

TABLE 9A-4: MRGCD Irrigation System, Off-Farm Conveyance Efficiency Estimate - 2001

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	Estimated consumptive irrigation requirement	2.2	acre-feet	(CIR values should be viewed at estimates not measured values)
2	% of canals proposed to be lined	20%		
3	Assumed seepage reduction	40%	(Worst seepage problems are in areas of most permeable soils. Seepage does not occur uniformly along all canal length.)	
4	Concrete lining	75%	efficient	
5	In column 11 incidental off-farm depletions (ID) are subtracted from possible diversion water reduction. ID coefficient from Wilson, B. (1999)			
6	It is assumed that irrigated areas include fallow but not idle lands			
7	For off-farm canal length, see Table A9-7			

#	County	Reported Irrigated Area	Off-Farm Canal Length	Consumptive Irrigation Use	Farm Delivery Requirement	Existing		Proposed		Possible Diversion Water Reduction
						Losses in Off-Farm Canals	System Diversion Requirement	Losses in Off-Farm Canals	System Diversion Requirement	
1	2	3	4	5	6	7	8	9	10	11
		acres	feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet
1	Sandoval	6,733	911,545	14,813	30,860	17,359	48,218	7,811	38,671	9,261
2	Bernalillo	12,870	1,061,775	28,314	58,988	33,180	92,168	14,931	73,919	17,702
3	Valencia	30,938	1,541,063	68,064	136,127	76,572	212,699	34,457	170,584	40,851
Totals		50,541	3,514,382	111,190	225,974	127,111	353,085	57,200	283,174	67,813
miles			665.6							

Est. Existing Diversion (acre-foot per acre)	7.0
Est. New Diversion (acre-foot per acre)	5.6

	Before	After
Total System Irrigation Efficiency (E _s)	31.5%	39.3%
Off-farm conveyance efficiency (E_c)	64.0%	79.8%
On-farm irrigation efficiency (E _f)	49.2%	49.2%