

Economic Impacts of the Measure M Project in Sutter County

Revised September 30, 2004
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Sacramento Regional Research Institute

INTRODUCTION AND SUMMARY

The Sacramento Regional Research Institute, a joint venture between California State University and the Sacramento Area Commerce and Trade Organization, has performed an economic impact analysis for the proposed Measure M Project in order to evaluate the potential impact of the project on the Sutter County economy. The analysis was performed using the IMPLAN econometric model, based on specific model parameters for Sutter County.

Measure M identifies the land uses as:

“ at least 3,600 acres of commercial and industrial space; no more than 2,900 acres for residential construction, with an estimated population of 39,000; and an additional 1,000 acres for schools, parks, open space, libraries, retail areas and other community facilities.”

Additional information on housing densities, employment, construction costs, and other assumptions were obtained from the Draft Sutter County Specific Plan Fiscal Impact Analysis Revisions study by Economic and Planning Systems.

Summary of the Economic Benefits from Measure M			
	Total Output (Revenues, \$)	Employment (job-years)	Employee Compensation (\$)
One-Time Construction Impacts	\$ 13,241,078,747	140,726	\$ 3,907,959,691
Annual Impacts After Buildout	\$ 11,240,418,916	84,690	\$ 2,049,043,356
Annual Impacts from On-Site Employment	\$ 10,050,973,811	74,064	\$ 1,839,614,103
Annual Impacts from Residential Incomes	\$ 1,189,445,105	10,625	\$ 209,429,253

Includes Direct, Indirect, and Induced Benefits.

The key findings of the economic impacts on Sutter County are as follows:

1. The one-time construction impacts of the project will be approximately \$13.241 billion in total business activity, spread over the buildout term of the project. The construction activity will support a total of 140,726 job-years, and workers who live within Sutter County will earn a total of approximately \$3.907 billion over the construction period of the project.
2. The long-term or permanent benefits of the project (not including construction) include the impacts from the on-site employment (in the retail, commercial, R&D, and industrial areas of the project) and the expenditures of the residents of the housing units in the project. This impact begins with the first business occupancy and residential occupancy, and builds to the level shown in the table, after which it continues until structural obsolescence at some distant future date. The long term business activity will total \$11.240 billion per year, support 84,690 permanent jobs, and will pay employees \$2.049 billion per year.
3. In the greater view, the project will ultimately change the nature of the Sutter County economy and residential demographics toward a composition more like other Counties in the Sacramento region in terms of job types, housing quality, and resident incomes.

Note that these benefits are those which accrue within Sutter County only. Significant additional benefits created by the project will be realized elsewhere in the Sacramento region.

DETAILS OF THE ANALYSIS

The detailed findings of the analysis are shown in the following tables, which show the three major types of benefits generated by the project: (1) The construction period impacts, (2) the permanent employment impacts of the retail, commercial, and industrial areas, and (3) the permanent effects of the incomes of the housing residents.

The analysis is divided into three types of impacts: (1) the Total Output and Revenues, which is the overall measure of business activity; (2) employment generation, in terms of job-years; and (3) the employment compensation, the financial flows to workers including salaries and benefits, and employer-paid taxes.

For each of these categories, the economic analysis uses not only the actual expenditures generated by the project, but also the additional indirect (supplier) effects on firms which supply goods and services to the project (including local government), and the induced (consumption) benefits generated when the direct and indirect employees spend their incomes on the usual household consumption goods and services.

TOTAL OUTPUT AND REVENUES

The Total Output measures the sales or revenue which accrues to each business firm involved in the project in any way. This is the best overall measure of business and economic activity because it is the measure most firms use to determine current activity levels. Note that the measure is not profit or expenditures of the firms. Table 1 shows the impacts in terms of total revenues generated in Sutter County.

Table 1. Measure M Total Output and Revenues (\$)				
One-Time Construction Impacts	Direct	Indirect	Induced	Total
Residential	\$ 4,968,949,888	\$ 1,455,599,997	\$ 1,177,425,265	\$ 7,601,975,124
Non-Residential Structures	\$ 4,138,758,774	\$ 505,428,065	\$ 994,916,781	\$ 5,639,103,623
One-time Construction Total	\$ 9,107,708,662	\$ 1,961,028,062	\$ 2,172,342,046	\$ 13,241,078,747
Annual Impacts after Buildout				
On-Site Employment Generation	\$ 8,298,085,578	\$ 812,847,554	\$ 940,040,704	\$ 10,050,973,811
Residential Incomes Impacts	\$ 978,025,620	\$ 105,178,910	\$ 106,240,573	\$ 1,189,445,105
Total Annual Impacts	\$ 9,276,111,199	\$ 918,026,464	\$ 1,046,281,277	\$ 11,240,418,916

Construction Impacts. One-time construction impacts will create a total of \$13.241 billion over the construction period, including both the residential and non-residential areas of the project. The direct construction costs total about \$9.107 billion, but the additional indirect effects (the business activities of suppliers of goods and services to the builders) add another \$1.961 billion, and the induced effects (the household consumption expenditures of the direct and indirect employees) adds another \$2.172 billion, bringing the total impact to the \$13.241 billion level.

Annual Impacts after Buildout. The longer term impacts are created by the retail, commercial, and industrial employment, and the residents' expenditures which continue over time. The table shows only a single year of benefits from the fully absorbed project, which generates about \$11.240 billion per year. This number includes not only the income of the on-site employees and the incomes of the housing residents, but also the indirect and induced effects of their expenditures.

The permanent on-site employment creates the greatest value of the project, creating about \$8.298 billion per year in direct on-site activity, and supporting a total of \$10.050 billion per year including the indirect and induced effects in the County.

The incomes of residents of the housing units in the project will equal about \$978 million per year, and will generate about \$1.189 billion per year including the indirect and induced effects.

EMPLOYMENT (Job-Years)

The employment generated in Sutter County by the project is shown in Table 2, which shows the employment in annual-equivalent employee years. This measure reflects the fact that some employees may work less than full time at least part of the year, and may represent many workers working for a short time or fewer workers working for a longer time.

Table 2. Measure M Employment (job-years)				
One-Time Construction Impacts	Direct	Indirect	Induced	Total
Residential	37,966	23,892	17,711	79,568
Non-Residential Structures	38,518	7,675	14,965	61,158
One-time Construction Total	76,483	31,567	32,676	140,726
Annual Impacts after Buildout				
On-Site Employment Generation	47,115	12,810	14,140	74,064
Residential Incomes Impacts	7,335	1,692	1,598	10,625
Total Annual Impacts	54,450	14,501	15,738	84,690

Construction Impacts. The total employment generated in Sutter County due to construction over the entire time to buildout will be about 140,726 job-years. Of these, 76,483 will be direct construction jobs, 31,567 will be in indirect firms which support or supply the construction process, and 32,676 will be in induced consumer service activities supported by the salaries of construction workers and supply firms workers.

Annual Impacts After Buildout. The long-term, permanent employment generated by the on-site employment and the expenditures of residents of the housing units totals will be about 84,690 jobs, with by far the major effect being the on-site employment in the retail, commercial, industrial, and R&D structures. The on-site employment will create about 47,115 jobs for Sutter County residents and support a total of 74,064 jobs

including the indirect and induced jobs. The residential income will supporting about 10,625 jobs.

EMPLOYMENT COMPENSATION

Employee compensation shows how the employment levels convert to financial and fiscal potential for Sutter County. Employee compensation includes not only the wages paid to the employee but also the benefits, employer-paid taxes, and other elements of compensation.

Table 3 shows that the employee compensation from the construction activity (including the indirect and induced impacts) totals about \$3,907 billion over the time to buildout. The timing of the annual impacts during the construction phase will depend primarily on the rate of progress in constructing and selling or leasing the space being created.

One-Time Construction Impacts	Direct	Indirect	Induced	Total
Residential	\$ 1,275,315,776	\$ 515,393,975	\$ 350,588,091	\$ 2,141,297,844
Non-Residential Structures	\$ 1,303,999,233	\$ 166,419,413	\$ 296,243,201	\$ 1,766,661,847
One-time Construction Total	\$ 2,579,315,009	\$ 681,813,388	\$ 646,831,292	\$ 3,907,959,691
Annual Impacts after Buildout				
On-Site Employment Generation	\$ 1,286,575,629	\$ 273,129,059	\$ 279,909,415	\$ 1,839,614,103
Residential Incomes Impacts	\$ 145,385,592	\$ 32,409,092	\$ 31,634,570	\$ 209,429,253
Total Annual Impacts	\$ 1,431,961,221	\$ 305,538,151	\$ 311,543,985	\$ 2,049,043,356

Long-term on-site employment after buildout will create employee compensation of about \$2.049 billion per year to Sutter County employees, including the indirect and induced effects. A part of these benefits will begin to be generated as soon as the first commercial or industrial parcels are occupied by employers, and the annual amounts will grow each year until full occupancy.

The long-term employment compensation resulting from the expenditures of the occupants of the homes will total about \$209.4 million per year after buildout. As with the on-site employment, some of these benefits begin as soon as the first homes are occupied, and the total grows toward the \$209.4 million per year level as the housing component of the project approaches full occupancy.

Methodology and Data Sources.

Sutter County Focus. SRRI configured the IMPLAN model to provide the impacts which occur within Sutter County, not the total the project generates for the entire region. Obviously some of the employees in the retail, commercial, and industrial area will reside outside Sutter County, and residents of the housing within the project will make some of their consumption purchases outside the County. As a result, part of the economic impacts of the project will occur elsewhere in the region. Model data for Sutter and comparison counties show that about 63% of the jobs will be filled by Sutter County residents, and this is the data included in the report.

Timing. The analysis is not based on any particular absorption schedule, but uses the full buildout land use estimates. Current market variables for construction costs, house prices, and wages were used without projecting inflation or discounting future flows. The economic benefit from construction is the total of the activity over the full buildout period of the project. The benefits of the on-site employment and the household expenditures of the future residents of the project will start growing as soon as any structures are built and occupied, and will increase to the buildout levels shown in the report and occur continuously after that.

Housing Values and Resident Incomes. The housing in the project adds two components to the economic analysis: the construction of the residential units; and the income effects of the households. The long-term impact of the expenditures resulting from the ongoing annual household income will create a much higher impact over the long run than the temporary construction benefits.

The Measure M housing requirements were converted to housing units and values using housing densities, types, costs, and other assumptions based on actual data for North Natomas, and on data from Table A-4 of the Draft Sutter County Specific Plan Fiscal Impact Analysis Revisions study by Economic and Planning Systems. The imputation of the income levels of residents was made using recent averages of financial and mortgage underwriting standards from national secondary markets.

Non-Residential Land Uses. The economic analysis requires details on land utilization by structure type, floor area ratios, and employee space utilization. SRRI used assumptions based on the overall Measure M land area and on detailed data in the the Draft Sutter County Specific Plan Fiscal Impact Analysis Revisions study by Economic and Planning Systems. The IMPLAN model also requires commercial and industrial employment to be identified by industry sector. SRRI estimated the employment sector composition using comparable existing employment centers in nearby Counties including Napa, Sonoma, Yolo, El Dorado, and Shasta. The table at the right shows the major industry categories by Implan Sector which are assumed to provide the employment in the completed project.

Major Employment Sectors for Industrial and R&D space			
Sector			
390	Wholesale Trade, truck transportation		
33	Construction Related Services		
87	Specialty food services and processing including wineries and food packaging		
503	State and Local Government including Education		
400	Warehousing and materials storage		
160	Medical services and supplies		
438	Accounting and Financial support services		
423	Computer and Information Technology services		
484	Mechanical and electrical equipment repair and servicing		
483	Automotive servicing and repair		
139	Printing and duplicating services		

Assumptions for Computing Land Use and Employment Details For the Measure M Project

The Measure M information on the employment generating area is as follows:

- “ at least 3,600 acres of commercial and industrial space;
- no more than 2,900 acres for residential construction, with an estimated population of 39,000;
- an additional 1,000 acres for schools, parks, open space, libraries, retail areas and other community facilities.”

These project descriptions do not provide the land use details necessary to perform the economic analysis, so the following assumptions and methods were used to fill in a more detailed description of the Measure M project.

Housing Economic Impacts. The residential portion of the economic impacts is based on the number and costs of housing units (which affects the construction phase of the project). Estimates of the number and type of housing units were provided by Lennar Homes, specified as 17,500 total units. The cost of the units was estimated using the data in the Draft Sutter County Specific Plan Fiscal Impact Analysis Revision, EOS # 143490, prepared by Economics & Planning Systems, which averages. The average cost for all housing units and types, including multifamily, would have a current value of about \$284,000. The imputation of the income levels of residents was made using recent averages of financial and mortgage underwriting standards from national secondary mortgage markets, and averages about \$56,000 per household. The implementation assumptions result in values about 1.75 times those of the Economic Impacts of the South Sutter County Specific Plan Phases I and II, July 19, 2004, by the Sacramento Regional Research Institute.

Non-Residential Impacts. Measure M does not provide details on the relative amounts of each type of non-residential land use, which is required for economic impact analysis. SRRI based its assumptions about the details of the non-residential land use on the uses previously proposed as part of the Draft Sutter County Specific Plan, contained in the Draft Sutter County Specific Plan Fiscal Impact Analysis Revision, EOS # 143490, Appendix A, tables 3 and A-4, prepared by Economics & Planning Systems, as used in the Economic Impacts of the South Sutter County Specific Plan Phases I and II, July 19, 2004, by SRRI. The information is shown in the following table.

Land Use, Floor Area Coverage, and Employment Density Information for the Draft Sutter County Specific Plan Fiscal Impact Analysis								
Land Use Category	Phase I		Phase II		Total Phase I and II		Employment Computations	
	Acres	Developable Sq Ft	Acres	Developable Sq Ft	Acres	Developable Sq Ft	Sq Ft/Employee	Employment
Local serving retail	25	272,250	-		25	272,250	450	605
Regional serving retail	35	381,150	120	1,306,800	155	1,687,950	450	3,751
Highway retail	50	435,600	-		50	435,600	300	1,452
Subtotal Retail	110	1,089,000	120	1,306,800	230	2,395,800		5,808
Research and Development	50	762,300			50	762,300	600	1,271
Industrial	600	11,761,200	680	13,329,360	1,280	25,090,560	1000	25,091
Total non-residential	760	13,612,500	800	14,636,160	1,560	28,248,660	Total Employment	32,169

Source: EPS, Draft Sutter County Specific Plan Fiscal Impact Analysis Revision, EOS # 143490, Appendix A, tables A-3 and A-4

The analysis for Phases I and II gives a total employment of 32,169 for the project at buildout. Note that this is not the specific impact on Sutter County. SRRI analyzed the percentage of these jobs which would be captured by Sutter County residents using the Implan model parameters and other employment information for existing Sutter County business patterns, and for comparable northern California counties which already have large industrial parks. The model parameters indicate that about 63% of the generated employment will accrue to Sutter County residents, or about 20,170 local employees.

SRRI based its land use and employment assumptions for the Measure M analysis on the above Phase I and II Specific Plan data, and assumes that the 3,600 acres of commercial and industrial space will have the same relative composition as shown in the above table. Comparing the 1,560 acres in the Specific Plan Phases I and II with the 3,600 acres in Measure M is an approximation, since Measure M says “at least 3600 acres” and, further, Measure M refers to “an additional 1,000 acres for schools, parks, open space, libraries, retail areas and other community facilities.” There is no indication of the relative amount of retail in this 1,000 acres, but it is likely that much of the 1,000 acres will be required for the schools, parks, open space, libraries, and other community facilities for the 2,900 acres of housing.

Lacking any other basis, SRRI made the assumption that only a small part of the 1,000 acres will be used for neighborhood retail (about 44 acres, based on the Measure M housing estimates), and that the regional retail and highway retail of the Measure M project will be unchanged from the Phase I & II level of 205 acres and will fall within the 3,600-acre commercial and industrial land allocation. To implement this assumption, SRRI applied the original land use proportions and employment assumptions of the Phase I & II analysis to the 3,600 acre industrial and commercial allocation of Measure M plus the 44 neighborhood acres within the 1,000 allocation.

This gives the Measure M analysis a ratio of about 2.3359 times the employment of the Phase I & II analysis, with the same composition except for minor differences in neighborhood retail.

The Measure M analysis is therefore based on retail, commercial, and industrial employment of approximately $2.33594 \times 32,169 = 75,275$ jobs onsite, of which approximately 63% or 47,115 are held by Sutter County residents. The indirect and induced additions to employment raises the total employment from the retail, commercial, and industrial areas of the Measure M project to a total of 74,064 Sutter County residents.

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Includes Direct, Indirect, and Induced Benefits.

The key findings of the economic impacts on Sutter County are as follows:

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2. The long-term or permanent benefits of the project (not including construction) include the impacts from the on-site employment (in the retail, commercial, R&D, and industrial areas of the project) and the expenditures of the residents of the housing units in the project. This impact begins with the first business occupancy and residential occupancy, and builds to the level shown in the table, after which it continues until structural obsolescence at some distant future date. The long term business activity will total \$11.240 billion per year, support 84,690 permanent jobs, and will pay employees \$2.049 billion per year.
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Timing. The analysis is not based on any particular absorption schedule, but uses the full buildout land use estimates. Current market variables for construction costs, house prices, and wages were used without projecting inflation or discounting future flows. The economic benefit from construction is the total of the activity over the full buildout period of the project. The benefits of the on-site employment and the household expenditures of the future residents of the project will start growing as soon as any structures are built and occupied, and will increase to the buildout levels shown in the report and occur continuously after that.

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Non-Residential Land Uses. The economic analysis requires details on land utilization by structure type, floor area ratios, and employee space utilization. SRRI used assumptions based on the overall Measure M land area and on detailed data in the the Draft Sutter County Specific Plan Fiscal Impact Analysis Revisions study by Economic and Planning Systems. The IMPLAN model also requires commercial and industrial employment to be identified by industry sector. SRRI estimated the employment sector composition using comparable existing employment centers in nearby Counties including Napa, Sonoma, Yolo, El Dorado, and Shasta. The table at the right shows the major industry categories by Implan Sector which are assumed to provide the employment in the completed project.

Major Employment Sectors for Industrial and R&D space			
Sector			
390	Wholesale Trade, truck transportation		
33	Construction Related Services		
87	Specialty food services and processing including wineries and food packaging		
503	State and Local Government including Education		
400	Warehousing and materials storage		
160	Medical services and supplies		
438	Accounting and Financial support services		
423	Computer and Information Technology services		
484	Mechanical and electrical equipment repair and servicing		
483	Automotive servicing and repair		
139	Printing and duplicating services		

Assumptions for Computing Land Use and Employment Details For the Measure M Project

The Measure M information on the employment generating area is as follows:

- “ at least 3,600 acres of commercial and industrial space;
- no more than 2,900 acres for residential construction, with an estimated population of 39,000;
- an additional 1,000 acres for schools, parks, open space, libraries, retail areas and other community facilities.”

These project descriptions do not provide the land use details necessary to perform the economic analysis, so the following assumptions and methods were used to fill in a more detailed description of the Measure M project.

Housing Economic Impacts. The residential portion of the economic impacts is based on the number and costs of housing units (which affects the construction phase of the project). Estimates of the number and type of housing units were provided by Lennar Homes, specified as 17,500 total units. The cost of the units was estimated using the data in the Draft Sutter County Specific Plan Fiscal Impact Analysis Revision, EOS # 143490, prepared by Economics & Planning Systems, which averages. The average cost for all housing units and types, including multifamily, would have a current value of about \$284,000. The imputation of the income levels of residents was made using recent averages of financial and mortgage underwriting standards from national secondary mortgage markets, and averages about \$56,000 per household. The implementation assumptions result in values about 1.75 times those of the Economic Impacts of the South Sutter County Specific Plan Phases I and II, July 19, 2004, by the Sacramento Regional Research Institute.

Non-Residential Impacts. Measure M does not provide details on the relative amounts of each type of non-residential land use, which is required for economic impact analysis. SRRI based its assumptions about the details of the non-residential land use on the uses previously proposed as part of the Draft Sutter County Specific Plan, contained in the Draft Sutter County Specific Plan Fiscal Impact Analysis Revision, EOS # 143490, Appendix A, tables 3 and A-4, prepared by Economics & Planning Systems, as used in the Economic Impacts of the South Sutter County Specific Plan Phases I and II, July 19, 2004, by SRRI. The information is shown in the following table.

Land Use, Floor Area Coverage, and Employment Density Information for the Draft Sutter County Specific Plan Fiscal Impact Analysis								
Land Use Category	Phase I		Phase II		Total Phase I and II		Employment Computations	
	Acres	Developable Sq Ft	Acres	Developable Sq Ft	Acres	Developable Sq Ft	Sq Ft/Employee	Employment
Local serving retail	25	272,250	-		25	272,250	450	605
Regional serving retail	35	381,150	120	1,306,800	155	1,687,950	450	3,751
Highway retail	50	435,600	-		50	435,600	300	1,452
Subtotal Retail	110	1,089,000	120	1,306,800	230	2,395,800		5,808
Research and Development	50	762,300			50	762,300	600	1,271
Industrial	600	11,761,200	680	13,329,360	1,280	25,090,560	1000	25,091
Total non-residential	760	13,612,500	800	14,636,160	1,560	28,248,660	Total Employment	32,169

Source: EPS, Draft Sutter County Specific Plan Fiscal Impact Analysis Revision, EOS # 143490, Appendix A, tables A-3 and A-4

The analysis for Phases I and II gives a total employment of 32,169 for the project at buildout. Note that this is not the specific impact on Sutter County. SRRI analyzed the percentage of these jobs which would be captured by Sutter County residents using the Implan model parameters and other employment information for existing Sutter County business patterns, and for comparable northern California counties which already have large industrial parks. The model parameters indicate that about 63% of the generated employment will accrue to Sutter County residents, or about 20,170 local employees.

SRRI based its land use and employment assumptions for the Measure M analysis on the above Phase I and II Specific Plan data, and assumes that the 3,600 acres of commercial and industrial space will have the same relative composition as shown in the above table. Comparing the 1,560 acres in the Specific Plan Phases I and II with the 3,600 acres in Measure M is an approximation, since Measure M says “at least 3600 acres” and, further, Measure M refers to “an additional 1,000 acres for schools, parks, open space, libraries, retail areas and other community facilities.” There is no indication of the relative amount of retail in this 1,000 acres, but it is likely that much of the 1,000 acres will be required for the schools, parks, open space, libraries, and other community facilities for the 2,900 acres of housing.

Lacking any other basis, SRRI made the assumption that only a small part of the 1,000 acres will be used for neighborhood retail (about 44 acres, based on the Measure M housing estimates), and that the regional retail and highway retail of the Measure M project will be unchanged from the Phase I & II level of 205 acres and will fall within the 3,600-acre commercial and industrial land allocation. To implement this assumption, SRRI applied the original land use proportions and employment assumptions of the Phase I & II analysis to the 3,600 acre industrial and commercial allocation of Measure M plus the 44 neighborhood acres within the 1,000 allocation.

This gives the Measure M analysis a ratio of about 2.3359 times the employment of the Phase I & II analysis, with the same composition except for minor differences in neighborhood retail.

The Measure M analysis is therefore based on retail, commercial, and industrial employment of approximately $2.33594 \times 32,169 = 75,275$ jobs onsite, of which approximately 63% or 47,115 are held by Sutter County residents. The indirect and induced additions to employment raises the total employment from the retail, commercial, and industrial areas of the Measure M project to a total of 74,064 Sutter County residents.