TABLE 9A-1: MRGCD Irrigation System, Rio Grande Drainage Basin, Sandoval, Bernalillo, and Valencia County, New Mexico

All land, water, crop and cost numbers presented in this table are based on published documents or data from agencies, many of which use estimates or placeholder assumptions to assign values. These values are based in part on empirical data (measurements, studies) however, they should not be considered as measured data. Therefore, the results of this analysis should be viewed as conceptual only and not as factual. Specific, more accurate data needs include, cropped acreages, crop irrigation requirements, on- and off-farm efficiency coefficients. References for all source documents have been provided.

Notes and Assumptions

1	Reported Irrigated Acreages	MRGCD Handout, *Estimated Irrigated Acreage as of July 2000*, MRGCD, 4/2001
2	Reported Irrigated Acreages	Gore, C., et. al., *New Mexico Agricultural Statistics 2000*, USDA (number of farms from 2000 Census data [probably full time farms])
3	Reported Irrigated Acreages	Wilson, B., Water Use by Categories in NM Counties and River Basins and Irrigated Acreage, NM OSE, 1999
4	Reported Irrigated Acreages	S.S. Papadopulos & Assoc., Inc. (SSPA), *MRGCD Efficiency and Metering Program*, NM ISC, Table 4.4, December 2002
5	Number of MRGCD Customers	13,000 (12000 - 14,000 from MRGCD Billing Records)
6	Consumptive Irrigation Requirement	2.2 acre-feet/acre S.S. Papadopulos & Assoc. *(CIR values should be viewed as estimates, not measured values)*
7	It is assumed that all irrigated areas include fallow but not idle lands. Incidental depletions are not broken out in this exercise.	

#	County	Reported Irrigated Area[1] (2000)	Reported Irrigated Area[2] (less non MRGCD systems) (2000)	Reported Irrigated Area[3] (1999)	Reported Irrigated Area[4] (2001)	Number of Farms (see Note #2)	Number of Billed Customers (see Note #5)
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
		acres	acres	acres	acres	#	#
1	Sandoval	6,733	4,712	6,075	8,008	353	3,143
2	Bernalillo	12,870	9,190	8,760	9,291	468	4,167
3	Valencia	30,938	23,674	20,798	28,459	639	5,690
	Totals	**50,541**	**37,576**	**35,633**	**45,758**	1,460	13,000

TABLE 9A-2: MRGCD Irrigation System Characterization

Notes and Assumptions

1 MRGCD Irrigation system diversion, incidental loss, consumptive use, and return flow accounting is complicated by the use of return flows for source irrigation diversions in downstream canals. ***For the purpose of this exercise, use MRGCD acreage data, at a CIR of 2.2 acre-feet per acre, use Wilson B., 1999 conveyance efficiency and incidental depletion coefficients. Use 64% as on-farm efficiency, assuming that there is a straight 36% losses to seepage as reported as average in New Mexico in Wilson (1997).***

This exercise then attempts to exclude to the extent possible any return flow from upstream irrigated areas being counted as diversion water for downstream irrigated land.

#	County	Reported Irrigated Area[1] (2000)	On-farm Irrigation Efficiency (E_f)	Farm Delivery Requirement	Off-farm Conveyance Efficiency (E_c)	Total System Diversion Requirement	System Diversion Requirement per Acre
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
		acres	%	acre-feet	%	acre-feet	acre-feet
1	Sandoval	6,733	48%	30,860	64%	48,218	7.2
2	Bernalillo	12,870	48%	58,988	64%	92,168	7.2
3	Valencia	30,938	50%	136,127	64%	212,699	6.9
		50,541		**225,974**		**353,085**	**7.0**