,506	8,772	19,012	17,902	28,518	27,453	38,024	37,500	47,530	48,133	47,530

Source: HEC.

"Summ key"

[1] Includes dry portions of irrigated quarter sections.

Table 24
Diamond Valley GID Financial Feasibility
Projected Summary Cash Flow

BASE CASE - Scenario A: Agricultural Users Only, Pay as You Go, No Set Aside
Method 1: Parcel Charges

DRAFT

Revenues and Expenses	Fiscal Year Ending									
	2014	2015	2016	2017	2018	2023	2033	2043	2053	2063
Program Year	1	2	3	4	5	10	20	30	40	50
Operating Revenue										
Net Ad Valorem Taxes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
County Contribution	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105
Parcel / Other Charges	\$266,230	\$262,495	\$258,760	\$255,025	\$251,291	\$232,617	\$195,269	\$157,921	\$120,573	\$83,225
Program Prepayments	\$183,004	\$179,270	\$175,535	\$171,800	\$168,065	\$149,391	\$112,043	\$74,696	\$37,348	\$0
Set Aside Parcel Charges	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Grants	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Revenue	\$1,082,339	\$1,074,869	\$1,067,400	\$1,059,930	\$1,052,461	\$1,015,113	\$940,417	\$865,722	\$791,026	\$716,330
Operating Expenses										
Board Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Supplies and Equipment	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Management Agreement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Professional Services	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Land Set Aside	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Expenses	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000
Agricultural Land Purchases	\$844,132	\$844,132	\$844,132	\$844,132	\$844,132	\$844,132	\$844,132	\$844,132	\$844,132	\$844,132
Net Operating Surplus (Deficit)	\$207,207	\$199,737	\$192,268	\$184,798	\$177,329	\$139,981	\$65,285	(\$9,410)	(\$84,106)	(\$158,802)
Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Operating Surplus (Deficit)	\$207,207	\$199,737	\$192,268	\$184,798	\$177,329	\$139,981	\$65,285	(\$9,410)	(\$84,106)	(\$158,802)
Beginning Balance										
less start-up expenses	(\$25,000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
plus bond proceeds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
less use of proceeds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
plus Surplus (Deficit)	\$207,207	\$199,737	\$192,268	\$184,798	\$177,329	\$139,981	\$65,285	(\$9,410)	(\$84,106)	(\$158,802)
Ending Balance	\$207,207	\$406,944	\$599,212	\$784,011	\$961,339	\$1,735,940	\$2,724,923	\$2,966,950	\$2,462,021	\$1,210,135

Source: HEC.

"sum cash"

Table 25
Diamond Valley GID Financial Feasibility
Projected Summary Cash Flow

BASE CASE - Scenario A: Agricultural Users Only, Pay as You Go, No Set Aside
Method 2: Ad Valorem Taxes

DRAFT

Revenues and Expenses Program Year	Fiscal Year Ending									
	2014 1	2015 2	2016 3	2017 4	2018 5	2023 10	2033 20	2043 30	2053 40	2063 50
Operating Revenue										
Net Ad Valorem Taxes	\$182,290	\$185,321	\$188,402	\$191,535	\$194,719	\$211,454	\$249,361	\$294,064	\$346,780	\$408,947
County Contribution	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105	\$633,105
Parcel / Other Charges	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Program Prepayments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Set Aside Parcel Charges	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Grants	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Revenue	\$815,395	\$818,426	\$821,507	\$824,640	\$827,824	\$844,559	\$882,466	\$927,169	\$979,885	\$1,042,052
Operating Expenses										
Board Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Supplies and Equipment	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Management Agreement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Professional Services	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Land Set Aside	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Expenses	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000
Agricultural Land Purchases	\$766,166	\$768,894	\$771,667	\$774,486	\$777,352	\$792,413	\$826,530	\$866,762	\$914,207	\$970,158
Net Operating Surplus (Deficit)	\$18,229	\$18,532	\$18,840	\$19,153	\$19,472	\$21,145	\$24,936	\$29,406	\$34,678	\$40,895
Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Operating Surplus (Deficit)	\$18,229	\$18,532	\$18,840	\$19,153	\$19,472	\$21,145	\$24,936	\$29,406	\$34,678	\$40,895
Beginning Balance	\$25,000	\$18,229	\$36,761	\$55,601	\$74,755	\$175,406	\$403,403	\$672,272	\$989,341	\$1,363,251
less start-up expenses	(\$25,000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
plus bond proceeds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
less use of proceeds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
plus Surplus (Deficit)	\$18,229	\$18,532	\$18,840	\$19,153	\$19,472	\$21,145	\$24,936	\$29,406	\$34,678	\$40,895
Ending Balance	\$18,229	\$36,761	\$55,601	\$74,755	\$94,227	\$196,552	\$428,339	\$701,678	\$1,024,019	\$1,404,146

Source: HEC.

"sum cash"