on crop type, with rangelands at only $50 per acre (based on the county-wide average), up to the very high value dairy and poultry uses. The large acreage of grain, seed, truck and row crops average $990 in annual sales per acre.

Using the multipliers for indirect economic activity for each type of agricultural use (from the Input-Output study for Merced County developed by George Goldman, Coop Extension), the total direct and indirect annual sales are estimated at $119.7 million. In addition, farming in the GEA generates an estimated 2,487 direct and indirect jobs.

In our analysis of the impacts of urbanization on the GEA, we have used the GIS map identification of actual acreage of range/wetlands affected and have assumed that the balance of farmlands affected will be a mix of the crop types represented throughout the GEA.

Table 5C compares the wetlands-related economic activity county-wide and within the GEA. Overall, it is estimated that wetlands generate $53.4 million in total (direct and indirect) sales county-wide, with almost $40.9 million of that occurring in the GEA.

The three main categories of economic activities from wetlands are:

- Land maintenance, consisting of Grasslands Water District (GWD) and State and federal government costs. Annual *direct* costs of such wetlands maintenance are estimated at $11.0 million County-wide, of which $8.4 million is in the GEA (see Table 5C footnote #2).
- Other land expenditures, including GWD costs for structures and wages, State and federal land acquisition costs, and private landowners' land expenses. These come to an estimated $8.0 million in direct sales annually for the GEA, which is 100% of the county-wide cost.
- Recreation expenditures, including transportation, equipment, food, retail, and services for hunting, fishing, and non-consumptive use of the wetlands. These generate estimated *direct* sales of $17.5 million County-wide, of which $11.4 million is from the GEA.

The *total* (direct plus indirect) sales and jobs generated from these three categories of wetlands economic activity are estimated as follows:

- County-wide, land maintenance of $15.9 million, other land costs of $12.4 million, and recreation expenditures of $25.2 million come to a total of $53.4 million in annual sales and generate an estimated 1,092 wetlands-related jobs.
- From the GEA only, land maintenance of $12.1 million, other land costs of $12.4 million, and recreation expenditures of $16.4 million total $40.9 million in annual sales and generate 798 related jobs.

Note that these totals are based on the type of economic activity (maintenance, banking, personal income, retail, etc.) and the Input-Output multipliers (shown in Table 5C footnote #1).

BIBLIOGRAPHY

American Farmland Trust, prepared by Strong Associates, *Analysis of Rural Parcels in the Central Valley*, May 1999
American Farmland Trust, *The Bottom Line for Agriculture & Taxpayers (Alternatives for Future Growth in California's Central Valley)*, December 1995
Campaign to Save California Wetlands (Allen, Cunningham, Greenwood, Rosenthal – students at Graduate School of Public Policy, University of California, Berkeley), *The Value of California Wetlands*, August 1992
City of Atwater, *Budget, Fiscal Year 1999-2000*
City of Dos Palos, *Budget*, Fiscal Year 1999-2000
City of Dos Palos, *General Plan*, 1991
City of Gustine, *Budget, 1999-2000*
City of Gustine, *General Plan* [NEED DATE]
City of Livingston, *Annual Budget, 1999-2000*
City of Los Banos, *Adopted Budget*, July 1999
City of Los Banos, *General Plan*, May 1999
City of Merced, *Adopted Budget Summary, 1999-2000*
City of Merced, *Capital Improvement Program*, 2000-2004
Merced County Association of Governments, *Regional Transportation Plan*, September 1998
Merced County Department of Agriculture, Agricultural Commissioner, *Annual Report of Agriculture, 1998*
Merced County, *Proposed Budget, Fiscal Year 1999-2000*
Sokolow, Alvin D., Public Policy Specialist, *Municipal Density and Farmland Protection: An Exploratory Study of Central Valley Patterns*, December 1996
State of California, California State Controller, *Cities Annual Report, Fiscal Year 1996-1997*
State of California, California State Controller, *Counties Annual Report, Fiscal Year 1996-97*
Thomas Reid Associates, *Grassland Water District Land Planning Guidance Study*, January 1995
Thomas Reid Associates, *Volta Land Use Policy Working Group, Policy Option* (Discussion Draft), April 1999
University of California Cooperative Extension, George Goldman, IMPLAN Input Output Model for Merced County, October 1999
University of California, Davis, Dr. Brian Roach, *A Travel Cost Analysis of Waterfowl Hunting in the Central Valley of California*, October 1996

OTHER CONTACTS

Cities of Atwater, Dos Palos, Gustine, and Livingston, Planning Directors
City of Los Banos, Michael E. Holland, Associate Planner
City of Merced, Kim Espinosa, Senior Planner, and Kathleen A. Childress, Management Analyst
Ducks Unlimited Inc., Frederic A. Reid, Ph.D., Director of Conservation Planning, and Timothy Eisler, GIS Programmer
Grasslands Water District, Veronica Woodruff, Office Manager, and Dean Kwasny, Biologist
Merced Data Special Services, Richard J. Green, GIS Program Manager
Thomas Reid Associates, Thomas S. Reid, President, and Karen Weissman, Ph.D., Vice President
U.S. Fish & Wildlife Service, Central Valley Habitat Joint Venture, Mike Eichholz, Monitoring & Evaluation Coordinator, and Ruth Ostroff
University of California Cooperative Extension, George Goldman
University of California Cooperative Extension, Jim Farley, County Director & Livestock Advisor, and Bill L. Weir, Ph.D., Advisor (Field & Vegetable Crops)

APPENDIX 2

SUPPORTING STUDY TABLES AND FIGURES

SUMMARY TABLE A - COMPARISON OF CITY AND COUNTY REVENUE EFFECTS BY LAND USE AND COMMON GROWTH SCENARIO

		Change from 1996 to 2040			
	Existing	< Low Density >		< Compact Density >	
	Total in 1996	Amount	%	Amount	%
Demographics					
Population	198,522	421,934	213%	421,934	213%
Jobs	75,916	161,351	213%	161,351	213%
Developed Acres	50,130	94,195	188%	47,097	94%
Pop per Acre	4.0	4.5		9.0	
Agriculture Impact					
Total Annual Sales (000)	$2,113,765	($229,245)	-11%	($114,623)	-5%
Total Jobs	27,319	-3,314	-12%	-1,657	-6%
GEA Impact					
Total Annual Sales (000)	$160,605	($14,291)	-9%	($7,146)	-4%
Total Jobs	3,286	-331	-10%	-166	-5%
Cities Fiscal Impact					
Revenues (000)	$86,125	$228,937	266%	$229,892	267%
Costs (000)	($84,274)	($282,568)	335%	($223,574)	265%
Net Revenue/(Cost) (000)	$1,852	($53,631)		$6,318	
Per Capita net Rev/(Cost)	$15	($158)		$19	
County Fiscal Impact					
Revenues (000)	$206,215	$421,083	204%	$421,039	204%
Costs (000)	($208,890)	($429,284)	206%	($427,250)	205%
Net Revenue/(Cost) (000)	($2,675)	($8,201)		($6,211)	
-	($13)	($19)		($15)	

SUMMARY TABLE B - CHANGE IN REVENUE FOR ALTERNATE GROWTH SCENARIOS

	Existing	Change from 1996 to 2040 < Low Density		> < Compact Density		Total 2040 Low	Compact
Demographics (T1)	Total in 1996	Amount	%	Amount	%		
Population							
Cities	125,232	339,751	271%	339,751	271%	464,983	464,983
Unincorp. Area	73,290	82,184	112%	82,184	112%	155,474	155,474
Total	198,522	421,934	213%	421,934	213%	620,456	620,456
Jobs							
Cities	47,806	128,043	268%	128,043	268%	175,849	175,849
Unincorp. Area	28,111	33,308	118%	33,308	118%	61,419	61,419
Total	75,916	161,351	213%	161,351	213%	237,267	237,267
Developed Acres							
Cities	22,875	63,632	278%	31,816	139%	86,507	54,691
Unincorp. Area	27,255	30,563	112%	15,281	56%	57,818	42,537
Total	50,130	94,195	188%	47,097	94%	144,325	97,227
Average Pop/Acre	3.96	4.48		8.96		4.30	6.38
Agriculture Impact (T2)							
Ag. Acres	1,162,008	-94,195	-8%	-47,097	-4%	1,067,813	1,114,910
Direct Annual Sales (000)	$1,449,754	($156,390)	-11%	($78,195)	-5%	$1,293,364	$1,371,559
Total Annual Sales (000)	$2,113,765	($229,245)	-11%	($114,623)	-5%	$1,884,520	$1,999,143
Direct Jobs	13,971	-1,846	-13%	-923	-7%	12,125	13,048
Total Jobs	27,319	-3,314	-12%	-1,657	-6%	24,006	25,663
GEA Impact (T5)							
Ag/Wetland Acres	179,464	-9,763	-5%	-4,881	-3%	169,701	174,582
Direct Annual Sales (000)	$114,021	($10,021)	-9%	($5,011)	-4%	$104,000	$109,010
Total Annual Sales (000)	$160,605	($14,291)	-9%	($7,146)	-4%	$146,314	$153,459
Direct Jobs	1,865	-249	-13%	-124	-7%	1,617	1,741
Total Jobs	3,286	-331	-10%	-166	-5%	2,955	3,120
Cities Fiscal Impact (T3)							
Revenues (000)	$86,125	$228,937	266%	$229,892	267%	$315,062	$316,017
Costs (000)							
Average (Res + Jobs)	($57,540)	($153,399)	267%	($153,399)	267%	($210,939)	($210,939)
Acre-related	($26,734)	($73,261)	274%	($36,631)	137%	($99,995)	($63,365)
Capital/year	NA	($55,907)		($33,544)		$55,907	$33,544
Total Costs	($84,274)	($282,568)	335%	($223,574)	265%	($366,841)	($307,848)
Net Revenue/(Cost) (000)	$1,852	($53,631)		$6,318		($51,779)	$8,169
Per Capita							
Revenue	$688	$674	98%	$677	98%	$678	$680
Cost	($673)	($832)	124%	($658)	98%	($789)	($662)
Net Revenue/(Cost)	$15	($158)		$19		($111)	$18
County Fiscal Impact (T4)							
Revenues (000)							
Average + New prop tx	$185,958	$421,876	227%	$421,436	227%	$607,834	$607,394
Agriculture	$19,541	($786)	-4%	($393)	-2%	$18,755	$19,148
Wetlands	$716	($7)	-1%	($3)	0%	$709	$713
Total	$206,215	$421,083	204%	$421,039	204%	$627,298	$627,254
Costs (000)							
Average (Res + Jobs)	($205,263)	($425,217)	207%	($425,217)	207%	($630,480)	($630,480)
Acre-related	($3,627)	($4,067)	112%	($2,034)	56%	($7,694)	($5,661)
Total Costs	($208,890)	($429,284)	206%	($427,250)	205%	($638,174)	($636,140)
Net Revenue/(Cost) (000)	($2,675)	($8,201)		($6,211)		($10,876)	($8,886)
Per Capita							
Revenues	$1,039	$998	96%	$998	96%	$1,011	$1,011
Cost	($1,052)	($1,017)	97%	($1,013)	96%	($1,029)	($1,025)
Net Revenue/(Cost)	($13)	($19)		($15)		($18)	($14)

SUMMARY TABLE C – REVENUE VS. COST BY LAND USE

Revenue vs. Cost by Land Use

	Agriculture	Wetlands	Cities Only	All Urban	County
Revenue ($1000's)	$12,194	$272	$86,125	$86,125	$206,215
Cost ($1000's)	$3,562	$160	$84,274	$84,274	$208,890
Net Revenue	$8,632	$112	$1,851	$1,851	($2,675)
Revenue/Cost Ratio	3.42	1.70	1.02	1.02	0.99
Area (ac)	1,162,000	129,000	22,875	22,875	1,162,000
Population			125,232	125,232	198,522
Net Revenue per capita			$14.78	$14.78	($13.47)
Net Revenue per acre	$7.43	$0.87	$80.92	$80.92	($2.30)

SUMMARY TABLE D – REVENUE VS. COST BY GROWTH SCENARIO

	Existing	2040 Sprawl	2040 Compact
Revenue ($1000's)	$292,340	$942,360	$943,272
Cost ($1000's)	$293,164	$1,005,015	$943,988
Net Revenue	($824)	($62,655)	($716)
Revenue/Cost Ratio	1.00	0.94	1.00
Urban Area (ac)	50,130	144,325	97,228
Population	198,522	620,457	620,457
Net Revenue per capita	($4.15)	($100.98)	($1.15)
Net Revenue per urban acre	($16.44)	($434.12)	($7.36)

TABLE 1 - DEMOGRAPHIC IMPACTS
Population, Jobs and Acres: 1996 Vs. 2040

	1 Atwater	2 Dos Palos	3 Gustine	4 Livingston	5 Los Banos	6 Merced	All Cities	Unincorp	Total
1996 Baseline: Population, Jobs, & Acres									
Population (1)	23,672	4,430	4,216	10,508	20,694	61,712	125,232	73,290	198,522
Jobs (2)	10,086	1,473	1,583	3,886	7,821	22,956	47,806	28,111	75,916
Developed Land Area (3)									
Residential	2,673	447	612	1,119	2,855	7,828	15,533	17,849	33,382
Commercial/Industrial	364	227	117	538	1,439	2,705	5,390	1,423	6,813
Other	503	106	42	565	0	735	1,951	7,983	9,935
Total	3,540	780	771	2,222	4,294	11,267	22,875	27,255	50,130
Population per gross acre	6.7	5.7	5.5	4.7	4.8	5.5	5.5	2.7	4.0
2040 Projected Population, Jobs									
% diff: 1996 Vs 2040	231%	302%	353%	461%	407%	404%	371%	212%	313%
2040 - Population	54,718	13,395	14,899	48,471	84,261	249,238	464,983	155,474	620,456
2040 - Jobs	23,314	4,455	5,594	17,926	31,844	92,715	175,849	61,419	237,267
New Population, Jobs in 2040 (vs 1996)									
Population	31,046	8,965	10,683	37,963	63,567	187,526	339,751	82,184	421,934
Jobs	13,228	2,982	4,011	14,040	24,023	69,758	128,043	33,308	161,351
New Urbanized Acres in 2040									
Low Density									
Pop/ Acre (existing ratio	6.7	5.7	5.5	4.7	4.8	5.5	5.3	2.7	4.5
Acres Urbanized	**4,643**	**1,579**	**1,953**	**8,029**	**13,190**	**34,239**	**63,632**	**30,563**	**94,195**
Compact Density (4)									
Pop/ Acre	12.0	10.2	9.8	8.5	8.7	9.9	9.6	4.8	8.1
Acres Urbanized	**2,321**	**790**	**976**	**4,014**	**6,595**	**17,119**	**31,816**	**15,281**	**47,097**

(1) Population estimates are based on Department of Finance, Population Unit projections

(2) Jobs estimates are based on 1990 Census ratio of jobs-to-population as applied to 1996.

[3]See Table 1A for Acreage documentation

(4) Compact density assumes 10% of new residents & jobs will be in infill; 90% in new annexations but at higher average density as shown.

(4) Compact: Infill Vs. Annexatic	Atwater	Dos Palos	Gustine	Livingston	Los Banos	Merced	All Cities	Unincorp	Total
Population Infill 10%	3,105	897	1,068	3,796	6,357	18,753	33,975	8,218	42,193
Population Annex 90%	27,941	8,069	9,615	34,167	57,211	168,773	305,775	73,965	379,741
Jobs infill 10%	1,323	298	401	1,404	2,402	6,976	12,804	3,331	16,135
Jobs Annex 90%	11,905	2,684	3,610	12,636	21,621	62,783	115,238	29,978	145,216

TABLE 1A - DETAIL DEMOGRAPHIC DATA: 1990, 1996

	1 Atwater	2 Dos Palos	3 Gustine	4 Livingston	5 Los Banos	6 Merced	All Cities	Unincorp Area (1)	Total County
1990 Census Information (for appropriate ratios)									
Population	22,282	4,080	3,931	7,317	14,519	56,216	108,345	70,058	178,403
K-12 ADA	4,920	906	793	1,959	3,070	12,840	24,488	NA	
Employment	9,494	1,357	1,476	2,706	5,487	20,912	41,432	26,791	68,223
Occ Housing Units	7,189	1,363	1,523	1,654	4,772	18,282	34,783	22,491	57,274
Census Ratios									
Pop to HH Ratio	3.099	2.993	2.581	4.424	3.043	3.075	3.115	3.115	
K-12 to HH Ratio	0.684	0.665	0.521	1.184	0.643	0.702	0.704	NA	
Pop/Job Ratio	0.426	0.333	0.375	0.370	0.378	0.372	0.382	0.382	
Employee to HH Ratio	1.321	0.996	0.969	1.636	1.150	1.144	1.191	1.191	
Resid & Job split calculation									
Population	22,282	4,080	3,931	7,317	14,519	56,216	108,345	70,058	178,403
Job Pop Equiv (jobs x 2/3)	6,329	905	984	1,804	3,658	13,941	27,621	17,861	45,482
Total	28,611	4,985	4,915	9,121	18,177	70,157	135,966	87,919	223,885
Percentage Pop	77.9%	81.9%	80.0%	80.2%	79.9%	80.1%	79.7%	79.7%	79.7%
Percentage Jobs	22.1%	18.1%	20.0%	19.8%	20.1%	19.9%	20.3%	20.3%	20.3%
1996 Information (for base year and fiscal analysis) (1)									
Population	23,672	4,430	4,216	10,508	20,694	61,712	125,232	73,290	198,522
Increase % Population - 1990 to 1996	6.2%	8.6%	7.3%	43.6%	42.5%	9.8%	15.6%	4.6%	11.3%
K-12 Students	5,227	984	850	2,813	4,376	14,095	28,345	NA	
Dwelling Units	7,637	1,480	1,633	2,375	6,802	20,069	39,997	23,529	63,526
Jobs	10,086	1,473	1,583	3,886	7,821	22,956	47,806	28,027	75,833
Job Population Equiv (jobs x 2/3)	6,724	982	1,055	2,591	5,214	15,304	31,871	18,684	50,555
Pop as % of pop/job equiv total	77.9%	81.9%	80.0%	80.2%	79.9%	80.1%	79.7%	79.7%	79.7%
Jobs as % of pop/job equiv total	22.1%	18.1%	20.0%	19.8%	20.1%	19.9%	20.3%	20.3%	20.3%
Acres (2)									
Residential	2,673	447	612	1,119	2,855	7,828	15,533	17,849	33,382
Commercial/Industrial	364	227	117	538	1,439	2,705	5,390	1,423	6,813
Other	503	106	42	565	0	735	1,951	7,983	9,935
Total Acres	3,540	780	771	2,222	4,294	11,267	22,875	27,255	50,130
Population/Acre	6.7	5.7	5.5	4.7	4.8	5.5	5.5	2.7	4.0
Resid acres as % of Total	88.0%	66.3%	83.9%	67.5%	66.5%	74.3%	74.2%	65.5%	66.6%
Commercial acres as % of Total	12.0%	33.7%	16.1%	32.5%	33.5%	25.7%	25.8%	5.2%	13.6%

(1) Department of Finance for population, 1990 Census ratios for other data

(2) City land areas are from Merced County GIS file LU 90.dbf updated by current city zoned use data.
Unincorporated area is from GIS file LU 90.dbf with added Strong Assoc. estimate of developed rural parcels, as follows:

	Pop@2.5	Units	Acres
Unincorporated Total	73,290	29,316	1,179,857
Farms (over 10 acre parcel 1DU/160ac	18,156	7,263	1,162,008
Rural Residential (1.5 to 10 ac parcels)	5,470	2,188	9,667
Urban Residential	49,664	19,865	8,182
Residential Developed (less than 10 acres)	55,134	22,053	17,849

TABLE 1B - DETAIL OF POPULATION PROJECTIONS

Method # 1

Based on Average percentage Increase (years 2020 to 2040)

	1		2		3		4		5		6						
	Atwater	%	Dos Palos	%	Gustine	%	Livingston	%	Los Banos	%	Merced	%	All Cities	Unincorp.	%	Total	%
1990	22,282		4,196		3,931		7,317		14,519		56,216		108,461	69,942		178,403	
1995	23,915	7%	4,365	4%	4,135	5%	10,437	43%	20,123	39%	60,973	8%	123,948	77,524	11%	201,472	13%
2000	26,115	9%	5,655	30%	5,484	33%	13,888	33%	25,042	24%	84,994	39%	161,178	77,806	0%	238,984	19%
2005	29,083	11%	6,461	14%	6,265	14%	17,683	27%	30,522	22%	102,667	21%	192,681	86,860	12%	279,541	17%
2010	31,410	8%	7,382	14%	7,370	18%	21,956	24%	36,280	19%	120,254	17%	224,652	94,810	9%	319,462	14%
2015	37,239	19%	8,434	14%	8,669	18%	25,048	14%	41,389	14%	142,571	19%	263,350	110,180	16%	373,530	17%
2020	42,523	14%	9,635	14%	10,196	18%	28,140	12%	51,000	23%	162,797	14%	304,291	124,199	13%	428,490	15%
2025	47,388	11%	11,090	15%	11,979	17%	35,345	26%	62,993	24%	194,957	20%	363,751	136,811	10%	500,562	16%
2030	52,809	11%	12,764	15%	14,074	17%	44,395	26%	77,806	24%	233,469	20%	435,317	150,704	10%	586,021	16%
2035	58,851	11%	14,691	15%	16,536	17%	55,761	26%	96,103	24%	279,589	20%	521,530	166,008	10%	687,538	16%
2040	65,583	11%	16,908	15%	19,427	17%	70,038	26%	118,702	24%	334,821	20%	625,480	182,865	10%	808,345	16%
Average increase per 5 yr interval		11%		15%		17%		26%		24%		20%			10%		16%

Note: Growth Projections as follows:

1995 to 2020 based on "1998 Regional Transportation Plan" - Merced County Association of Governments

2025 to 2040 based on the average growth rate of "1998 Regional Transportation Plan"

Method # 2

Based on meeting Target 2040 Population

	1		2		3		4		5		6						
	Atwater	%	Dos Palos	%	Gustine	%	Livingston	%	Los Banos	%	Merced	%	All Cities	Unincorp.	% inc	Total	% inc
1990	22,282		4,196		3,931		7,317		14,519		56,216		108,461	69,942		178,403	
1995	23,915	7%	4,365	4%	4,135	5%	10,437	43%	20,123	39%	60,973	8%	123,948	77,524	11%	201,472	13%
2000	26,115	9%	5,655	30%	5,484	33%	13,888	33%	25,042	24%	84,994	39%	161,178	77,806	0%	238,984	19%
2005	29,083	11%	6,461	14%	6,265	14%	17,683	27%	30,522	22%	102,667	21%	192,681	86,860	12%	279,541	17%
2010	31,410	8%	7,382	14%	7,370	18%	21,956	24%	36,280	19%	120,254	17%	224,652	94,810	9%	319,462	14%
2015	37,239	19%	8,434	14%	8,669	18%	25,048	14%	41,389	14%	142,571	19%	263,350	110,180	16%	373,530	17%
2020	42,523	14%	9,635	14%	10,196	18%	28,140	12%	51,000	23%	162,797	14%	304,291	124,199	13%	428,490	15%
2025	45,290	7%	10,462	9%	11,210	10%	32,238	15%	57,821	13%	181,087	11%	338,108	131,372	6%	469,480	9%
2030	48,237	7%	11,361	9%	12,325	10%	36,932	15%	65,554	13%	201,433	11%	375,841	138,959	6%	514,801	9%
2035	51,375	7%	12,336	9%	13,551	10%	42,310	15%	74,321	13%	224,064	11%	417,958	146,985	6%	564,943	9%
2040	54,718	7%	13,395	9%	14,899	10%	48,471	15%	84,261	13%	249,238	11%	464,983	155,474	6%	620,456	9%
% to meet 2040		7%		9%		10%		15%		13%		11%			6%		9%

Note: Growth Projections as follows:

1995 to 2020 based on "1998 Regional Transportation Plan" - Merced County Association of Governments

2025 to 2040 based on Dept. of Finance population projection growth rate percentage.

TABLE 2 - PRIVATE SECTOR AGRICULTURE IMPACT:2040

Annual Acres, Sales & Jobs Lost

	1 Atwater	2 Dos Palos	3 Gustine	4 Livingston	5a Los Banos NE (1)	5b Los Banos SW (1)	6 Merced	All Cities	Unincorp	Total
Acres Urbanized (2)										
Low Density	4,643	1,579	1,953	8,029	6,595	6,595	34,239	63,632	30,563	94,195
Compact Density	2,321	790	976	4,014	3,298	3,298	17,119	31,816	15,281	47,097
Direct Annual Sales Lost ($000)										
Low Density	$10,887	$2,447	$2,544	$18,710	$5,632	$19,291	$46,136	$105,647	$50,743	$156,390
Compact Density	$5,444	$1,224	$1,272	$9,355	$2,816	$9,646	$23,068	$52,824	$25,371	$78,195
Total Annual Sales Lost ($000)										
Low Density	$15,997	$3,684	$3,719	$27,500	$7,979	$28,553	$67,432	$154,864	$74,382	$229,245
Compact Density	$7,998	$1,842	$1,860	$13,750	$3,989	$14,276	$33,716	$77,432	$37,191	$114,623
Direct Jobs Lost (3)										
Low Density	102	29	30	164	123	190	609	1,247	599	1,846
Compact Density	51	14	15	82	61	95	305	623	299	923
Total Jobs Lost										
Low Density	206	55	54	343	164	385	1,032	2,239	1,075	3,314
Compact Density	103	28	27	171	82	192	516	1,119	538	1,657

(1) Los Banos growth area is divided into two areas: NE affects Grasslands WD(Focus Area) , SW does not affect the Focus Area Strong Associates assumes a 50/50 split of growth for illustrative purposes.

(2) The ag impact is estimated based on total urbanized acres, which may slightly overlap with wetlands and vacant lands.

(3) Sales and jobs impact figures for the unincorporated area are assumed to be proportional to the city figures.

TABLE 2A - AGRICULTURAL SALES & JOBS: 1998

Sector Description	Acres	Dir. Sales/Acre	Direct Sales (1)	Total Sales (2)	Direct Jobs (2)	Total Jobs (2)
Dairy	5,684	$92,706	$526,908,000	$749,997,686	3,053	7,234
Poultry	2,680	$87,613	$234,820,000	$333,864,258	858	3,183
Range Fed Cattle	568,000	$96	$54,391,000	$94,357,888	759	1,369
Sheep, Lambs & Goats	3,374	$500	$1,687,000	$2,659,171	102	132
Hogs, Pigs & Swine	2,870	$500	$1,435,000	$2,018,507	15	24
Other Meat Animal Products	4,750	$500	$2,375,000	$3,708,054	32	53
Cotton	68,772	$884	$60,823,000	$88,564,249	396	961
Food Grains	36,545	$309	$11,297,000	$15,330,989	234	288
Feed Grains	129,911	$358	$46,567,000	$66,117,456	639	968
Hay Pasture	162,938	$505	$82,250,000	$115,953,007	3,169	3,734
Fruits	32,044	$2,829	$90,637,000	$135,126,987	1,001	1,987
Nuts	83,837	$1,553	$130,178,000	$194,140,570	1,337	2,659
Vegetables	44,704	$3,341	$149,371,000	$227,469,478	1,253	2,978
Sugar Crops	12,658	$1,199	$15,176,000	$20,205,827	250	338
Misc. Crops	1,952	$10,933	$21,342,000	$35,869,009	632	1,040
Greenhouse & Nursery	1,214	$15,657	$19,007,000	$26,425,508	224	348
Commercial Fishing	75	$19,867	$1,490,000	$1,956,591	18	25
Total All	1,162,008	$1,248	$1,449,754,000	$2,113,765,234	13,971	27,319

(1) Direct Sales from Ag Commissioner Crop/Livestock Report

(2) Input Output Multiplier for Sales, Income and Employment - Coop Extension, George Goldman

I-O #	Sector Description	Sales Multiplier	Direct Jobs Per $1M Sales	Total Jobs Per $1M Sales
1	Dairy	1.4234	5.7944	13.7293
2	Poultry	1.4218	3.6544	13.5536
4	Range Fed Cattle	1.7348	13.9602	25.1706
6	Sheep, Lambs & Goats	1.5763	60.2469	78.0057
7	Hogs, Pigs & Swine	1.4066	10.4100	16.6830
8	Other Meat Animal Products	1.5613	13.5223	22.2791
10	Cotton	1.4561	6.5051	15.7977
11	Food Grains	1.3571	20.7085	25.5081
12	Feed Grains	1.4198	13.7263	20.7857
13	Hay Pasture	1.4098	38.5283	45.3970
16	Fruits	1.4909	11.0463	21.9229
17	Nuts	1.4913	10.2696	20.4244
18	Vegetables	1.5228	8.3877	19.9357
19	Sugar Crops	1.3314	16.4511	22.2812
20	Misc. Crops	1.6807	29.5999	48.7288
23	Greenhouse & Nursery	1.3903	11.7964	18.2913
25	Commercial Fishing	1.3131	11.8341	16.7378

TABLE 2B - AGRICULTURAL IMPACT: 2040

By Crop Type and City (1)

	1	2	3	4	5a	5b	6			
	Atwater	Dos Palos	Gustine	Livingston	Los Banos NE	Los Banos SW	Merced	All Cities	Unincorp.	Total County
Acres Urbanized										
1-8 Animal Products	93	0	20	161	66	132	342	813	391	1204
11 - Food Grains	464	316	781	803	0	0	10,272	12,636	6069	18705
12 - Feed Grains	0	0	0	803	989	0	0	1,792	861	2653
13 - Hay Pasture	464	474	488	0	5,276	1,649	13,695	22,047	10589	32636
16 - Fruits	464	0	0	803	0	1,979	0	3,246	1559	4805
17 - Nuts	2,553	0	195	4,416	0	660	3,424	11,248	5402	16650
18 - Vegetables	464	632	293	803	0	1,979	5,136	9,306	4470	13776
Other	139	158	176	241	264	198	1,370	2,545	1222	3767
Low Density Total	4,643	1,579	1,953	8,029	6,595	6,595	34,239	63,632	30563	94195
Compact Density	2,321	790	976	4,014	3,298	3,298	17,119	31,816	15,281	47,097
									48.03%	
Direct Sales Lost										
1-8 Animal Products	$3,680,167	$0	$773,885	$6,364,077	$2,613,892	$5,227,783	$13,570,111	$32,229,914	$15,480,135	$47,710,049
11 - Food Grains	$143,518	$97,636	$241,438	$248,185	$0	$0	$3,175,223	$3,906,000	$1,876,065	$5,782,065
12 - Feed Grains	$0	$0	$0	$287,788	$354,606	$0	$0	$642,393	$308,544	$950,937
13 - Hay Pasture	$234,361	$239,156	$246,413	$0	$2,663,333	$832,292	$6,913,394	$11,128,948	$5,345,271	$16,474,219
16 - Fruits	$1,313,199	$0	$0	$2,270,903	$0	$5,596,313	$0	$9,180,416	$4,409,384	$13,589,800
17 - Nuts	$3,964,938	$0	$303,188	$6,856,529	$0	$1,024,056	$5,316,424	$17,465,137	$8,388,563	$25,853,700
18 - Vegetables	$1,551,286	$2,110,695	$978,638	$2,682,623	$0	$6,610,939	$17,160,460	$31,094,641	$14,934,859	$46,029,500
Low Density Total	$10,887,470	$2,447,487	$2,543,563	$18,710,104	$5,631,830	$19,291,383	$46,135,611	$105,647,448	50742820.11	$156,390,268
Compact Density	$5,443,735	$1,223,743	$1,271,781	$9,355,052	$2,815,915	$9,645,692	$23,067,806	$52,823,724	$25,371,410	$78,195,134
Total Sales Lost										
1-8 Animal Products	$5,238,327	$0	$1,101,543	$9,058,588	$3,720,598	$7,441,195	$19,315,614	$45,875,867	$22,034,331	$67,910,197
11 - Food Grains	$194,766	$132,501	$327,652	$336,808	$0	$0	$4,309,047	$5,300,774	$2,545,979	$7,846,753
12 - Feed Grains	$0	$0	$0	$408,611	$503,481	$0	$0	$912,092	$438,081	$1,350,173
13 - Hay Pasture	$330,394	$337,153	$347,384	$0	$3,754,668	$1,173,334	$9,746,247	$15,689,179	$7,535,565	$23,224,744
16 - Fruits	$1,957,795	$0	$0	$3,385,596	$0	$8,343,314	$0	$13,686,705	$6,573,770	$20,260,475
17 - Nuts	$5,913,099	$0	$452,159	$10,225,464	$0	$1,527,223	$7,928,633	$26,046,579	$12,510,258	$38,556,837
18 - Vegetables	$2,362,374	$3,214,270	$1,490,317	$4,085,230	$0	$10,067,461	$26,132,790	$47,352,442	$22,743,535	$70,095,978
Low Density Total	$15,996,755	$3,683,923	$3,719,056	$27,500,298	$7,978,748	$28,552,528	$67,432,331	$154,863,639	$74,381,520	$229,245,158
Compact Density	$7,998,378	$1,841,962	$1,859,528	$13,750,149	$3,989,374	$14,276,264	$33,716,165	$77,431,819	$37,190,760	$114,622,579

(1) Percentage of Crop Mix in City Expansion Areas per Agricultural Commissioner, Cooperative Extension & GIS LU90.shp

	Atwater	Dos Palos	Gustine	Livingston	Los Banos-NE	Los Banos-SW	Merced	Unincorp (All Cities Aver.)
1-8 Animal Products	2.0%	0.0%	1.0%	2.0%	1.0%	2.0%	1.0%	1.3%
11 - Food Grains	10.0%	20.0%	40.0%	10.0%			30.0%	19.9%
12 - Feed Grains				10.0%	15.0%			2.8%
13 - Hay Pasture	10.0%	30.0%	25.0%		80.0%	25.0%	40.0%	34.6%
16 - Fruits	10.0%	0.0%		10.0%		30.0%		5.1%
17 - Nuts	55.0%	0.0%	10.0%	55.0%		10.0%	10.0%	17.7%
18 - Vegetables	10.0%	40.0%	15.0%	10.0%		30.0%	15.0%	14.6%
19 - Other open	3.0%	10.0%	9.0%	3.0%	4.0%	3.0%	4.0%	4.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE 2B, CONT. - AGRICULTURAL IMPACT:2040

By Crop Type and City

	1	2	3	4	5a	5b	6			
	Atwater	Dos Palos	Gustine	Livingston	Los Banos NE	Los Banos SW	Merced	All Cities	Unincorp.	Total County
Direct Jobs Lost										
1-8 Animal Products	21	0	4	37	15	30	79	187	90	276
11 - Food Grains	3	2	5	5	0	0	66	81	39	120
12 - Feed Grains	0	0	0	4	5	0	0	9	4	13
13 - Hay Pasture	9	9	9	0	103	32	266	429	206	635
16 - Fruits	15	0	0	25	0	62	0	101	49	150
17 - Nuts	41	0	3	70	0	11	55	179	86	266
18 - Vegetables	13	18	8	23	0	55	144	261	125	386
Total Low Density	102	29	30	164	123	190	609	1247	599	1,846
Total Compact Density	51	14	15	82	61	95	305	623	299	923
Total Jobs Lost										
1-8 Animal Products	51	0	11	87	36	72	186	442	213	655
11 - Food Grains	4	2	6	6	0	0	81	100	48	147
12 - Feed Grains	0	0	0	6	7	0	0	13	6	20
13 - Hay Pasture	11	11	11	0	121	38	314	505	243	748
16 - Fruits	29	0	0	50	0	123	0	201	97	298
17 - Nuts	81	0	6	140	0	21	109	357	171	528
18 - Vegetables	31	42	20	53	0	132	342	620	298	918
Total Low Density	206	55	54	343	164	385	1032	2239	1075	3314
Total Compact Density	103	28	27	171	82	192	516	1,119	538	1,657

Sources: Interviews with Ag commissioner and Coop Extension staff

GIS LU90 map for buffer areas

I-O Multipliers for Table 2A

TABLE 2B, CONT. - AGRICULTURAL IMPACT:2040
By Crop Type and City

	1 Atwater	2 Dos Palos	3 Gustine	4 Livingston	5a Los Banos NE	5b Los Banos SW	6 Merced	All Cities	Unincorp.	Total County
Direct Jobs Lost										
1-8 Animal Products	21	0	4	37	15	30	79	187	90	276
11 - Food Grains	3	2	5	5	0	0	66	81	39	120
12 - Feed Grains	0	0	0	4	5	0	0	9	4	13
13 - Hay Pasture	9	9	9	0	103	32	266	429	206	635
16 - Fruits	15	0	0	25	0	62	0	101	49	150
17 - Nuts	41	0	3	70	0	11	55	179	86	266
18 - Vegetables	13	18	8	23	0	55	144	261	125	386
Total Low Density	102	29	30	164	123	190	609	1247	599	1,846
Total Compact Density	51	14	15	82	61	95	305	623	299	923
Total Jobs Lost										
1-8 Animal Products	51	0	11	87	36	72	186	442	213	655
11 - Food Grains	4	2	6	6	0	0	81	100	48	147
12 - Feed Grains	0	0	0	6	7	0	0	13	6	20
13 - Hay Pasture	11	11	11	0	121	38	314	505	243	748
16 - Fruits	29	0	0	50	0	123	0	201	97	298
17 - Nuts	81	0	6	140	0	21	109	357	171	528
18 - Vegetables	31	42	20	53	0	132	342	620	298	918
Total Low Density	206	55	54	343	164	385	1032	2239	1075	3314
Total Compact Density	103	28	27	171	82	192	516	1,119	538	1,657

Sources: Interviews with Ag commissioner and Coop Extension staff
GIS LU90 map for buffer areas
I-O Multipliers for Table 2A

TABLE 3 - CITY FISCAL IMPACTS: 2040

($000'97 dollars)	1 Atwater	2 Dos Palos	3 Gustine	4 Livingston	5 Los Banos	6 Merced	All Cities	Per Capita
New Residents	31,046	8,965	10,683	37,963	63,567	187,526	339,751	
New Jobs	13,228	2,982	4,011	14,040	24,023	69,758	128,043	
Low Density: New Acres	4,643	1,579	1,953	8,029	13,190	34,239	63,632	
Revenues								
Average/Resident	$17,434	$3,172	$6,597	$14,144	$25,269	$92,824	$159,440	
Average/Job	$4,313	$1,462	$1,401	$5,179	$9,611	$35,144	$57,109	
Property Tax (1)	$858	$236	$407	$1,012	$2,675	$7,199	$12,388	
Total Rev.	**$22,605**	**$4,869**	**$8,406**	**$20,335**	**$37,555**	**$135,167**	**$228,937**	**$674**
Costs								
Average/Resident	($13,107)	($2,370)	($3,323)	($11,756)	($20,182)	($76,853)	($127,591)	
Average/Job	($3,405)	($511)	($735)	($2,626)	($4,154)	($14,377)	($25,809)	
Acre-Related	($5,554)	($2,093)	($3,453)	($6,014)	($11,245)	($44,902)	($73,261)	
Capital/year	($4,079)	($1,388)	($1,716)	($7,054)	($11,589)	($30,082)	($55,907)	
Total Cost	**($26,145)**	**($6,362)**	**($9,227)**	**($27,450)**	**($47,170)**	**($166,214)**	**($282,568)**	**($832)**
Net Revenue/(Cost)	**($3,540)**	**($1,493)**	**($820)**	**($7,115)**	**($9,615)**	**($31,047)**	**($53,631)**	**($158)**
Net as % of Revenue	-15.7%	-30.7%	-9.8%	-35.0%	-25.6%	-23.0%	-23.4%	
Compact: New Acres	2,321	790	976	4,014	6,595	17,119	31,816	
Revenues								
Average/Resident	$17,434	$3,172	$6,597	$14,144	$25,269	$92,824	$159,440	
Average/Job	$4,313	$1,462	$1,401	$5,179	$9,611	$35,144	$57,109	
Property Tax (1)	$915	$249	$438	$1,119	$2,838	$7,785	$13,344	
Total Rev	**$22,662**	**$4,882**	**$8,436**	**$20,442**	**$37,717**	**$135,753**	**$229,892**	**$677**
Costs								
Average/Resident	($13,107)	($2,370)	($3,323)	($11,756)	($20,182)	($76,853)	($127,591)	
Average/Job	($3,405)	($511)	($735)	($2,626)	($4,154)	($14,377)	($25,809)	
Acre-Related	($2,777)	($1,047)	($1,726)	($3,007)	($5,623)	($22,451)	($36,631)	
Capital/year	($2,447)	($833)	($1,029)	($4,232)	($6,953)	($18,049)	($33,544)	
Total Cost	**($21,737)**	**($4,760)**	**($6,814)**	**($21,621)**	**($36,912)**	**($131,730)**	**($223,574)**	**($658)**
Net Revenue/(Cost)	**$925**	**$122**	**$1,622**	**($1,180)**	**$805**	**$4,024**	**$6,318**	**$19**
Net as % of Revenue	4.1%	2.5%	19.2%	-5.8%	2.1%	3.0%	2.7%	

(1) See Table 3C for Property Tax detail

TABLE 3A - DETAIL OF EXISTING CITY REVENUES

	1 Atwater	2 Dos Palos	3 Gustine	4 Livingstone	5 Los Banos	6 Merced	All Cities	Allocation
Taxes								
Secured and Unsecured Prop Tax	749,066	134,395	199,665	347,119	1,070,444	2,664,010	5,164,699	Prop. Tax CS (1)
Indebtedness Property Tax	0		50,500		0		50,500	Prop. Tax CS (1)
Property Tax - Prior Year	45	4,430	268	1,807	1,356	30,648	38,554	Prop. Tax CS (1)
Other Property Taxes				0		28,013	28,013	Prop. Tax CS (1)
Interest, Penalties /Delinquent								
Sales and Use Taxes	876,740	267,690	159,274	229,957	1,462,499	6,691,063	9,687,223	Jobs.67 (3)Res.33 (4)
Transportation Tax	344,390	90,117	54,629	201,526	32,527	546,605	1,269,794	Jobs.67 (3)Res.33 (4)
Transient Lodging Taxes	25,128		319	1,797	96,552	522,367	646,163	Res/Jobs (2)
Franchises	227,966	32,345	70,171	344,631	409,518	545,147	1,629,778	Res/Jobs (2)
Business License Taxes	82,199	17,428	17,606	33,236	69,758	788,073	1,008,300	Jobs (3)
Real Property Transfer Taxes	23,533			2,761	34,454	48,265	109,013	Res/Jobs (2)
Utility Users Tax	14,705		163,367				178,072	Res/Jobs (2)
Other Non-Property Taxes	0	48,258	13,693		180,925		242,876	Res/Jobs (2)
Benefit Assessments								
Fire		0		4,567			4,567	Res/Jobs (2)
Paramedics		0				0	0	Res/Jobs (2)
Lighting	84,787	0	96,767		182,175		363,729	Res/Jobs (2)
Other		0		215,144		458,297	673,441	Res/Jobs (2)
Licenses and Permits								
Construction Permits	244,227	33,892	35,609	32,959	303,307	337,604	987,598	Res/Jobs (2)
Other Licenses and Permits	27,536	3,550	2,661	12,009	15,513	5,005	66,274	Res/Jobs (2)
Fines and Forfeitures								
Vehicle Code Fines	24,553	7,108	4,629	23,716	32,753	306,787	399,546	Res/Jobs (2)
Other Fines, Forfeitures /Penalties	26,572	3,484	4,268	28,630	48,346	39,340	150,640	Res/Jobs (2)
Use of Money								
Investment Earnings	503,738	17,482	98,996	268,463	356,037	2,006,240	3,250,956	Res/Jobs (2)
Rents and Concessions	42,090	12,175		32,921	16,706	34,938	138,830	Res/Jobs (2)
Royalties								Res/Jobs (2)
Other				8,343		0	8,343	Res/Jobs (2)
Intergovernmental								
State Motor Vehicle In-Lieu Tax	904,307	171,665	165,569	406,500	788,129	2,398,933	4,835,103	Resid (4)
State Trailer Coach In-Lieu Tax	0			0	0	0	0	Resid (4)
State Cigarette Tax	0			0	0	0	0	Resid (4)
Homeowners Property Tax Relief	18,481	3,408	5,037	8,435	28,131	68,205	131,697	Prop. Tax CS (1)
State Gasoline Tax	412,478	81,157	74,968	186,548	352,968	1,062,065	2,170,184	Resid (4)
Other State Grants	235,620	55,495	339,242	89,123	568,563	1,841,132	3,129,175	Resid (4)
County Grants of State Gas Tax						0	0	Resid (4)
County Grants	0	405					405	Resid (4)
Federal Revenue Sharing								Resid (4)
Other Federal Grants	586,540		2,400	60,072	113,848	2,319,699	3,082,559	Resid (4)
Other Taxes in-Lieu	0	76,600		62,472			139,072	Resid (4)

TABLE 3A CONT. - DETAIL OF EXISTING CITY REVENUES

	1 Atwater	2 Dos Palos	3 Gustine	4 Livingstone	5 Los Banos	6 Merced	All Cities	Allocation
Charges for Services								
Zoning Fees and Subdivision Fees	0	4,834		6,573	41,805	310,072	363,284	Res/Jobs (2)
Police Department Services	13,932	7,743	21,026	71,283	101,050	117,136	332,170	Res/Jobs (2)
Fire Department Services	0	180			26,977	107,883	135,040	Res/Jobs (2)
Plan Checking Fees	67,776	2,196	630		40,189	113,662	224,453	Res/Jobs (2)
Animal Shelter Fees and Charges	523	780	447			0	1,750	Resid (4)
Engineering Fees	415				30,321	334,421	365,157	Res/Jobs (2)
Street, Sidewalk and Curb Repairs		1,031	2,425	1,034	492	18,546	23,528	Resid (4)
Weed and Lot Cleaning		780	1,406	965	17,755	7,206	28,112	Resid (4)
Sewer Charges/Connect Fees *	2,299,979	415,420	893,289	1,003,693	1,454,797	5,372,724	11,439,902	Enterprise Res/Jobs (2)
Solid Waste Revenues *	1,240,160	256,694	529,930	583,054	1,215,641	4,120,045	7,945,524	Enterprise Res/Jobs (2)
First Aid and Ambulance Charges								Resid (4)
Library Fines and Fees								Resid (4)
Parking Facilities						6,433	6,433	Jobs (3)
Parks and Recreation Fees	71,855	13,167	34,307	63,416	450,934	390,509	1,024,188	Resid (4)
Golf Course Fees								Resid (4)
Water Charges/Connect Fees *	1,411,827	550,179	321,593	910,326	1,426,744	5,164,913	9,785,582	Enterprise Res/Jobs (2)
Electric Revenues								Res/Jobs (2)
Airport Revenues	0		34,052		153,330	155,086	342,468	Res/Jobs (2)
Cemetery Revenues								Resid (4)
Housing Revenues						526,792	526,792	Resid (4)
Transit Revenues	3,389					925	4,314	Res/Jobs (2)
Quasi-External Transactions	653,535		356	249,990	450,315	4,510,173	5,864,369	Res/Jobs (2)
Other Current Service Charges	292,887	16,148		0	430,534	411,188	1,150,757	Res/Jobs (2)
Other Revenues								
Sale of Real and Personal Property	5,708,564					145,066	5,853,630	Res/Jobs (2)
Contributions: Non-Govt Sources	2,810	5,000	8,000			47,043	62,853	Res/Jobs (2)
Other Sources of Revenues	108,487	50,079		204,158	0	232,876	595,600	Res/Jobs (2)
Other Sources								
Sale of Bonds					41,220	0	41,220	Res/Jobs (2)
Notes and Other		43,007			379,924		422,931	Res/Jobs (2)
Total Revenues	**$17,330,841**	**$2,428,324**	**$3,407,102**	**$5,697,232**	**$12,426,542**	**$44,835,141**	**$86,125,161**	

Source: Annual Report 1996/97 - Financial Transactions Concerning Cities
State of California, Office of the Controller

TABLE 3A CONT. - EXISTING CITY REVENUES
Totals and Per Resident & Job

	1 Atwater	2 Dos Palos	3 Gustine	4 Livingston	5 Los Banos	6 Merced	All Cities
Revenue Totals - by Allocation							
Case Study (Property Tax)	$749,111	$138,825	$250,433	$348,926	$1,071,800	$2,722,671	$5,281,766
Res/Jobs (1)	$8,115,111	$290,889	$559,581	$1,516,380	$3,400,082	$10,857,726	$24,739,769
Resident Share	$6,319,905	$238,096	$447,551	$1,216,462	$2,715,838	$8,700,130	$19,720,938
Job Share	$1,795,206	$52,793	$112,030	$299,918	$684,244	$2,157,596	$5,018,831
Resident	$2,614,296	$519,156	$691,352	$1,012,519	$2,786,048	$10,953,312	$18,576,684
Jobs	$900,356	$257,159	$160,921	$322,330	$1,071,425	$5,643,744	$8,355,934
Enterprise (Sewer/water) (1)	$4,951,966	$1,222,293	$1,744,812	$2,497,073	$4,097,182	$14,657,682	$29,171,008
Resident Share	$4,359,006	$809,962	$1,464,695	$1,685,918	$2,724,139	$10,893,733	$21,656,294
Job Share	$592,960	$412,331	$280,117	$811,155	$1,373,043	$3,763,949	$7,514,714
Total Revenue	**$17,330,840**	**$2,428,322**	**$3,407,099**	**$5,697,228**	**$12,426,537**	**$44,835,135**	**$86,125,161**
Residents & Jobs Base							
Population (1996)	23,672	4,430	4,216	10,508	20,694	61,712	125,232
Jobs (1996 est.)	10,086	1,473	1,583	3,886	7,821	22,956	47,806
Average Rev per Resident (w/o Prop Tax)							
Resid. share of resid/job	$266.98	$53.75	$106.16	$115.77	$131.24	$140.98	$157.48
Resid. only	$110.44	$117.19	$163.98	$96.36	$134.63	$177.49	$148.34
Resid. share of enterprise	$184.14	$182.84	$347.41	$160.44	$131.64	$176.53	$172.93
Total per Resident	**$561.56**	**$353.77**	**$617.55**	**$372.56**	**$397.51**	**$495.00**	**$478.74**
Average Rev per Job (w/o Prop Tax)							
Job share of resid/job	$177.99	$35.83	$70.77	$77.18	$87.49	$93.99	$104.98
Job only	$89.27	$174.53	$101.66	$82.94	$137.00	$245.85	$174.79
Job share of enterprise	$58.79	$279.85	$176.95	$208.73	$175.57	$163.96	$157.19
Total per Job	**$326.04**	**$490.21**	**$349.38**	**$368.85**	**$400.06**	**$503.79**	**$436.96**

(1) Revenues/costs affecting both residents & jobs are allocated at the ratio of residents to job population equivalents from Table 1A. This ratio varies by city. The average for all cities is 79.7% res. to 20.3% jobs.

TABLE 3B - DETAIL OF EXISTING CITY COSTS

	1 Atwater	2 Dos Palos	3 Gustine	4 Livingston	5 Los Banos	6 Merced	Total Cities	Allocation
General Government								
Legislative	$6,632	$7,163	$21,283	$85,478	$371,271	$174,809	$666,636	Res/Jobs (2)
Management and Support	$1,389,272	$124,758	$62,173	$605,050	$833,305	$2,659,532	$5,674,090	Res/Jobs (2)
Public Safety								
Police	$1,593,500	$578,728	$461,644	$1,515,593	$2,800,650	$9,658,337	$16,608,452	Res/Jobs (2)
Fire	$851,033	$65,932	$19,647	$39,229	$512,280	$5,692,179	$7,180,300	Acre (5)
Animal Regulation			$4,829		$66,909		$71,738	Resid (4)
Street Lighting	$55,130		$89,269	$41,800	$248,024	$0	$434,223	Acre (5)
Other			$46,654					Res/Jobs (2)
Transportation								
Street, Highways, & Storm Drains	$715,565	$333,030	$471,512	$237,986	$1,038,734	$1,816,202	$4,613,029	Acre (5)
Street Trees & Landscaping			$7,269	$17,216	$0	$278,296	$302,781	Acre (5)
Public Transit	$22,937				$32,527	$965,853	$1,021,317	Res/Jobs (2)
Airports	$0		$33,361		$224,537	$337,161	$595,059	Res/Jobs (2)
Other				$6,679				Res/Jobs (2)
Community Development			$9,698					
Planning	$179,421	$15,882		$64,979	$305,644	$303,805	$869,731	Res/Jobs (2)
Regulation Enforcement	$230,948	$28,993	$38,541	$52,526	$288,110	$1,931,025	$2,570,143	Res/Jobs (2)
Housing	$479,772					$2,615,232	$3,095,004	Resid (4)
Community Promotion		$105			$0	$302,370	$302,475	Res/Jobs (2)
Other				$14,512		$484,817	$499,329	Res/Jobs (2)
Enterprise								
Solid Waste	$1,130,189	$270,613	$259,119	$557,159	$854,930	$4,530,376	$7,602,386	Ac(5)0.5 & Res/job(2)0.5
Sewers	$2,923,953	$425,004	$838,522	$880,463	$1,364,290	$5,276,048	$11,708,280	Ac(5)0.5 & Res/job(2)0.5
Culture and Leisure								
Parks and Recreation	$374,647	$32,469	$100,349	$237,428	$1,137,416	$2,905,060	$4,787,369	Resid (4)
Community Center/Auditoriums	$0		$47,962			$693,987	$741,949	Resid (4)
Other				$69,821		$0	$69,821	Resid (4)
Public Utilities (Enterprise)								
Water	$1,172,027	$575,084	$452,068	$1,219,298	$1,504,310	$4,173,623	$9,096,410	Ac(5)0.5 & Res/job(2)0.5
Other Costs	$5,700,000							Res/Jobs (2)
Total Costs	**$16,825,026**	**$2,457,761**	**$2,963,900**	**$5,645,217**	**$11,582,937**	**$44,798,712**	**$84,273,553**	

TABLE 3B CONT. - EXISTING CITY COSTS
Totals and Per Resident, Job & Acre

	1 Atwater	2 Dos Palos	3 Gustine	4 Livingston	5 Los Banos	6 Merced	Total Cities
Cost Totals - by Allocation							
Case Study	NA	NA	NA	NA	NA	NA	
Res/Jobs total (1)	$11,735,795	$1,390,980	$1,448,209	$3,673,277	$6,717,809	$23,807,733	$48,773,801
Residential share	$9,139,628	$1,138,531	$1,158,272	$2,946,756	$5,365,894	$19,076,771	$38,825,852
Jobs share	$2,596,166	$252,449	$289,936	$726,521	$1,351,915	$4,730,962	$9,947,949
Resident only	$854,419	$32,469	$153,140	$307,249	$1,204,325	$6,214,279	$8,765,881
Job only	$0	$0	$0	$0	$0	$0	$0
Acre-Related	$4,234,813	$1,034,313	$1,362,552	$1,664,691	$3,660,803	$14,776,701	$26,733,871
Total Cost	**$16,825,026**	**$2,457,761**	**$2,963,900**	**$5,645,217**	**$11,582,937**	**$44,798,712**	**$84,273,553**
Residents, Jobs & Acres: Base							
Population (1996)	23,672	4,430	4,216	10,508	20,694	61,712	125,232
Jobs (1996 est.)	10,086	1,473	1,583	3,886	7,821	22,956	47,806
Acres	3,540	780	771	2,222	4,294	11,267	22,875
Average Cost per Resident, Job & Acre							
Per Resident	$422.19	$264.33	$311.06	$309.67	$317.49	$409.82	$380.03
Per Job	$257.42	$171.53	$183.34	$187.03	$172.90	$206.10	$208.10
Per Acre	$1,196.27	$1,325.44	$1,768.21	$749.10	$852.54	$1,311.45	$1,168.71

(1) Revenues/costs affecting both residents & jobs are allocated at the ratio of residents to job population equivalents from Table 1A. This ratio varies by city. The average for all cities is 79.7% res. to 20.3% jobs.

Source: Annual Report 1996/97 - Financial Transactions Concerning Cities
State of California, Office of the Controller

TABLE 3C - PROPERTY TAX CASE STUDY

	1 Atwater	2 Dos Palos	3 Gustine	4 Livingston	5 Los Banos	6 Merced	All Cities
Value Per: (1)							
Household	$ 80,000	$ 75,000	$ 100,000	$ 120,000	$ 130,000	120,000	
Resident	$ 25,811	$ 25,055	$ 38,743	$ 27,126	$ 42,727	39,025	
Job (@ 25% per resid value)	$ 6,453	$ 6,264	$ 9,686	$ 6,781	$ 10,682	9,756	
City Property Tax							
For City Infill							
City Rate for Infill	16.1%	15.1%	15.6%	18.5%	14.5%	16.3%	
Per Resident	$41.59	$37.78	$60.59	$50.13	$61.77	64	57
Per Job	$10.40	$9.45	$15.15	$12.53	$15.44	16	14
For Annexation Areas							
City Rate from County (2)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
City Rate from Fire	9.7%	9.7%	9.0%	9.0%	9.0%	9.0%	
Total	9.7%	9.7%	9.0%	9.0%	9.0%	9.0%	
Per Resident	$24.99	$24.25	$34.87	$24.41	$38.45	$35.12	$32.53
Per Job	$6.25	$6.06	$8.72	$6.10	$9.61	$8.78	$8.06
City Revenue Projections							
Population	31,046	8,965	10,683	37,963	63,567	187,526	
Jobs	13,228	2,982	4,011	14,040	24,023	69,758	
Low Density:							
Population Property Tax ($000)	$776	$217	$373	$927	$2,444	$6,586	
Jobs Property Tax ($000)	$83	$18	$35	$86	$231	$613	
Total ($000)	**$858**	**$236**	**$407**	**$1,012**	**$2,675**	**$7,199**	**$12,388**
Compact Density:							
Infill Resid. (10%)	$129	$34	$65	$190	$393	$1,195	
Infill Jobs (10%)	$14	$3	$6	$18	$37	$111	
Annex Residents (90%)	$698	$196	$335	$834	$2,200	$5,928	
Annex Jobs (90%)	$74	$16	$31	$77	$208	$551	
Total ($000)	**$915**	**$249**	**$438**	**$1,119**	**$2,838**	**$7,785**	**$13,344**

(1) Property value is based on regional real estate values and cross checked with City property tax revenue. Strong Associates

(2) Annexation Prop Tax Shift: Per Bill Nicholson, Merced Co. LAFCo Exec. Director, County will retain its full share of property tax in annexation areas; cities will receive the Fire District share.

NOTE: The following are the County property tax shares, used in Table 4D below.

For City Infill	Atwater	Dos Palos	Gustine	Livingston	Los Banos	Merced	All Cities
County Rate in City	13.6%	14.2%	13.2%	12.2%	15.0%	16.0%	
Per Resident	$35.14	$35.57	$50.99	$33.15	$64.29	$62.36	$53.75
Per Job	$8.79	$8.89	$12.75	$8.29	$16.07	$15.59	$13.31
For Annexation Areas							
County Rate in City (2)	18.8%	18.8%	18.3%	18.3%	18.3%	18.3%	
Per Resident	$48.45	$47.03	$71.02	$49.72	$78.32	$71.53	$65.58
Per Job	$12.11	$11.76	$17.75	$12.43	$19.58	$17.88	$16.31

TABLE 4 - COUNTY FISCAL IMPACTS: 2040

	< Acres Urbanized >		< - Per Res/Job/Ac - >		City area	Unincorp	Total	Per Capita
	City area	Unincorp	City area	Unincorp				
New Population					339,751	82,184	421,934	
New Jobs					128,043	33,308	161,351	
Low Density								
Revenues								
Av/Resident			$843.96	$880.63	$286,735,854	$72,373,150	$359,109,004	
Av/Job			$196.17	$220.62	$25,118,593	$7,348,433	$32,467,026	
Property Tax					$24,367,382	$5,932,421	$30,299,803	
Subtotal Above					$336,221,829	$85,654,005	$421,875,834	
Agriculture	58,356	28,029	$9.10	$9.10	($530,988)	($255,035)	($786,023)	
GEA (range/wetlands)	5,276	2,534	$0.87	$0.87	($4,597)	($2,208)	($6,805)	
Total	63,632	30,563			$335,686,244	$85,396,762	$421,083,006	$998
Costs								
Av/Resident			$950.78	$985.14	$323,027,151	$80,962,166	$403,989,317	
Av/Job			$126.83	$149.74	$16,239,738	$4,987,484	$21,227,222	
Subtotal Above					$339,266,889	$85,949,650	$425,216,539	
Roads (per Acre)		30,563		$133.07		$4,067,073	$4,067,073	
Total					$339,266,889	$90,016,723	$429,283,612	$1,017
Net Revenue/(Cost)					($3,580,645)	($4,619,962)	($8,200,607)	($19)
Net as a % of Revenues					-1.07%	-5.41%	-1.95%	
Compact Density								
Revenues								
Av/Resident			$843.96	$880.63	$286,735,854	$72,373,150	$359,109,004	
Av/Job			$196.17	$220.62	$25,118,593	$7,348,433	$32,467,026	
Property Tax					$23,927,385	$5,932,421	$29,859,807	
Subtotal Above					$335,781,833	$85,654,005	$421,435,837	
Agriculture	29,178	14,014	$9.10	$9.10	($265,494)	($127,518)	($393,012)	
GEA (range/wetlands)	2,638	1,267	$0.87	$0.87	($2,298)	($1,104)	($3,402)	
Total	31,816	15,281			$335,514,040	$85,525,383	$421,039,423	$998
Costs								
Av/Resident			$950.78	$985.14	$323,027,151	$80,962,166	$403,989,317	
Av/Job			$126.83	$149.74	$16,239,738	$4,987,484	$21,227,222	
Subtotal Above					$339,266,889	$85,949,650	$425,216,539	
Roads		15,281		$133.07		$2,033,537	$2,033,537	
Total					$339,266,889	$87,983,186	$427,250,076	$1,013
Net Revenue/(Cost)					($3,752,849)	($2,457,803)	($6,210,652)	($15)
Net as a % of Revenues					-1.12%	-2.87%	-1.48%	

Existing City and County Demographic Information

	County Wide	-	Unincorp
Estimated Population	198,522	125,232	73,290
Estimated Jobs	75,916	47,806	28,111

TABLE 4A - DETAIL OF EXISTING COUNTY REVENUES

	Total	< - - - - - - - - - - Allocation	- - - - -	- - - - - - >
Taxes		Resident	Jobs	Unincorp only	Case Study
Property Taxes	$19,069,090				$19,069,090
Other Taxes					
Sales and Use Taxes	$3,088,839		$3,088,839		
Transportation Tax (non-transit)	$941,747	$750,433	$191,314		
Property Transfer	$288,343	$229,767	$58,576		
Transient Lodging	$287,036	$228,725	$58,311		
Subtotal Other Taxes	$4,605,965	$1,208,924	$3,397,041		
Total Taxes	**$23,675,055**	**$1,208,924**	**$3,397,041**		**$19,069,090**
Special Benefit Assessments					
Capital Outlay	$558,684	$445,188	$113,496		
Total Special Benefit Assmts	$558,684	$445,188	$113,496		
Licenses, Permits & Franchises					
Animal Licenses	$113,318	$113,318			
Business Licenses	$0	$0	$0		
Construction Permits	$735,500	$586,084	$149,416		
Road Privileges & Permits	$47,988	$38,239	$9,749		
Zoning Permits	$33,552	$26,736	$6,816		
Franchises	$977,576	$778,983	$198,593		
Other	$223,592	$178,170	$45,422		
Total Licenses & Permits	**$2,131,526**	**$1,721,530**	**$409,996**		
Fines, Forfeitures & Penalties					
Vehicle Code Fines	$238,066	$189,703	$48,363		
Superior Court Fines	$4,743	$3,779	$964		
Municipal Court	$1,300,147	$1,036,024	$264,123		
Forfeitures and Penalties	$284,309	$226,552	$57,757		
Total Fines, Forfeitures & Penalties	$1,827,265	$1,456,059	$371,206		
Revenue From Use of Money & Property					
Interest	$4,228,408	$3,369,414	$858,994		
Rents and Concessions	$1,096,657	$873,873	$222,784		
Total Revenues From Use of Money & Property	**$5,325,065**	**$4,243,287**	**$1,081,778**		
State & Federal & Other					
State					
Highway Uses Tax	$3,826,103	$3,826,103			
Motor Vehicle In-lieu Tax	$13,497,494	$8,066,625	$2,056,495	$3,374,374	
Highway Property Rentals	$1,545	$1,231	$314		
Other State In-Lieu Taxes	$9,506	$7,575	$1,931		
Public Assistance Administration	$14,574,715	$14,574,715			
Public Assistance Programs	$37,281,559	$37,281,559			
Aid for Mental Health	$6,541,611	$6,541,611			
Alcohol and Drug Abuse	$1,568,367	$1,568,367			
Other Aid for Health	$3,968,482	$3,968,482			
Aid for Agriculture	$610,326				$610,326
Aid for Construction	$167,967	$133,845	$34,122		
Aid for Corrections	$152,322	$152,322			
Aid for County Fairs	$117,000	$93,232	$23,768		
Aid for Disaster	$7,619	$6,071	$1,548		
Homeowners Property Tax Relief	$471,531				$471,531
Public Safety	$6,967,278	$5,551,887	$1,415,391		
SP 90 Mandated Costs	$61,985	$49,393	$12,592		
Trial Court Funding	$2,830,377	$2,830,377			
Other	$5,609,451	$4,426,701	$1,128,537		$54,213
Subtotal State	$98,265,238	$89,080,096	$4,674,699	$3,374,374	$1,136,070

TABLE 4B - CONT. COUNTY COSTS

	Total	< - - - - - - - - - - Allocation - - - - -			- - - - - - >
		Resident	Jobs	Unincorp only	Case Study
Public Ways and Facilities					
Roads	$7,253,886	$2,890,136	$736,807		$3,626,943
Total Public Ways and Facilities	$7,253,886	$2,890,136	$736,807	$0	$3,626,943
Health					
Public Health	$14,581,745	$14,581,745			
Medical Care	$2,300,778	$2,300,778			
Mental Health	$8,943,321	$8,943,321			
Drug & Alcohol Abuse	$1,592,598	$1,592,598			
Total Health	**$27,418,442**	**$27,418,442**	$0	$0	$0
Public Assistance (Welfare/Soc/Relief etc.)					
Welfare					
Administration	$19,056,093	$19,056,093			
Aid Programs-Cash	$72,458,431	$72,458,431			
Subtotal Welfare	$91,514,524	$91,514,524	$0	$0	$0
Social Services					
Administration & Programs	$7,700,355	$7,700,355			
Other	$9,142	$9,142			
Subtotal Social Services	$7,709,497	$7,709,497	$0	$0	$0
General Relief					
Aid to Indigents	$451,217	$451,217			
Subtotal General Relief	$451,217	$451,217	$0	$0	$0
Care of Court Wards					
Veterans' Services	$47,512	$47,512			
J.T.P.A.	$5,688,915	$5,688,915			
Other	$827,835	$827,835			
Subtotal Other Public Assistance	$6,516,750	$6,516,750	$0	$0	$0
Total Public Assistance	**$106,239,500**	**$106,239,500**	$0	$0	$0
Education					
Library Services	$575,914	$575,914			
Agricultural Education	$121,338				$121,338
Total Education	**$697,252**	**$575,914**	**$0**	**$0**	**$121,338**
Recreation/Cultural Services					
Recreation Facilities	$1,178,959	$1,178,959			
Cultural Services	$1,902	$1,902			
Total Recreation & Culture	**$1,180,861**	**$1,180,861**	$0	$0	$0
Debt Service					
Retirement/ Long Term Debt	**$2,496,638**	**$1,989,450**	**$507,188**		
Interest of Long Term Debt	$1,578,362	$1,257,720	$320,642		
Interest of Short Term Notes & Warrants	$308,126	$245,531	$62,595		
Total Debt Service	$4,383,126	$3,492,701	$890,425	$0	$0
Total Financing Uses	**$208,890,229**	**$188,750,260**	**$9,628,535**	**$3,162,004**	**$7,349,430**
Total Transfers Out	$0	$0	$0		
Total Fin. Uses and Transfers Out	**$208,890,229**	**$188,750,260**	**$9,628,535**	**$3,162,004**	**$7,349,430**

Case Study Cost - Total			$7,349,430
Agriculture Share			$3,562,487
Wetlands Share			$160,000
Roads Share (acre related)			$3,626,943
Unincorporated Only - Total		$3,162,004	
Resident Share		$2,518,118	
Job Share		$643,886	

Note: Total road costs are divided 50:50 to county-wide system and the case study portion allocated to developed areas in the unincorporated area. The per acre share is based on unincorp. developed areas (27,195) from Table 1.

TABLE 4C - COUNTY AVERAGE REVENUES & COSTS

Existing Average Revenues & Costs	County-wide	Unincorp Area	Total
Total Resident Revenues	$167,544,638	$2,687,243	$170,231,881
Total Job Revenues	$14,892,804	$687,131	$15,579,935
Total Resident Costs	$188,750,260	$2,518,118	$191,268,379
Total Job Costs	$9,628,535	$643,886	$10,272,420
Base Resident & Job Factors - 1996			
Resident Count	198,522	73,290	
Job Count	75,916	28,111	
Revenues/Resident	$843.96	$36.67	$880.63
Revenues/Job	$196.17	$24.44	$220.62
Costs/Resident	$950.78	$34.36	$985.14
Costs/Job	$126.83	$22.91	$149.74
New Resident & Job Impact - 2040			
Resident Count	421,934	82,184	
Job Count	161,351	33,308	
Average Revenues	County-wide	Unincorp Added	Total
New Residents	$356,095,664	$3,013,340	$359,109,004
New Jobs	$31,652,837	$814,189	$32,467,026
Total Revenue	$387,748,501	$3,827,529	$391,576,031
Average Costs			
New Residents	$401,165,624	$2,823,693	$403,989,317
New Jobs	$20,464,275	$762,948	$21,227,222
Total Cost	$421,629,899	$3,586,640	$425,216,539

TABLE 4D - COUNTY PROPERTY TAX: 2040 GROWTH

	City Infill	City Annex	Unincorp	Total
County Property Tax (1)				
Per Resid	$53.75	$65.58	$65.58	
Per Job	$13.31	$16.31	$16.31	
Low Density				
New Residents		339,751	82,184	421,934
New Jobs		128,043	33,308	161,351
New Property Taxes		**$24,367,382**	**$5,932,421**	**$30,299,803**
Compact Density (2)				
New Residents	33,975	305,775	82,184	421,934
New Jobs	12,804	115,238	33,308	161,351
New Property Taxes	**$1,996,742**	**$21,930,644**	**$5,932,421**	**$29,859,807**

(1) County property tax estimates are from Table 3C.
Unincorporated area new devt. revenue at cities annexation area average.

(2) Compact assumes 10% infill and 90% city annexations for city growth

TABLE 4E- AGRICULTURAL FISCAL IMPACT

		Existing	< 2040 Reduced Acres, Rev/Cost >	
		County Wide	Low Density	Compact
Agricultural Acreage (1)		1,162,008	86,385	43,192
		100.0%	7.4%	3.7%
Revenues				
Property Assessed Value ($000'96)	$3,826,068		$348,420	$174,210
Percent share of AV (2)	100.0%		9.1%	4.6%
Property Tax Rev @ 1%	$38,260,680		$3,484,199	$1,742,099
County Share @ 30%		$11,478,204	$1,045,260	$522,630
Other County Revenue				
Aid for Agriculture	$610,326		$55,579	$27,790
Agricultural Services	$105,438	$715,764	$9,602	$4,801
Total Ag Revenue		**$12,193,968**	**$1,110,440**	**$555,220**
Revenue per Acre		$10.49	$12.85	$12.85
Costs				
Agricultural Commissioner	$1,341,149		$122,131	$61,066
Agricultural Education (Coop Ext)	$121,338		$11,050	$5,525
County Administrative Cost (3)	$1,500,000		$136,597	$68,299
Sheriff Patrol (3)	$600,000		$54,639	$27,319
Total Ag Costs		**$3,562,487**	**$324,417**	**$162,208**
Cost per Acre		$3.07	$3.76	$3.76
Net Revenue/Cost		**$8,631,481**	**$786,023**	**$393,012**
Net Per Acre		$7.43	$9.10	$9.10
Percent Reduction of Net Revenue			9.1%	4.6%

(1) Ag acreage impact is based on total urbanized area minus estimated wetlands impact area.

(2) Percent share of A/V has been applied to all other ag revenues & costs

(3) Strong Associates - based on interviews.

TABLE 4F - WETLANDS AREA FISCAL IMPACT

			< 2040 Reduced Acres, Rev/Cost >	
		Existing	Low Density	Compact
GEA Wetlands Acreage		128,893	7,810	3,905
		100.0%	6.1%	3.0%
Revenues				
Property Assessed Value ($000'96) (1)	$66,000		$3,999	$2,000
Property Tax Revenue @ 1%	$660,000		$39,992	$19,996
County Share @ 19%		$125,400	$7,599	$3,799
Other County Revenue				
State - Fish & Game	$54,213			
Federal Wetlands	$92,684	$146,897	$8,901	$4,451
Total Wetlands Revenue		**$272,297**	**$16,500**	**$8,250**
Revenue per Acre		$2.11	$2.11	$2.11
Costs				
County Administrative Cost (2)	$90,000			
Sheriff Patrol (2)	$70,000	$160,000	$9,695	$4,848
Cost per Acre		$1.24	$1.24	$1.24
Net Revenue/Cost		**$112,297**	**$6,805**	**$3,402**
Per Acre		$0.87	$0.87	$0.87
Percent Reduction of Net Revenue			6.1%	3.0%

(1) GEA acreage impact estimated based on Los Banos NE for city; proportionate share for unincorp area.

	Private acres	Per Ac AV	Total AV
Assessed Value Calculation	110,000	$600.00	$66,000,000

(2) Strong Associates - based on interviews.

TABLE 5 - GRASSLANDS ECOLOGICAL AREA (GEA) IMPACTS

		<- Lost to Urbanization: 2040 ->					
	Existing	2040: Low Density			2040: Compact Density		
		City	Unincorp (1)	Total	City	Unincorp (1)	Total
Focus Area Acreage by Land Use							
Urban development	771						
Agriculture	49,799	1,319	634	1,953	660	317	976
Range & Wetlands	38,602	5,276	2,534	7,810	2,638	1,267	3,905
Wetlands only	90,072						
Other	220						
Total	179,464	6,595	3,168	9,763	3,298	1,584	4,881
Agricultural Economic Impact							
Acres (Ag + Rangeland)	88,402	6,595	3,168	9,763	3,298	1,584	4,881
Direct Sales	$86,273,530	$5,631,830	$2,704,987	$8,336,817	$2,815,915	$1,352,493	$4,168,409
Total Sales	$119,738,516	$7,978,748	$3,832,219	**$11,810,966**	$3,989,374	$1,916,109	**$5,905,483**
Direct Jobs	1,257	123	59	182	61	29	91
Total Jobs	2,487	164	79	243	82	39	122
Wetlands Economic Impact							
Acres (Wetlands + Range)	128,674	5,276	2,534	7,810	2,638	1,267	3,905
Direct Sales	$27,747,283	$1,137,739	$546,460	$1,684,199	$568,869	$273,230	$842,099
Total Sales	$40,866,536	$1,675,676	$804,833	**$2,480,508**	$837,838	$402,416	**$1,240,254**
Direct Jobs	609	45	22	67	23	11	34
Total Jobs	798	60	29	88	30	14	44
Combined Economic Impact							
Direct Sales	$114,020,813	$6,769,569	$3,251,447	$10,021,016	$3,384,785	$1,625,723	$5,010,508
Total Sales	$160,605,052	$9,654,423	$4,637,052	**$14,291,475**	$4,827,212	$2,318,526	**$7,145,737**
Direct Jobs	1,865	168	81	249	84	40	124
Total Jobs	3,286	224	107	331	112	54	166

(1) Based on county-wide ratio of city-to-unincorporated are new growth (from Table 1).

TABLE 5A - GEA & BUFFER AREA LAND USE:1990

	Entire County	% share	Focus Area	% share	2-Mi Buffer around Focus Area	% share	City portion of Buffer Area	% share	Unincorp portion of Buffer Area	% share
Urban										
Residential	15,826	1.2%	24	0.0%	1,154	0.7%	1,069	3.2%	86	0.1%
Commercial/Industrial	3,679	0.3%	39	0.0%	463	0.3%	315	0.9%	149	0.1%
Right of Ways	6,335	0.5%	657	0.4%	436	0.3%	40	0.1%	396	0.3%
Public land	3,956	0.3%		0.0%	71	0.0%	64	0.2%	8	0.0%
Parks/sports/openspace	1,378	0.1%	51	0.0%	63	0.0%	63	0.2%		0.0%
Subtotal Urban	**31,174**	**2.5%**	**771**	**0.4%**	**2,187**	**1.4%**	**1,550**	**4.7%**	**638**	**0.5%**
Agriculture										
Dairy and Livestock	5,684	0.4%	318	0.2%	1,141	0.7%	201	0.6%	940	0.7%
Grain, Seed and Truck and Row Crops	442,074	34.9%	47,585	26.5%	123,860	77.2%	25,650	77.2%	98,210	77.3%
Improved Pasture / Grazing Operation	12,195	1.0%	352	0.2%	1,817	1.1%	467	1.4%	1,350	1.1%
Orchards, Vineyards and Tree Farms	137,620	10.9%	1,257	0.7%	7,714	4.8%	617	1.9%	7,097	5.6%
Other Agricultural Land Uses	1,247	0.1%	35	0.0%	255	0.2%	45	0.1%	210	0.2%
Poultry	2,680	0.2%	45	0.0%	729	0.5%	51	0.2%	678	0.5%
Rice Fields	10,987	0.9%	154	0.1%	3,539	2.2%	1,740	5.2%	1,799	1.4%
Fish Farms	852	0.1%	53	0.0%	605	0.4%	189	0.6%	416	0.3%
Subtotal Ag	**613,339**	**48.4%**	**49,799**	**27.7%**	**139,659**	**87.1%**	**28,960**	**87.2%**	**110,699**	**87.1%**
Range Land/Wetlands	**603,162**	**47.6%**	**38,602**	**21.5%**	**17,961**	**11.2%**	**2,513**	**7.6%**	**15,448**	**12.2%**
Wetlands - only (1)			90,072	50.2%						
Other										
Extractive	1,417	0.1%		0.0%		0.0%		0.0%		0.0%
Land In Transition	1,109	0.1%	13	0.0%	345	0.2%	207	0.6%	138	0.1%
Open Water	16,411	1.3%	207	0.1%	183	0.1%		0.0%	183	0.1%
Unknown	35	0.0%	0	0.0%	23	0.0%		0.0%	23	0.0%
Subtotal Other	**18,972**	**1.5%**	**220**	**0.1%**	**551**	**0.3%**	**207**	**0.6%**	**344**	**0.3%**
Total	**1,266,648**	100.0%	**179,464**	100.0%	**160,359**	100.0%	**33,230**	100.0%	**127,129**	100.0%
Percent share of County acres	100.0%		14.2%		12.7%		2.6%		10.0%	

Source: LU90.shp. This GIS file was developed in 1990 and is not consistent with Ag Commissioner acreage or with urban acreage uses persented elsewhere

(1) Based on interview with GWD

TABLE 5B - GEA - AG SALES & JOBS: 1998

	Acres	Av. Sales/ac	Direct Sales	Total Sales (1)	Direct Jobs (1)	Total Jobs (1)
Agricultural Uses						
Dairy & Livestock	318	$92,706	$29,517,513	$42,015,051	171	577
Grain, Seed, Truck & Row	47,585	$989	$47,049,367	$63,849,990	974	1,629
Pasture, Grazing	352	$192	$67,416	$116,954	1	3
Orchard, Vine & Tree	1,257	$1,906	$2,395,826	$3,571,839	26	78
Other Agricultural Uses	35	$1,491	$52,782	$88,710	2	4
Poultry	45	$87,613	$3,898,787	$5,543,249	14	75
Rice	154	$2,000	$308,800	$419,068	6	11
Fish Farms	53	$19,867	$1,052,933	$1,382,657	12	23
Subtotal	49,799	$1,694	$84,343,424	$116,987,517	1,207	2,400
Range Land/Wetlands (2)	38,602	$50	$1,930,106	$2,750,999	49	87
Total	**88,402**	$976	$86,273,530	**$119,738,516**	1,257	**2,487**

(1) Input Output Multipliers per Coop Extension, George Goldman, as follows:

	Direct Sales	Total Sales	Direct Jobs	Total Jobs
Dairy & Livestock	1.0000	1.4234	5.7944	13.7293
Grain, Seed, Truck & Row	1.0000	1.3571	20.7085	25.5081
Pasture, Grazing	1.0000	1.7348	13.9602	25.1706
Orchard, Vine & Tree	1.0000	1.4909	11.0463	21.9229
Other Agricultural Uses	1.0000	1.6807	29.5999	48.7288
Poultry	1.0000	1.4218	3.6544	13.5536
Rice	1.0000	1.3571	20.7085	25.5081
Fish Farms	1.0000	1.3131	11.8341	16.7378
Undeveloped & Range	1.0000	1.4253	25.5480	31.7132

(2) Based on interviews with GWD Staff

TABLE 5C - WETLANDS SALES & JOBS: 1998 - COUNTY & GEA

			GEA/Co Ratio	Dir/Tot Ratio	Direct Sales	Total Sales (1)	irect Jobs (1)	Total Jobs (1)
COUNTY-WIDE								
Land Maintenance Costs (2)			1.3112	1.4421	$10,998,911	$15,861,299	184	265
Other Land Costs			1.0000	1.5544	$7,965,832	$12,381,739	111	168
Recreation Expenditures (3)			1.5371	1.4384	$17,512,500	$25,190,435	458	659
Total					**$36,477,243**	**$53,433,473**	753	**1,092**
GEA ONLY			ST.& Fed	GWD (4)				
Land Maintenance Costs (2)			$8,297,383	$91,168	**$8,388,551**	**$12,096,954**	142	**202**
Other Land Costs (3)								
Structures				$198,192	$198,192	$274,267	2	3
Land Acquisition (Banking) (5)			$862,800		$862,800	$1,261,388	12	18
Land Acquisition (Income) (5)			$1,294,200		$1,294,200	$2,032,922	18	27
Wages/Other				$1,210,640	$1,210,640	$1,901,667	17	26
Landowners (110,000ac/$40per)					$4,400,000	$6,911,496	62	93
Subtotal Other Land Costs			$2,157,000	$1,408,832	**$7,965,832**	**$12,381,739**	111	**168**
Recreation Expenditures (3)	Hunting		Fishing	Non-Consum				
Transportation	$328,831		$333,081	$523,091	$1,185,004	$1,732,440	17	25
Equipment/Auxiliary	$1,400,654		$582,842	$1,192,671	$3,176,167	$4,494,887	109	128
Food	$390,937		$487,443	$735,169	$1,613,549	$2,433,887	51	62
Retail	$322,260		$1,863,267	$2,416,297	$4,601,825	$6,444,303	163	190
Services	$400,618		$125,566	$290,171	$816,355	$1,282,326	16	24
Subtotal Recreation	$2,843,300		$3,392,200	$5,157,400	**$11,392,900**	**$16,387,843**	356	**429**
Combined Total					**$27,747,283**	**$40,866,536**	609	**798**

TABLE 5C FOOTNOTES - WETLANDS SALES & JOBS 1998 - COUNTY & GEA

(1) Input Output Multipliers per Coop Extension, George Goldman, as follows:	Direct Sales	Sales Multiplier	Direct Jobs	Total Jobs
New Industrial and Commercial Buildings	1.0000	1.3838	10.2919	16.5350
Maintenance Repair, other Facilities	1.0000	1.4421	16.9025	24.0615
Transportation Services	1.0000	1.4620	14.0883	20.6996
General Merchandise Store	1.0000	1.4152	34.2205	40.3439
Food	1.0000	1.5084	31.7355	38.3278
Special Retail	1.0000	1.4004	35.3375	41.3769
Banking	1.0000	1.2920	6.6801	10.9123
Services	1.0000	1.4703	19.9968	29.2110
Personal Income	1.0000	1.5708	14.0563	21.2369

(2) Land Maintenance - Direct Costs per Thomas Reid Associates

	County Wide	% in GEA	GEA
Grasslands Water Dist.	$91,168	100.0%	$91,168
Other State & Federal			
NRCS	$140,025	100.0%	$140,025
Wildlife Conservation Board	$1,271,547	100.0%	$1,271,547
WCB	$84,800	100.0%	$84,800
California Fish & Game	$3,000,000	67.0%	$2,010,000
California State Parks	$1,770,885	8.5%	$150,525
Ducks Unlimited	$1,151,915	100.0%	$1,151,915
USFWS Partners for Wildlife	$279,143	100.0%	$279,143
USFWS San Luis NWR Complex	$3,177,562	100.0%	$3,177,562
California Waterfowl Assn.	$31,866	100.0%	$31,866
Subtotal Other St /Fed.	$10,907,743		$8,297,383
Total Maintenance	**$10,998,911**		**$8,388,551**

(3) Recreation & other land costs are from Thomas Reid & Assoc.

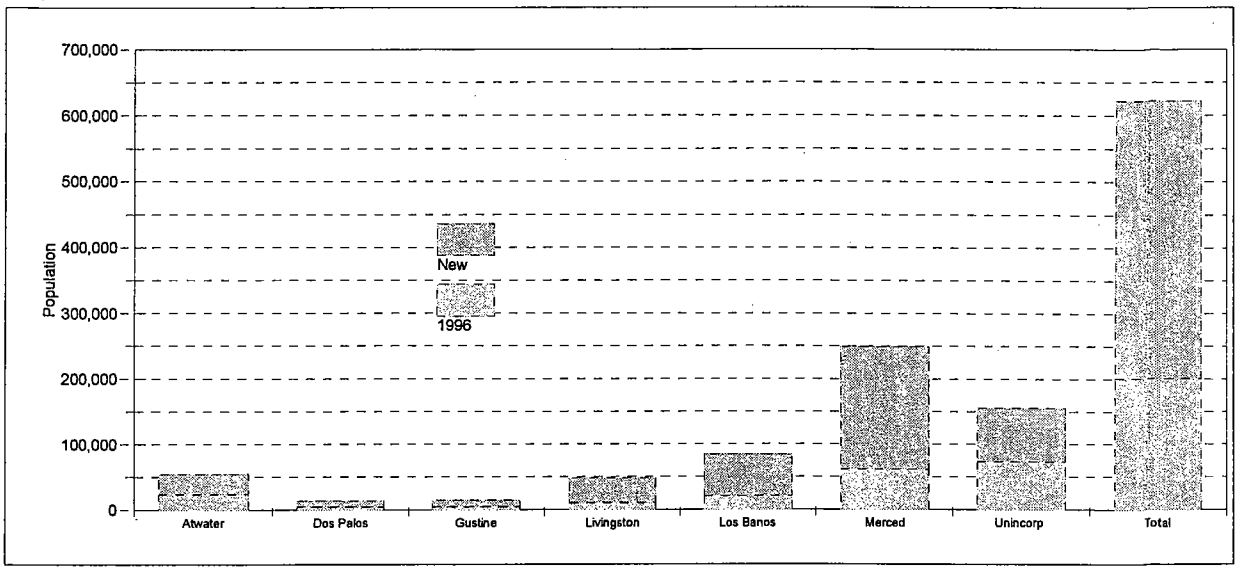
(4) GWD (Grassland Water Dist.) Annual Budget - $1,500,000 ($91,168 is Maintenance;$1,408,832 is other land costs)

(5) Land Acquisition total of $2,157,000 is allocated to banking (40%) and personal income (60%)

TABLE 5C - WETLANDS SALES & JOBS: 1998 - COUNTY & GEA

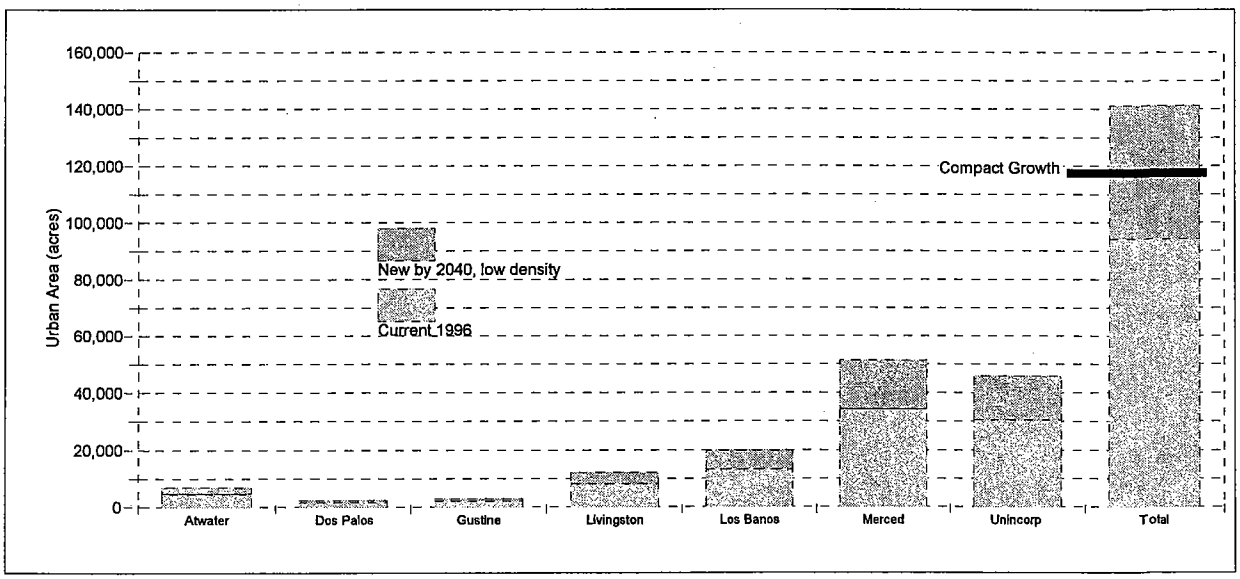
			GEA/Co Ratio	Dir/Tot Ratio	Direct Sales	Total Sales (1)	irect Jobs (1)	Total Jobs (1)
COUNTY-WIDE								
Land Maintenance Costs (2)			1.3112	1.4421	$10,998,911	$15,861,299	184	265
Other Land Costs			1.0000	1.5544	$7,965,832	$12,381,739	111	168
Recreation Expenditures (3)			1.5371	1.4384	$17,512,500	$25,190,435	458	659
Total					**$36,477,243**	**$53,433,473**	753	**1,092**
GEA ONLY		ST.& Fed	GWD (4)					
Land Maintenance Costs (2)		$8,297,383	$91,168		**$8,388,551**	**$12,096,954**	142	**202**
Other Land Costs (3)								
Structures			$198,192		$198,192	$274,267	2	3
Land Acquisition (Banking) (5)		$862,800			$862,800	$1,261,388	12	18
Land Acquisition (Income) (5)		$1,294,200			$1,294,200	$2,032,922	18	27
Wages/Other			$1,210,640		$1,210,640	$1,901,667	17	26
Landowners (110,000ac/$40per)					$4,400,000	$6,911,496	62	93
Subtotal Other Land Costs		$2,157,000	$1,408,832		**$7,965,832**	**$12,381,739**	111	**168**
Recreation Expenditures (3)	Hunting	Fishing	Non-Consum					
Transportation	$328,831	$333,081	$523,091		$1,185,004	$1,732,440	17	25
Equipment/Auxiliary	$1,400,654	$582,842	$1,192,671		$3,176,167	$4,494,887	109	128
Food	$390,937	$487,443	$735,169		$1,613,549	$2,433,887	51	62
Retail	$322,260	$1,863,267	$2,416,297		$4,601,825	$6,444,303	163	190
Services	$400,618	$125,566	$290,171		$816,355	$1,282,326	16	24
Subtotal Recreation	$2,843,300	$3,392,200	$5,157,400		**$11,392,900**	**$16,387,843**	356	**429**
Combined Total					**$27,747,283**	**$40,866,536**	609	**798**

Figure 1.1 - Population Growth in Merced County: 1996 to 2040



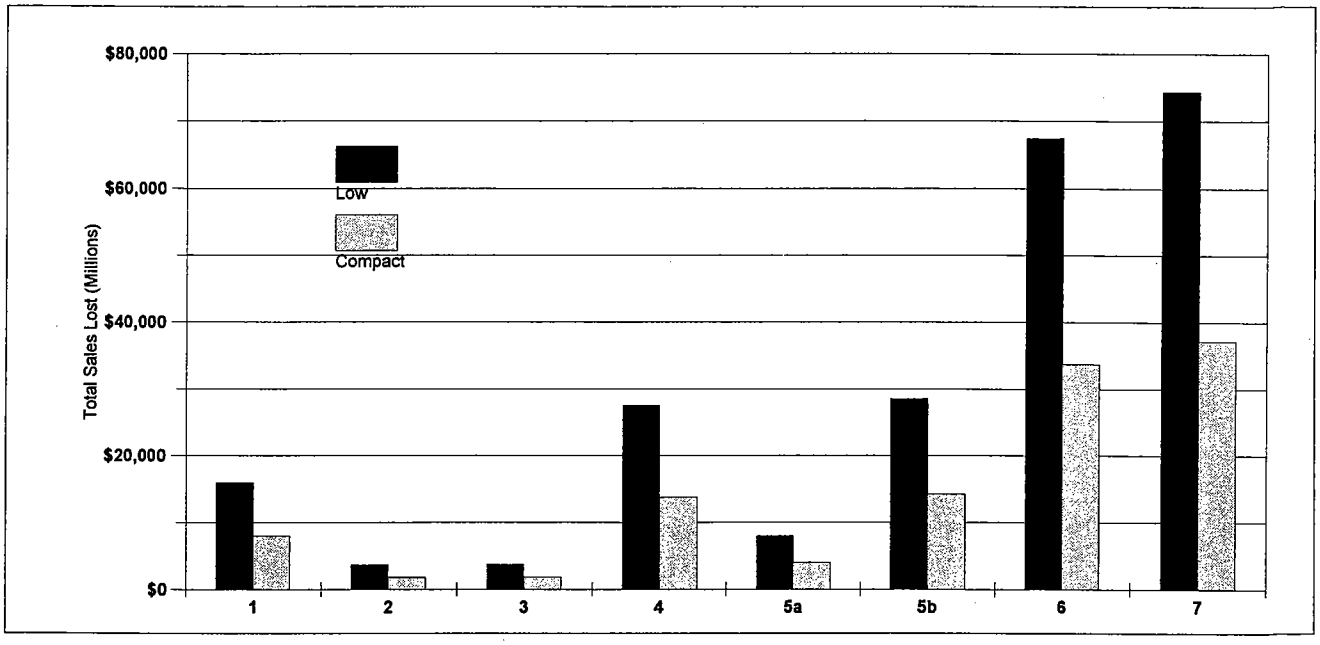
	1	2	3	4	5	6	7	
Population	Atwater	Dos Palos	Gustine	Livingston	Los Banos	Merced	Unincorp	Total
1996	23,672	4,430	4,216	10,508	20,694	61,712	73,290	198,522
New	31,046	8,965	10,683	37,963	63,567	187,526	82,184	421,934
2040	54,718	13,395	14,899	48,471	84,261	249,238	155,474	620,456
% Added	131%	202%	253%	361%	307%	304%	112%	213%

Figure 1.2 - Acres Urbanized: 1996 to 2040, Low density ("sprawl") growth



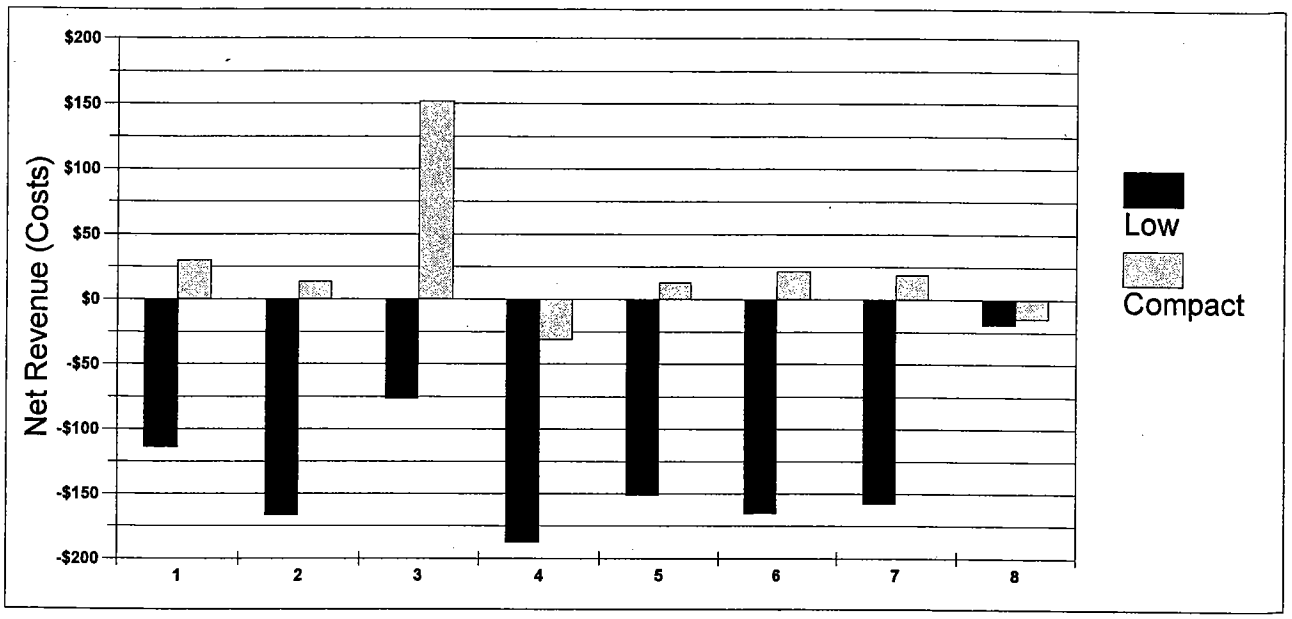
	1	2	3	4	5	6	7	
Acres	Atwater	Dos Palos	Gustine	Livingston	Los Banos	Merced	Unincorp	Total
Current 1996	3,540	780	771	2,222	4,294	11,267	27,255	50,130
New by 2040, low density	4,643	1,579	1,953	8,029	13,190	34,239	30,563	94,195
New by 2040, Compact	2,321	790	976	4,014	6,595	17,119	15,281	47,097

Figure 2 - Ag Sales Lost, Low Vs. Compact Density: 2040



	1 Atwater	2 Dos Palos	3 Gustine	4 Livingston	5a Los Banos NE (1)	5b Los Banos SW (1)	6 Merced	7 Unincorp	Total
Annual Sales Lost									
Low Density ($000'97)									
Direct	$10,887	$2,447	$2,544	$18,710	$5,632	$19,291	$46,136	$50,743	$156,390
Indirect	$5,109	$1,236	$1,175	$8,790	$2,347	$9,261	$21,297	$23,639	$72,855
Total	$15,997	$3,684	$3,719	$27,500	$7,979	$28,553	$67,432	$74,382	$229,245
Compact Density ($000'97)									
Direct	$5,444	$1,224	$1,272	$9,355	$2,816	$9,646	$23,068	$25,371	$78,195
Indirect	$2,555	$618	$588	$4,395	$1,173	$4,631	$10,648	$11,819	$36,427
Total	$7,998	$1,842	$1,860	$13,750	$3,989	$14,276	$33,716	$37,191	$114,623
Total Value/Acre	$3,446	$2,333	$1,905	$3,425	$1,210	$4,329	$1,969	$2,434	$2,434

Figure 3 - Net Fiscal Balance per Capita, Low Vs. Compact: 2040



	1 Atwater	2 Dos Palos	3 Gustine	4 Livingston	5 Los Banos	6 Merced	7 Total Cities	8 County Gov.
New Population	31,046	8,965	10,683	37,963	63,567	187,526	339,751	339,751
Low Density ($000'97)								
Revenues	$22,605	$4,869	$8,406	$20,335	$37,555	$135,167	228,937	$421,083
Costs	$26,145	$6,362	$9,227	$27,450	$47,170	$166,214	282,568	-$429,284
Net Annual	-$3,540	-$1,493	-$820	-$7,115	-$9,615	-$31,047	-53,631	-$8,201
Per Capita Net	-$114	-$167	-$77	-$187	-$151	-$166	-$158	-$19
Compact ($000 '97)								
Revenues	$22,662	$4,882	$8,436	$20,442	$37,717	$135,753	229,892	$421,039
Costs	$21,737	$4,760	$6,814	$21,621	$36,912	$131,730	223,574	-$427,250
Net Annual	$925	$122	$1,622	-$1,180	$805	$4,024	6,318	-$6,211
Per Capita Net	$30	$14	$152	-$31	$13	$21	$19	-$15

APPENDIX 3 — Strategies to Encourage Compact Growth

1. Commercial, Industrial, Institutional[1]

- Policies and standards that encourage construction of multi-story buildings in commercial centers
- Minimize land devoted to parking (multi-story structures)
- Shared use of parking facilities with different peak demand hours
- Enhancement of pedestrian access to parking and employment
- Financial incentives such as tax exempt bond financing or density bonuses to encourage infill, redevelopment and re-use of prior development sites (including blighted sites)
- Promote infill development and discourage expansion of growth into open lands
- Concentrate growth in areas with existing infrastructure in preference to building new infrastructure
- Change zoning, if necessary to permit uses that serve employees of industrial and office developments, such as restaurants and other retail shops (to reduce automobile trips for these services)

2. Residential Development

- Encourage nodes of higher density housing (village centers) served by a full range of urban services (within walking or short transit distance from residences)
- Provide incentives for commercial development that serves residences in village centers such as reduced parking requirements and increased allowable floor area ratios.
- Transit and pedestrian-oriented guidelines for specific plans
- Overlay zones that facilitate compact growth
- Revise local street standards to be narrower and more pedestrian-friendly
- Exclude motor vehicles from village centers
- Promote infill development and discourage expansion of growth into open lands
- Re-designate vacant land for higher density or mixed use where appropriate
- Create housing near employment centers to allow for non-vehicular "commuting" or realistic public transit
- Design housing to be affordable to household incomes of the population working in local employment centers

3. Downtown Redevelopment

- Create mixed-use zone districts that encourage residential, commercial and office use on the same site
- Promote downtown or village centers to centralize activities
- Improve transportation and public transit access to downtown from all areas of a city
- Promote infill development and revitalization/redevelopment of run-down or non-functioning neighborhoods
- Create activity centers that give each area a sense of identity

---

[1] Sources of Information: Growth Alternatives Alliance. A Landscape of Choice (1998). Association of Bay Area Governments. Jobs/Housing Balance for Traffic Mitigation. (1985). The Local Government Commission. Land Use Strategies for More Livable Places (1992). Center for Land Recycling. Land Recycling and the Creation of Sustainable Communities. (1998).