Varshney & Associates

Prepared for:
Marshall
July 2024

THE SOCIO-ECONOMIC IMPACT OF MARSHALL

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EXECUTIVE SUMMARY

The main objective of this report is to record the impact of Marshall on the economy and society of the El Dorado County and Greater Sacramento Area (GSA) as a whole.

Marshall is an independent, nonprofit community healthcare provider located in the Sierra Foothills between Sacramento and South Lake Tahoe. Marshall includes Marshall Hospital, a fully accredited acute care facility with 111 beds located in Placerville; several outpatient facilities in Cameron Park, Placerville, El Dorado Hills and Georgetown; primary and specialty care physicians including internal and family medicine, OB/GYN, and specialty care; and many community health and education programs. Marshall has over 190 affiliated physicians and a team of more than 1,500 employees providing quality healthcare services to residents of El Dorado County, 170,000 of whom reside on the county's western slope, within Marshall's direct impact area.

Marshall serves the residents of the El Dorado County and the Greater Sacramento Area through fulfillment of the following interconnected tasks:

- **Clinical**: Providing clinical services through Marshall healthcare facilities.
- **Educational**: Offering educational programs with the assistance of Marshall.
- **Social:** Contributing to the social well-being, economic growth, and overall quality of life in the communities of El Dorado County and the Greater Sacramento Area.

The approach used in this study relies on economic input-output modeling, specifically employing the econometric input-output model known as IMPLAN. This model serves as the primary analytical tool for calculating the effects of expenditures on various economic factors, such as overall economic activity, job creation, non-income tax generation, and more. By utilizing data and specialized tools, IMPLAN enables the assessment of economic impacts at different levels, including the state, county, and even micro-level (such as zip-code level).

The multiplier effects resulting in direct, indirect, and induced benefits can be represented in five different dimensions: output, employment, labor income, value added, and taxes on production and imports.

- ***Output*** accounts for total revenues including all sources of income for a given time period for an industry in dollars. It is the total production value and includes all components of production such as employee compensation, proprietor income, intermediate expenditures, taxes on production and imports, and other property type

income. This is the best overall measure of business and economic activity. For example, an output multiplier of 1.5 means that for each dollar of Marshall spending, an additional 50 cents is spent in other sectors because of related business-to-business and consumer spending.

- ***Employment*** demonstrates the number of jobs generated and is calculated on an annual full-time/part-time basis. IMPLAN is an annual model, therefore Employment estimates provided by IMPLAN represent annualized Employment values (i.e. if a worker works 6 months, IMPLAN counts that as 0.5 jobs, and one job sustained over 5 years counts as 5 jobs). A person can hold more than one job, so the job count is not necessarily the same as the count of employed persons. For example, an employment multiplier of 1.5 means that for each two jobs created by Marshall, an additional one job is created because of related business-to-business and consumer spending.

- ***Labor Income*** represents the total value of all forms of employment income paid for a given time period. It includes all forms of employee compensation paid by employers (e.g., total payroll costs including benefits, wages and salaries of workers, health and life insurance, retirement payments, non-cash compensation), and proprietary income (payments received by self-employed individuals and/or unincorporated business owners such as self-employment income, income received by private business owners including doctors, lawyers). For example, a labor income multiplier of 1.5 means that for each dollar of labor income created by Marshall, an additional 50 cents of labor income is created in other sectors because of related business-to-business and consumer spending.

- ***Value Added*** is the difference between an industry's total output and the cost of its intermediate inputs for a given time period. It equals gross output (i.e., sales or receipts and other operating income, plus inventory change) minus intermediate inputs (i.e., consumption of goods and services purchased from other industries or imported). Value Added is a measure of the contribution to GDP made by an individual producer, industry, or sector. For example, a Value Added multiplier of 1.5 means that for each dollar of value added by Marshall there will be an additional value added in the amount of 50 cents in other sectors because of related business-to-business and consumer spending.

- ***Taxes on Production and Imports less Subsidies (TOPI)*** [1] is one of the components of Value Added and includes sales and excise taxes, customs duties, property taxes, motor vehicle licenses, severance taxes, other taxes, and special assessments. For all industries other than government enterprises, subsidies are counted as a negative figure towards TOPI. While all taxes during the normal operation of businesses are included, taxes on profits or income are not included. For example, a TOPI multiplier of 1.5 means that for each dollar of taxes generated by Marshall an

[1] In IMPLAN based studies "taxes on production and import (TOPI)" are also termed as "indirect business taxes (IBT)".

additional 50 cents is paid as taxes by taxpayers in other sectors because of related business-to-business and consumer spending.

Four types of multiplier effect are usually analyzed in the output-input models like IMPLAN: direct, indirect, induced, and total.

- The *direct* effect represents the initial influence of an economic activity on the local economy of a region. If an industry is present in the region, for every dollar spent in that industry, there is a corresponding one-dollar direct impact on the local economy.
- The *indirect* effect refers to the generation of additional economic activity that stems from interconnected businesses, suppliers of goods and services, and the provision of operational inputs. This includes the purchases made by Marshall, such as food, detergents, blankets, and other products, as well as contracted services.
- The *induced* effect measures consumption expenditures of direct and indirect sector employees. While the indirect effect considers business-to-business transactions only, the induced effect includes the sum of household purchases per dollar spent, based on the respective labor income payments. Examples of induced benefits include employees' expenditures on items such as retail purchases, housing, banking, medical services, and insurance.
- The *total* effect encompasses the combined impact of the direct, indirect, and induced effects.

The study conducted an economic impact analysis for two specific regions: the Greater Sacramento Area and El Dorado County. For the purposes of this study, the Greater Sacramento Area (GSA) was defined to encompass several counties, including Sacramento, Placer, Yolo, El Dorado, Yuba, Nevada, and Sutter. It corresponds to the definition of the Greater Sacramento area, or officially Sacramento–Roseville, CA Combined Statistical Area as a combined statistical area consisting of several metropolitan statistical areas and seven counties listed above[2].

The analysis was limited by the foreseeable period of the next 10 years (until 2034) and it operated with NPV 2024 US dollars.

The economic impact of Marshall will be influenced by three main activities: capital investments directly and indirectly related to Marshall, expenditures to operate Marshall, and public benefit generated by Marshall.

The study revealed that during this period Marshall Capital Expenditures and operations (healthcare and education) will add to the economic output of the Greater Sacramento and El Dorado County, act as a catalyst for new economic activity, create new jobs, add to the labor income, produce net new taxes, and in general add to the gross state product of the region.

[2] Source: U.S. Department of Commerce Economics and Statistics Administration. https://www2.census.gov/geo/maps/econ/ec2012/csa/EC2012_330M200US472M.pdf

Specifically, the total economic impact to the GSA (to include direct, indirect, and induced effects) will:

- Produce more than $5.4 billion of economic Output.
- Create 27,475 new jobs (2,748 jobs per year).
- Result in nearly $2.4 billion of new Labor Income.
- Yield more than $3.2 billion of new Value Added.

This study reveals that the presence of Marshall will further serve as a catalyst, leading to increased growth and economic activity in El Dorado County area from 2024 to 2034. As a result, a significant additional economic impact is anticipated. The total incremental economic impact to El Dorado County area (to include direct, indirect, and induced effects) will:

- Produce more than $2.0 billion of economic Output.
- Create 10,488 jobs (1,049 jobs per year).
- Result in more than $0.9 billion of new Labor Income.
- Yield more than $1.2 billion of new Value Added.

Tax impact (including employee compensation, proprietor income, TOPI, households, and corporation taxes) was estimated under the assumption that in the next 10 years period Marshall will operate under a not-for-profit status. Not-for-profit status will somewhat reduce the portion Marshall's taxes resulting only from its *direct* economic impact. Those taxes on production and imports that will be the result of Marshall's *indirect* and *induced* economic impact will remain the same as in a for-profit status. The total cumulative tax impact on the federal level within 10 years period will be nearly $470 million for Federal Taxes. The total State and Local Tax Impact in GSA (including El Dorado County) will be more than $220 million, for El Dorado County only - nearly $74 million.

The study specifically assessed the per capita benefits of operating Marshall in El Dorado County. If the increased economic activity were evenly distributed, each resident in the study area would, on average, experience an additional Value Added benefit of $6,369 within 10 year period. Similarly, the additional labor income benefit for every resident of El Dorado County, resulting from Marshall's operations, would be $4,844 within the 10 year period.

The increased Taxes on Production and Imports (TOPI) due to the direct, indirect, and induced impact would amount to an average of over $3.45 million per year. These incremental TOPI figures would be a 0.87% addition to the El Dorado County General Fund revenues.

Alongside the measurable economic impact generated by Marshall's operations, there will be added benefits like enhanced educational and healthcare infrastructure in the area. Marshall's presence will also boost the economic vibrancy of the western slope of El Dorado County and improve community health. The impact includes supporting new housing, creating job opportunities, and increasing commercial and service activities. According to this study's findings, investing in Marshall operations promises significant long-term benefits.

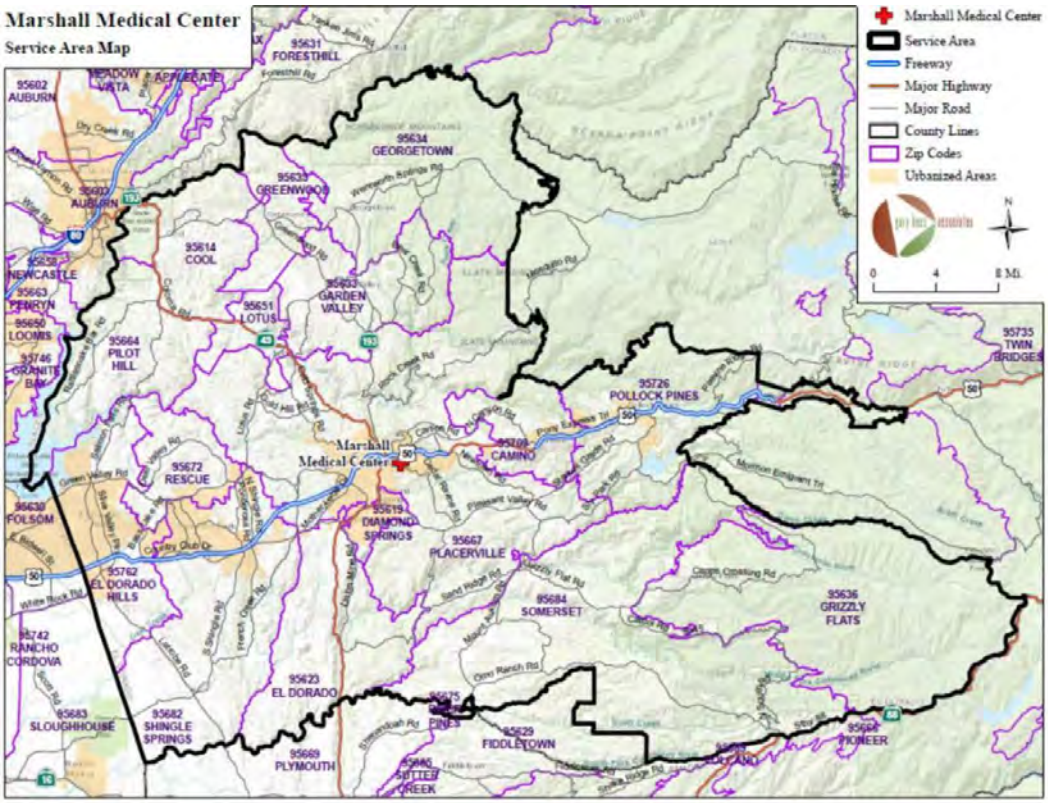
THE SOCIO-ECONOMIC IMPACT OF MARSHALL

INTRODUCTION

The main objective of this report is to record the prospective impact of Marshall on the economy and society of El Dorado County, California, as well as the entire Greater Sacramento Area (GSA). The purpose of this study is to provide information to citizens, policymakers, and community leaders regarding the potential contributions that Marshall is making and could make in future economic development, education, healthcare provision, and social well-being of the region.

Marshall is an independent, nonprofit community healthcare provider located in the Sierra Foothills between Sacramento and South Lake Tahoe. Marshall includes Marshall Hospital, a fully accredited acute care facility with 111 beds located in Placerville; several outpatient facilities in Cameron Park, Placerville, El Dorado Hills and Georgetown; primary and specialty care physicians including internal and family medicine, OB/GYN, and specialty care; and many community health and education programs. Marshall has over 190 affiliated physicians and a team of over 1500 employees providing quality healthcare services to residents of El Dorado County, 170,000 of whom reside on the county's western slope, within Marshall's direct impact area.

Figure 1. Marshall service area map



Health services at the Marshall Hospital and clinic campuses include:

• Birth Center
• Cancer Center
• Cardiac Rehabilitation
• Cardiac services
• Clinically Assisted recovery and Education Services (CARES)
• Diagnostic imaging services
• Emergency Department/Level III Trauma Center
• Gynecology and Well-women services
• Intensive Care/Critical Care Unit
• Laboratory
• Orthopedic Surgery
• Outpatient Occupational Therapy
• Outpatient Physical Rehabilitation
• Outpatient Speech Therapy
• Outreach services to the homeless and other vulnerable populations
• Palliative Care
• Respiratory Care
• Surgery (outpatient and inpatient)
• Wound Care

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The report is structured into five sections. The first section explores the primary mechanisms that establish connections between the healthcare sector and the broader economy.

The second section provides socio-economic and demographic indicators of El Dorado County, serving as background information to showcase the significance of Marshall as an economic, medical, educational, and social asset within the local area.

Moving on, the third section highlights the key findings of Marshall's economic impact on El Dorado County and the GSA, projecting future quantitative analyses of its economic influence. It specifically examines the projected direct, indirect, and induced effects of Marshall on economic growth, job creation, payroll, and local tax revenues over the next decade.

In the fourth section, the report presents retrospective analyses of the economic impact generated by similar Marshalls and teaching hospitals in other regions across the country. By comparing these results with the prospective economic impact analysis of Marshall from section three, the report demonstrates that the impact projections are realistic and possibly conservative.

Lastly, the fifth section summarizes the research findings and presents the overall conclusions drawn from the study and its results.

THE LINK BETWEEN REGIONAL ECONOMIC DEVELOPMENT AND HEALTHCARE

Over the past twenty years, the healthcare sector, encompassing hospitals, outpatient facilities, nursing homes, pharmacies, physician, dental practices, and other medical service providers, has emerged as a crucial driver of regional economic growth. Prior to the onset of the COVID-19 pandemic, the healthcare sector in the GSA experienced a remarkable 23% growth over the span of four years, being second only to the construction industry in terms of growth rate. [3]

The economic benefits of the healthcare sector are often underestimated when the focus is solely on direct healthcare functions. However, facilities like Marshall not only attract healthcare-related spending from the local market but also generate economic activity from other industries. Additionally, by improving the skills and knowledge of the workforce, the healthcare sector contributes to enhanced productivity and overall economic performance. As the quality of life improves and more job opportunities arise, the entire area becomes more appealing for residential, investment, and infrastructural development.

Healthcare and Workforce

The significance of the healthcare sector as a major employer in the GSA has been steadily growing in recent decades. Currently after the pandemic, the Sacramento metropolitan area continues to welcome a collection of new residents, many of whom are moving from the Bay Area and accepting positions in the expanding healthcare sector. With an annual revenue of $8.64 billion, the healthcare industry accounts for approximately 20% of the total payroll for the entire workforce in the Sacramento Region, providing over 98,000 jobs. [4]

There are more than 100 biotechnology and medical device companies in the region, and over $18 billion has been spent on new facilities at Kaiser, Mercy, Sutter and UC Davis medical expansion projects in recent years. [4] Top healthcare employers in Greater Sacramento Area are UC Davis Health at 16,000 jobs, Kaiser Permanente at 12,000 jobs, and Sutter Health at 11,000 jobs.[5] Prior to the COVID-19 pandemic, between 2000 and the present, healthcare services represented around half of the region's overall job growth in the Greater Sacramento area. [6]

In El Dorado County healthcare companies represent two out of five major employers. Marshall with nearly 1,500 jobs and Barton Health with more than 900 jobs are the second and the fourth largest employers in El Dorado County respectively, with county governmental service sector (nearly 2,000)

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[3] Source: Prosperity Partnership. The 2020-2025 Comprehensive Economic Development Strategy

[4] Source: City of Sacramento. Economic Development. Life Science and Health Care. https://www.cityofsacramento.gov/city-manager/oied/business/grow-here/key-industries/life-science-and-health-care

[5] Source: Sacramento Business Journal. Nov.14, 2022.

[6] Source: GlobeSt.com (2019) Sacramento Sheds Capital City Image by Lisa Brown. April 17, 2019 https://www.globest.com/2019/04/17/sacramento-sheds-capital-city-image/?slreturn=20210002170917

on the first place, Red Hawk Resort and Casino (1,200 jobs) on the third, and Safeway (more than 800 jobs) on the fifth place. [7]

The GSA benefits from the economic expansion in the healthcare sector and connected economic vibrancy and jobs growth. For the metropolitan area in the long term, the development of high-quality healthcare services not only directly contributes to the economic growth, but also increases its competitiveness to attract more industries due to the higher quality of life. Areas attractive for living create a competitive advantage by providing businesses with relatively inexpensive and productive human resources. The proximity of affordable and high-quality healthcare improves human capital, which is the most critical asset for any business, especially in knowledge- and technology-intensive sectors.

The most current post-COVID demographic data also provides the evidence in favor of the importance of the healthcare sector as the regional driver of economic growth as the population of El Dorado County and GSA and demand for healthcare continues to grow. While California lost 1.55% of its population (614,000 residents) since 2020, bringing the state's population to 38.889 million in 2024, El Dorado county continued to grow. The county has 191,643 residents in 2024, which is a 0.21% increase since 2020.[8]

Healthcare and Retirees

Retirees constitute one of the most economically influential demographic groups due to their significant consumer spending power, which encompasses expenditures through programs such as Medicare, Medicaid, Social Security, and others. The economic impact of this group is expanding, and greater Sacramento is currently experiencing a remarkable and unparalleled rise in its senior population, primarily driven by the aging Baby Boomer generation. During the three-year period between 2020 and 2023, the population aged 65 and over increased from 441,500 to 435,000 in Greater Sacramento, equaling a 5.73 percent growth.[9] By the year 2040, it is projected that the number of individuals aged 60 and older in greater Sacramento will be almost three times the number of seniors living in the county in 2000, demonstrating a staggering growth rate of 177% over the span of forty years. Notably, the population of those aged 85 and older, who typically require a significant proportion of elder care services, is projected to grow exponentially, resulting in an approximately five-fold increase in this group by 2040.[10]

Attracting middle- and upper-income retirees is a key factor in bolstering the economic prosperity of the region. This demographic group places significant importance on the quality of healthcare, particularly factors such as the proximity of healthcare facilities and access to prompt and professional assistance in case of emergencies. El Dorado County, already appealing to retirees due to its favorable ecological conditions, safety, housing options, cleanliness, convenient infrastructure,

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[7] Source: *Sacramento Business Journal*, July 5, 2024. https://www.bizjournals.com/sacramento/subscriber-only/2024/07/05/employers--el-dorado-county.html

[8] Source: *World Population Review*. Population of Counties of California (2024). https://worldpopulationreview.com/states/california/counties

[9] Source: *Greater Sacramento Economic Council*. Demographics (2023). https://www.greatersacramento.com/demographics

[10] Source: Agency on Aging\Area 4. *Sacramento County Data (2019)*, https://agencyonaging4.org/wp-content/uploads/2015/06/Sacramento_Population_SENIORS_VS_CHILDREN.pdf

and recreational opportunities, must also strive to maintain its competitiveness in the healthcare sector. This can be achieved by further expanding medical facilities strategically situated in major residential areas. Marshall is offering and has the potential of further expansion of offering high-quality care in the western El Dorado County area and throughout the county. This provision of quality healthcare services becomes an enticing factor for retirees when considering residential locations.

"Healthcare Dollars" Destination

The healthcare system in the United States is highly complex, with numerous sources of "healthcare dollars", such as different types of insurance, Medicare, Medicaid, out-of-pocket payments by patients, and contributions from employers. The annual national health expenditures in the USA amount to $4.5 trillion, or $13,493 per person, constituting 17.3% of Gross Domestic Product (GDP).[11] This presents an opportunity for El Dorado County to attract additional healthcare funding through Marshall. Attracting healthcare funding would result in the generation of new taxes, jobs, and income that would otherwise be generated outside the County.

Furthermore, jobs in the healthcare sector tend to offer higher wages compared to the average wages in other industries. In 2023, the median annual wage for healthcare practitioners and technical occupations, such as registered nurses, physicians and surgeons, and dental hygienists, was $102,060, which is approximately 56% higher than the median annual wage for all occupations in the economy ($65,470).[12] These higher incomes create substantial purchasing power for goods and services, thereby playing a significant role in the local economy.

Lastly, Marshall and healthcare facilities generally serve as customers for other businesses. Their operations require a wide range of goods and services, including supplies, laundry services, waste management, technician services, and other components necessary to support their functioning.

Community Creating Concept

Marshall's vision is expressed in the statement: "Marshall commits to creating a community where everyone can attain their highest desired state of health and well-being." To implement this vision, Marshall functions as a comprehensive organization that integrates healthcare, education, and community service, operating as a community creating center. Marshall's educational services include, but are not limited to providing regular health education sessions (e.g., joint replacement,

[11] Source: Centers for Medicare and Medicaid Services. NHE Fact Sheet 2023. https://www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/nationalhealthexpenddata/nhe-fact-sheet

[12] Source: Bureau of Labor Statistics (2023). May 2023 National Occupational Employment and Wage Estimates, United States. https://www.bls.gov/oes/current/oes_nat.htm#00-0000

weight loss management, Alzheimer's and dementia, diabetes and nutrition), conducting tele-visits programs, initiating a program for remote patients living in rural communities, etc.

Marshall is actively engaged in health professional education, providing precepted residency opportunities for medical school students and training for nurse students, and serving as an educational training site for pharmacy students, radiology technicians, respiratory therapists, clinical lab technicians, phlebotomists, and paramedic students. Educating medical facilities play significant roles in their communities both nationally and in the State of California. They are instrumental in educating future doctors and researchers, delivering advanced patient care, and conducting groundbreaking research, such as in Marshall Cancer Center clinical trials. Moreover, these facilities serve as essential economic drivers, creating employment opportunities, generating wages, and fostering business and community development prospects.

From an economic perspective, grants and other related revenue sources bring "new dollars" into the local economy. Beyond their direct economic benefits, healthcare facilities drive significant advancements in medical knowledge. Medical professionals trained in facilities such as Marshall have the opportunity to learn from esteemed physicians and learn how rural and community care differs from urban. This level of teaching excellence attracts highly qualified medical students to train in the county and state, and many of these graduates choose to remain in their local regions, serving as residents for a substantial portion of their careers.

The subsequent section of this report presents quantitative estimations of Marshall's impact on local businesses. It discusses the potential role of Marshall as an economic engine for the area based on the results of the analysis.

DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS OF AREA OF STUDY

Greater Sacramento Area

The seven county Greater Sacramento Area (El Dorado, Nevada, Placer, Sacramento, Sutter, Yolo, and Yuba counties), also called Sacramento–Roseville-Folsom, CA Combined Statistical Area, serves a population close to 500,000 in the city of Sacramento and nearly 2.5 million people in the region. The political and socio-economic center of GSA is City of Sacramento that is the capital of the U.S. state of California. Located at the confluence of the Sacramento and American Rivers in Northern California's Sacramento Valley, Sacramento's 2022 population of 526,126[13] makes it the sixth-largest city in California and the ninth-largest capital in the United States[14]. Sacramento is a major transportation hub, served by an air cargo airport, an international airport, a deep-water shipping port, two major Interstate freeways, freight and passenger rail lines, and an extensive regional commuter bus and light-rail system[15].

Sacramento is also the cultural and economic core of the Sacramento metropolitan area, which at the 2020 census had a population of 2,397,382. Since 1854, the city has served as the political nucleus of the nation's most influential state, with the fifth-largest economy in the world[16]. Sacramento is the fastest-growing major city in California, owing to its status as a notable financial center on the West Coast and as a major educational hub, home of California State University, Sacramento and University of California, Davis. Similarly, Sacramento is a major center for the California healthcare industry, as the seat of Sutter Health, UC Davis. and the UC Davis School of Medicine. The Sacramento region also has five community colleges, several private institutions of higher education, and more than 160 vocational and training programs[15].

Sacramento is a prime location and compelling choice for thousands of businesses. Its geography, qualified workforce, lower (compared e.g. to Bay Area) cost of living, access to government and education, endless opportunities for sporting and recreation activities, quality of life, amenities and culture are all key ingredients that make Sacramento attractive for people of different demographic groups.

El Dorado County

El Dorado County (EDC), located in the southeastern part of GSA, offers a distinct socio-economic landscape compared to its neighboring regions and the state at large. The county is characterized by its relatively high median household income and per capita income, reflecting an affluent population, particularly in the western portion of the county. This economic prosperity is coupled with a robust health insurance coverage rate, suggesting a financially stable and health-conscious community.

[13] Source: El Dorado County. *Economic Development*. https://www.cityofsacramento.org/Economic-Development/Why-Sacramento/Demographics-and-Market-Information/Key-Demographics
[14] Source: Visit Sacramento. *About Sacramento*. https://www.visitsacramento.com/plan/about-sacramento/
[15] Source: El Dorado County. *Economic Development*. http://www.cityofsacramento.org/economic-development/why-sacramento
[16] Source: https://en.wikipedia.org/wiki/Economy_of_California

El Dorado County's socio-economic attributes highlight its status as a relatively affluent and educated region with a growing elderly population. The median household income in El Dorado County is notably higher than that of the broader Greater Sacramento Area and aligns closely with the higher income levels seen in more affluent regions. This affluence is likely supported by a well-educated population, with a significant portion holding bachelor's and advanced degrees. Such a demographic profile is often associated with higher spending power and a strong demand for quality services, including healthcare.

In terms of educational attainment, EDC exhibits a well-educated demographic that fosters a culture of informed health and wellness decisions. The county's age structure further complements this socio-economic profile. The median age in EDC indicates an older population compared to GSA, California, and national averages. This demographic trend, alongside a significant growth in the 65+ age group, suggests an increasing demand for healthcare services tailored to the needs of senior residents.

Further below is the selected demographic and economic data for the Greater Sacramento Area and El Dorado County illustrating the socio-economic trends outlined above. Table 1 highlights the demographic trends in the Area. The demographic data shows that population growth in the Greater Sacramento Area from 2017 to 2022 was substantially more dynamic than in the State of California, and the nation as a whole. It is related both to the growth of the population and the number of housing units. The most visible trend is the especially significant growth of the senior (65+ years old) population group compared to the State of California and the nation as a whole.

Table 1. Selected Demographic Data for Sacramento-Roseville-Folsom Metro Area, Sacramento County, California, and the United States[17]

	USA			California			Greater Sacramento Area			El Dorado County		
	2022 Estimate	2017 Estimate	% Growth	2022 Estimate	2017 Estimate	% Growth	2022 Estimate	2017 Estimate	% Growth	2022 Estimate	2017 Estimate	% Growth
Total population	333,287,562	325,719,178	2.32%	39,029,342	39,536,653	-1.28%	2,416,702	2,324,884	3.95%	192,646	188,987	1.94%
Age 0-17	72,325,602	73,612,534	-1.75%	8,499,006	9,053,894	-6.13%	529,931	534,723	-0.90%	37,015	37749	-1.94%
Age 18-64	203,139,645	201,294,452	0.92%	24,371,434	24,987,165	-2.46%	1,482,068	1,441,428	2.82%	109,962	112781	-2.50%
Age 65+	57,822,315	50,812,192	13.80%	6,158,902	5,495,595	12.07%	404,703	348,733	16.05%	45669	38457	18.75%
Median Age	39	38.1	2.4%	37.9	36.5	3.8%	38.3	37.3	2.7%	46.1	45.7	0.9%
Housing Units	143,772,895	137,407,308	4.63%	14,627,041	14,177,270	3.17%	955,796	901,954	5.97%	94,831	90311	5.00%

As follows from the table, the age structure of the population in EDC and the GSA, compared to California and the United States, as well as the population growth in EDC (1.94%) and GSA (3.95%) between 2017 and 2022 indicates a growing demand for healthcare services, contrasting with the slight decline in California's population (-1.28%) and modest growth in the U.S. (2.32%). The most notable demographic trend is the significant increase in the 65+ age group, with EDC experiencing an 18.75%

[17] Source: U.S. Census Bureau. *2022 American Community Survey*. https://data.census.gov/all?q=American%20Community%20Surveye https://data.census.gov/all?q=American%20Community%20Surveye

growth and the GSA at 16.05% growth. This aging population suggests a higher demand for medical services and long-term care, highlighting the critical role of local healthcare industry in catering to the healthcare needs of older residents.

The median age in EDC is 46.1 years, significantly higher than in the GSA (38.3 years), California (37.9 years), and the U.S. (39 years). This older median age reinforces the importance of accessible healthcare facilities for an aging population, which is more likely to require regular medical attention, specialized care, and chronic disease management. The decline in the 0-17 age group across all regions indicates a shifting demographic that may influence future healthcare planning and resource allocation.

Table 2 provides a socio-economic snapshot of El Dorado County and comparative data for the GSA, the State of California, and the United States.

Table 2. Socio-Economic Indicators for El Dorado County, Greater Sacramento Area, California, and the United States[18]

	United States	California	Greater Sacramento Area	El Dorado County
INCOME				
Median household income (dollars)	74,755	91,551	89,237	105,982
Per capita income (dollars)	41,804	46,661	44,724	57,717
HEALTH INSURANCE COVERAGE				
With private health insurance	67.2%	63.8%	69.6%	77.0%
With public coverage	37.2%	40.0%	40.2%	38.0%
No health insurance coverage	8.0%	6.5%	4.1%	4.3%
SCHOOL ENROLLMENT				
Population enrolled in school	79,389,309	9,820,607	610,933	38,961
Nursery school, preschool	5.8%	5.0%	5.0%	5.6%
Kindergarten	5.0%	4.7%	4.1%	5.9%
Elementary school (grades 1-8)	42.8%	38.7%	39.1%	27.7%
High school (grades 9-12)	21.9%	21.6%	20.9%	23.2%
College or graduate school	26.6%	30.1%	30.9%	23.4%
EDUCATIONAL ATTAINMENT				
Bachelor's degree	21.6%	22.5%	22.9%	24.0%
Graduate or professional degree	14.0%	14.4%	13.3%	14.5%

As demonstrated in the table, EDC exhibits higher median household income ($105,982) and per capita income ($57,717) compared to GSA, California, and the national averages. This indicates a relatively affluent population in EDC, which likely contributes to higher demand for quality healthcare services. Moreover, the health insurance coverage in EDC is notably robust, with 77.0% of the population having private health insurance, higher than the figures for GSA (69.6%), California (63.8%), and the U.S. (67.2%). This suggests that Marshall operates in a market with a

[18] Source: U.S. Census Bureau. 2022 American Community Survey. Comparative Demographic Estimates. https://data.census.gov/table?q=population&g=010XX00US_040XX00US06_050XX00US06067_310XX00US40900

strong base of insured individuals, enhancing the financial stability and revenue potential of the healthcare institution.

The educational attainment levels in EDC are slightly higher, with 24.0% holding a bachelor's degree and 14.5% holding a graduate or professional degree, compared to the GSA, California, and national statistics. This educated demographic potentially supports a more health-conscious and proactive population, further driving the demand for advanced medical services. Additionally, the school enrollment patterns indicate a balanced distribution across different education levels, with a significant portion enrolled in college or graduate school (23.4%), underscoring a future workforce that is likely to continue valuing and supporting local healthcare services.

Overall, Marshall utilizes the existing advantages of the demographic structure of El Dorado County that is important for the developing further demand both for healthcare and educational services. At the same time, analysis shows Marshall contributes to changes in the demographic landscape favorable to the local economic vibrancy and growth.

IMPACT OF MARSHALL ON THE LOCAL ECONOMY

Methodology

The approach used in this study relies on economic input-output modeling. It is a quantitative approach that measures and forecasts the interdependencies between different sectors of a national economy. Under this methodology inter-industry relationships within an economy are quantified and represented in the input-output matrix.

Model

The primary analytical tool used in this study is the econometric input-output model IMPLAN. This model serves as the primary analytical tool for calculating the effects of expenditures on various economic factors, such as overall economic activity, job creation, non-income tax generation, and more. By utilizing data and specialized tools, IMPLAN enables the assessment of economic impacts at different levels, including the state, county, and even micro-level (such as zip-code level).

It is widely recognized and used nationally and regionally, and its clients, more than 1,500 active users in the United States and internationally, include the federal government, state governments, universities, and private sector consultants.

The benefit of using input-output models, including IMPLAN, is that they help evaluate the effects of industries on each other based on the supposition that industries use the outputs of other industries as inputs. Some other models measuring economic activity examine only the total output or employment of an industry, and not the dual causality that may run both ways. The use of an input-output model provides a much more comprehensive view of the inter-related economic impacts. It examines economic relationships between businesses and between business and consumers.

Each industry that produces goods and services has an influence on, and in turn is influenced by, the production of goods and services of other industries. These interrelationships are captured through a multiplier effect as the demand and supply trickle over from industry to industry (i.e., direct and derived demand) and thus impact total output, compensation, employment, etc. Multipliers may vary from one region to another depending on the strength of these interrelationships. IMPLAN data can be used to compute economic impact at the regional and county levels. Of particular interest are industry output, employment, value added as measured by employee compensation, and taxes on production and imports.

Multiplier Effect

Multipliers form the foundation of estimating potential economic impacts in an input-output analysis system like IMPLAN. A multiplier is a measure of the impact resulting from a one-unit change in indicators such as income, sales, or employment, and the subsequent effect it has on the overall economy of the area. Expressed as a ratio, a multiplier indicates the extent to which a specific change in an industry will lead to a corresponding change in the broader economy. For example, if every dollar spent in the economy generates an additional $0.25 of local economic activity, it implies a multiplier of 1.25.

The multiplier effect is founded on the understanding of how financial funds circulate within the economy, resembling a recycling process. In the case of Marshall, this analysis focuses on the recycling of dollars within specific territorial borders delineated by zip codes that represent the service area.

The benefits that arise from the multiplier effects, which include direct, indirect, and induced impacts, can be measured and presented in five different ways: output, employment, labor income, value added, and taxes on production and imports.

- ***Output*** accounts for total revenues including all sources of income for a given time period for an industry in dollars. It is the total production value and includes all components of production such as employee compensation, proprietor income, intermediate expenditures, taxes on production and imports, and other property type income. This is the best overall measure of business and economic activity. For example, an output multiplier of 1.5 means that for each dollar of Marshall spending, an additional 50 cents is spent in other sectors because of related business-to-business and consumer spending.

- ***Employment*** demonstrates the number of jobs generated and is calculated on an annual full-time/part-time basis. IMPLAN is an annual model, therefore Employment estimates provided by IMPLAN represent annualized Employment values (i.e. if a worker works 6 months, IMPLAN counts that as 0.5 jobs, and one job sustained over 5 years counts as 5 jobs). A person can hold more than one job, so the job count is not necessarily the same as the count of employed persons. For example, an employment multiplier of 1.5 means that for every two jobs created by Marshall, an additional one job is created because of related business-to-business and consumer spending.

- ***Labor Income*** represents the total value of all forms of employment income paid for a given time period. It includes all forms of employee compensation paid by employers (e.g., total payroll costs including benefits, wages and salaries of workers, health and life insurance, retirement payments, non-cash compensation), and proprietary income (payments received by self-employed individuals and/or unincorporated business owners such as self-employment income, income received by private business owners including doctors, lawyers). For example, a labor income multiplier of 1.5 means that for each dollar of labor income created by Marshall, an additional 50 cents of labor income is created in other sectors because of related business-to-business and consumer spending.

- ***Value Added*** is the difference between an industry's total output and the cost of its intermediate inputs for a given time period. It equals gross output (i.e., sales or receipts and other operating income, plus inventory change) minus intermediate inputs (i.e., consumption of goods and services purchased from other industries or imported). Value Added is a measure of the contribution to GDP made by an individual producer, industry, or sector. For example, a Value Added multiplier of 1.5 means that for each dollar of value added by Marshall, there will be an additional value added in the amount of 50 cents in other sectors because of related business-to-business and consumer spending.

- ***Taxes on Production and Imports less Subsidies (TOPI)*** [19] is one of the components of Value Added and includes sales and excise taxes, customs duties, property taxes, motor vehicle licenses, severance taxes, other taxes, and special assessments. For all industries other than government enterprises, subsidies are counted as a negative figure towards TOPI. While all taxes during the normal operation of businesses are included, taxes on profits or income are not included. For example, a TOPI multiplier of 1.5 means that for each dollar of taxes generated by Marshall an additional 50 cents is paid as taxes by taxpayers in other sectors because of related business-to-business and consumer spending.

Four types of multiplier effects are usually analyzed in the output-input models like IMPLAN: direct, indirect, induced, and total (see table 3 below).

- The *direct* effect represents the initial influence of an economic activity on the local economy of a region. If an industry is present in the region, for every dollar spent in that industry, there is a corresponding one-dollar direct impact on the local economy.
    - For Output, this Effect is either 1.00 or 0.00. For every dollar spent in an Industry, if the Industry exists in the region, there is a dollar's worth of activity in the local economy. If the Industry doesn't exist in the region, the effect is 0.00.
    - For Employment, the Effect represents the number of jobs per $1,000,000 of production in the Industry.
    - Labor Income Effects represent the Labor Income dollars per $1,000,000 of production in the Industry.
    - Value Added Effects represent the Total Value Added and various Value Added subset dollars per $1,000,000 of production in the Industry.
    - For TOPI, the Effect represents the tax dollars per $1,000,000 of production in the Industry.
- The *indirect* effect refers to the generation of additional economic activity that stems from interconnected businesses, suppliers of goods and services, and the provision of operational inputs. This includes the purchases made by Marshall, such as food, detergents, blankets, and other products, as well as contracted services.
    - For Output, the Effect represents the sum of local business-to-business purchases per dollar of Output.
    - For Employment, the Effect represents the number of jobs per $1,000,000 of business-to-business purchases by all resultant rounds of local Industry purchases.
    - Labor Income Effect represents the value of Labor Income dollars per $1,000,000 of business-to-business purchases by all resultant rounds of local Industry purchases.

[19] In IMPLAN based studies "taxes on production and import (TOPI)" are also termed as "indirect business taxes (IBT)".

- Value Added Effect represents the value of Value Added dollars per $1,000,000 of business-to-business purchases by all resultant rounds of local Industry purchases.
- For TOPI, the Effect represents the value of tax dollars per $1,000,000 of business-to-business purchases by all resultant rounds of local Industry purchases.

- The *induced* effect measures consumption expenditures of direct and indirect sector employees. While the indirect effect considers business-to-business transactions only, the induced effect includes the sum of household purchases per dollar spent, based on the respective labor income payments. Examples of induced benefits include employees' expenditures on items such as retail purchases, housing, banking, medical services, and insurance.

  - For Output, the Effect represents the sum of local Household purchases per dollar of Output, based on Labor Income payments made by the originating Industry and the local Industries from which they purchase.
  - For Employment, the Effect represents the number of jobs supported in local Industries per $1,000,000 of Direct spending in the originating Industry as a result of Household purchases derived from Labor Income payments throughout all rounds of the impact.
  - Labor Income Effect represents the value of Labor Income dollars per $1,000,000 of Direct spending in the originating Industry in local Industries as a result of Household purchases derived from Labor Income payments throughout all rounds of the impact.
  - Value Added Effect represents the Value Added dollars per $1,000,000 of Direct spending in the originating Industry in local Industries as a result of Household purchases derived from Labor Income payments throughout all rounds of the impact.
  - For TOPI, the Effect represents the value of tax dollars per $1,000,000 of Direct spending in the originating Industry in local Industries as a result of Household purchases derived from Labor Income payments throughout all rounds of the impact.

- The *total* effect encompasses the combined impact of the direct, indirect, and induced effects.

Table 3. Marshall Related Economic Impact Multiplier

Type of Multiplier	Direct	Indirect	Induced
Output Multiplier	Marshall spending	Local business- to-business purchases due to Marshall spendings	Local household purchases due to Marshall spendings

Employment Multiplier	Number of jobs in Marshall	Number of jobs due to all resultant rounds of local industry purchases caused by Marshall spendings	Number of jobs as a result of household purchases caused by Marshall spendings
Labor Income Multiplier	Labor income of Marshall employees and proprietors	Labor income due to all resultant rounds of local industry purchases caused by Marshall spendings	Labor income as a result of household purchases caused by Marshall spendings
Value Added	Total value added dollars created by Marshall operations	Value added dollars due to all resultant rounds of local industry purchases caused by Marshall spendings	Value added dollars as a result of household purchases caused by Marshall spendings
TOPI	Sales and excise taxes, customs duties, property taxes, motor vehicle licenses, severance taxes, other taxes, and special assessments paid by Marshall	Sales and excise taxes, customs duties, property taxes, motor vehicle licenses, severance taxes, other taxes, and special assessments paid due to all resultant rounds of local industry purchases caused by Marshall spendings	Sales and excise taxes, customs duties, property taxes, motor vehicle licenses, severance taxes, other taxes, and special assessments paid as a result of household purchases caused by Marshall spendings

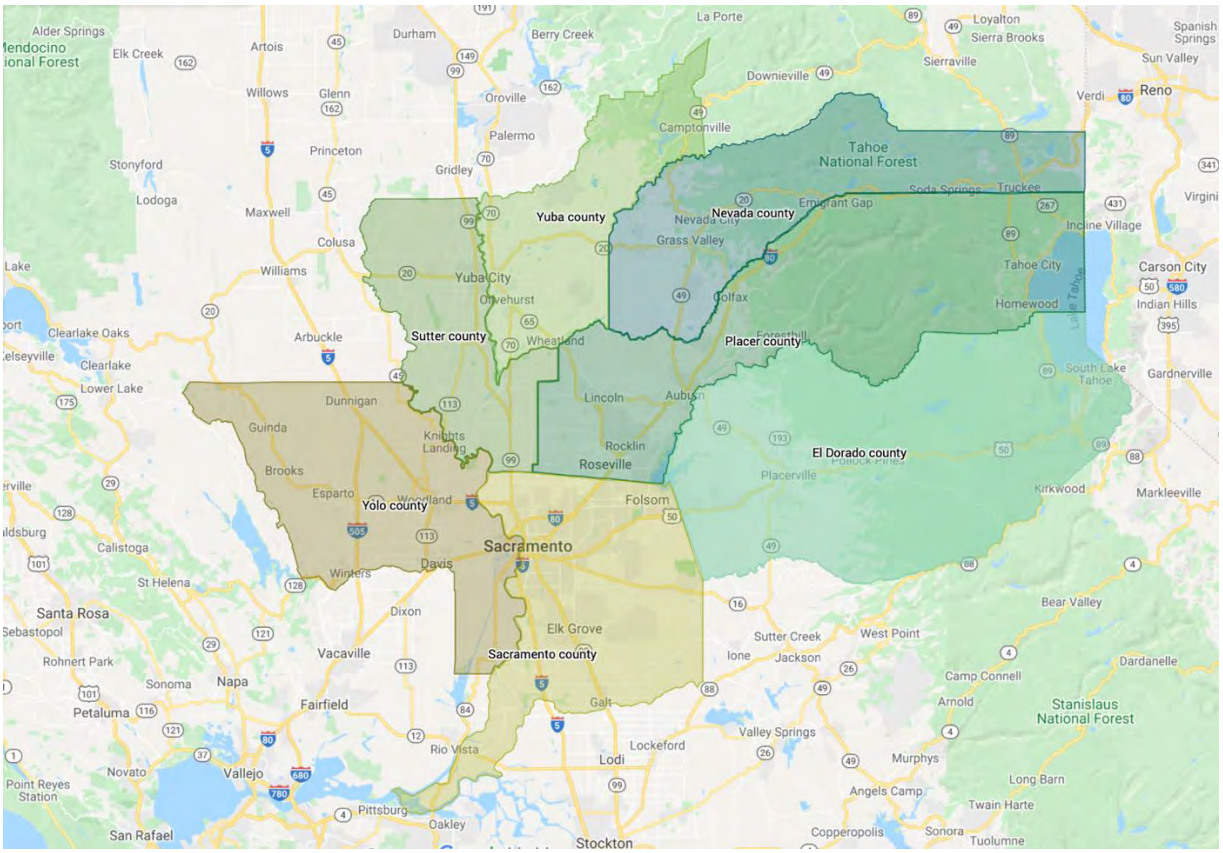
Definitions of the Geographic Areas

The study conducted an economic impact analysis for two specific regions: the Greater Sacramento Area and El Dorado County.

For the purposes of this study, the Greater Sacramento Area (GSA) was defined to encompass seven counties, including Sacramento, Placer, Yolo, El Dorado, Yuba, Nevada, and Sutter[20]. This definition aligns with the official designation of the Sacramento–Roseville, CA Combined Statistical Area, which constitutes a combined statistical area comprising multiple metropolitan statistical areas and the aforementioned seven counties. Figure 1 provides a visual representation of the GSA's definition as utilized in this study.

[20] Source: U.S. Department of Commerce Economics and Statistics Administration. https://www2.census.gov/geo/maps/econ/ec2012/csa/EC2012_330M200US472M.pdf

Figure 2. Greater Sacramento Area definition for the purposes of the study



El Dorado County area was defined within the county's administrative boundaries.

Figure 3. El Dorado County

In more details the basic demographic and economic data used as the background for IMPLAN analysis for GSA and El Dorado County is included in the Appendix section at the end in Tables 1A, 1B, and 2A through 2D.

Other Assumptions of the Study

To assess the economic impact of Marshall, the study has made the following assumptions:

- Marshall will function as a not-for-profit facility.
- The model does not account for any price changes occurring after 2024. All impacts are estimated in 2024 Net Present Value dollars. To update the analysis for subsequent years, IMPLAN dataset(s) specific to those years should be utilized.
- This study focuses solely on the benefits and does not consider potential offsets, such as adverse impacts from increases in rental or housing prices, land acquisition, crowding out effects, traffic, or environmental issues. These aspects should be addressed separately in dedicated studies.
- All benefits are calculated over a 10-year period. While individual yearly figures may vary, the totals represent the cumulative impact over the 10-year timeframe.
- To estimate the long-term benefits, Marshall's expenditures over the past five years were projected forward for the next 10 years. This projection was made using a conservative growth rate estimate covering the inflation rate.
- For the analysis conducted at the county level, IMPLAN utilizes the Econometric method to estimate Regional Purchasing Coefficients. This method is considered less accurate than the Trade Flow method used for the county-level analysis, as the Trade Flow data is unavailable at the Congressional District level in IMPLAN.

The economic impact of Marshall will be influenced by three main activities: the capital spendings of Marshall, the provision of healthcare services, and delivered educational activities. All these activities are expected to continue within the next 20-year period.

To evaluate the economic impact of Marshall starting in 2024, we have considered various components, including operating budgets, support funds, grants and contracts, faculty practice plans, support from affiliated entities, gifts and endowments, and other related expenditures. Except the recorded impact calculated based on quantifiable expenditures, there is a non-recorded and non-quantifiable one that is further discussed on pp.35-36.

To estimate the economic impact, it is necessary to establish a realistic time frame. A 10-year period (until 2034) has been selected to estimate the impact of Marshall's operations.

The numerical data used in the model is based on information provided by Marshall. Considering the longitudinal nature of the study, an assumption of inflation has been made and deflator coefficients are employed by IMPLAN to calculate real values rather than nominal values. All estimates, both input and output, are expressed in Net Present Value using 2024 dollars.

Model Output

The IMPLAN model calculates the multiplier effect that arises when there is an increase in output or employment within a specific geographic area due to certain economic activities. In this study, the economic impact is evaluated for 544 industries as defined in the latest version of IMPLAN. To

facilitate analysis, the researchers grouped the individual industries into 8 categories that reflect key sectors in the regional economy. These categories were created based on the North American Industrial Classification System (NAICS) and aim to provide a comprehensive overview of the economic impact across different industry sectors:

- Agriculture
- Mining
- Construction
- Manufacturing
- Transportation, Information, Power, and Utilities
- Trade
- Service
- Government

Results

As outlined in the Methodology section, the IMPLAN analysis encompasses five metrics: Output, Employment, Labor Income, Value Added, and Taxes on Production and Import (TOPI). The findings for both the Greater Sacramento Area (GSA) and El Dorado County are detailed below. The report includes exhibits that present summarized data from the IMPLAN output. It is crucial to highlight that the economic impact on the GSA encompasses the economic impact on El Dorado County area as well.

Total Economic Impact

The combined economic impact of Marshall operations for the 10 year period (2024-2034) is described below for both geographic areas.

Impact on the GSA

The summary of the total economic impact on the GSA is presented in the Exhibit below, and in detail in Tables 3.A through 3.F at the end in the Appendix. The impacts are grouped into the categories of output, employment, labor income, value added, and taxes on production and imports. They are further separated in each category into the major industrial sectors such as agriculture, mining, capital expenditures, manufacturing, TIPU (transportation, information, power, and utilities), trade, service, and government. This shows both the overall total impact and how it is distributed through the industry categories. In addition, for demonstrating the industry-specific effect, the findings are also presented for each category for the top ten industries of GSA that will experience the greatest impact.

"Output" is estimated to total more than $5.4 billion. This includes total revenues for all sources of income and represents the best overall measure of business and economic activity levels.

"Employment" based on this economic activity is estimated to be equivalent to 27,474 jobs within the 10 year period (i.e., on average 2,747 jobs per year). Employment demonstrates the number of jobs generated and is calculated on an annual full-time/part-time equivalent average.

"Labor Income" is projected to be nearly $2.4 billion. Labor income includes all forms of employee compensation paid by employers (e.g., total payroll costs including benefits, wages and salaries of workers, health and life insurance, retirement payments, non-cash compensation), and proprietary income (e.g., self employment income, income received by private business owners including doctors, laywers, etc.).

"Value Added" is estimated to be more than $3.2 billion. Value added is the difference between an industry's total output and the cost of its intermediate inputs. It equals gross output (i.e., sales or receipts and other operating income, plus inventory change) minus intermediate inputs (i.e., consumption of goods and services purchased from other industries or imported).

Shown below (Exhibit A) are the total impacts for each of these five effects in the GSA.

Exhibit A. Total impacts of Marshall operations on the GSA economy

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	12,362	$1,487,135,703	$1,750,803,474	$2,816,945,168
Indirect Effect	6,418	$401,447,007	$589,186,755	$1,094,041,987
Induced Effect	8,695	$484,357,499	$909,359,072	$1,496,826,722
Total Effect	27,475	$2,372,940,209	$3,249,349,300	$5,407,813,878

In summary, within the GSA, the Output direct and indirect benefits will be more than $3.9 billion, and the induced benefits (i.e., consumption expenditures of direct and indirect sector employees) add another nearly $1.5 billion. Direct and indirect Employment benefits amount to 18,780 jobs (1,878 jobs annually), and the induced benefits add another 8,695 jobs (870 jobs annually). The direct and indirect benefits of Labor Income are projected to total nearly $1.9 billion, and induced benefits add more than $480 million. Direct and indirect Value Added will amount to nearly $2.4 billion, and the induced benefits add more than $900 million.

Impact on the El Dorado County Area

The summary of the total economic impact on El Dorado County is presented in the Exhibit below, and in detail in Tables 4.A through 4.F in the Appendix. The impacts are grouped into the categories of output, employment, labor income, value added, and taxes on production and imports. They are further separated in each category into the major industrial sectors such as agriculture, mining, capital expenditures, manufacturing, TIPU (transportation, information, power, and utilities), trade, service, and government. This shows both the overall total impact and how it is distributed through the industry categories. In addition to it, for demonstrating the industry-specific effect the findings are also presented for each category for the top ten industries of El Dorado County that will experience the greatest impact.

"Output" is estimated to total more than $2.0 billion. This includes total revenues for all sources of income and represents the best overall measure of business and economic activity levels.

"Employment" based on this economic activity is estimated to be equivalent to 10,448 jobs within 10 years period (i.e., on average 1,045 jobs per year). Employment demonstrates the number of jobs generated and is calculated on an annual full-time/part-time equivalent average.

"Labor Income" is projected to be nearly $934 million. Labor income includes all forms of employee compensation paid by employers (e.g., total payroll costs including benefits, wages and salaries of workers, health and life insurance, retirement payments, non-cash compensation), and proprietary income (e.g., self employment income, income received by private business owners including doctors, laywers, etc.).

"Value Added" is estimated to be more than $1.2 billion. Value added is the difference between an industry's total output and the cost of its intermediate inputs. It equals gross output (sales or receipts and other operating income, plus inventory change) minus intermediate inputs (consumption of goods and services purchased from other industries or imported).

Shown below (Exhibit B) are the total impacts for each of these five effects in El Dorado County Area.

Exhibit B. Total impacts of Marshall operations on El Dorado County Area economy

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	5,671	$696,029,623	$809,391,410	$1,317,471,385
Indirect Effect	2,308	$120,167,837	$165,480,207	$342,638,660
Induced Effect	2,509	$117,632,094	$242,760,854	$409,418,608
Total Effect	10,488	$933,829,554	$1,217,632,470	$2,069,528,653

In summary, within El Dorado County Area, the Output direct and indirect benefits will be more than $1.66 billion, and the induced benefits (i.e., consumption expenditures of direct and indirect sector employees) add another more than $409 million. Direct and indirect Employment benefits amount to 7,979 jobs, and the induced benefits add another 2,509 jobs. The direct and indirect benefits of Labor Income are projected to total more than $816 million, and induced benefits add nearly $118 million. Direct and indirect Value Added will amount to nearly $975 million, and the induced benefits add nearly $243 million.

Sector Specific Impact

As mentioned in the Introduction section, Marshall serves the residents of El Dorado County Area and the Greater Sacramento Area in different ways. The sectors of impact include capital expenditures, clinical, and educational activities. Through the IMPLAN analysis, it becomes possible to distinguish the impact of Marshall capital expenditures (used to acquire, upgrade, and maintain physical assets such as property, buildings, technology, and equipment) from its subsequent operations. Furthermore, within the operations phase, the analysis allows for a separation between the impact of clinical services and educational services.

Marshall Capital Expenditures Specific Impact

The summary of capital expenditures specific impact is presented in the Tables 5A and 5B for GSA and Tables 5C and 5D for El Dorado County.

For the GSA, the capital expenditures related Output is estimated to total more than $112 million. Employment based on this economic activity is estimated to be equivalent to 709 jobs within the 10 year period (i.e., on average 71 jobs per year). Labor Income is projected to be more than $50 million. Value Added is estimated to be nearly $69 million.

For El Dorado County the capital expenditures related Output is estimated to total nearly $71 million. Employment based on this economic activity is estimated to be equivalent to 465 jobs within 10 years period (i.e., on average 47 jobs per year). Labor Income is projected to be nearly $33 million. Value Added is estimated to be nearly $43 million.

Marshall Clinical Services Specific Impact

The summary of clinical services specific impact is presented in the Tables 6A and 6B for GSA and Tables 6C and 6D for El Dorado County.

For the GSA the clinical services related Output is estimated to total more than $5.2 billion. Employment based on this economic activity is estimated to be equivalent to 25,502 jobs within the 10 year period (i.e., on average 2,550 jobs per year). Labor Income is projected to be nearly $2.3 billion. Value Added is estimated to be more than $3.1 billion.

For El Dorado County the clinical services related Output is estimated to total more than $2.0 billion. Employment based on this economic activity is estimated to be equivalent to 9,787 jobs within the 10 year period (i.e., on average 979 jobs per year). Labor Income is projected to be more than $900 million. Value Added is estimated to be nearly $1.2 billion.

Marshall Educational Services Specific Impact

The summary of educational services specific impact is presented in the Tables 7A and 7B for GSA and Tables 7C and 7D for El Dorado County.

For GSA the educational services related Output is estimated to total more than $69 million. Employment based on this economic activity is estimated to be equivalent to 730 jobs within the 10 year period (i.e., on average 73 jobs per year). Labor Income is projected to be nearly $28 million. Value Added is estimated to be nearly $43 million.

For El Dorado County the educational services related Output is estimated to total more than $22 million. Employment based on this economic activity is estimated to be equivalent to 237 jobs within 10 years period (i.e., on average 24 jobs per year). Labor Income is projected to be nearly $ 8.5 million. Value Added is estimated to be more than $12 million.

For all three types of impact (capital expenditures, clinical, and educational services) the tables in the Appendix provide both overall impact and the impact on top ten industries that are mostly affected by that type of activity.

Exhibit C. Overall Economic Impact by Sector in GSA in 2024-2034

Impact Type	Employment	Labor Income	Value Added	Output
Clinical Services				
Direct Effect	10,960	$1,431,522,143	$1,680,195,254	$2,704,517,585
Indirect Effect	6,237	$395,672,912	$577,553,412	$1,071,062,360
Induced Effect	8,306	$468,566,262	$879,745,634	$1,449,358,451
Total Effect	25,503	$2,295,761,317	$3,137,494,300	$5,224,938,397
Capital Expenditures				
Direct Effect	459	$35,452,887	$42,159,023	$66,348,570
Indirect Effect	68	$4,596,131	$7,493,985	$14,215,845
Induced Effect	183	$10,299,020	$19,316,055	$31,830,146
Total Effect	710	$50,348,039	$68,969,063	$112,394,561
Educational Services				
Direct Effect	565	$18,925,358	$25,608,567	$38,447,121
Indirect Effect	64	$3,338,913	$6,457,976	$12,892,329
Induced Effect	101	$5,716,818	$10,728,210	$17,676,352
Total Effect	730	$27,981,090	$42,794,754	$69,015,802

Exhibit D. Overall Economic Impact by Sector in El Dorado County in 2024-2034

Impact Type	Employment	Labor Income	Value Added	Output
Clinical Services				
Direct Effect	5,146	$672,130,705	$780,792,846	$1,269,829,685
Indirect Effect	2,242	$118,537,512	$162,297,654	$335,130,895
Induced Effect	2,399	$113,911,179	$235,086,254	$397,254,356
Total Effect	9,787	$904,579,395	$1,178,176,754	$2,002,214,935
Capital Expenditures				
Direct Effect	346	$26,711,079	$31,369,997	$49,988,648
Indirect Effect	32	$1,781,201	$2,846,311	$6,426,774
Induced Effect	87	$4,143,170	$8,546,522	$14,448,083
Total Effect	465	$32,635,450	$42,762,829	$70,863,505
Educational Services				
Direct Effect	180	$6,022,997	$7,502,700	$12,235,801
Indirect Effect	34	$1,374,493	$2,436,791	$6,044,819
Induced Effect	23	$1,070,926	$2,209,600	$3,734,641
Total Effect	237	$8,468,417	$12,149,092	$22,015,260

Tax Impact, not-for-profit scenario

A scenario analyzed in this report is that in the next 10 years Marshall will operate under a not-for-profit status. Under this scenario, Marshall will be exempt from some of the taxes that belong in IMPLAN output to taxes on production and import (TOPI) category (i.e., property tax and sales tax).

Sales Tax

The Taxes on Production and Imports output in IMPLAN for hospitals is already adjusted to the healthcare industry by taking into account that many supplies are exempt from sales tax. The list of

items that are not subject to sales tax for both for-profit and not-for-profit hospitals includes, but is not limited to, medicines, meals and food products consumed by patients and served by medical service facilities, various disposable items, diagnostic substances or preparations intended for use by external or internal application to the human body etc.

Together with that, certain items are taxable when purchased by hospitals and other medical service facilities. This list includes, but is not limited to, hospital beds, microscopes, X-ray equipment, apparatus, instruments, reusable dinnerware and cooking utensils, stationery and business supplies, housekeeping supplies, chemicals and supplies used in laboratories and other diagnostic centers within hospitals, educational supplies used in conjunction with educational programs etc.[21] These items will be exempt from sales tax paid by Marshall if it continues to operate under a not-for-profit scenario.

Property Tax

If Marshall continues to operate as a not-for-profit entity, it will be exempt from property taxes that are paid by for-profit hospitals and other medical service facilities. IMPLAN output in property taxes is not limited by taxes paid by Marshall only. For example, the property tax paid on real property owned by households is included in IMPLAN model as paid by owner-occupied dwellings. Real and equipment property tax paid by other industries are included in those industries' payments to TOPI.

Other TOPI and Non-Tax Payments

Under a not-for-profit scenario, Marshall will still be subject to various types of TOPI taxes paid to state and local governments. These include specific obligations such as motor vehicle license taxes, severance taxes, business licenses, permits, and documentary and stamp taxes, which remain part of the overall fiscal responsibility. In addition to these tax liabilities, Marshall will also be responsible for making non-tax payments that are categorized under TOPI. These non-tax payments include a range of financial obligations such as rents and royalties, special assessments, fines, settlements, and voluntary donations. Collectively, these payments contribute to Marshall's economic impact, even in a not-for-profit structure, by ensuring continued contributions to the local and state economies through both direct and indirect channels.

Other Taxes

Marshall's tax obligations resulting from its economic impact, whether under a for-profit or not-for-profit scenario, are not limited to taxes on production and imports (TOPI). In addition to these, other significant tax impacts include social insurance taxes, which cover both employee and employer contributions, as well as various taxes paid by households, such as personal income tax and motor vehicle licenses. These broader tax components ensure that Marshall contributes comprehensively to the tax base. In the IMPLAN system, these taxes are categorized beyond TOPI, specifically under categories such as Employee Compensation and Other Property Income, reflecting a diverse range of tax liabilities that extend beyond simple production and imports taxation.

Not-for-profit status will somewhat reduce the portion Marshall's taxes resulting only from its *direct* economic impact. Those taxes on production and imports that will be the result of Marshall's *indirect* and *induced* economic impact will remain the same as in a for-profit status. Medical schools and hospitals that are public and not-for-profit entities indirectly generate government revenue through

[21] California Department of Tax and Fee Administration (CDTFA). Hospitals and Other Medical Facilities. https://www.cdtfa.ca.gov/formspubs/pub45.pdf

income taxes paid by staff, employed physicians, and medical residents. The same is related to the sales tax revenues paid by businesses providing goods and services to medical schools and hospitals. Corporate net income taxes are still paid by businesses providing goods and services to medical schools and hospitals. The same is true for other selective business taxes such as gross receipts taxes, public utility realty taxes, insurance premium taxes, motor vehicle taxes, and financial institutions taxes.

The exhibits below for two categories – TOPI and Corporations – completely exclude taxes paid due to the *direct* impact. Instead, they focus on illustrating the amount of taxes paid by Marshall under a nonprofit scenario. This calculation assumes that the taxes listed under the TOPI and Corporations categories reflect only those that are due to the *indirect* and *induced* economic impacts.

Exhibit E. Tax impact for Federal Taxes (GSA), not-for-profit scenario

Description	Employee Compensation	Proprietor Income	Tax on Production and Imports (Indirect and Induced only)	Households	Corporations (Indirect and Induced only)
Social Ins. Tax- Employee Contribution	$125,431,429	$6,645,776			
Social Ins. Tax- Employer Contribution	$115,048,591				
TOPI: Excise Taxes			$9,573,290		
TOPI: Custom Duty			$7,759,467		
TOPI: Fed Non-Taxes			$843,889		
Corporate Profits Tax					$15,156,499
Personal Tax: Income Tax				$189,166,100	
Total Federal Tax	$240,480,020	$6,645,776	$18,176,646	$189,166,100	$15,156,499

To summarize tax impact on federal level under not-for-profit scenario, the total amount of additional taxes on production and imports (TOPI) is expected to be more than $18 million. Taxes on employee compensation will be more than $240 million. Corporate taxes will be more than $15 million. Household taxes will be more than $189 million. The federal level will also get more than $6.6 million of employee contribution taxes in the Proprietor Income category. The total cumulative tax impact on the federal level within 10 years period between 2024 and 2034 will be nearly $470 million.

Impact on the GSA

Exhibit F. Tax impact for State and Local Taxes (GSA), not-for-profit scenario

Description	Employee Compensation	Proprietor Income	Tax on Production and Imports (Indirect and Induced only)	Households	Corporations (Indirect and Induced only)
Dividends					$564,723
Social Ins. Tax- Employee Contribution	$4,635,469				
Social Ins. Tax- Employer Contribution	$7,090,967				
TOPI: Sales Tax			$54,389,516		
TOPI: Property Tax			$43,901,206		
TOPI: Motor Vehicle Lic.			$1,356,060		
TOPI: Severance Tax			$79,207		
TOPI: Other Taxes			$8,364,782		
TOPI: S/L Non-Taxes			$4,277,089		
Corporate Profits Tax					$6,795,087
Personal Tax: Income Tax				$74,742,938	
Personal Tax: Non-Taxes (Fines- Fees				$9,561,419	
Personal Tax: Motor Vehicle License				$2,537,284	
Personal Tax: Property Taxes				$1,585,631	
Personal Tax: Other Tax (Fish/Hunt)				$364,464	
Total State and Local Tax	$11,726,436		$112,367,860	$88,791,736	$7,359,810

To summarize state and local level tax impact of Marshall and related businesses located in the GSA under the not-for-profit scenario, the total amount of additional taxes on production and imports (TOPI) is expected to be more than $112 million. Taxes on employee compensation will be more than $11.7 million. Corporate taxes will be nearly $7.4 million. Household taxes will be nearly $88.8 million. The total cumulative state and local tax impact of Marshall and related GSA businesses within 10 years period between 2024 and 2034 will be more than $220.2 million.

Impact on El Dorado County Area

Exhibit G. Tax impact for State and Local Taxes (El Dorado County Area), not-for-profit scenario

Description	Employee Compensation	Proprietor Income	Tax on Production and Imports (Indirect and Induced only)	Households	Corporations (Indirect and Induced only)
Dividends					$79,775
Social Ins. Tax- Employee Contribution	$1,803,855				
Social Ins. Tax- Employer Contribution	$2,759,393				
TOPI: Sales Tax			$14,183,114		
TOPI: Property Tax			$15,781,206		
TOPI: Motor Vehicle Lic.			$461,096		
TOPI: Severance Tax			$27,076		
TOPI: Other Taxes			$2,532,378		
TOPI: S/L Non-Taxes			$1,486,410		
Corporate Profits Tax					$1,337,186
Personal Tax: Income Tax				$29,229,972	
Personal Tax: Non-Taxes (Fines- Fees				$2,479,771	
Personal Tax: Motor Vehicle License				$979,358	
Personal Tax: Property Taxes				$647,065	
Personal Tax: Other Tax (Fish/Hunt)				$146,887	
Total State and Local Tax	$4,563,249		$34,471,280	$33,483,053	$1,416,961

To summarize the state and local level tax impact of Marshall and related businesses located in the El Dorado County area, the total amount of additional taxes on production and imports (TOPI) is expected to be nearly $34.5 million. Taxes on employee compensation will be nearly $4.6 million. Corporate taxes will be more than $1.4 million. Household taxes will be nearly $33.5 million. The total cumulative state and local tax impact of Marshall and related El Dorado County area businesses within the 10 year period between 2024 and 2034 will be nearly $74.0 million.

EL DORADO COUNTY SPECIFIC IMPACT

Economic Impact on El Dorado County on Per Capita Basis

The economic impact of Marshall can directly benefit the residents of El Dorado County by generating additional economic activity, increasing labor income, and contributing to increased business tax revenue. The specific details regarding these impacts can be found in Exhibits H, I, and J.

Exhibit I provides an illustration of the overall magnitude of the incremental economic activity relative to the population size of El Dorado County. It shows that, on average within this 10-year period, the Value Added divided by the number of households amounts to $16,371. Similarly, when divided by the number of residents, the Value Added amounts to $6,369 on average over the 10 year period.

Exhibit H. Impact of Value Added on Residents of El Dorado County Area

Total Net Incremental Value Added within the 10-year period	$1,217,632,470
Number of Households in Studied Area[22]	74,376
Incremental Value Added per Household	$16,371
Population of Studied Area	191,185
Incremental Value Added per Resident	$6,369

Exhibit I provides a visual representation of how the incremental Labor Income correlates with the population size of the area under study. It demonstrates that, on average over 10-year period, the Labor Income divided by the number of households amounts to $12,555. Similarly, when divided by the number of residents, the Labor Income averages $4,844 per household over the 10 year period.

Exhibit I. Impact of Total Labor Income on Residents of El Dorado County Area

Total Net Incremental Labor Income within 10 years period	$933,829,554
Number of Households in Studied Area	74,376
Incremental Value Added per Household	$12,555
Population of Studied Area	191,185
Incremental Value Added per Resident	$4,844

[22] Source: U.S. Census Bureau. *2022 American Community Survey*. ACS 2022 1-year estimate, https://data.census.gov/profile/El_Dorado_County,_California?g=050XX00US06017

Indirect Business Taxes Relatively to the Budget of El Dorado County

Exhibit J displays the projected General Fund revenues of El Dorado County for the 2023-2024 fiscal year, along with the incremental indirect business taxes generated by the direct, indirect, and induced impacts of Marshall at the state and local levels. It is important to note that the figures presented in the right column do not directly increase the City's revenues, as they represent the tax impact at the state and local levels. These amounts are subject to distribution among various entities, including the state, county, and city. The purpose of including these figures is to highlight the magnitude of the impact of Marshall on state and local taxes in comparison to the current budget of El Dorado County. For the sake of comparability, the exhibit specifically itemizes the property and sales tax portions of the projected new tax revenues.

Exhibit J. El Dorado County Projected General Fund Revenues vs New TOPI revenues from Marshall on state and local levels (average per year, FY 2022-2027 period), in millions $

	El Dorado County Projected Average Per Year Budget Revenues, FY 2022-2027[23]
General Sales & Use Tax	$ 20.28
Property Tax	$ 116.21
Other Revenue/Other Sources	$ 259.37
Total General Fund Revenue	**$ 395.87**

	New TOPI revenues from Marshall (average per year in 2022-2027)
Sales Tax	$1.42
Property Tax	$1.58
TOPI: other than sales and property taxes	$0.45
TOPI: Total	**$3.45**

The comparison shows that Marshall's direct, indirect, and induced state and local level indirect business tax (TOPI) impact will be in the amount of $3.45 million per year that is 0.87% of the total General Fund revenues in 2022-2027 period.

Non-Quantifiable Impact

Apart from the measurable economic impact generated by constructing and operating Marshall, there will be other impacts resulting from the improvement of healthcare infrastructure in the area. Marshall's presence enhances the appeal of living in the area by providing access to quality healthcare, potentially leading to increased economic activity. Marshall attracts highly skilled medical specialists, and service personnel, thereby expediting the capital expenditures of housing units and driving population growth in the project area.

[23] Source: El Dorado County Chief Administrative Office. *Fiscal Year 2022-23 Recommended Adopted Budget General Fund 5-Year Projections* http://www. https://eldorado.legistar.com/View.ashx?M=F&ID=11236424&GUID=CCFD031F-7865-4345-8676-FD844C3C41B1

Furthermore, Marshall offers a range of advantages to the community, which encompass the advancement of the latest healthcare technologies and cutting-edge research, both in practical and academic aspects, providing knowledge and practical experience to a new generation of healthcare professionals. Moreover, the benefits to the community are intertwined with the role of Marshall as a source of inspiration for technological progress in Greater Sacramento Area and El Dorado County in particular, a link to national and international collaborations with leading healthcare and research institutions, as well as collaboration with other economic leaders in Sacramento, including El Dorado County, UC Davis Health, and Sacramento State University, among others. These benefits go beyond the quantifiable economic impact and signify a substantial additional impact that will be generated by Marshall.

The GSA in recent years has encountered difficulties in attracting new industries and job opportunities, resulting in competition among communities within the region for attracting new residents and employment hubs. This has become more pronounced during the post-COVID economic recovery, as people who moved from San Francisco and Bay Area to greater Sacramento due to affordability are now deciding whether to stay. As this competition is a zero-sum game, the development of Marshall has the potential to contribute enhancing the economic growth of El Dorado County. The study demonstrates that Marshall in years to come will be an excellent source of enrichment for the county's quality of life, and investing in its capital expenditures may result in significant benefits beyond the immediate economic impact evaluated in the study.

CONCLUSION

According to the findings of this study, Marshall's activity has a positive impact on income, employment, and tax revenue within its service area. This impact goes beyond the expected benefits of improved access to healthcare, as well as community advantages. In addition to these benefits, Marshall contributes to local economic growth by generating jobs and income through its capital expenditures and operations. Furthermore, Marshall is acting as a catalyst for the growth of new sources of employment and income in other related businesses within El Dorado County Area and the GSA.

The study shows that Marshall not only enhances access to education and healthcare in the local community but also boosts overall economic growth. Marshall's impact goes beyond the expected immediate benefits and includes generating new income, creating employment opportunities, increasing tax revenues, and opening doors for developing other businesses, leading to an added contribution to the economic and social environment of El Dorado County Area and the GSA. Furthermore, the investments in technological innovation, state-of-the-art healthcare and educational facilities, infrastructure upgrades, and demand for skilled labor will add vibrancy to these areas in terms of socio-economic development.

APPENDIX

Table 1.A. GSA (Seven County Region) IMPLAN Model Information

Model Information			
		Value Added	
GRP	$158,754,307,655	Employee Compensation	$90,640,188,020
Total Personal Income	$154,190,600,000	Proprietor Income	$12,026,659,599
Total Employment	1,532,452	Other Property Type Income	$44,123,943,750
		Tax on Production and Import	$11,963,516,284
Number of Industries	461		
Land Area (Sq. Miles)	7,285	Total Value Added	$158,754,307,655
Area Count	7		
Population	2,639,124	*Final Demand*	
Total Households	960,771	Households	135,216,362,753
Average Household Income	$160,486	State/Local Government	$50,192,644,728
		Federal Government	$7,215,012,088
Trade Flows Method	Trade Flows Model	Capital	$38,179,520,778
Model Status	Multipliers	Exports	$46,955,872,452
		Imports	-$109,934,109,572
Economic Indicators		Institutional Sales	-$9,070,991,496
Shannon-Weaver Index	.73847	Total Final Demand:	$158,754,311,732

Table 1.B. El Dorado County IMPLAN Model Information.

Model Information			
		Value Added	
GRP	$8,184,314,041	Employee Compensation	$4,009,758,588
Total Personal Income	$13,310,710,000	Proprietor Income	$1,015,911,421
Total Employment	94,382	Other Property Type Income	$2,523,993,527
		Tax on Production and Import	$634,650,504
Number of Industries	275		
Land Area (Sq. Miles)	1,711	Total Value Added	$8,184,314,041
Area Count	1		
		Final Demand	
Population	192,843	Households	11,469,079,837
Total Households	73,843	State/Local Government	$1,587,419,080
Average Household Income	$180,256	Federal Government	$184,647,294
		Capital	$3,345,227,119
Trade Flows Method	Trade Flows Model	Exports	$3,577,294,450
Model Status	Multipliers	Imports	-$11,646,698,724
		Institutional Sales	-$332,654,785
Economic Indicators			
Shannon-Weaver Index	.72425	Total Final Demand:	$8,184,314,271

Table 2.A. Top 10 Industries - GSA (Seven County Region)

Top Ten Industries				
Industry Code	**Description**	**Employment**	**Labor Income**	**Output**
540	* Employment and payroll of state govt, non-education	102,142	$14,225,040,000	$15,455,260,000
541	* Employment and payroll of local govt, education	61,215	$5,296,898,000	$5,764,592,000
447	Other real estate	60,017	$1,992,092,000	$13,093,660,000
493	Individual and family services	50,310	$1,189,181,000	$1,760,748,000
510	Limited-service restaurants	43,753	$1,127,289,000	$3,649,587,000
509	Full-service restaurants	42,775	$1,291,913,000	$3,106,653,000
542	* Employment and payroll of local govt, non-education	36,645	$4,078,852,000	$4,441,999,000
472	Employment services	35,527	$1,624,622,000	$3,280,318,000
418	Transit and ground passenger transportation	28,367	$323,082,300	$690,982,100
490	Hospitals	28,255	$3,422,066,000	$6,529,093,000

Table 2.B. Aggregated Industry Sectors - GSA (Seven County Region)

Sector Code	Description	Employment	Output	Employee Compensation	Proprietor Income	Other Property Type Income	Tax On Production And Imports
0	Total	1,532,452	$255,089,895,487	$ 90,640,188,020	$ 12,026,659,599	$44,123,943,750	$11,963,516,284
1	Agriculture	24,639	$ 2,644,068,951	$ 709,114,188	$ 247,953,146	$ 760,311,271	$ 28,365,689
2	Mining	2,292	$ 841,767,428	$ 85,547,965	$ 9,329,683	$ 98,382,038	$ 70,175,337
3	Construction	108,280	$ 17,976,169,037	$ 5,976,479,523	$ 2,134,196,156	$ 2,496,185,188	$ 159,388,373
4	Manufacturing	49,399	$ 20,843,705,639	$ 3,495,040,410	$ 141,663,288	$ 2,343,777,306	$ 355,714,769
5	Transportation, Information, Power, and Utilities	96,757	$ 18,621,090,256	$ 3,576,026,417	$ 1,387,871,300	$ 3,536,693,738	$ 580,085,026
6	Trade	168,440	$ 26,356,396,942	$ 6,941,479,000	$ 975,789,944	$ 2,333,418,271	$ 5,946,235,030
7	Service	825,280	$130,989,831,102	$ 40,298,840,275	$ 7,129,856,082	$27,845,085,189	$ 5,152,854,605
8	Government	257,365	$ 36,816,866,131	$ 29,557,660,244	$ -	$ 4,710,090,749	$ (329,302,544)

Table 2.C. Top 10 Industries – El Dorado County

Top Ten Industries				
Industry Code	**Description**	**Employment**	**Labor Income**	**Output**
447	Other real estate	5,500	$120,760,200	$951,090,000
541	Employment and payroll of local govt, education	4,914	$392,849,000	$427,535,800
509	Full-service restaurants	3,755	$111,863,300	$269,421,700
542	Employment and payroll of local govt, non-education	2,840	$298,758,000	$325,356,500
510	Limited-service restaurants	2,388	$63,485,110	$200,626,100
457	Architectural, engineering, and related services	2,279	$151,826,400	$326,157,700
445	Insurance agencies, brokerages, and related activities	2,134	$216,200,800	$639,126,700
57	Construction of new single-family residential structures	2,092	$151,161,100	$270,890,700
493	Individual and family services	1,880	$45,312,280	$66,853,940
534	Other local government enterprises	1,844	$180,312,300	$558,900,500

Table 2.D. Aggregated Industry Sectors – El Dorado County

Sector Code	Description	Employment	Output	Employee Compensation	Proprietor Income	Other Property Type Income	Tax On Production and Imports
0	Total	94,382	$14,973,445,285	$ 4,009,758,588	$1,015,911,421	$ 2,523,993,527	$634,650,504
1	Agriculture	1,745	$61,126,884	$16,678,469	$17,917,605	$9,807,547	$1,069,184
2	Mining	239	$79,214,416	$2,378,152	$298,191	$3,394,945	$8,087,635
3	Construction	9,795	$1,572,103,601	$471,649,047	$236,318,462	$198,469,808	$14,526,362
4	Manufacturing	4,048	$1,859,800,134	$195,542,411	$12,332,715	$170,229,057	$29,255,166
5	TIPU	2,551	$648,012,307	$92,813,406	$59,882,292	$113,437,750	$31,728,891
6	Trade	10,190	$1,291,072,809	$325,171,751	$83,011,918	$113,505,166	$235,160,410
7	Service	54,885	$7,989,898,852	$1,921,297,502	$606,150,238	$1,681,011,594	$364,780,472
8	Government	10,930	$1,472,216,281	$984,227,851	$ -	$234,137,659	$ (49,957,617)

Table 3.A. Overall Economic Impact of Marshall Capital Expenditures and Operations in GSA

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	12,362	$1,487,135,703	$1,750,803,474	$2,816,945,168
Indirect Effect	6,418	$401,447,007	$589,186,755	$1,094,041,987
Induced Effect	8,695	$484,357,499	$909,359,072	$1,496,826,722
Total Effect	27,475	$2,372,940,209	$3,249,349,300	$5,407,813,878

Table 3.B. Economic Impact of Marshall Capital Expenditures and Operations – Top Ten Industries Affected in GSA

Industry Code	Description	Employment	Labor Income	Value Added	Output
490	Hospitals	11,301	$1,457,033,438	$1,710,138,176	$2,758,136,845
449	Owner-occupied dwellings	0	$-	$184,471,156	$238,245,388
447	Other real estate	903	$31,507,099	$95,546,496	$205,510,452
444	Insurance carriers, except direct life	325	$32,617,895	$73,673,391	$178,011,057
472	Employment services	1,133	$54,501,729	$75,156,245	$110,788,966
445	Insurance agencies, brokerages, and related activities	350	$33,352,168	$43,953,236	$104,782,734
50	Construction of new health care structures	628	$47,956,850	$57,028,189	$89,133,087
509	Full-service restaurants	788	$25,027,447	$37,612,438	$62,160,690
455	Legal services	282	$25,732,458	$42,087,030	$58,039,828
469	Management of companies and enterprises	257	$28,321,449	$32,606,444	$56,643,597

Table 3.C. Economic Impact of Marshall Capital Expenditures and Operations by Output – Aggregated Industry Sectors in GSA

Sector Code	Description	Direct	Indirect	Induced	Total
0	Total	$2,809,313,276	$1,098,170,535	$1,498,864,949	$5,406,348,760
1	Agriculture	$0	$266,756	$2,380,355	$2,647,111
2	Mining	$0	$696,501	$718,333	$1,414,834
3	Construction	$66,348,570	$10,178,050	$18,545,196	$95,071,815
4	Manufacturing	$0	$15,843,474	$17,351,558	$33,195,032
5	TIPU	$0	$89,660,940	$115,532,382	$205,193,322
6	Trade	$0	$73,656,047	$208,138,296	$281,794,343
7	Service	$2,742,964,706	$878,891,471	$1,094,544,168	$4,716,400,345
8	Government	$0	$28,977,295	$41,654,663	$70,631,958

Table 3.D. Economic Impact of Marshall Capital Expenditures and Operations by Employment – Aggregated Industry Sectors in GSA

Sector Code	Description	Direct	Indirect	Induced	Total
0	Total	12,362	6,418	8,695	27,475
1	Agriculture	0	2	18	21
2	Mining	0	2	1	3
3	Construction	628	40	76	744
4	Manufacturing	0	41	42	82
5	TIPU	0	460	600	1,060
6	Trade	0	255	1,572	1,827
7	Service	11,733	5,501	6,247	23,481
8	Government	0	118	138	256

Table 3.E. Economic Impact of Marshall Capital Expenditures and Operations by Value Added – Aggregated Industry Sectors in GSA

Sector Code	Description	Direct	Indirect	Induced	Total
0	Total	$1,747,962,844	$591,505,373	$909,789,899	$3,249,258,116
1	Agriculture	$0	$155,424	$1,423,120	$1,578,544
2	Mining	$0	$184,713	$163,671	$348,383
3	Construction	$42,159,023	$4,899,915	$8,921,505	$55,980,443
4	Manufacturing	$0	$4,672,125	$4,651,349	$9,323,474
5	TIPU	$0	$41,821,650	$56,730,555	$98,552,205
6	Trade	$0	$40,863,798	$126,558,570	$167,422,368
7	Service	$1,705,803,821	$483,088,783	$691,196,827	$2,880,089,431
8	Government	$0	$15,818,966	$20,144,302	$35,963,268

Table 3.F. Economic Impact of Marshall Capital Expenditures and Operations by Labor Income – Aggregated Industry Sectors in GSA

Sector Code	Description	Direct	Indirect	Induced	Total
0	Total	$1,485,900,388	$403,607,956	$484,582,100	$2,374,090,445
1	Agriculture	$0	$85,297	$648,554	$733,851
2	Mining	$0	$58,364	$44,102	$102,466
3	Construction	$35,452,887	$3,079,192	$5,720,121	$44,252,200
4	Manufacturing	$0	$2,608,610	$2,677,058	$5,285,668
5	TIPU	$0	$22,770,477	$29,987,335	$52,757,812
6	Trade	$0	$20,397,415	$70,841,558	$91,238,974
7	Service	$1,450,447,501	$340,815,373	$357,837,301	$2,149,100,175
8	Government	$0	$13,793,227	$16,826,072	$30,619,299

Table 4.A. Overall Economic Impact of Marshall Capital Expenditures and Operations in El Dorado County

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	5,671	$696,029,623.01	$809,391,409.50	$1,317,471,384.90
Indirect Effect	2,308	$120,167,836.50	$165,480,207.28	$342,638,660.29
Induced Effect	2,509	$117,632,094.20	$242,760,853.71	$409,418,608.28
Total Effect	10,488	$933,829,553.71	$1,217,632,470.49	$2,069,528,653.47

Table 4.B. Economic Impact of Marshall Capital Expenditures and Operations – Top Ten Industries Affected in El Dorado County

Industry Code	Description	Employment	Labor Income	Value Added	Output
490	Hospitals	5,232	$672,471,601	$781,330,292	$1,274,632,165
449	Owner-occupied dwellings	0	$0	$73,247,963	$94,600,095
447	Other real estate	491	$11,343,261	$28,625,565	$88,656,284
50	Construction of new health care structures	346	$26,376,268	$30,976,788	$49,023,199
509	Full-service restaurants	360	$11,277,090	$16,851,032	$28,053,155
462	Management consulting services	170	$11,736,030	$12,326,646	$22,765,906
534	Other local government enterprises	70	$7,205,460	$10,242,642	$22,478,627
489	Other ambulatory health care services	103	$9,502,217	$10,996,231	$16,072,689
393	Wholesale - Professional and commercial equipment and supplies	53	$4,639,349	$8,017,410	$14,898,247
154	Petroleum refineries	2	$286,995	$1,730,845	$14,435,346

Table 4.C. Economic Impact of Marshall Capital Expenditures and Operations by Output – Aggregated Industry Sectors in El Dorado County

Sector Code	Description	Direct	Indirect	Induced	Total
0	Total	$1,317,471,385	$342,638,660	$409,418,608	$2,069,528,653
1	Agriculture	$0	$17,626	$389,093	$406,719
2	Mining	$0	$677,270	$410,940	$1,088,210
3	Construction	$49,023,199	$6,475,083	$7,570,123	$63,068,406
4	Manufacturing	$0	$11,857,788	$8,682,310	$20,540,098
5	TIPU	$0	$24,833,307	$22,213,369	$47,046,676
6	Trade	$0	$22,485,349	$55,512,598	$77,997,947
7	Service	$1,268,448,186	$264,906,195	$300,808,751	$1,834,163,132
8	Government	$0	$11,386,043	$13,831,422	$25,217,465

Table 4.D. Economic Impact of Marshall Capital Expenditures and Operations by Employment – Aggregated Industry Sectors in El Dorado County

Sector Code	Description	Direct	Indirect	Induced	Total
0	Total	5,671	2,308	2,509	10,488
1	Agriculture	0	0	14	14
2	Mining	0	2	1	3
3	Construction	346	26	32	404
4	Manufacturing	0	21	11	32
5	TIPU	0	92	90	182
6	Trade	0	84	459	543
7	Service	5,326	2,032	1,855	9,212
8	Government	0	51	48	99

Table 4.E. Economic Impact of Marshall Capital Expenditures and Operations by Value Added – Aggregated Industry Sectors in El Dorado County

Sector Code	Description	Direct	Indirect	Induced	Total
0	Total	$809,391,410	$165,480,207	$242,760,854	$1,217,632,470
1	Agriculture	$0	$13,721	$293,314	$307,035
2	Mining	$0	$132,861	$58,455	$191,316
3	Construction	$30,976,788	$3,060,144	$3,580,215	$37,617,147
4	Manufacturing	$0	$2,447,322	$1,571,825	$4,019,147
5	TIPU	$0	$10,949,307	$10,479,754	$21,429,061
6	Trade	$0	$11,997,089	$32,611,704	$44,608,793
7	Service	$778,414,621	$130,751,884	$187,583,660	$1,096,750,165
8	Government	$0	$6,127,879	$6,581,927	$12,709,806

Table 4.F. Economic Impact of Marshall Capital Expenditures and Operations by Labor Income – Aggregated Industry Sectors in El Dorado County

Sector Code	Description	Direct	Indirect	Induced	Total
0	Total	$696,029,623	$120,167,837	$117,632,094	$933,829,554
1	Agriculture	$0	$9,526	$185,383	$194,910
2	Mining	$0	$26,281	$7,697	$33,978
3	Construction	$26,376,268	$1,982,793	$2,358,148	$30,717,210
4	Manufacturing	$0	$1,228,497	$687,125	$1,915,623
5	TIPU	$0	$5,777,115	$5,212,832	$10,989,947
6	Trade	$0	$6,230,030	$18,282,281	$24,512,311
7	Service	$669,653,355	$100,046,193	$86,105,841	$855,805,389
8	Government	$0	$4,867,400	$4,792,787	$9,660,187

Table 5.A. Overall Economic Impact of Marshall Capital Expenditures in GSA

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	459	$35,452,887	$42,159,023	$66,348,570
Indirect Effect	68	$4,596,131	$7,493,985	$14,215,845
Induced Effect	183	$10,299,020	$19,316,055	$31,830,146
Total Effect	710	$50,348,039	$68,969,063	$112,394,561

Table 5.B. Economic Impact of Marshall Capital Expenditures– Top Ten Industries Affected in GSA

Industry Code	Description	Employment	Labor Income	Value Added	Output
50	Construction of new health care structures	459	$35,452,887	$42,159,023	$66,348,570
449	Owner-occupied dwellings	0	$0	$3,937,337	$5,107,027
447	Other real estate	10	$359,492	$1,090,174	$2,340,365
490	Hospitals	7	$927,354	$1,088,447	$1,752,013
396	Wholesale - Other durable goods merchant wholesalers	7	$443,593	$852,256	$1,727,225
444	Insurance carriers, except direct life	2	$220,978	$499,119	$1,201,283
417	Truck transportation	7	$517,959	$575,590	$1,134,144
510	Limited-service restaurants	10	$282,271	$465,660	$951,533
509	Full-service restaurants	10	$336,680	$505,978	$842,998
483	Offices of physicians	4	$593,479	$631,496	$834,060

Table 5.C. Overall Economic Impact of Marshall Capital Expenditures in El Dorado County

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	346	$26,711,079	$31,369,997	$49,988,648
Indirect Effect	32	$1,781,201	$2,846,311	$6,426,774
Induced Effect	87	$4,143,170	$8,546,522	$14,448,083
Total Effect	465	$32,635,450	$42,762,829	$70,863,505

Table 5.D. Economic Impact of Marshall Capital Expenditures– Top Ten Industries Affected in El Dorado County

Industry Code	Description	Employment	Labor Income	Value Added	Output
50	Construction of new health care structures	346	$26,711,079	$31,369,997	$49,988,648
449	Owner-occupied dwellings	0	$0	$2,589,365	$3,358,604
447	Other real estate	7	$169,063	$426,643	$1,318,829
154	Petroleum refineries	0	$15,655	$94,415	$807,664
490	Hospitals	3	$310,500	$365,708	$645,163
396	Wholesale - Other durable goods merchant wholesalers	2	$146,437	$278,280	$593,907
457	Architectural, engineering, and related services	4	$252,014	$285,420	$563,452
534	Other local government enterprises	2	$179,224	$254,768	$560,019
509	Full-service restaurants	7	$220,552	$329,564	$553,102
483	Offices of physicians	2	$305,709	$324,761	$438,512

Table 6.A. Overall Economic Impact of Marshall Clinical Services in GSA

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	10,960	$1,431,522,143	$1,680,195,254	$2,704,517,585
Indirect Effect	6,237	$395,672,912	$577,553,412	$1,071,062,360
Induced Effect	8,306	$468,566,262	$879,745,634	$1,449,358,451
Total Effect	25,503	$2,295,761,317	$3,137,494,300	$5,224,938,397

Table 6.B. Economic Impact of Marshall Clinical Services – Top Ten Industries Affected in GSA

Industry Code	Description	Employment	Labor Income	Value Added	Output
490	Hospitals	11,286	$1,473,556,493	$1,729,531,490	$2,783,931,402
449	Owner-occupied dwellings	0	$0	$178,431,588	$231,439,434
447	Other real estate	849	$30,029,853	$91,066,688	$195,500,173
444	Insurance carriers, except direct life	320	$32,517,360	$73,446,314	$176,770,986
472	Employment services	1,117	$54,410,950	$75,031,063	$110,790,674
445	Insurance agencies, brokerages, and related activities	344	$33,188,306	$43,737,291	$104,163,607
509	Full-service restaurants	763	$24,545,558	$36,888,232	$61,458,525
455	Legal services	275	$25,467,728	$41,654,049	$57,300,356
469	Management of companies and enterprises	250	$27,925,276	$32,150,331	$55,704,800
510	Limited-service restaurants	514	$14,093,557	$23,250,054	$47,509,328

Table 6.C. Overall Economic Impact of Marshall Clinical Services in El Dorado County

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	5,146	$672,130,705	$780,792,846	$1,269,829,685
Indirect Effect	2,242	$118,537,512	$162,297,654	$335,130,895
Induced Effect	2,399	$113,911,179	$235,086,254	$397,254,356
Total Effect	9,787	$904,579,395	$1,178,176,754	$2,002,214,935

Table 6.D. Economic Impact of Marshall Clinical Services – Top Ten Industries Affected in El Dorado County

Industry Code	Description	Employment	Labor Income	Value Added	Output
490	Hospitals	5,228	$680,617,464	$790,788,580	$1,287,463,613
449	Owner-occupied dwellings	0	$0	$70,920,301	$91,989,057
447	Other real estate	466	$10,903,150	$27,514,911	$85,053,468
509	Full-service restaurants	350	$11,104,341	$16,592,897	$27,847,575
462	Management consulting services	169	$11,779,892	$12,372,715	$23,050,467
534	Other local government enterprises	66	$6,872,413	$9,769,211	$21,474,200
489	Other ambulatory health care services	103	$9,587,536	$11,094,965	$16,353,308
393	Wholesale - Professional and commercial equipment and supplies	52	$4,634,015	$8,008,193	$14,862,149
154	Petroleum refineries	2	$272,405	$1,642,856	$14,053,682
510	Limited-service restaurants	134	$3,799,708	$6,160,179	$12,503,037

Table 7.A. Overall Economic Impact of Marshall Educational Services in GSA

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	565	$18,925,358	$25,608,567	$38,447,121
Indirect Effect	64	$3,338,913	$6,457,976	$12,892,329
Induced Effect	101	$5,716,818	$10,728,210	$17,676,352
Total Effect	730	$27,981,090	$42,794,754	$69,015,802

Table 7.B. Economic Impact of Marshall Educational Services – Top Ten Industries Affected in GSA

Industry Code	Description	Employment	Labor Income	Value Added	Output
481	Junior colleges, colleges, universities, and professional schools	567	$18,997,488	$25,706,200	$38,593,836
447	Other real estate	29	$1,010,854	$3,065,455	$6,580,857
449	Owner-occupied dwellings	0	$0	$2,180,925	$2,828,827
534	Other local government enterprises	3	$421,618	$618,140	$1,221,506
490	Hospitals	4	$512,222	$601,202	$967,721
444	Insurance carriers, except direct life	2	$154,662	$349,331	$840,773
509	Full-service restaurants	8	$247,013	$371,223	$618,484
510	Limited-service restaurants	6	$167,421	$276,194	$564,376
445	Insurance agencies, brokerages, and related activities	2	$176,991	$233,248	$555,496
441	Monetary authorities and depository credit intermediation	1	$108,827	$307,412	$489,635

Table 7.C. Overall Economic Impact of Marshall Educational Services in El Dorado County

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	180	$6,022,997	$7,502,700	$12,235,801
Indirect Effect	34	$1,374,493	$2,436,791	$6,044,819
Induced Effect	23	$1,070,926	$2,209,600	$3,734,641
Total Effect	237	$8,468,417	$12,149,092	$22,015,260

Table 7.D. Economic Impact of Marshall Educational Services – Top Ten Industries Affected in El Dorado County

Industry Code	Description	Employment	Labor Income	Value Added	Output
481	Junior colleges, colleges, universities, and professional schools	181	$6,044,654	$7,531,930	$12,298,424
447	Other real estate	18	$415,036	$1,047,374	$3,237,618
449	Owner-occupied dwellings	0	$0	$668,082	$866,554
534	Other local government enterprises	2	$245,288	$348,679	$766,449
60	Maintenance and repair construction of nonresidential structures	1	$86,735	$133,922	$285,335
509	Full-service restaurants	3	$95,345	$142,471	$239,107
490	Hospitals	1	$79,758	$93,939	$165,723
441	Monetary authorities and depository credit intermediation	0	$31,281	$87,946	$156,849
457	Architectural, engineering, and related services	1	$66,590	$75,417	$148,882
154	Petroleum refineries	0	$2,578	$15,545	$132,978