TABLE 10A-4: Middle Rio Grande Irrigation Systems: Possible Seepage Effects of Changes to Systems

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 Assume Programs outlined in Alternatives Analyses A-7, A-9, and A-10 are feasible and implemented with total farm and system coverage

2 All conceptual plans noted in A-7, A-9, and A-10, assume that for MRGCD, return flows have been to the extent possible, factored out, of analysis accounting as possible diversions used in downstream irrigated areas.

EXISTING

#	County / System	Reported Irrigated Area	Consumptive Irrigation Requirement	Total System Diversion Requirement	System Irrigation Efficiency (Ej)	Total Diversion Per Acre	Total Diversion Water Reduction From A-7, A-9, A-10
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
		acres	acre-feet	acre-feet	%	acre-feet	acre-feet
1	Sandoval (MRGCD)	6,733	14,813	48,218	30.7%	7.2	21,601
2	Bernalillo (MRGCD)	12,870	28,314	92,168	30.7%	7.2	41,633
3	Valencia (MRGCD)	30,938	68,064	212,699	32.0%	6.9	84,787
4	Small Systems - Sandoval County	4,639	5,242	14,977	35.0%	3.2	7,776
	Totals	**55,180**	**116,432**	**368,062**	**31.6%**	**6.7**	**155,797**

POSSIBLE

#	County / System	Reported Irrigated Area	Existing Consumptive Irrigation Requirement	New Total System Diversion Requirement	New System Irrigation Efficiency (Ej)	New Total Diversion Per Acre	Existing Volume of Water - Incidental Depletions, Deep Percolation, and Off-Farm Conveyance Seepage	New Volume of Water - Incidental Depletions, Deep Percolation, and Off-Farm Conveyance Seepage
1	*2*	*3*	*4*	*10*	*11*	*12*	*13*	*14*
		acres	acre-feet	acre-feet	%	acre-feet	acre-feet	acre-feet
1	Sandoval (MRGCD)	6,733	8,820	26,617	33.1%	4.0	33,405	17,797
2	Bernalillo (MRGCD)	12,870	28,384	50,535	56.2%	3.9	63,854	22,151
3	Valencia (MRGCD)	30,938	74,389	127,912	58.2%	4.1	144,635	53,523
4	Small Systems - Sandoval County	4,639	5,242	7,201	72.8%	1.6	9,735	1,959
	Totals	**55,180**	**116,835**	**212,265**	**55.0%**	**3.8**	**251,630**	**95,430**

Results

1 Irrigated acreage remains the same

2 Consumptive Irrigation Requirement (CIR) remains the same

3 Total system Diversion is reduced by **155,797** acre-feet or by **42%**

4 Irrigation system efficiency in the study area improves from **31.6%** to **55.0%**

5 Seepage is not curtailed