

APPENDIX K

ECONOMIC IMPACT ANALYSIS

An Economic Impact Analysis of The Camp 4 Housing Project in the Santa Ynez Valley

For

The Santa Ynez Band of Chumash Indians

Prepared by



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Table of Contents

	page
Background	1
Project Description	3
Impact Analysis	7
Case 1: Low Cost Scenario	7
Case 2: High Cost Scenario	13
Summary of Impacts	17
Appendix	19

Background

The Chumash Tribe purchased about 1,400 acres of land located approximately 2 miles east of the existing Reservation from Fess Parker in 2009. The Fess Parker family originally named this land "Camp 4." The Tribe has promised the 143 enrolled Tribal members land assignments on the Camp 4 site.

The Chumash would like to build 143 homes on the Camp 4 site. They have requested an economic impact study for constructing the units and the infrastructure.

The lack of new home and non-residential development in Santa Barbara County since 2007 has resulted in a material reduction of the county's workforce in construction. Between February 2007 and December 2011, total jobs in construction contracted by nearly 3,500, or 35 percent.

Over 1,300 construction jobs were lost in the Santa Maria Valley alone over the last 4 1/2 years. The Lompoc economy has shed more than 350 construction jobs since the Spring of 2007. Total employment in the county has declined by more than 13,000 workers over the last 4 years.

Purpose of the Report

The California Economic Forecast has conducted an economic impact analysis for the Camp 4 housing project. The economic impact spans a 5 to 6 year period from 2012 to 2017 and is limited to Santa Barbara County. There is already a "base case" forecast of the Santa Barbara County that is routinely conducted and published. The analysis in this report shows how that base case forecast changes if the Camp 4 housing project is developed over the next 5 years.

Using a proprietary model of Santa Barbara County, estimates of the total employment, income, population, and consumer spending impacts on Santa Barbara County are determined as a result of the Camp 4 housing project including the infrastructure requirements.

Because the Santa Barbara County model is routinely updated and maintained to forecast economic activity for Santa Barbara County twice a year (since 1982), the impact analysis method presented here produces a clear picture of the economic impacts the project would produce.

The Model

Rather than using an input-output based modeling system to estimate the total impacts of the project on the county's economy, the model used for this analysis is a proprietary econometric model of the Santa Barbara County economy.

Econometric methods rely on statistical procedures to estimate relationships for models specified on the basis of economic and demographic theory, prior studies, and local knowledge about the particular regional economy. Given good prior knowledge about regional economic relationships

and the existence of available data, econometric methods provide an ideal way to incorporate expert judgment and quantitative information that will form the basis for a reliable forecast or impact analysis.

The modeling system is normally used to produce a forecast of the regional economy. It can also produce an alternative forecast of the regional economy that includes a policy change or a hypothetical change to the economic landscape. In this application, the Camp 4 housing project would represent that change.

A more detailed discussion on the econometric model used to estimate impacts in this report on can be found in the appendix.

Project Description and Assumptions

Introduction

The Santa Ynez Band of Chumash Indians is planning to construct a new housing development near its reservation. The project would include 143 housing units and an administration building. The structures would be located on the "Camp 4" land parcel. The project is scheduled to begin in July 2012, and is expected to be completed by the end of 2016. This report details the economic impacts that would be created by a project of this nature.

Economic impact studies measure the total effects of an event or project, including the direct, indirect, and induced effects. The direct effects consist of the "up-front" changes that occur – the new revenue that is generated by a construction firm, for example, as a result of the project.

The indirect and induced effects, on the other hand, are a measure of the "back-end" changes that take place. The indirect effects, in general, are separated from the direct effects by one step. This includes, for example, the wages that are paid to workers who are hired for the project, and the materials that are purchased as inputs for the project.

The induced effects are everything that occurs beyond the indirect effects. When new jobs are created, the workers who hold these jobs receive an income, part of which is spent in local stores, restaurants, and other establishments. This generates new income for the owners and employees of these establishments, and these individuals then generate more economic activity of their own. The induced effects, therefore, are the results of this economy-wide ripple or "multiplier" effect.

Methodology

In order to determine the direct, indirect, and induced effects—the sum of which is known as the total effect—the California Economic Forecast used its proprietary econometric model of Santa Barbara County. This model has been developed over a 20-year period, and measures virtually every principal category of economic activity that occurs in the region.

To isolate the effects of the project from the economic activity that would otherwise have taken place, the model was first run under a base case scenario. This consisted of a forecast without

the inputs from the Camp 4 project. Then, two additional forecasts were made under both low- and high-cost value estimates for the housing units. By comparing each of these to the baseline forecast, the total economic impact on Santa Barbara County is derived.

The Direct Impacts

The California Economic Forecast used housing project cost estimates from the Chumash tribe, and introduced these costs into the Santa Barbara County econometric model. The direct effects of the project are therefore the entitlement, planning, mitigation, and construction costs.

It was necessary at the outset to determine the amount of expenditures that would remain in Santa Barbara County from those that would be spent elsewhere. In order for a project to have an economic impact in a local area, some or all of the funds for that project must be spent on firms that operate in the region, or jobs must be created for workers who reside there.¹

Budget

In preparation for the Camp 4 project, the Chumash Tribe developed a budget that includes all anticipated expenses. Certain portions of this budget will be spent outside of Santa Barbara County. The following table provides details of the budget, under the low- and high-cost scenarios, and identifies the amounts that were omitted from the analysis because they will be directly spent outside of the region.

Camp 4 Project Budget			
Low-Cost Scenario (Thousands of Dollars)			
Category	Cost	Amount Omitted from Analysis	Amount Included in Analysis
Land and Site Improvements	38,865	0	38,865
Construction of Homes	78,650	0	78,650
Construction of Admin Building	5,000	0	5,000
Engineering, Architecture, Design, and Management Fees	8,964	8,964	0
Entitlement and Utility fees	4,290	185	4,105
Mitigation Fees	5,000	0	5,000
Total	140,769	9,149	131,620

¹ See Appendix

Camp 4 Project Budget High-Cost Scenario (Thousands of Dollars)			
Category	Cost	Amount Omitted from Analysis	Amount Included in Analysis
Land and Site Improvements	44,340	0	44,340
Construction of Homes	117,975	0	117,975
Construction of Administrative Building	7,500	0	7,500
Engineering, Architecture, Design, and Management Fees	8,964	8,964	0
Entitlement and Utility fees	4,290	185	4,105
Mitigation Fees	5,000	0	5,000
Total	188,069	9,149	178,920

Timeline

Because the Camp 4 housing project is expected to span a five-year period, it was necessary to structure the analysis around the timeline of the project. In general, the project is expected to proceed as follows:

Project Component	Timeframe
Entitlement	2012 Q2 – 2014 Q4
Mitigation fees	2012 Q2 – 2016 Q4
Site improvement	2013 Q2 – 2015 Q4
Construction of homes	2015 Q1 – 2016 Q4
Construction of administration building	2015 Q3 – 2016 Q4

To accommodate this schedule, we allocated the components of the project budget as follows:

Camp 4 Project Budget Timeline Low-Cost Scenario (Thousands of Dollars)					
Category					
Year	Entitlement	Land and Site Improvements	Construction of Homes	Construction of Administrative Building	Mitigation Fees
2012	1,368				833
2013	2,737	12,955			2,083
2014		25,910			833
2015			39,325	1,000	625
2016			39,325	4,000	625

Camp 4 Project Budget Timeline High-Cost Scenario (Thousands of Dollars)					
Category					
Year	Entitlement	Land and Site Improvements	Construction of Homes	Construction of Administrative Building	Mitigation Fees
2012	1,368				833
2013	2,737	14,780			2,083
2014		29,560			833
2015			58,988	1,500	625
2016			58,988	6,000	625

Impacts of Camp 4 Housing on Santa Barbara County

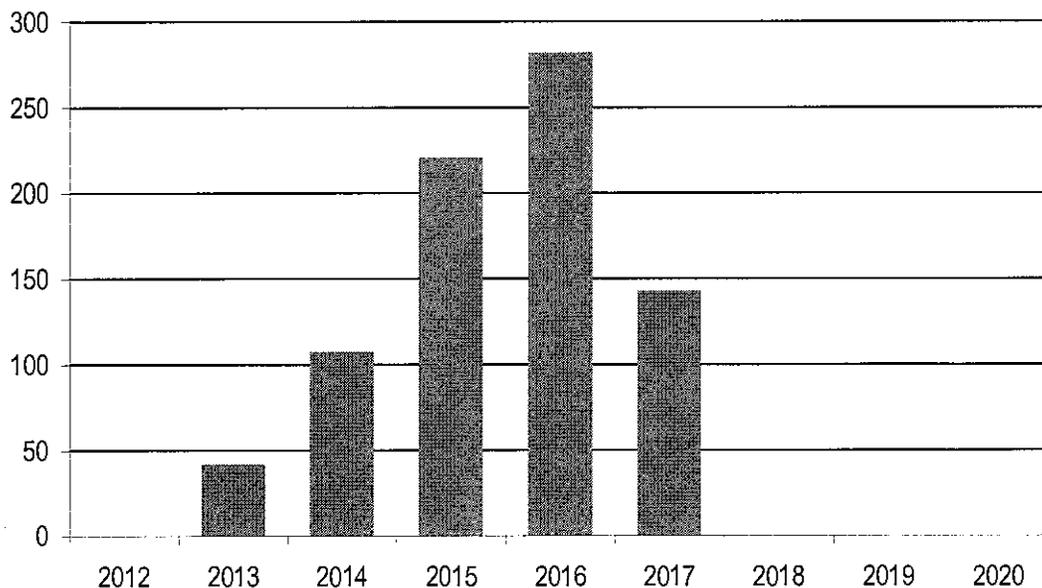
Case 1: Low Cost Scenario

The \$132 million in new residential and non-residential building investment over the 2012 to 2016 time period produces economic impacts on the County economy which can be quantified. They include:

- Wage and salary employment
- Self employed employment
- Population and net migration
- Total housing units
- Total building investment
- Income
- Total retail sales
- Total consumer spending
- Existing home sales

The total annual average employment impacts of grading and new construction are principally new construction jobs. In view of the level of planned residential investment that will be needed to construct the Camp 4 housing project, the following construction jobs per year will be needed:

Construction Employment Impacts



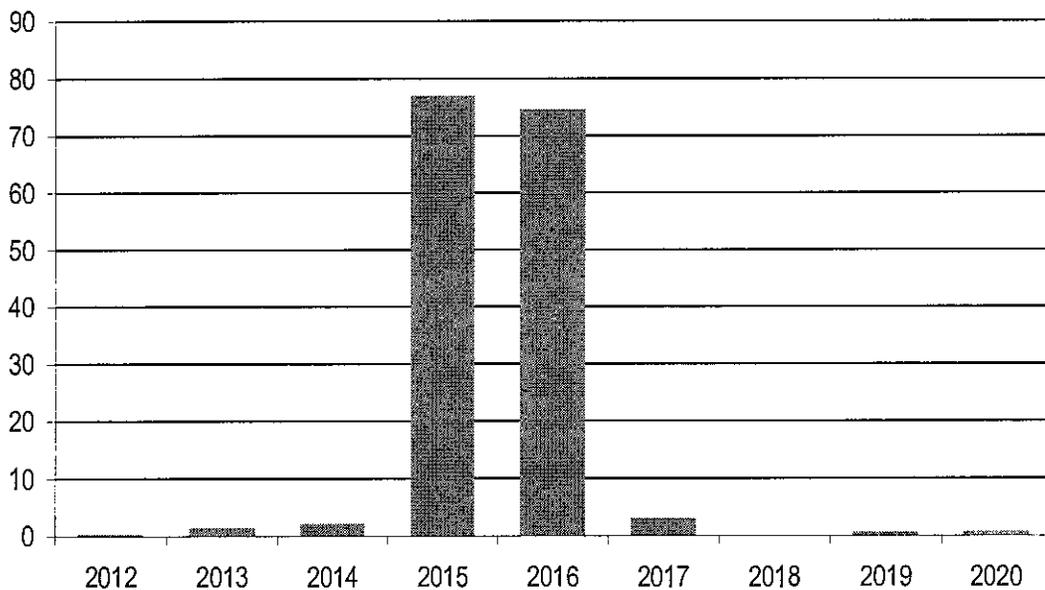
New construction jobs are created above and beyond what would normally be created in the 2013 to 2017 period due entirely to the Camp 4 housing project and the level of residential investment associated with the project.

The peak years of the project are 2015 and 2016 when all of the housing units are started, and the public administration building also breaks ground.

In view of the current economic climate, it would be difficult to overstate the importance of construction jobs. As a result of the housing bubble and subsequent bust, the construction industry has been devastated. Santa Barbara County lost over 3,000 construction jobs from 2006 to 2011, a decline of more than 30 percent. The Camp 4 project is expected to create several hundred new construction jobs, and in its peak year, will account for almost 10 percent of the jobs lost over the last few years.

The direct effects of the project on residential and non-residential structures—143 housing units and one principal administration building—produce indirect building effects of 6 additional single family homes and 10 multi-family home starts. The total construction impact of the project is 159 housing units.

New Residential Unit Impacts



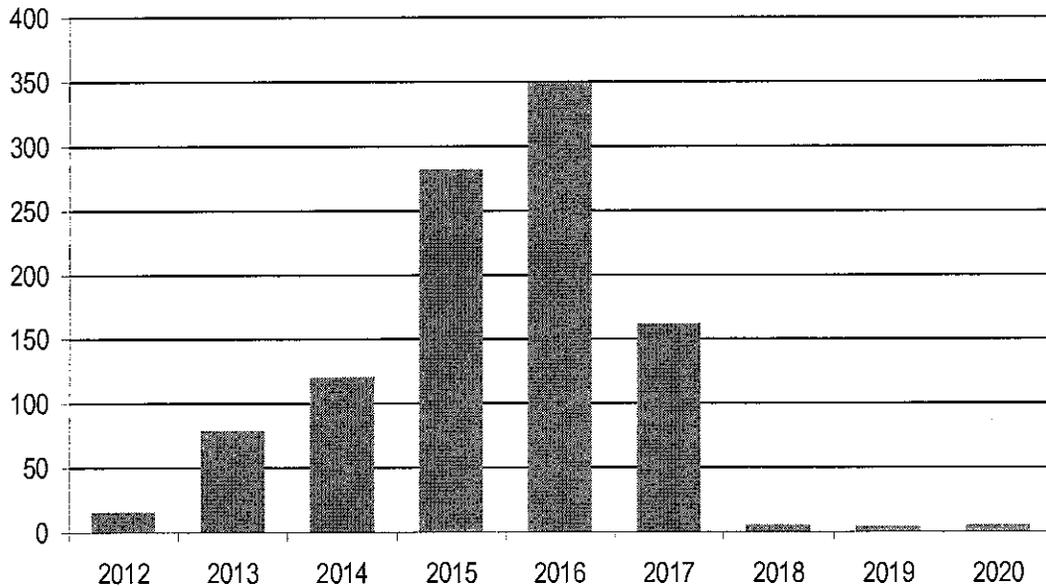
More than 250 construction jobs will be created in the peak year. The homes are completed in 2017 and no further construction worker project impacts are realized. However, the project will have an impact on employment across other industries through 2020.

Total annual average employment rises by a total impact of 348 workers in the peak year of the project, estimated to be 2016. Total job creation per year can be categorized as follows:

	Total Employment	Construction	Public Utilities	Retail	Professional Services	Leisure & Hospitality	Financial Activities	County Government
2012	15.0	0.1	0.0	0.0	0.5	0.9	0.2	13.7
2013	78.5	41.4	1.0	0.0	3.4	5.0	1.3	29.2
2014	119.8	106.9	1.9	0.0	5.1	4.4	1.5	4.3
2015	281.7	220.2	1.8	0.0	12.2	14.0	40.0	3.6
2016	348.3	281.7	3.3	10.8	12.1	5.6	40.1	3.6
2017	161.5	142.2	4.8	12.5	0.0	0.0	0.0	0.0
2018	5.0	0.0	4.2	0.6	0.0	0.0	0.0	0.1
2019	3.9	0.0	3.7	0.0	0.0	0.0	0.0	0.1
2020	4.3	0.0	3.2	0.0	0.0	0.0	0.7	0.3

Additional jobs in other sectors of the Santa Barbara County economy are created due to the indirect and induced effects of the project. The respending of income that occurs by firms providing goods and services to the Camp 4 housing project during the development and operations phase, and by new construction workers creates additional jobs in professional services, leisure, retail, and financial services. Much of the gain in financial services employment is directly related to the sale or rental of homes vacated by tribal members moving to Camp 4 housing.

Total Wage and Salary Employment Impacts



The consumer spending impacts occur principally in 2016 and 2017 when the homes are being completed and occupants must purchase furnishings, fixtures, and equipment for the homes. The total effects are presented here:

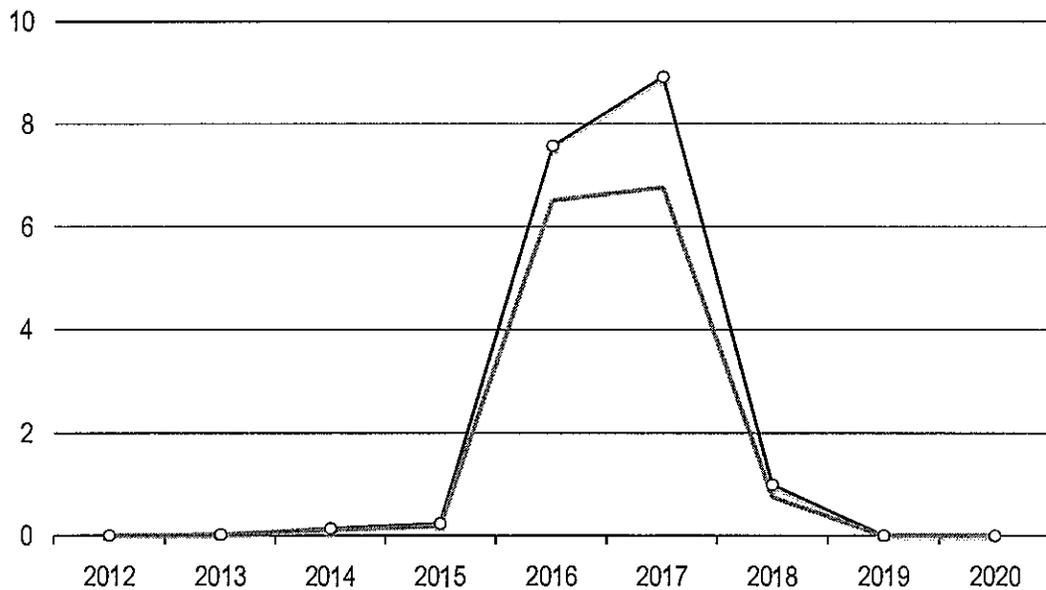
Consumer Spending Impacts

Retail Sales Total Sales

-- millions of dollars --

2012	\$0.00	\$0.00
2013	\$0.02	\$0.02
2014	\$0.12	\$0.14
2015	\$0.19	\$0.24
2016	\$6.51	\$7.58
2017	\$6.77	\$8.93
2018	\$0.75	\$0.99
2019	\$0.00	\$0.00
2020	\$0.00	\$0.00
Total	\$14.36	\$17.90

Consumer Spending Impacts

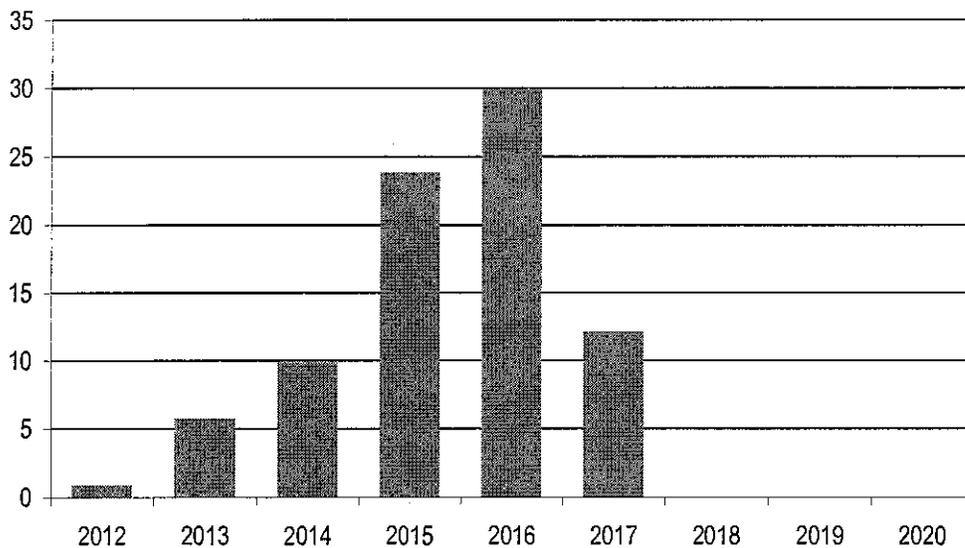


The project generates an estimated \$18 million in total sales in the county. The peak year is 2017 when the homes are completed. The sales impacts result in just under 13 jobs in the retail sector on an annual average basis.

There is also the generation of income due to the project. Income impacts are principally the additional wages and salaries paid to construction workers and other workers who become employed due to the indirect and induced effects of the project.

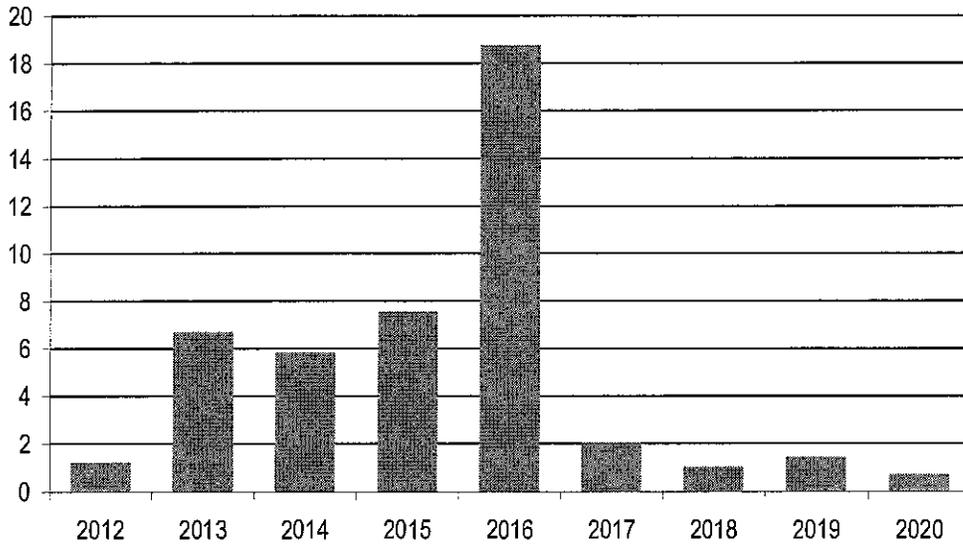
Total personal income (or income from all sources) rises by \$82.4 million from 2012 to 2020. The peak year is 2016 when nearly \$30 million is generated in the Santa Barbara County economy, much of it from new construction employment, retail expenditures, retail employment, and income generated by contractors that provide direct services to the project or whose income is the induced result of all other economic activity generated from the project.

Total Income Impacts



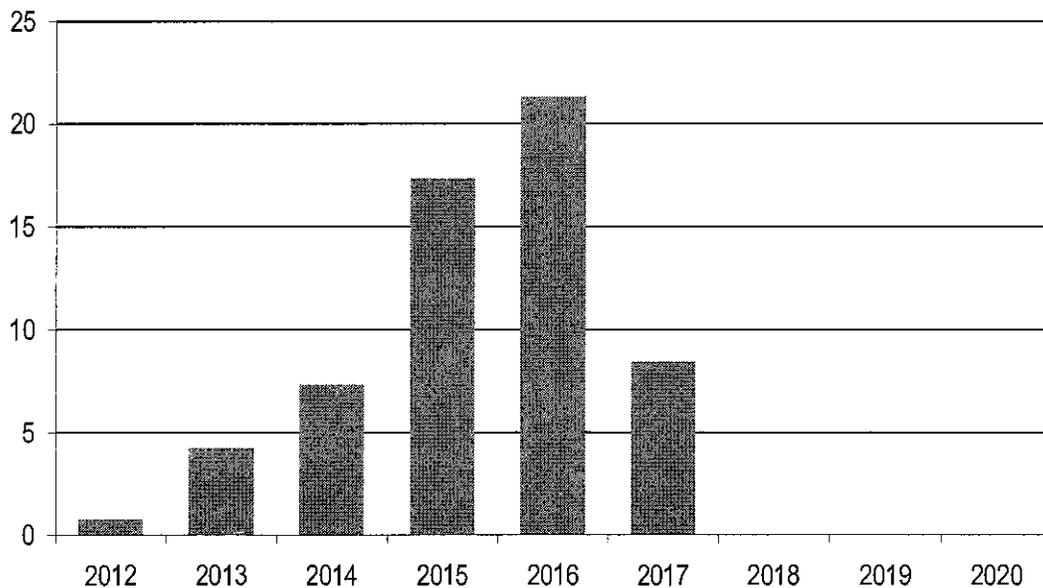
The project also produces impacts in the existing home market. The additional jobs and income created together with the additional housing for relocating tribal members results in additional purchases of homes in the county—a total of 45 over the 9 year period of analysis. Most of the existing homes purchased occur in 2016 when many of the new homes are built and are moved into.

Existing Home Sale Impacts



The estimated population impacts are minimal as a result of the project. Population is estimated to increase by 21 persons in the peak year of the project, either from relocating construction workers, other workers who were able to obtain employment as a result of the project, or from new migrants purchasing homes in the area vacated by relocating tribal members to Camp 4 housing.

Population Impacts



Case 2: High Cost Scenario

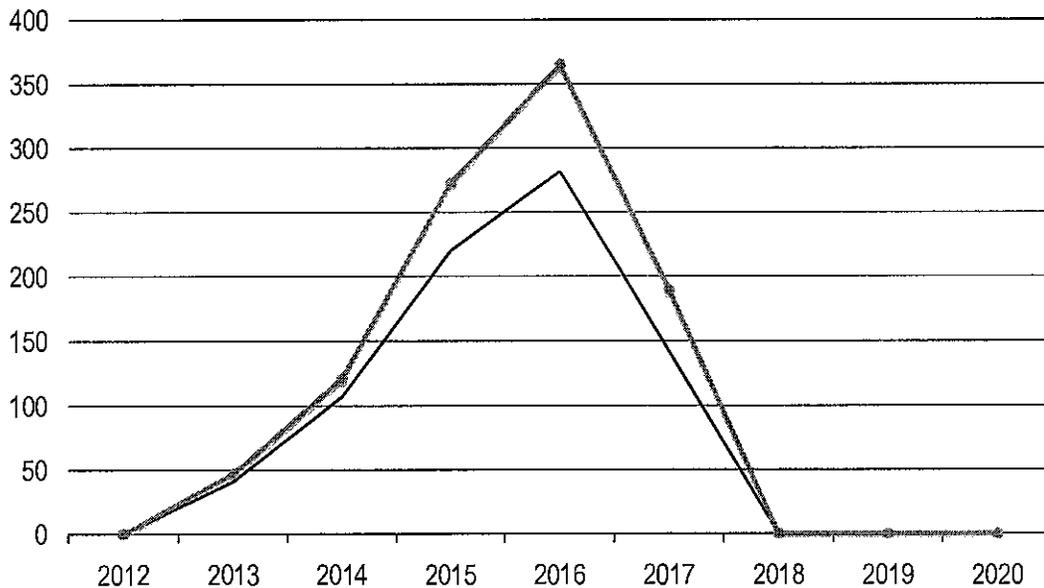
The \$179 million in new residential and non-residential building investment over the 2012 to 2016 time period produces greater economic impacts on the County economy which can also be quantified.

Under the high cost scenario, the impacts to the county are greater because the volume of project investment is higher.

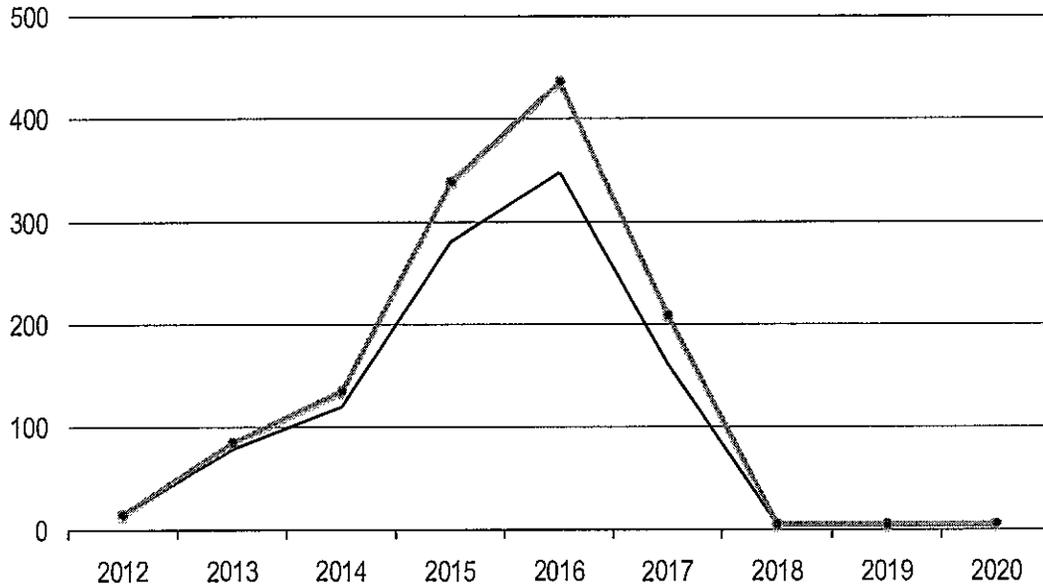
For the low cost scenario, the average gross project expenditure per home constructed was \$984,000. For the high cost scenario, the average cost rises to \$1.32 million per home.

Under the high cost scenario, more construction and total jobs are created. In the peak year, 365 construction jobs and 436 total jobs are created in the county. Under this scenario, the Camp 4 project will account for more than 10 percent of the construction jobs that have been lost since 2006.

Construction Employment Impacts



Total Wage & Salary Employment Impacts



The total annual average employment impacts under the High Cost scenario are shown in the table below. The impacts are similar to the low cost scenario presented earlier except that more jobs are created from a higher level of project expenditures.

	Total Employment	Construction	Public Utilities	Retail	Professional Services	Leisure & Hospitality	Financial Activities	County Government
2012	15.0	0.1	0.0	0.0	0.5	0.9	0.2	13.7
2013	84.9	47.0	1.0	0.0	3.8	5.5	1.4	29.2
2014	135.3	121.2	1.9	0.0	5.8	5.1	1.7	4.3
2015	339.4	272.9	1.8	0.0	14.9	17.6	40.9	3.6
2016	435.8	365.1	3.4	10.8	15.6	8.2	41.0	3.5
2017	209.8	189.7	4.8	13.0	0.0	0.0	0.0	0.0
2018	5.3	0.0	4.3	0.8	0.0	0.0	0.0	0.1
2019	5.7	0.0	3.7	0.0	0.0	1.8	0.0	0.2
2020	5.9	0.0	3.2	0.0	0.0	1.4	0.9	0.3

Consumer Spending Impacts

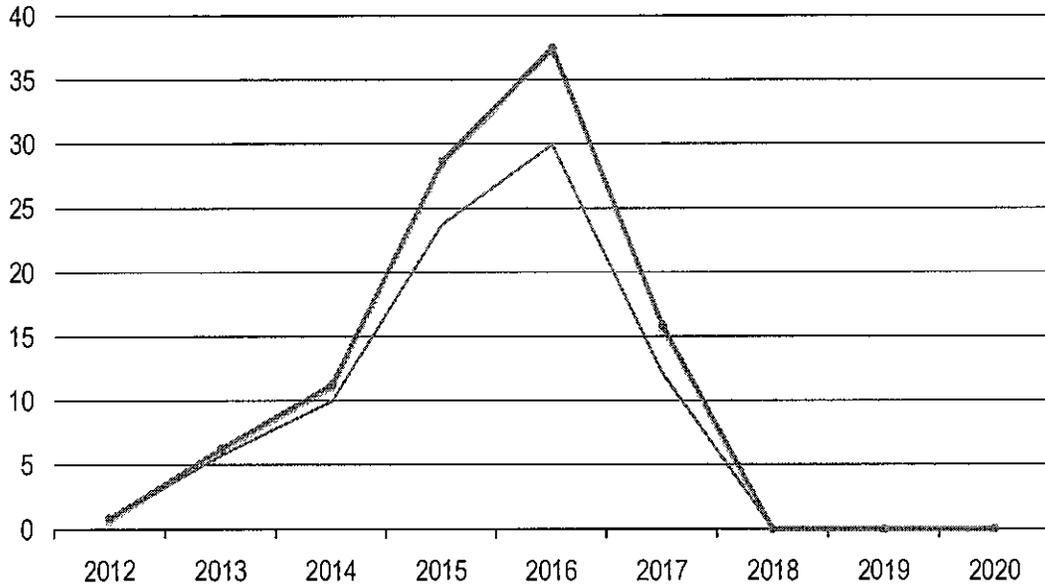
	Retail Sales	Total Sales
<i>-- millions of dollars --</i>		
2012	\$0.00	\$0.00
2013	\$0.02	\$0.02
2014	\$0.13	\$0.15
2015	\$0.22	\$0.27
2016	\$6.60	\$7.69
2017	\$6.90	\$9.09
2018	\$0.75	\$1.00
2019	\$0.00	\$0.00
2020	\$0.00	\$0.00
Total	\$14.62	\$18.22

The consumer spending impacts occur principally in 2016 and 2017 when the homes are being completed and occupants must purchase furnishings, fixtures, and equipment for the homes. Under the high cost scenario, expenditures are slightly higher in the County. During the peak year (2017), total sales under Scenario 2 are estimated at \$9.1 million.

The number of new retail jobs that are induced by the additional expenditures on retail goods in the peak year is 13, slightly higher than under the low cost scenario.

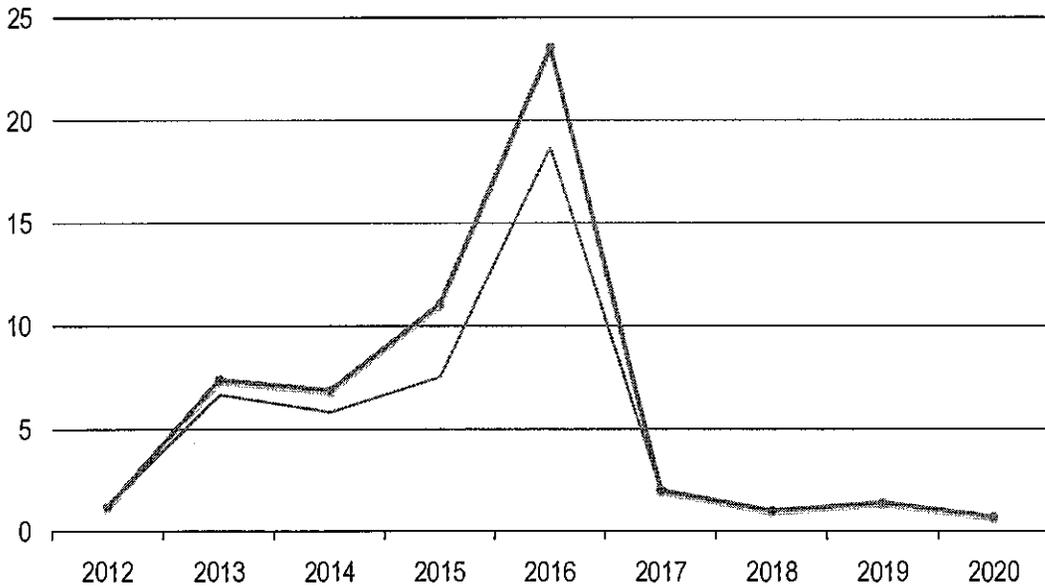
Additional income generated in the county economy is also higher under the high cost scenario. Total personal income (or income from all sources) rises by \$100.4 million from 2012 to 2020. The peak year is 2016 when over \$37 million is generated. The source of this income is from new construction employment, retail expenditures, retail employment, and income generated by contractors that provide direct services to the project or whose income is the indirect result of all other economic activity generated from the project.

Total Income Impacts

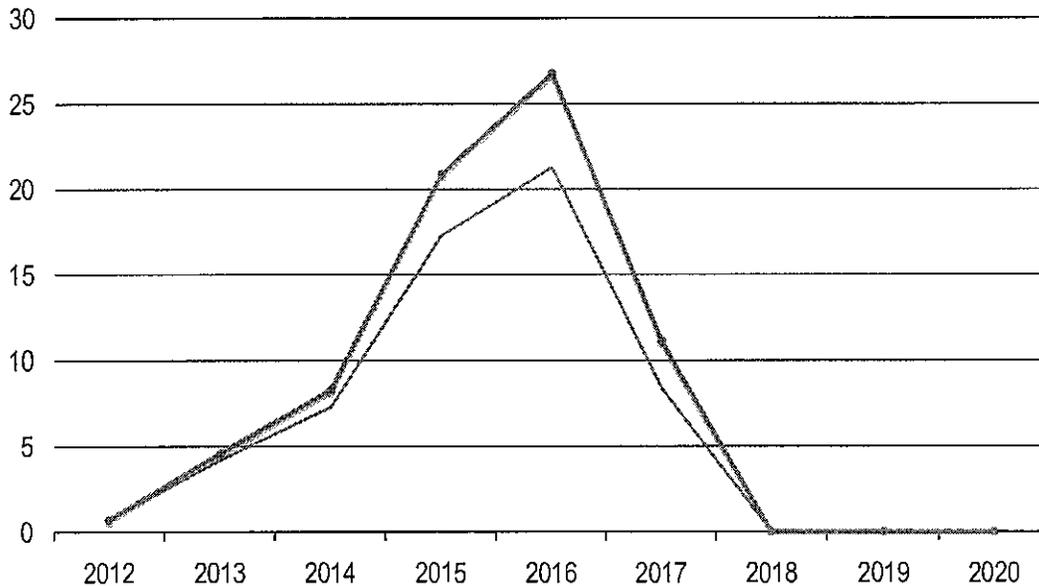


The 143 new housing units for relocating tribal members results in additional purchases of their existing homes in the county and some new sales from the creation of jobs—a total of 55 home sales over the 9 year period of analysis.

Existing Home Sales Impacts



Population Impacts



The estimated population impacts are minimal as a result of the project. Population is estimated to increase by 26 persons in the peak year of the project, either from relocating construction workers, other workers who were able to obtain employment as a result of the project, or from new migrants purchasing homes in the area vacated by relocating tribal members to Camp 4 housing.

Summary of Impacts

The project will create a significant employment impact to a Santa Barbara County construction industry that has downsized substantially in recent years. There will be spin off effects that produce more job opportunities in the retail, professional services, and financial activities sectors.

Between 100 and 360 construction jobs will be created per year during the peak years of the project inside the County. Between 350 and 425 total wage and salary jobs will be created during the peak years of the project.

Total income in the county rises by between \$80 and \$100 million during the project's life. Additional income in the county enables more expenditures on goods and services. Total retail sales rise by \$18 million, while the retail sector of the economy is estimated to receive approximately \$14 million in new sales. Some of these sales will produce taxable receipts which will go directly to the general fund of Santa Barbara County, or to the cities of Santa Barbara, Solvang, Buellton, Goleta, Lompoc, or Santa Maria.

Population impacts are negligible.

There are a few more home sales in the county as a result of the improvement in job creation and economic activity in general. There is more fee revenue received by Santa Barbara County as a result of the entitlement process. More fee revenue would enable the County to relieve debt or expand the workforce.

In general, while the project is relatively small in size, it will produce measurable impacts to the county's economy during the 2013 to 2016 period. This analysis assumes there is no delay in the entitlement process and that ground breaking begins later this year and continues through 2014 or 2015.

Appendix

Model Inputs

For this particular project, CEF was able to determine that Santa Barbara residents would be employed in virtually all of the construction jobs created or supported. Some of the construction firms, however, would be located in other regions. This means that while the labor income generated by the project would stay local, much of the business profit would not. This situation is common in Santa Barbara County, and as a result, the econometric model was able to measure the impacts accordingly. Because of this, CEF input the entire construction budget into the model, dividing it between the Residential Building Construction and Nonresidential Building Construction industries (detail on the funds excluded from the analysis can be found in the body of the report).

In addition to construction costs, the project plan also allocates a certain amount of funding to architecture, engineering, design, and management services. However, the Chumash tribe has indicated that these services will be provided by firms outside of Santa Barbara County, and that these firms generally employ workers who live outside of the county. As a result, this portion of the budget will not generate economic activity in Santa Barbara, and as a result, CEF did not include it in the analysis.

The Camp 4 project plan also allocates funds for permit, mitigation, and utility fees. The vast majority of these fees will go to public organizations, but some will go to private firms. Based on information from the Chumash tribe, CEF allocated \$250,000 of these funds to the utilities industry, exempted \$185,000 that are expected to go to organizations outside of the region, and allocated the rest to local government agencies in Santa Barbara County.

The final model input was the number of housing units that the Camp 4 project will generate. The construction of new residential units increases the supply of housing, and allows the population to grow. A larger population generally increases the size of the economy, contributing to the total impacts that are generated.

Given the budget categories, CEF was required to allocate the funds to the categories of its econometric model. The following table provides a crosswalk between the categories of the Chumash budget and the categories of the CEF model:

Crosswalk for Camp 4 Project Funds	
Chumash Budget Category	CEF Model Category
Residential Construction	Land and Site Improvements
	Construction of Homes

Nonresidential Construction	Construction of Administrative Building
Utilities	Entitlement Fees (portion of)
State/Local Government	Entitlement Fees (portion of) Mitigation Fees

These allocations (discussed in the body of the report) were converted into the following model inputs:

Model Inputs Low-Cost Scenario					
Industry (Thousands of Dollars)					Building Category
Year	Residential Building Construction	Nonresidential Building Construction	Utilities	Local Government	Residential Housing Units
2012				2,202	
2013	12,955		125	4,695	
2014	25,910		125	708	
2015	39,325	1,000		625	72
2016	39,325	4,000		625	71

Model Inputs High-Cost Scenario					
Industry (Thousands of Dollars)					Building Category
Year	Residential Building Construction	Nonresidential Building Construction	Utilities	Local Government	Residential Housing Units
2,012				2,202	
2,013	14,780		125	4,695	
2,014	29,560		125	708	
2,015	58,988	1,500		625	72
2,016	58,988	6,000		625	71

The Econometric Model: A Brief Description

A regional econometric model is a set of behavioural equations, as well as institutional and definitional relationships representing the main behaviours of regional economic agents (that is, consumers, firms, and governments) and the operations of an economy. The equations, or behavioural relations, can be empirically validated to capture the structure of a macroeconomy, and can then be used to simulate the effects of policy changes or changes to the economic environment.

Econometric models are interdependent sets of equations. Each equation determines the numerical value of one of the region's economic indicators. The right-hand side of the equation may include exogenous variables such as the national wage rate, job creation for the state of California, and birth and death rates within the region. The right hand side may also include other endogenous variables (i.e, variables that are determined within the model).

Econometric models attempt to measure economic linkages that exist within the region and between the region and the outside world. These links are estimated by econometric methods and represented as equations for the purpose of predictions

Econometric models are mostly used for forecasting economic activity. However, they can also be used to estimate the effect of changes in the local economy, brought about by a change in policies or a change to the economic environment, such as a new development project or a military base closure.

The Santa Barbara County econometric model is comprised of 6 blocks of equations: 47 stochastic behavioral relationships and 17 accounting identities. The model is characterized by simultaneous interaction and determination of local employment, income, population, wages, and housing demand.

The stochastic equations are estimated as regression equations and the entire system is solved using the Gauss-Seidel algorithm.

The model is a "satellite model," requiring forecasts of various California and U.S. economic variables which are treated as exogenous to the local county areas. These forecasts of the California and U.S. economies are obtained from the UCLA Anderson Forecast, updated 4 times a year.

The county-level model is moderately detailed. The 64 equation system is estimated using updated information at least twice a year. All of the stochastic equations are evaluated each time new data is introduced into the models or re-specification of the model is undertaken.

Outputs

The initial economic and demographic indicators that are forecast for the county are shown in Table 1. Forecast values are prepared over a 10 year period beginning with the year in which actual data are not yet available.

Base forecasts of the Santa Barbara County economy are assembled for semi-annual reports, in the Winter and the early Autumn.

Table 1

The principal economic indicators initially forecasted by the Santa Barbara County econometric model

- Non-farm employment by principal two digit NAICS sector
- Farm employment
- Total wage and salary employment
- Personal Income
- Per capita personal income
- Number of housing units permitted
- Taxable retail store sales
- Population
- Number of households
- Number of vehicle registrations
- Existing Home Sales
- Median Housing Values