

ECONOMIC & PLANNING SYSTEMS

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## FINAL REPORT

# ECONOMIC ANALYSIS OF THE CACHE CREEK OFF-CHANNEL MINING PLAN: AGGREGATE MINING AND AGRICULTURAL INDUSTRY COMPARISON

Prepared for:

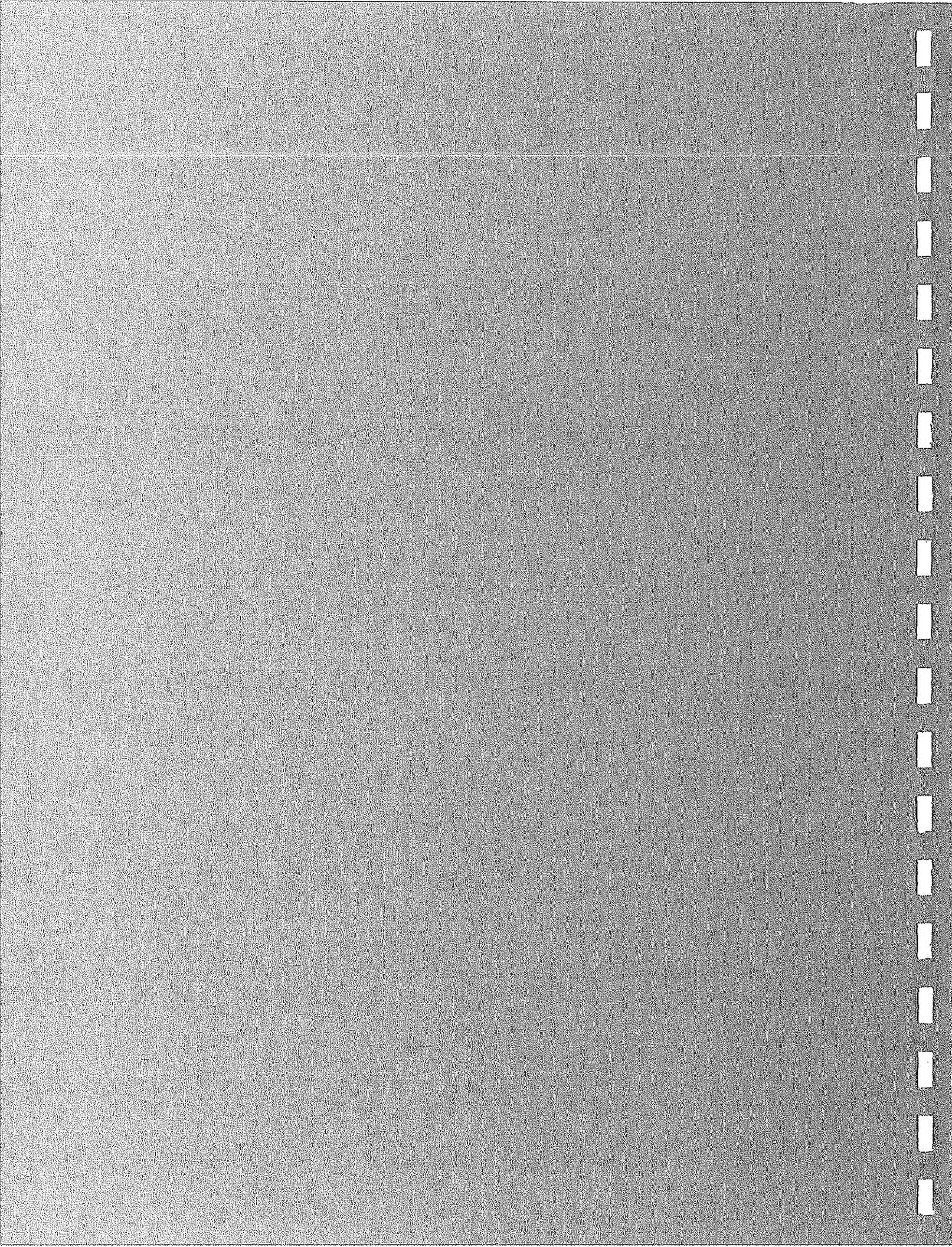
Yolo County Community Development Agency

Prepared by:

Economic & Planning Systems, Inc.

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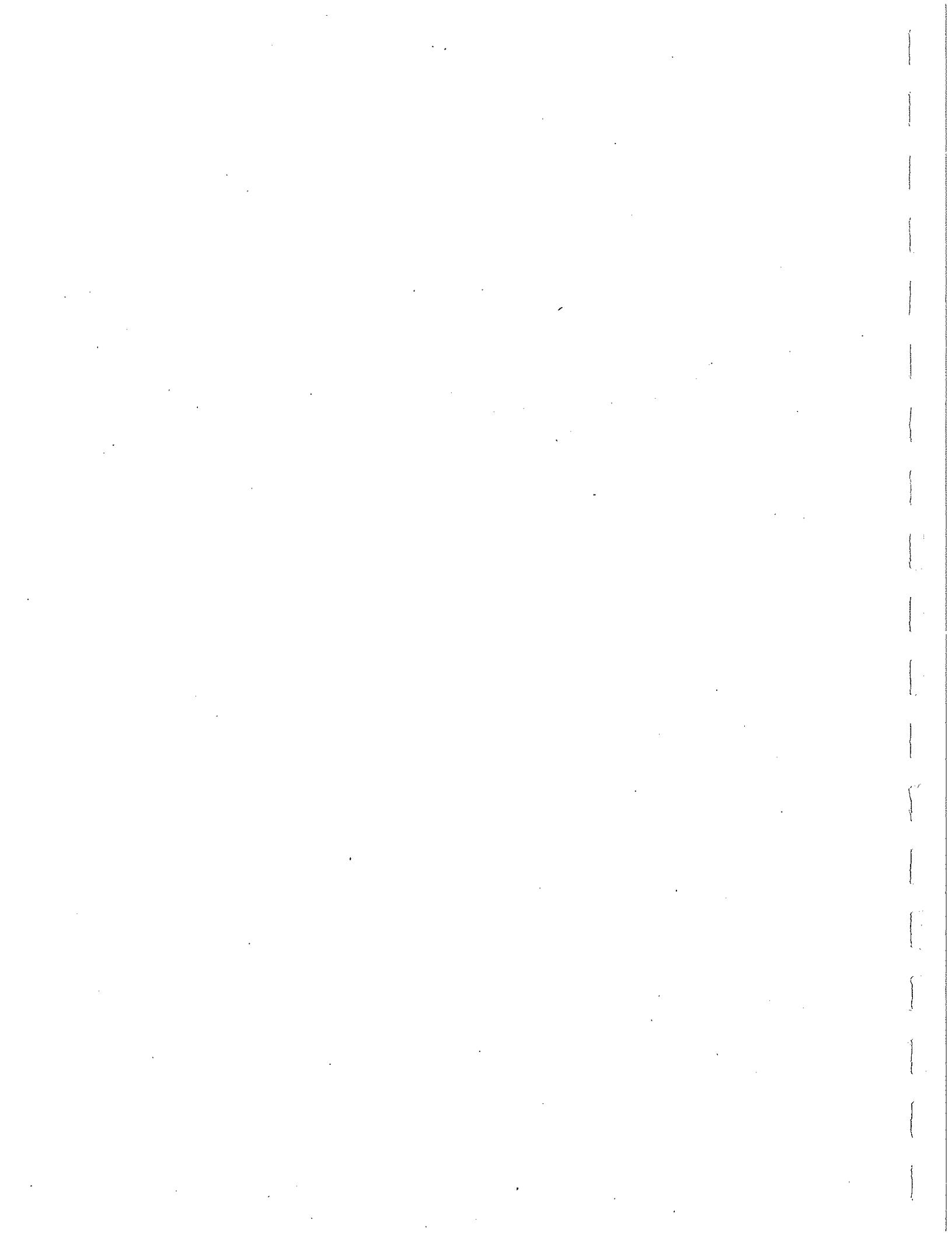
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## I. INTRODUCTION

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Yolo County is presently considering a proposal to expand aggregate mining operations along Cache Creek to include "off channel" or "terrace" locations. This expansion is described in the Off-Channel Mining Plan (OCMP) being prepared and evaluated by Yolo County. Aggregate resources from "in-channel" locations have largely been depleted or may threaten the integrity of the Creek. The "off-channel" mining will permit the industry to continue in Yolo County within the area designated by the State Division of Mines and Geology as a "Mineral Resources Zone" (MRZ).

Because much of the area designated Mineral Resources Zone also contains viable farmland and ongoing farming operations, Economic & Planning Systems (EPS) has prepared an economic analysis that explores key economic issues regarding mining, especially in comparison to the ongoing agricultural operations. These issues include: 1) the relative economic value (direct sales and indirect "multiplier" effects) of mining versus continued agriculture; 2) the effects of mining upon surrounding property values; and 3) contributions from these industries to the County's tax base. The economic analysis will provide information that will inform decision-makers as they confront the various discretionary approvals being sought by the industry.

This analysis is predicated on a body of work that includes all information generated to date, including EPS' Economic Analysis of the Gravel Mining Industry completed in 1994, as well as data and reports generated by YCAPA, the Yolo County Farm Bureau, and other sources. This report represents the culmination of a three-part analytic process that included:

- 1) **General analytical framework and assumptions.** Major assumptions, analytical frameworks, and general methodologies were communicated to major stakeholders, including representatives of the gravel and agriculture industries in Yolo County. Comments have been compiled and are summarized in this report.
- 2) **Identification of specific assumptions.** Once the general framework and direction of the analysis were discussed, EPS constructed appropriate models and conducted research to develop detailed assumptions. These assumptions were presented in a second technical memorandum, issued for further review and comment from stakeholders. In cases where consensus has not been reached, disagreements have been documented and final assumptions have been justified in this report.
- 3) **Economic analysis and report presentation.** Based on the analytical framework and detailed assumptions derived through the initial steps identified above, this report identifies relative economic characteristics of each industry and major differences in respective employment, payroll, and total value-added contributions to the local economy.

## SUMMARY OF CONCLUSIONS

- 1) **The aggregate industry generates a substantial economic infusion into Yolo County.** This infusion (whether from the 100-acre or project-wide scenario) is several orders of magnitude larger than that provided by agricultural activities on the same land.
- 2) **The strong agricultural sector in Yolo County will not be significantly affected by the OCMP.** Although agriculture is a much larger industry and is more important to the County in terms of total economic activity, gravel mining described in the OCMP would disturb less than five percent of farmland in the OCMP area and less than 0.3 percent of the farmland in the County.
- 3) **There is no evidence that the presence of mining activity has any substantial affect on residential property values in and around the OCMP area, and likely increases the value of agricultural properties with potential aggregate reserves.** Moreover, there is no economic evidence to suggest that other agricultural properties (without reserves) are affected by the presence of mining activity.
- 4) **Mining contributes more tax revenues to Yolo County than does agriculture, on a per-acre basis.** The aggregate industry contributes both property and sales tax to the County's General Fund, while agriculture, as a food commodity, does not generate sales tax.

## ORGANIZATION OF REPORT

Following this initial chapter, Chapter II presents the detailed assumptions used to arrive at the report's conclusions. Chapter III provides a more detailed discussion of the study's results for each of three major components of the analysis.

## **II. GENERAL FRAMEWORK & METHODOLOGY**

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This analysis compares the economic characteristics of gravel mining and agriculture, in order to provide information to the County for purposes of policy making in the Off-Channel Mining Plan (OCMP) Area. To analyze comparative returns, both a 100-acre "case study" and a project-wide (OCMP area) analysis are conducted. Important technical distinctions between these two methodologies are described below:

- **100-acre analysis.** The 100-acre analysis is very straight forward, in that a 100-acre parcel is evaluated in terms of: 1) returns from agriculture; and 2) a linear progression of mining, reclamation, and agriculture on reclaimed lands. For purposes of simplification, there is no overlap between the mining, reclamation, and subsequent agricultural use of land in the mining scenario.
- **Project-wide analysis.** The project-wide analysis is parallel to the 100-acre analysis, but is more complex due to the model's simulation of the actual sequence of activities associated with the OCMP. As with the 100-acre analysis, the agricultural scenario is comprised of basic agricultural production on lands within the OCMP. However, the mining scenario assumes pre-mining agriculture, mining, reclamation, and subsequent agricultural production on reclaimed lands. All of these activities may be occurring simultaneously at any given point of time within the project area.

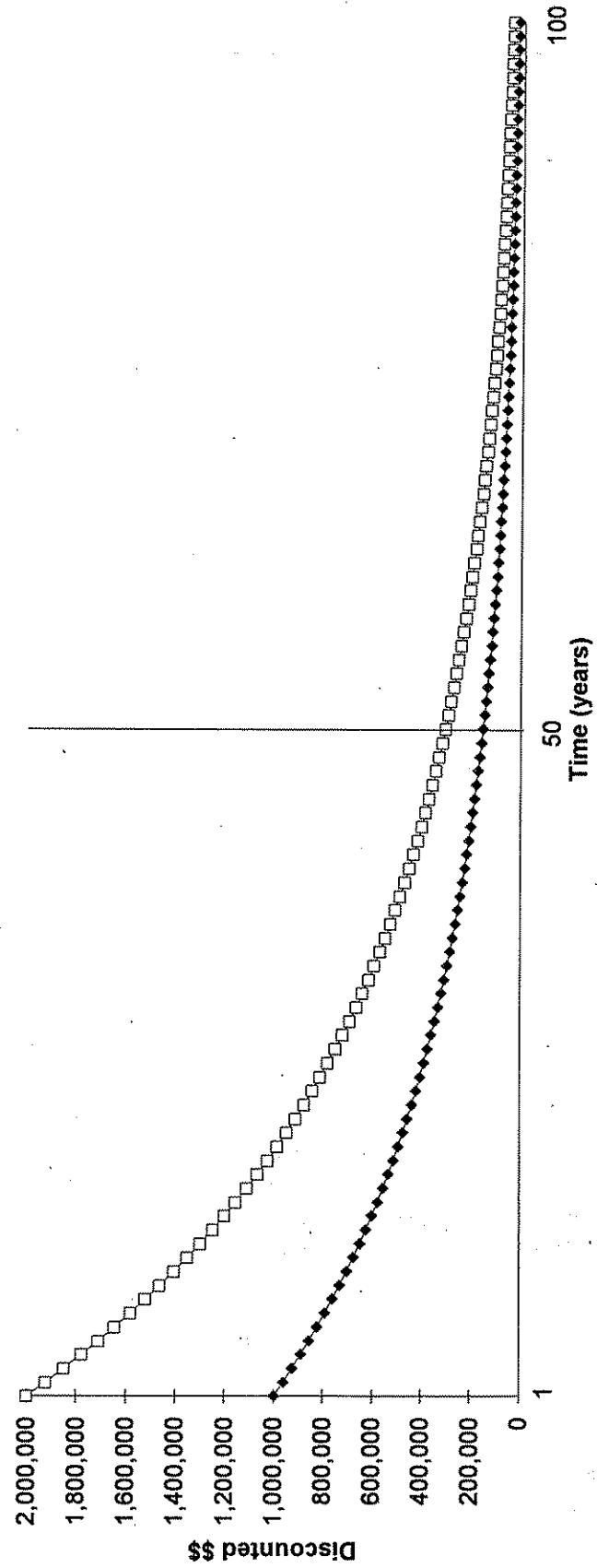
The length of time for all aspects of the study is 50 years. Several stakeholders expressed an interest in evaluating a longer period (i.e., 300 years). We have concluded that such longer study periods are not useful. Two factors support this conclusion:

- **Discount rate.** As shown by Figure 1, discounted revenue streams extending beyond this period of time will yield little additional information regarding the difference between agricultural and mining scenarios. A discount rate of 4.0 percent will be applied to convert nominal revenue streams to current dollar terms.
- **Uncertainty.** There are many factors that could influence the economic returns from either gravel mining or agriculture. Major changes affecting the supply and demand of commodities, such as technological advances, are possible but not predictable in the long-term future. As such, any attempt to predict economic returns over a period exceeding 50 years would be misleading.

### **GRAVEL MINING ASSUMPTIONS**

The most recent published YCAPA industry data has been used to identify direct gravel mining employment characteristics including employment, annual industry payroll, and sales assumptions. These data have been supplemented by subsequent interviews of gravel industry representatives.

**Figure 1**  
**Effect of Discounting**  
**Revenue over Time by 4.0 Percent Annually**



## GENERAL CHARACTERISTICS

- **Reserves per acre.** It is assumed that there is an average of 128,000 tons of PCC-grade aggregate per acre extracted from the off-channel mining area. This assumption, which assumes a 60-foot deep pit and about 10 feet of overburden, has been discussed with Yolo County and represents an industry average for off-channel mining applications.
- **Price per ton.** An average price of \$5.76 per ton is assumed. This assumption is based on the production and sale of PCC-grade aggregate, based on the previous EPS Economic Analysis in 1994 and a subsequent review of market conditions.
- **Net operating income.** Aggregate industry operating data is consistent with the *Economic Analysis of the Cache Creek Gravel Mining Program* prepared by EPS. For example, net operating income is assumed to be approximately 20 to 25 percent of gross revenues, before deductions for taxes and amortized capital depreciation.
- **Sales volume.** It is assumed that the percentage of mined tonnage sold as aggregate is 88 percent, consistent with the OCMP and current industry trends.
- **Average salary.** The average salary in aggregate mining industry is \$57,500 per year, based on a review of industry data and interviews of industry representatives.
- **Reclaimed land productivity.** There is no assumed difference in the productivity of reclaimed agricultural land, as compared to other agricultural land, as measured by crop yield and/or value.
- **Local Market Capture -- Sales Tax.** The sales tax rate in Yolo County, including the local public safety fund, is 1.475 percent. It is assumed that the producers in the OCMP Area will post approximately 50 percent of their sales within the County, primarily at local asphalt and ready-mix batch plants. Therefore, sales tax is calculated using a factor of 0.74 percent. It should be noted that this is a conservative estimate of Yolo County market capture. Certain procedures may exceed this assumed capture rate.
- **County property tax.** The County's share of property tax revenues in the OCMP's tax rate areas averages approximately 12.8 percent of the 1.0 percent property tax rate. This is based on a statistical review of County Assessor data by tax rate area.

## 100-ACRE ANALYSIS

- **Project Description.** Based on input from Yolo County, the 100-acre analysis has been designed to provide a simplified comparison of the agriculture and aggregate mining industries. Unlike the project-wide analysis, this scenario is "linear", in that it has three discreet stages that do not overlap:
  1. **Years 1 - 10: Mining Activity.** It is assumed that the land is used for extraction of aggregate at a rate of 1.0 million tons per year.

- 2. **Years 11 - 30: Reclamation.** Starting in Year 11, the tax basis for the property is changed due to its change in use. Use of reclaimed lands are consistent in use with the OCMP, including 48 percent reclamation of land back to agricultural uses.
- 3. **Years 30+: Agriculture, habitat, and recreation.** The reclaimed agricultural land is assumed to be farmed as described below, in a three-year tomato rotation. Other land uses have not been evaluated.
- **Aggregate employment.** Direct aggregate extraction employment is assumed to be consistent with the current ratio of industry employees and extraction volume, which is approximately 80,500 annual tons of aggregate per full-time position. This translates to approximately 12 employees for the 100-acre scenario, which assumes extraction of 1.0 million tons of aggregate per year.
- **Subsequent reclamation and agricultural employment.** Estimates for the reclamation and agricultural phases have been developed by EPS based on interviews of industry representatives. It is assumed that reclamation activities on a 100-acre site would require full-time employment for four persons, while agriculture would require 0.5 full time employees. It should be noted that in the case of agriculture, this is higher than the average employment level assumed in the project-wide scenario (one FTE per 260 acres), as a loss of efficiency would occur to the relatively small area assumed in this hypothetical example. A more detailed discussion of employment assumptions is provided in the following section.

## PROJECT-AREA ANALYSIS

- **Project description.** Gravel will be mined using two project alternatives: 1) a rate of 6.2 million tons per year, as assumed by the OCMP DEIR (2,422 total acres mined); and 2) the 20-year historical County average of 2.6 million tons per year (1,016 acres mined). Unlike the "100-acre" analysis described above, the project-area analysis assumes a dynamic cycle of uses resulting in pre-mining agriculture, aggregate mining, subsequent reclamation, and eventual reuse of land for agriculture. At any given point in time over the 50-year period (after the initial start-up period), land in the project area will accommodate all four uses.
- **Reclamation rate.** Reclamation is assumed to recover 48 percent of all mined land as agricultural land. It is assumed that there is no difference in the economic viability of "typical" agricultural land and reclaimed land. It is assumed that lands are returned to agricultural use within three years of completion of mining activity.
- **Mining Use Values.** For purposes of calculating property taxes, the provisions of the Williamson Act apply to agricultural land that is converted to mining uses. As a result, property taxes are based on the capitalized value of permitted tonnage held in reserve.

Reclamation values are assumed to be equivalent to agricultural use values, per standard assessment practices in Yolo County. Agricultural use values are discussed below.

## AGRICULTURAL ASSUMPTIONS

Unless otherwise noted, all assumptions listed below apply to both the 100-acre scenario and the project-wide scenario.

- **Agricultural crop rotation.** The economic analysis assumes a three-year tomato rotation. This rotation will consist of tomatoes, followed by a two-year period of wheat production. It is assumed that agricultural land under production is subject to the provisions of the Williamson Act.
- **Land values.** The *Yolo County Habitat Management Program*, published by EPS in 1994, indicates that the upper end of the price range for Yolo County agricultural land is \$3,500 per acre. Based on a subsequent analysis of the Cache Creek area, which contains very few orchards and suffers from numerous pockets of boron (resulting in inconsistent productivity), the average land value is estimated to be \$2,500 per acre. This estimate is based on a review of recent mining and agricultural land transactions in Yolo County, obtained through DataQuick Information Services and local broker interviews. It is also consistent with the calculated use value of tomato and wheat crops in the project area.
- **Tomato yield.** The average yield among tomato crops in Yolo County is assumed to be 33.7 tons per acre, with a gross value of \$53 per ton (\$1,780/ac), based on the Yolo County Crop Report and Sagara Farms.
- **Wheat yield.** The average yield among wheat crops is assumed to be 2.9 tons per acre, with a gross value of \$180 per ton (\$517/ac), based on the Yolo County Crop Report and Sagara Farms.
- **Agricultural employment generation.** Tomato employment is estimated to be 28.6 laborers per 1,000 acres (two-month peak harvest), and 5.4 laborers per 1,000 acres in the Spring associated with planting, thinning and weeding (two months), per the California Employment Development Department (EDD). This labor is in addition to general management, overhead, and administrative employment estimated to be two to three full-time equivalents per 1,000 acres. The general baseline of two full-time employees per 1,000 acres is assumed for wheat production. In order to apply these assumptions to the analysis it was necessary to adjust for seasonal employment and the weighted average between tomato and wheat production employment levels and corresponding payroll. These adjustments yield a total employment assumption of one FTE per 260 acres, and an average payroll assumption of \$142 per acre.<sup>1</sup>

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<sup>1</sup> For tomato labor, assumes two months at 28.6 FTE per 1,000 acres and two months at 5.4 FTE per 1,000 acres. Year-round baseline employment for tomatoes is assumed to be three full time

- **Tomato labor costs.** Labor costs to produce processing tomatoes are estimated to be \$142/acre, based on information provided by the UC Agricultural Extension.
- **Wheat labor costs.** Labor costs to produce wheat under dryland/conventional tillage are estimated to be \$14/acre. On an hourly basis, the average labor rate for producing wheat is estimated to be \$8.71/hour. These data have been provided by the UC Agricultural Extension.
- **Use value.** For purposes of estimating property taxes under the Williamson Act, the use value of the land is estimated assuming net operating income of 15 percent for tomatoes and 30 percent for wheat crops, based on discussions with the Yolo County Assessor's Office, the UC Agricultural Extension, and a review of industry publications. The net operating income is capitalized at 7.0 percent to estimate the annual use value per acre for these lands, which is \$3,800/acre for tomatoes and \$2,200/acre for wheat. Because wheat will be farmed for two out of every three years on any given parcel in the project area, the weighted average use value is \$2,600 per acre.
- **Sales tax assumptions.** Agriculture is a food commodity that is exempt from sales taxes in California. As a result, the analysis assumes no sales tax accruing to the County from sales of wheat or tomatoes.

## **RESPONSE TO STAKEHOLDER INPUT**

EPS received input from Anthony Russo of YCAPA, Ian Eckholm, Lois Linford, and Charlie Rominger. EPS has given all comments careful consideration. Where appropriate, comments have been incorporated into the analysis. Adopted assumptions influenced by stakeholder input include:

1. **Crop Rotation.** Incorporation of a tomato/wheat three-year rotation crop cycle.
2. **Adoption of multiple project descriptions:** 1) the DEIR's 6.2 million tons per year, and 2) the historical average of 2.6 million tons per year.

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employees per 1,000 acres. The year-round employment baseline represents total employment assumption for wheat production. For payroll assumptions, it is assumed that the weighted average between tomato and wheat payroll is \$56.67/acre. This computed by a weighted average taking into consideration tomato labor payroll at \$142/acre for 33.3 percent of agricultural land and wheat labor payroll of \$14/acre for 66.6 percent of agricultural land. In addition, it was assumed that two (for wheat production) or three (in the case of tomatoes) employees are needed to conduct administrative, maintenance, and other routine year-round activities. As a result of these calculations, the average gross salary (including indirect compensation and benefits) per FTE for agriculture in the project area is estimated to be \$36,800 per year.

3. **County tax contribution methodology.** Concern was raised during the comment period regarding the use of discounted cash flows while analyzing County tax receipts. It should be noted that the tax revenue model (found in Appendix A) is expressed in constant 1996 dollar terms, and tax revenues accruing to the County are not discounted.

Several responses from stakeholders were not adopted for various reasons, as described below:

1. **Analytic Framework.** Several stakeholders have expressed interest in evaluating shallow pit mining versus deep pit mining, rather than deep pit mining versus agriculture. While this is not the focus of this study, Appendix A provides a detailed account of assumptions and their specific applications, which facilitates independent analysis by interested stakeholders regarding alternative project descriptions.
2. **Long-term costs and benefits of the gravel pit "lakes", habitat area, and open space.** These areas, resulting from former mining sites that cannot be reclaimed as agricultural land, have intrinsic costs and benefits. These items are important policy issues. However, due to the complexities of evaluating these land uses, the economic analysis makes no attempt to quantify them, and therefore does not assign economic value to them.
3. **The discount rate,** assumed to be 4.0 percent, is used to discount future cash flows to account for future investment risk. Comments have been made that this rate is either too high or too low. While there are many potential arguments regarding the appropriate discount rate, EPS has retained a 4.0 percent discount rate, as this is an appropriate rate for analyzing natural resource production.

### III. ECONOMIC ANALYSIS

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The economic analysis is divided into three sections: 1) economic impact analysis; 2) property value analysis; and 3) local tax contribution analysis. Each is described within this chapter. For all three analyses at the project level, a comparison is drawn between economic returns from mining and economic returns from agricultural production.

#### A. ECONOMIC IMPACT ANALYSIS

The economic impact analysis measures direct and indirect economic effects of gravel mining (with subsequent reclamation of land back to agriculture) and agricultural production in a three-year tomato rotation. Three measures are analyzed:

- 1) **Employment.** Number of full-time equivalent jobs (FTE's) created by mining or agricultural activity.
- 2) **Personal Income.** Includes direct and indirect employee compensation.
- 3) **Value Added.** Includes employee compensation, proprietary income, other property income, and indirect business taxes.

The multipliers used in this analysis have been generated by Micro IMPLAN, an input-output modeling program based on economic data from the U.S. Bureau of Economic Analysis (BEA). The multipliers are applied to the estimated direct effects to calculate direct, indirect, and induced economic activity (i.e., all successive rounds of economic activity within a region contributing to the direct unit under production). In this analysis, the economic region under analysis is Yolo County.

#### METHODOLOGY

Direct economic effects are the jobs, payroll, and sales created through the sale of aggregate or agricultural goods. Indirect economic effects result when business revenue and employee income are spent and circulated in the local economy in the form of sales, which generates further employment, income, and sales through successive rounds of spending.

The economic impact analysis evaluates the total volume of economic activity leading up to the sale of the product under consideration (e.g., gravel or tomatoes). As such, the study evaluates "backward linkages" such as seed, fertilizer, heavy machinery, business services, and other sectors contributing to the production of a commodity.

Of course, both industries under consideration have important forward linkages. In the case of tomatoes, for example, an example of a forward linkage is employment at tomato processing plants, such as American Home Foods in Vacaville. In the case of gravel mining,

direct forward linkages include the production of asphalt and ready mix at nearby batch plants. Both industries result in truck driving activity. Forward linkages have not been formally estimated as a part of the quantitative analysis.

## RESULTS

Aggregate mining is a resource-intensive activity that yields significantly more economic output than farming. The following tables summarize the magnitude of each industry's economic output in terms of employment, personal income, and value added. More detailed calculations, assumptions, and economic results are found in Appendix A.

- **Employment.** Table 1 presents employment for the project-wide scenario in the last year of the study period. Employment is most accurately measured using the project-area scenario (as opposed to the 100-acre scenario), as a 100 acre area is not large enough to support significant agricultural employment. As shown, direct and indirect agricultural employment ranges from seven to 17 full-time employees under the low and high extraction scenarios respectively (including seasonal workers). This is 52 to 125 fewer employees than would result from aggregate extraction, under the low and high extraction scenarios, respectively.

It should be noted that both industries have substantial "forward linkages" to truck driving and processing functions. In terms of processing, the aggregate industry is more directly tied to the next stage in the value-added process, which is the manufacture of ready-mix and asphalt. The agricultural industry is also closely tied to processing industries, but regional tomato processing facilities (for example) do not rely directly on OCMP area resources to the degree that the aggregate industry does.

- **Personal Income.** As shown by Table 2, under the 100-acre analysis, the agricultural industry would generate a total of \$2.4 million (net present value) over the next 50 years, as opposed to \$13.9 million from the aggregate industry, contributing to a difference of \$11.5 million. This difference ranges from \$62 million to \$150 million at the project-area scenario for the low and high extraction alternatives, respectively. Of particular note, the agricultural industry has a very high multiplier for personal income, suggesting that a large proportion of labor originates from within Yolo County.
- **Value Added.** Table 3 presents the total value added as a result of the production of agricultural goods and aggregate, respectively. This comparison demonstrates the high resource value of aggregate over the short term, as opposed to the moderate resource value of agriculture over a longer term. In economic analysis, near-term cash flow is more certain than long-term cash flow. The net present value of aggregate exceeds that of agriculture by \$57.5 million in the 100-acre scenario, and by over \$357 million under the project-area scenario. Even without discounting, the margin of mining economic productivity over that of agriculture would be sizable.

**Table 1**  
**Employment Impacts (End of Period)**  
**Cache Creek Economic Analysis**

Item	Project-Wide Scenario		
	Direct	Indirect	Total
<b>MINING SCENARIO</b>			
<u>Low Extraction Rate (2.6 mtpy)</u>			
Mining	32	18	49
Reclamation	5	2	7
Agriculture	2	1	3
Total	39	21	60
<u>High Extraction Rate (6.2 mtpy)</u>			
Mining	76	42	118
Reclamation	12	5	17
Agriculture	4	4	8
Total	92	50	142
<b>AGRICULTURAL SCENARIO</b>			
Agriculture -- Low Extraction	4	3	7
Agriculture -- High Extraction	9	8	17
Difference -- low extraction	35	18	52
Difference -- high extraction	83	43	125

Source: California Employment Development Dept. (EDD); Yolo County Farm Bureau; UC Cooperative Extension; YCAPA; MIG; Economic & Planning Systems

**Table 2**  
**Personal Income Impacts**  
**Cache Creek Economic Analysis**  
(1996\$ discounted by 4.0 percent annually)

Item	100-acre Scenario			Project-Wide Scenario		
	Direct	Indirect	Total	Direct	Indirect	Total
<b>MINING SCENARIO</b>						
Low Extraction Rate	\$8,137,217	\$5,757,456	\$13,894,673	\$47,044,929	\$34,495,658	\$81,540,587
High Extraction Rate	--	--	--	\$112,184,061	\$82,258,878	\$194,442,939
<b>AGRICULTURAL SCENARIO</b>						
Low Extraction Rate	\$395,640	\$2,004,725	\$2,400,364	\$3,214,571	\$15,538,273	\$18,752,844
High Extraction Rate	--	--	--	\$7,665,516	\$37,052,805	\$44,718,321
Difference -- low extraction	\$7,741,577	\$3,752,732	\$11,494,309	\$43,830,358	\$18,957,385	\$62,787,743
Difference -- high extraction	--	--	--	\$104,518,545	\$45,206,073	\$149,724,618

Source: California Employment Development Dept. (EDD); Yolo County Farm Bureau; UC Cooperative Extension; YCAPA; MIG; Economic & Planning Systems

**Table 3**  
**Value Added Impacts**  
**Cache Creek Economic Analysis**  
*(1996\$\$ discounted by 4.0 percent annually)*

Item	100-acre Scenario			Project-Wide Scenario		
	Direct	Indirect	Total	Direct	Indirect	Total
<b>MINING SCENARIO</b>						
Low Extraction Rate	\$41,973,699	\$20,069,933	\$62,043,632	\$299,221,804	\$153,654,170	\$452,875,974
High Extraction Rate	--	--	--	\$713,528,918	\$366,406,097	\$1,079,935,015
<b>AGRICULTURAL SCENARIO</b>						
Low Extraction Rate	\$2,385,239	\$2,175,185	\$4,560,423	\$52,120,211	\$43,697,585	\$95,817,795
High Extraction Rate	--	--	--	\$124,286,656	\$104,201,932	\$228,488,588
Difference – low extraction	\$39,588,461	\$17,894,748	\$57,483,209	\$247,101,594	\$109,956,585	\$357,058,179
Difference – high extraction	--	--	--	\$589,242,262	\$262,204,164	\$851,446,426

Source: California Employment Development Dept. (EDD); Yolo County Farm Bureau; UC Cooperative Extension; YCAPA; MIG; Economic & Planning Systems

## B. PROPERTY VALUE ANALYSIS

The purpose of this analysis is to identify any effects aggregate mining has on the value of adjoining residential and agricultural properties.

### METHODOLOGY

Two general methodologies are applied within this component of the study: 1) a statistical review of land sales involving agricultural and residential land; and 2) case studies of key developments in mining areas.

- 1) **Statistical Review.** EPS reviewed major agricultural and rural residential land sales occurring along the I-505 and I-5 corridors over the past ten years. Sales transactions have been tracked via DataQuick Information Services. This land transaction analysis controls for quality of agricultural land.
- 2) **Case studies of key residential project areas associated with gravel mining.** Several cases of mining in close proximity to residential uses have occurred in the greater Bay Area and Sacramento regions. Case studies of effects on residential value in aggregate production zones in these regions have been used to provide additional data for this evaluation.

### RESULTS

#### **Impacts on Local Property Values: Project Area**

EPS conducted an extensive review of agricultural and residential sales transactions in and around the proposed OCMP area. Although mining has historically been confined to the Cache Creek channel, sales transactions have been organized by location under the assumption that properties located within the OCMP area have a greater likelihood of having close proximity to a gravel mining operation. If gravel mining operations have a significant impact on property values, then sales transactions (analyzed on a per acre basis) should reflect this loss in value.

#### Agricultural Land Sales

Theoretically, it is possible that truck traffic and dust could have some affect on the value of adjoining agricultural parcels. However, farming activities also tend to generate truck traffic, dust, and use herbicides and fertilizers.

Based on a statistical analysis of sales transactions, it appears that agricultural properties within the OCMP have higher values than similar properties elsewhere in the County. This appears to be associated with the possibility of underlying aggregate resources, which tends to drive land values up irrespective of agricultural value. This is reflected by Table 4. For

**Table 4**  
**Analysis of Land Value Impacts**  
**Cache Creek Economic Analysis**  
(1996 \$\$)

Item	Price Per Acre		
	Inside OCMP Area	Outside OCMP Area	Difference
<b>Class III &amp; IV</b>			
Row Crop Value (1)	\$4,065	\$3,000	\$1,065
Rural Residential Value (2)	\$28,565	\$26,740	\$1,825

(1) Agricultural sales outside project area are County-wide average.

Applicable sales from Table B-1 are shown below:

Sale #	Sale Price/Acre
2	\$2,261
3	\$7,383
8	\$6,500
11	\$609
16	\$3,571

(2) See Table B-2 for detailed transactions listing.

Source: DataQuick Information Systems; Economic & Planning Systems

properties within the OCMP, the average price per acre of Class III and IV row crop land was \$4,000, as compared to the regional average of \$3,000 per acre. This represents an increase of approximately \$1,000 per acre -- about 33 percent.

It should be noted that because sales transactions involving comparable agricultural land are limited in this area, this apparent trend is not statistically significant. To bolster the statistical analysis, interviews of regional land brokers were conducted. Based on these interviews, agricultural lands with mining potential tend to sell within the \$4,500 to \$12,000 per acre range. Based on available sales and anecdotal evidence, it appears that any mining-related effects on agricultural land values are positive.

#### Residential Land Sales

EPS analyzed approximately 40 sales transactions involving rural residential homesteads in the project area. Based on this statistical review, there is virtually no difference in the sales price per acre among homesteads located near historical gravel mining areas versus households in other similar areas in the County. Based on available data, there is no evidence supporting a correlation between rural residential home values and proximity to gravel mining.

#### **Impacts on Residential Property Values: Greater Bay Area**

To further analyze potential effects on residential values, EPS visited and collected sales transaction data for residential neighborhoods near other quarry sites throughout the Bay Area. In several communities, including Pleasanton, Livermore, and Roseville, active mining operations coexist with upscale housing developments. Furthermore, nearby aggregate mining does not appear to have impeded the planning of major new upscale developments in the region. Five examples representing key findings are summarized below:

- *South Livermore.* Directly north of RMC Lonestar's operation, one of Livermore's upscale subdivisions has developed over the past three years. The average sales price in this area, bounded by Concannon Road to the north and Holmes Street to the east, is \$343,000. In addition, Standard Pacific is developing a new housing tract directly adjacent to the RMC Lonestar gravel mining operation at Isabel Avenue. According to local real estate analysts, this development includes approximately 150 homes, with houses estimated to be priced in the low- to mid-\$300,000s.
- *Mohr Avenue Area (Pleasanton).* This high-end neighborhood is located directly west of Kaiser's operation on the east side of the City of Pleasanton. Of the five residences in this neighborhood that have sold in 1994, the average sales price was \$657,000. One feature that appears to be protecting property values is a landscaped buffer that separates the neighborhood from the gravel pits to the east.
- *Ruby Hills (Pleasanton).* Ruby Hills is an upscale development that is planned around a championship golf course. The development overlooks RMC Lonestar's active mining operation (as well as Futures Lake "A" and "B"), and includes 200 proposed homes at an average price of \$500,000; 650 custom lots; and 32 twenty-acre vineyard parcels.

According to Signature's project manager for this development, the quarry site below is a part of the overall visual landscape. In the future this area will be converted to permanent open space, including a linear park with jogging trails.<sup>2</sup>

- *Stanford Ranch (Roseville).* According to representatives of Stanford Ranch, a large mixed-use development adjacent to a defunct gravel mine (operations ceased in 1994), the gravel mine has no detectable impact on home prices. The closest residential subdivision at this point is three miles from the mine. Although there were substantial concerns regarding the gravel mine in 1989 when residential development was initiated, neither the mining activities nor the negative publicity generated by concerned citizens had any apparent effect on home sales. The homes are visually buffered from the gravel mine, although there have been some complaints that the buffers are not well landscaped. The mine is planned for reclamation and subsequent development.

This case study, and EPS' general experience in analyzing the economic impacts of siting large-scale facilities in the Bay Area, suggest that certain measures, including mitigation of noise, dust, and visual impacts, can be utilized to minimize property value impacts. The available data (see Table B-3 in Appendix B) suggest that high value residential developments often coexist with gravel mining operations.

## C. LOCAL TAX CONTRIBUTION ANALYSIS

### METHODOLOGY

This component of the economic analysis compares property and sales tax revenues accruing to Yolo County from mining and farming, respectively. Sales taxes accruing to Yolo County stem from transactions recorded within Yolo County. In the case of gravel mining, sales to contractors are posted at both plant sites and construction sites, depending on whether material is being sold as base rock or as a component of cement or asphalt production.

It is assumed that property is purchased at the outset of the analysis for its full market value under both scenarios. Moreover, it is assumed that for both mining and agricultural land, there is no difference in real appreciation of land or the turnover rate of property.

### RESULTS

Table 5 presents respective tax contributions from agricultural and mining activity. These revenues are expressed in constant 1996 dollars, and are not discounted. Aggregate mining is projected to contribute \$8.7 to \$20.8 million more than agriculture under the project-wide scenario. This analysis does not include fees paid to the County directly by the YCAPA for

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<sup>2</sup> RMC Lonestar has an agreement with the County whereby the company must reclaim land as its proceeds with mining. Planting at the eastern extent of this operation has reportedly already begun.

purposes of environmental documentation, monitoring, and other County services. These have traditionally ranged between \$120,000 and \$150,000 annually. The higher contribution from aggregate is higher than agriculture for two reasons:

- 1) **Property taxes are higher.** Both aggregate mining and agriculture pay taxes based on their respective use values. Because the capitalized use value of aggregate far exceeds that of agriculture, property taxes are much higher.
- 2) **The aggregate industry pays sales taxes.** Unlike agriculture, which is a food commodity and therefore exempt from sales taxes in California, the aggregate industry pays sales taxes on all transactions posting in Yolo County. Based on industry research and interviews, it is estimated that about 50 to 60 percent of YCAPA's aggregate sales are posted in Yolo County -- primarily at nearby industry asphalt and ready mix batch plants. This analysis conservatively uses a 50 percent capture rate.

**Table 5**  
**County Tax Contribution Analysis**  
**Cache Creek Economic Analysis**  
(constant 1996\$\$)

Item	100-acre Scenario	Project-Wide Scenario
<b>MINING SCENARIO (1)</b>		
Low Extraction Rate	\$512,306	\$8,916,090
High Extraction Rate	--	\$21,261,446
<b>AGRICULTURAL SCENARIO (2)</b>		
Low Extraction Rate	\$10,262	\$177,261
High Extraction Rate	--	\$422,700
Difference -- low extraction	\$502,044	\$8,738,829
Difference -- high extraction	--	\$20,838,746

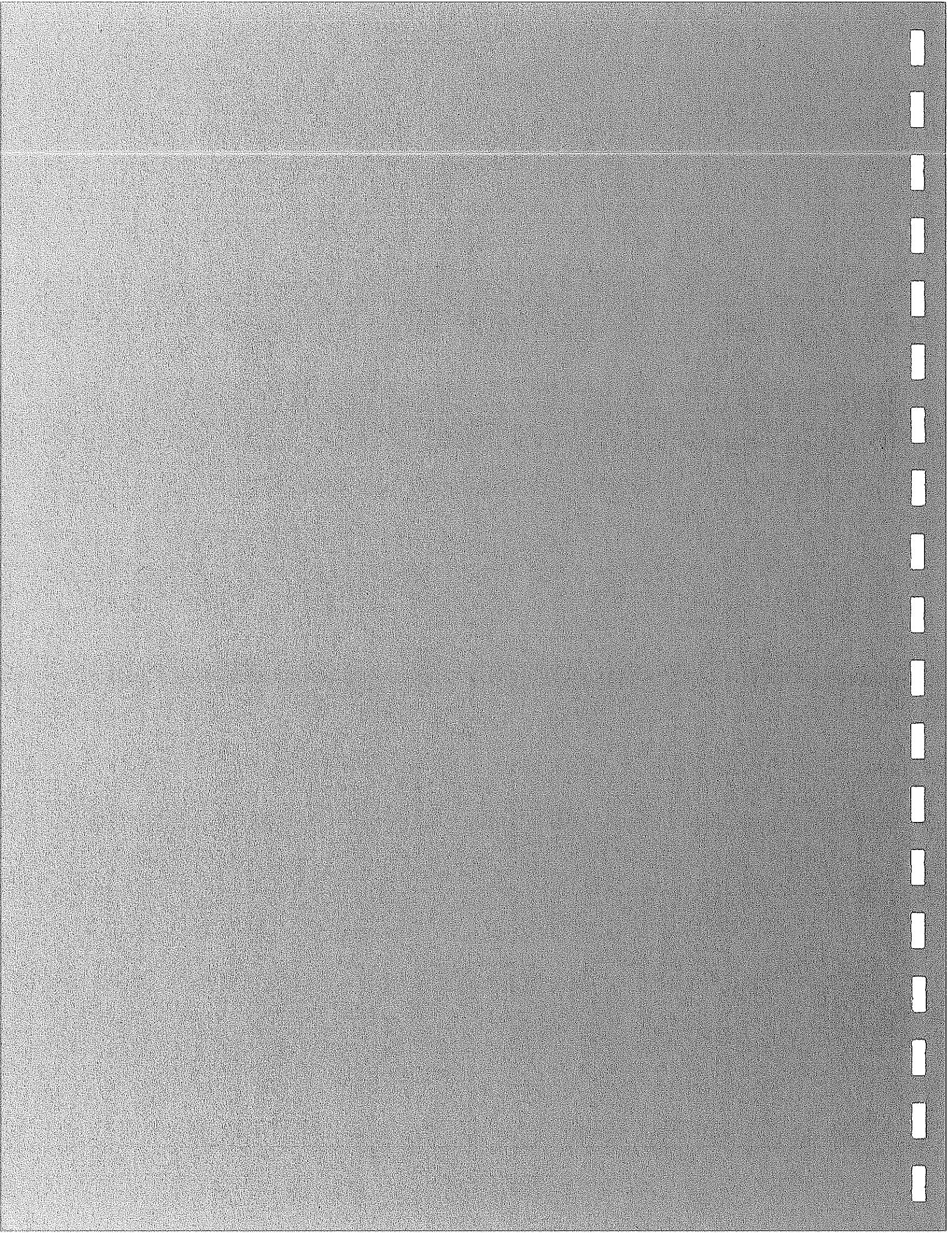
(1) Includes property and sales taxes.

(2) Includes property taxes, as food sales are not taxable in California.

Source: California Employment Development Dept. (EDD); Yolo County

Farm Bureau; UC Cooperative Extension; YCAPA; MIG; Economic & Planning Systems

APPENDIX A:  
ECONOMIC IMPACT MODELS



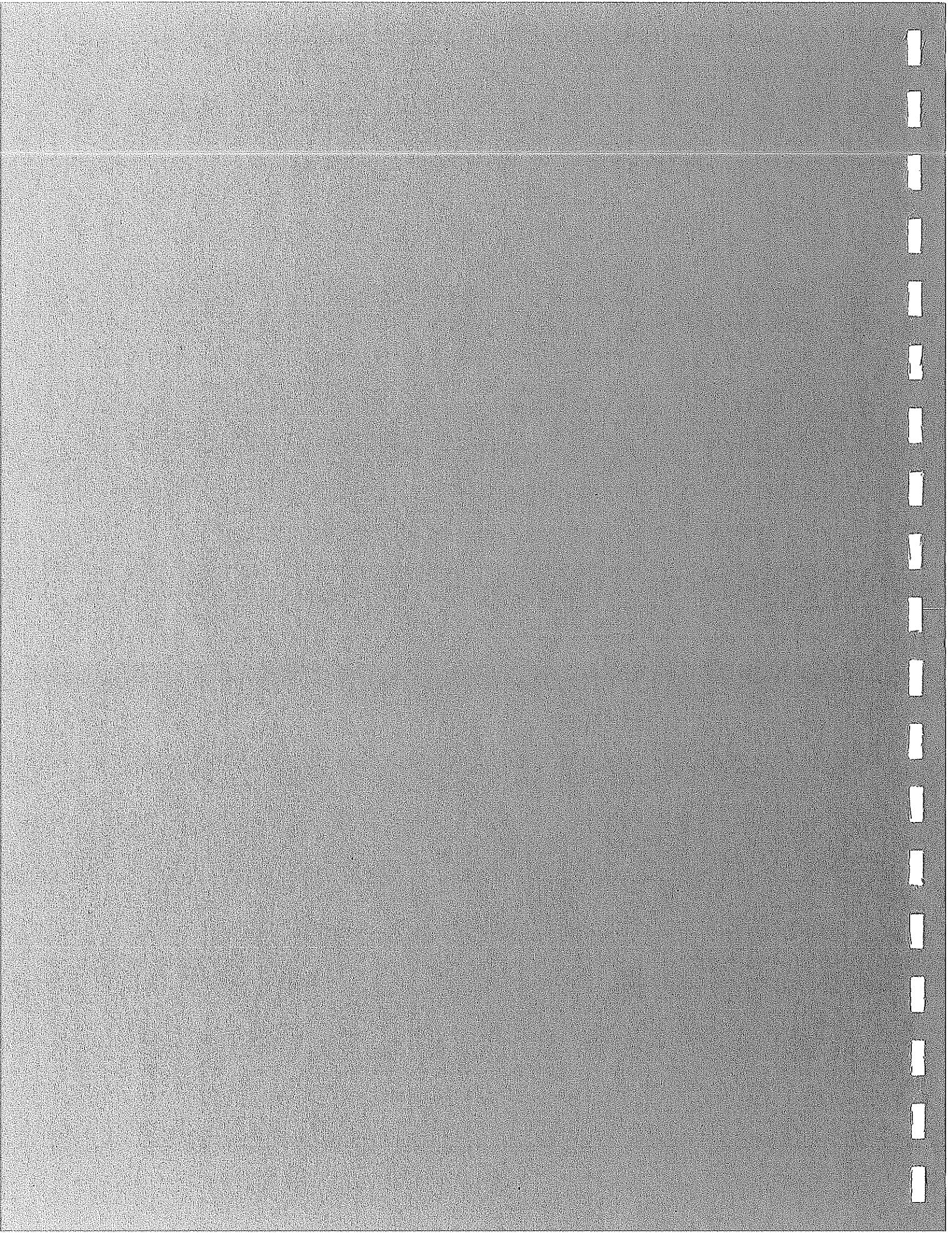
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- Appendix A-3: Model 2 - Economic Impact: Project-Wide Scenario
- Appendix A-4: Model 2A - County Tax Revenue Analysis: Project-Wide Scenario
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Low Extraction Rate
- Appendix A-6: Model 2C - County Tax Revenue Analysis:  
Project-Wide Scenario Low Extraction Rate



APPENDIX A-1:  
ECONOMIC IMPACTS:  
100-ACRE SCENARIO



## **Model 1 Economic Impacts: 100-ac Scenario Yolo Gravel Economic Analysis**

**Model 1**  
**Economic Impacts: 100-ac Scenario**  
**Yolo Gravel Economic Analysis**

Item		1	5	10	15	20	25	30	35
<b>Direct &amp; Indirect Pers. Income</b>									
Mining	Multiplier	994,175	994,175	994,175	994,175	994,175	994,175	994,175	994,175
Reclamation		0	0	0	0	0	0	0	0
Ag		0	0	0	0	0	0	0	0
Total		994,175	994,175	994,175	994,175	994,175	994,175	994,175	994,175
NPV @	4%	\$13,894,673							
<b>Direct &amp; Indirect Value Added</b>									
Mining	Multiplier	7,266,125	7,266,125	7,266,125	7,266,125	7,266,125	7,266,125	7,266,125	7,266,125
Reclamation		0	0	0	0	0	0	0	0
Ag		0	0	0	0	0	0	0	0
Total		7,266,125	7,266,125	7,266,125	7,266,125	7,266,125	7,266,125	7,266,125	7,266,125
NPV @	4%	\$62,043,632							

**Model 1**  
**Economic Impacts: 100-ac Scen:**  
**Yolo Gravel Economic Analysis**

Item	40	45	50
<b>I. MINING SCENARIO</b>			
Activity	Agriculture	Agriculture	Agriculture
Direct Employment (FTE's)			
Mining	2	2	2
Reclamation	2	2	2
Ag	2	2	2
<b>Subtotal</b>			
Average Income per FTE			
Mining			
Reclamation			
Ag			
<b>Total Direct Personal Income</b>	36,834	36,834	36,834
Mining	0	0	0
Reclamation	0	0	0
Ag	73,668	73,668	73,668
<b>Subtotal</b>	73,668	73,668	73,668
NPV @			
<b>Gravel Production, Sales, and Net Profit</b>			
<b>I. Gravel Mining Phase</b>			
Annual Tons Mined	0	0	0
Annual Tons Sold	0	0	0
Price per ton	\$5.76	\$5.76	\$5.76
Value	0	0	0
<b>II. Agricultural Production Phase</b>			
Total Acreage	100	100	100
Acreage in Wheat	67	67	67
Acreage in Tomatoes	33	33	33
Total Value			
Wheat Value per Acre	34,467	34,467	34,467
Tomato Value/Acre	59,333	59,333	59,333
Total Value	93,800	93,800	93,800
<b>Direct Value Added (mining,rec.,ag)</b>			
<b>Total Value</b>	93,800	93,800	93,800
<b>Direct &amp; Indirect Employment</b>			
Mining	0	0	0
Reclamation	0	0	0
Ag	4	4	4

**Model 1**
**Economic Impacts: 100-ac Scen:  
Yolo Gravel Economic Analysis**

Item	40	45	45	50
<b>Direct &amp; Indirect Pers. Income</b>				
Mining	0	0	0	0
Reclamation	0	0	0	0
Ag	429,759	429,759	429,759	429,759
Total	429,759	429,759	429,759	429,759
NPV @				
<b>Direct &amp; Indirect Value Added</b>				
Mining	0	0	0	0
Reclamation	0	0	0	0
Ag	172,442	172,442	172,442	172,442
Total	172,442	172,442	172,442	172,442
NPV @				

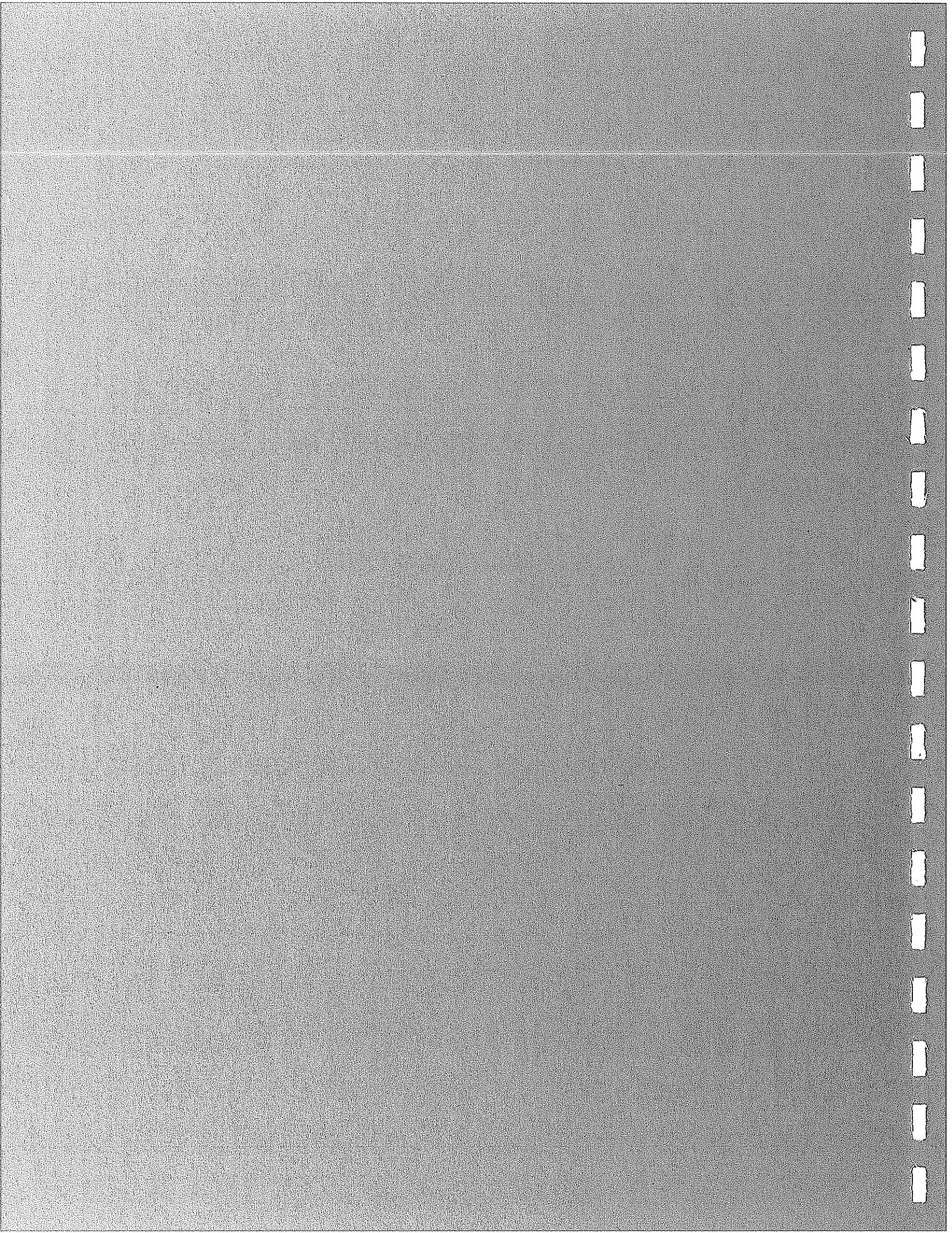
**Model 1**  
**Economic Impacts: 100-ac Scenario**  
**Yolo Gravel Economic Analysis**

Item	1	5	10	15	20	25	30	35
<b>II. AGRICULTURAL SCENARIO</b>								
<i>Total/Acreage</i>								
Acreage in Wheat	67%	100	100	100	100	100	100	100
Acreage in Tomato Rotation	33%	67	67	67	67	67	67	67
<b>Direct Employment</b>	<b>0.5 /100 ac (est.)</b>	<b>33</b>						
Average Salary	36,834	0.50	0.50	0.50	0.50	0.50	0.50	0.50
<b>Direct Pers. Income</b>	<b>18,417</b>	<b>18,417</b>	<b>18,417</b>	<b>18,417</b>	<b>18,417</b>	<b>18,417</b>	<b>18,417</b>	<b>18,417</b>
NPV @ 4%	395,640							
<b>Direct Output</b>								
Alfalfa Value per Acre	517	51,700	51,700	51,700	51,700	51,700	51,700	51,700
Tomato Value/Acre	1,780	59,333	59,333	59,333	59,333	59,333	59,333	59,333
<b>Total Value</b>		111,033	111,033	111,033	111,033	111,033	111,033	111,033
Ag NPV of Direct Value	4%	2,385,239						
multiplier								
Direct & Indirect Employment	1.8366	1	1	1	1	1	1	1
Direct & Indirect Personal Income	5.8337	107,440	107,440	107,440	107,440	107,440	107,440	107,440
NPV @ 4%	\$2,400,364							
Direct & Indirect Value Added	1.8384	204,124	204,124	204,124	204,124	204,124	204,124	204,124
NPV @ 4%	\$4,560,423							

**Model 1**  
**Economic Impacts: 100-ac Scen:**  
**Yolo Gravel Economic Analysis**

Item	40	45	50
<b>II. AGRICULTURAL SCENARIO</b>			
Total Acreage	100	100	100
Acreage in Wheat	67	67	67
Acreage in Tomato Rotation	33	33	33
Direct Employment	0.50	0.50	0.50
Average Salary	36,834	36,834	36,834
Direct Pers. Income	18,417	18,417	18,417
NPV @			
Direct Output			
Alfalfa Value per Acre	51,700	51,700	51,700
Tomato Value/Acre	59,333	59,333	59,333
Total Value	111,033	111,033	111,033
Ag NPV of Direct Value			
Direct & Indirect Employment	1	1	1
Direct & Indirect Personal Income	107,440	107,440	107,440
NPV @			
Direct & Indirect Value Added	204,124	204,124	204,124
NPV @			

APPENDIX A-2:  
MODEL 1A  
COUNTY TAX REVENUE ANALYSIS:  
100-ACRE SCENARIO



**Model 1a**  
**County Tax Analysis: 100-acre Scenario**  
**Yolo Gravel Economic Analysis**

Item	1	5	10	15	20	25	30	35	40
<b>MINING</b>									
<b>Property Tax</b>									
Mining Phase									
Gross Revenue	25%	5,068,800	5,068,800	5,068,800	5,068,800	5,068,800	5,068,800	5,068,800	5,068,800
NOI	4%	1,267,200	1,267,200	1,267,200	1,267,200	1,267,200	1,267,200	1,267,200	1,267,200
Capitalized Value @	1.0%	10,689,252	10,689,252	10,689,252	10,689,252	10,689,252	10,689,252	10,689,252	10,689,252
County's Share of 1.1% Property Tax @	12.8%	13,653	13,653	13,653	13,653	13,653	13,653	13,653	13,653
Base Year Property Tax Increase @	0.0%								
Total Property Tax to Yolo Co.									
NPV of Property Tax to Yolo Co.	4%	136,609	136,609	136,609	136,609	136,609	136,609	136,609	136,609
(1) Annual price per ton sold	0.12	115,234	115,234	115,234	115,234	115,234	115,234	115,234	115,234
<b>Reclamation Phase</b>									
Assumes Co. Ptax Receipts Equivalent to Ag									
NPV of Property Tax @	4%	4,105	4,105	4,105	4,105	4,105	4,105	4,105	4,105
NPV of Ptax Receipts Equivalent to Ag		2,789	2,789	2,789	2,789	2,789	2,789	2,789	2,789
<b>Agriculture Phase</b>									
Tomato Production Land (acres)	1,780	0	0	0	0	0	0	0	0
Gross Value/ac	15%	0	0	0	0	0	0	0	0
Rent	NOI	267	0	0	0	0	0	0	0
Cap Rate	7%	0	0	0	0	0	0	0	0
Williamson Act AV/ac	3,814	0	0	0	0	0	0	0	0
Total Estimated Tomato AV		0	0	0	0	0	0	0	0
Wheat Production Land (acres)	517	0	0	0	0	0	0	0	0
Gross Value/ac	30%	0	0	0	0	0	0	0	0
Rent	NOI	155	0	0	0	0	0	0	0
Cap Rate	7%	0	0	0	0	0	0	0	0
Williamson Act AV/ac	2,216	0	0	0	0	0	0	0	0
Total Estimated Wheat AV		0	0	0	0	0	0	0	0
Total Agricultural AV		0	0	0	0	0	0	0	0
Total Property Tax @	1.0%	32,322	0	0	0	0	0	0	0
County's Share of Property Tax @	12.7%	4,105	0	0	0	0	0	0	0
NPV of Property Tax @	4%	894	0	0	0	0	0	0	0
TOTAL PROPERTY TAX TO YOLO CO.		144,818	0	0	0	0	0	0	0
TOTAL PROPERTY TAX (NPV)		118,918	0	0	0	0	0	0	0
<b>Sales Tax</b>									
Minerals Phase									
Sales Value	1.45%	50,688,000	5,068,800	5,068,800	5,068,800	5,068,800	5,068,800	5,068,800	5,068,800
County Sales Tax Rate	50%	0	0	0	0	0	0	0	0
Percent of Sales Posting in Yolo Co.	0.73%	0	0	0	0	0	0	0	0
Effective Tax Rate									
Annual Sales Taxes to Yolo Co.									
NPV of Sales Taxes @	4%	367,488	36,749	36,749	36,749	36,749	36,749	36,749	36,749
Total Yolo Co. Tax Contribution		512,306	0	0	0	0	0	0	0
Total Yolo Co. Tax Contrib. (NPV)		428,906	0	0	0	0	0	0	0

**Model 1a**  
**County Tax Analysis: 100-ac Sce**  
**Yolo Gravel Economic Analysis**

Item	45	50
<b>MINING</b>		
<b>Property Tax</b>		
Mining Phase		
Gross Revenue	0	0
NOI	0	0
Capitalized Value @ Estimated Annual Property Tax (1)		
County's Share of 1.1% Property Tax =		
Base Year Property Tax Increase @		
Total Property Tax to Yolo Co.		
NPV of Property Tax to Yolo Co.		
(1) Annual ptax per ton sold		
Reclamation Phase		
Assumes Co. Pay Receipts Equivalent to NPV of Property Tax @		
<b>Agriculture Phase</b>		
Tomato Production Land (acres)	33	33
Gross Value/ac		
Rent		
NOI		
Cap Rate		
Williamson Act AV/ac	127,143	127,143
Total Estimated Tomato AV		
Wheat Production Land (acres)	67	67
Gross Value/ac		
Rent		
NOI		
Cap Rate		
Williamson Act AV/ac	34,467	34,467
Total Estimated Wheat AV		
Total Agricultural AV	161,610	161,610
Total Property Tax @ County's Share of Property Tax @	1,616	1,616
NPV of Property Tax @	205	205
TOTAL PROPERTY TAX TO YOLO CO.		
TOTAL PROPERTY TAX (NPV)		
<b>Sales Tax</b>		
Mining Phase		
Sales Value	0	0
County Sales Tax Rate		
Percent of Sales Postling in Yolo Co.		
Effective Tax Rate		
Annual Sales Taxes to Yolo Co.	0	0
NPV of Sales Taxes @		
Total Yolo Co. Tax Contribution		
Total Yolo Co. Tax Contrib. (NPV)		

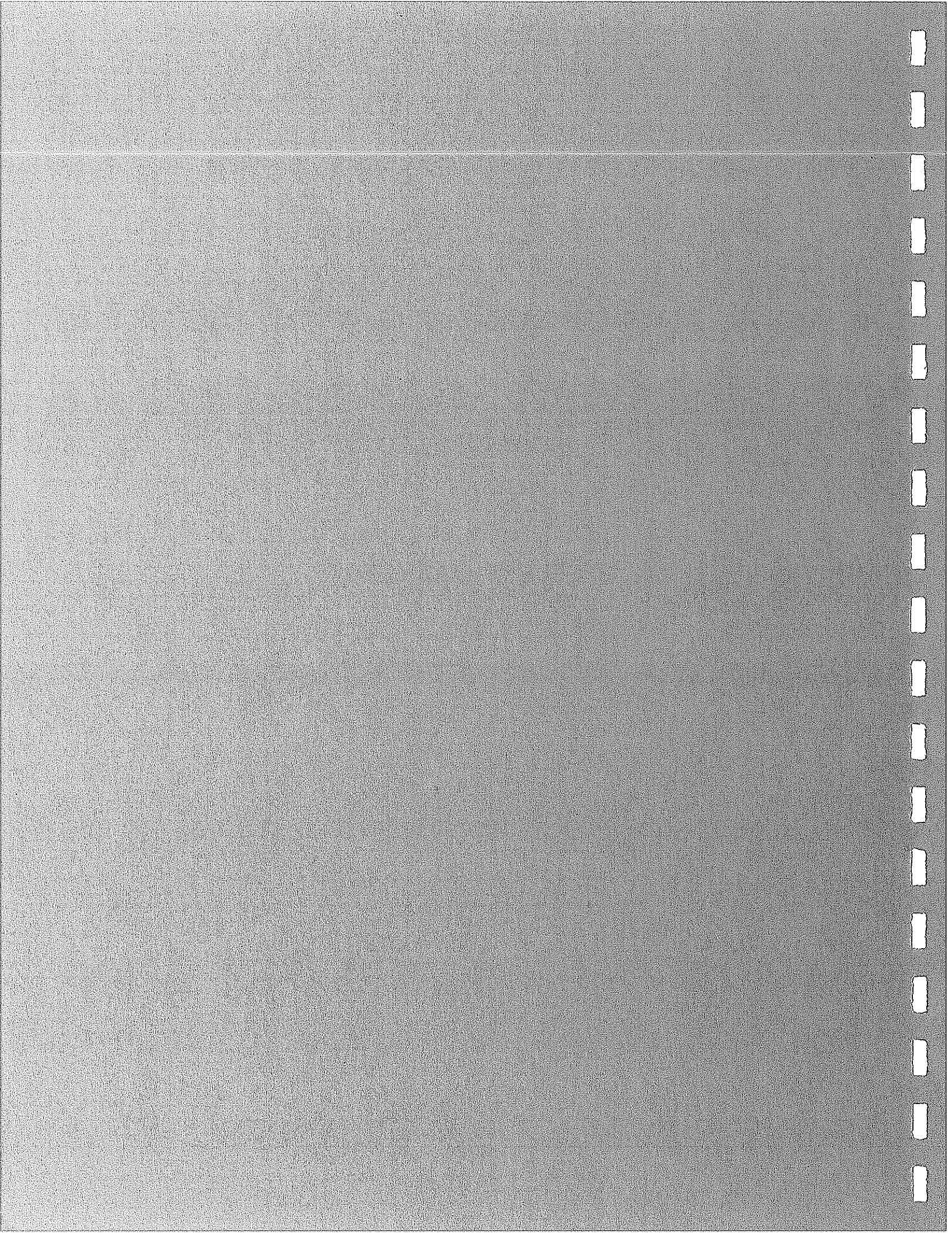
**Model 1a  
County Tax Analysis: 100-ac Scenario  
Yolo Gravel Economic Analysis**

Item	1	5	10	15	20	25	30	35
<b>AGRICULTURE</b>								
Tomato Production Land (acres)								
Gross Value/ac	1,780							
Rent	15%							
NOI	267							
Cap Rate	7%							
Williamson Act AV/ac	3,814							
Total Estimated Tomato AV		127,143	127,143	127,143	127,143	127,143	127,143	127,143
Wheat Production Land (acres)								
Gross Value/ac	517							
Rent	30%							
NOI	155							
Cap Rate	7%							
Williamson Act AV/ac	2,216							
Total Estimated Tomato AV		34,467	34,467	34,467	34,467	34,467	34,467	34,467
Total Agricultural AV		161,610	161,610	161,610	161,610	161,610	161,610	161,610
Total Property Tax @ County's Share of Property Tax @	1.0% 12.7% 4%	80,805 10,262 4,585	1,616 205	1,616 205	1,616 205	1,616 205	1,616 205	1,616 205
NPV of Property Tax @								

**Model 1a  
County Tax Analysis: 100-ac Sce  
Yolo Gravel Economic Analysis**

Item	40	45	50
<b>AGRICULTURE</b>			
Tomato Production Land (acres)	33	33	33
Gross Value/ac			
Rent			
NOI			
Cap Rate			
Williamson Act AV/ac			
Total Estimated Tomato AV	127,143	127,143	127,143
Wheat Production Land (acres)	67	67	67
Gross Value/ac			
Rent			
NOI			
Cap Rate			
Williamson Act AV/ac			
Total Estimated Tomato AV	34,467	34,467	34,467
Total Agricultural AV	161,610	161,610	161,610
Total Property Tax @	1,616	1,616	1,616
County's Share of Property Tax @	205	205	205
NPV of Property Tax @			

APPENDIX A-3:  
MODEL 2  
ECONOMIC IMPACT:  
PROJECT-WIDE SCENARIO



**Model 2**  
**Economic Impacts: Project-wide Scenario**  
**Yolo Gravel Economic Analysis**  
Annual Extraction Rate (tons): 6,200,000

Item	Assumption	1	5	10	15	20	25	30	35	40
<b>I. MINING SCENARIO</b>										
<b>Acreage</b>										
Tons Mined	(per DEIR)	6,200	6,200	6,200	6,200	6,200	6,200	6,200	6,200	6,200
Annual Acreage Mined	128,000 tons per acre	48	48	48	48	48	48	48	48	48
Cumulative	48% reclaimed to farmland	48	242	484	727	969	1,211	1,453	1,695	1,938
Annual Reclaimed Farm Acreage	(per acre mined, three-year differential)	0	23	23	23	23	23	23	23	23
Cumulative Reclaimed Farmland		0	47	163	279	395	512	628	744	860
Recreational & Habitat Reclaimed Land		0	25	25	25	25	25	25	25	25
Cumulative Reclaimed Recreational/Habitat Land		0	50	176	302	428	554	680	806	932
<b>Direct Employment</b>										
Mining	81,579 tons per FTE (DEIR)	76	76	76	76	76	76	76	76	76
Reclamation	2.0 active acres per FTE	0	12	12	12	12	12	12	12	12
Ag	260 acres per FTE	9	9	8	8	7	7	6	6	5
Subtotal		85	96	95	95	95	94	94	93	93
<b>Total Direct Payroll</b>										
Mining	\$7,500 per FTE	4,370,000	4,370,000	4,370,000	4,370,000	4,370,000	4,370,000	4,370,000	4,370,000	4,370,000
Reclamation	\$7,500 per FTE	0	668,438	668,438	668,438	668,438	668,438	668,438	668,438	668,438
Ag	142 per acre	336,245	315,384	297,542	279,701	261,859	244,018	226,176	208,335	190,493
Subtotal		4,706,245	5,253,821	5,335,980	5,318,138	5,300,297	5,282,455	5,264,614	5,246,772	5,228,931
NPV @ avg income per FTE		4%	112,164,061		36,834	36,834	36,834	36,834	36,834	36,834
<b>Total Direct Output</b>										
<b>I. Mining Phase</b>	6,200,000 tons per year	6,200,000	6,200,000	6,200,000	6,200,000	6,200,000	6,200,000	6,200,000	6,200,000	6,200,000
Annual Tons Sold	88%	5,456,000	5,456,000	5,456,000	5,456,000	5,456,000	5,456,000	5,456,000	5,456,000	5,456,000
Price per ton	\$5.76	\$5.76	\$5.76	\$5.76	\$5.76	\$5.76	\$5.76	\$5.76	\$5.76	\$5.76
Value		31,426,560	31,426,560	31,426,560	31,426,560	31,426,560	31,426,560	31,426,560	31,426,560	31,426,560
<b>II. Reclaimed Agricultural Production Phase</b>										
<i>Mining Area in Temporary Ag Production</i>										
Cumulative Reclaimed Ag Acreage	2,373	2,180	1,938	1,695	1,453	1,211	968	727	484	
Total Agriculture Activity Under Mining Program	0	47	163	279	395	512	628	744	860	
Acreage in Wheat	2,373	2,226	2,100	1,974	1,848	1,722	1,597	1,471	1,345	
Acreage in Tomato Rotation	1,582	1,484	1,400	1,316	1,232	1,148	1,064	980	896	
Total Value	791	742	700	658	616	574	532	490	448	
Wheat Value per Acre	818,045	767,293	723,886	680,480	637,073	593,667	550,260	506,854	463,447	
Tomato Value/Acre	1,408,240	1,320,871	1,246,148	1,171,425	1,086,703	1,021,980	947,257	872,554	797,811	
Total Value	2,226,284	2,088,164	1,970,034	1,851,905	1,733,776	1,615,646	1,497,517	1,379,388	1,261,258	
<b>Total Direct Value Added: Mining Sequence</b>	4%									
NPV @	\$713,528,918	33,514,724	33,396,595	33,273,465	33,160,336	33,042,206	32,924,077	32,805,948	32,687,818	
<b>Direct &amp; Indirect Employment</b>										
Multiplier										

**Model 2**  
**Economic Impacts: Project-wide Scenario**  
**Yolo Gravel Economic Analysis**  
**Annual Extraction Rate (tons):** 6,200,000

Item	Assumption	1	5	10	15	20	25	30	35	40
Mining		118	118	118	118	118	118	118	118	118
Reclamation		0	17	17	17	17	17	17	17	17
Ag		17	16	15	14	13	12	11	10	9
Total		135	150	149	148	148	147	146	145	144
<b>Direct &amp; Indirect Pers. Income</b>										
Mining	Multiplier	6,163,885	6,163,885	6,163,885	6,163,885	6,163,885	6,163,885	6,163,885	6,163,885	6,163,885
Reclamation		0	1,106,598	1,106,598	1,106,598	1,106,598	1,106,598	1,106,598	1,106,598	1,106,598
Ag		1,961,552	1,839,556	1,735,773	1,631,691	1,527,609	1,423,556	1,319,444	1,215,361	1,111,279
Total		8,125,437	9,110,339	9,006,256	8,902,174	8,798,092	8,694,009	8,589,927	8,485,845	8,381,762
NPV @		4%	194,442,939							
<b>Direct &amp; Indirect Value Added</b>										
Mining	Multiplier	45,049,974	45,049,974	45,049,974	45,049,974	45,049,974	45,049,974	45,049,974	45,049,974	45,049,974
Reclamation		0	0	0	0	0	0	0	0	0
Ag		4,092,801	3,838,880	3,621,711	3,404,542	3,187,373	2,970,204	2,753,035	2,535,866	2,318,697
Total		49,142,775	48,888,854	48,671,685	48,454,516	48,237,347	48,020,178	47,803,009	47,585,840	47,368,671
NPV @		4%	1,079,935,015							

**Model 2**  
**Economic Impacts: Project-wide Scenarios**  
**Wyo Gravel Economic Analysis**  
**Annual Extraction Rate (tons):**

Item	45	50	50
<b>MINING SCENARIO</b>			
Acreage Mined	6,200	6,200	6,200
Annual Acreage Mined	48	48	48
Cumulative	2,180	2,422	2,422
Annual Reclaimed Farm Acreage	23	23	23
Cumulative Reclaimed Farmland	977	1,093	1,093
Recreational & Habitat Reclaimed Land	25	25	25
Cumulative Reclaimed Recreational/Habitat	1,058	1,184	1,184
<b>Direct Employment</b>			
Mining	76	76	76
Reclamation	12	12	12
Ag	5	4	4
Subtotal	92	92	92
<b>Total Direct Payroll</b>			
Mining	4,370,000	4,370,000	4,370,000
Reclamation	668,438	668,438	668,438
Ag	172,651	154,810	154,810
Subtotal	5,211,089	5,193,247	5,193,247
NPV @ 8% Avg Income per FTE	36,834	36,834	36,834
<b>Total Direct Output</b>			
i. Mining Phase			
Annual Tons Sold	6,200,000	6,200,000	6,200,000
Price per ton	\$5.76	\$5.76	\$5.76
Value	31,426,560	31,426,560	31,426,560
ii. Reclaimed Agricultural Production Phas			
Mining Area in Temporary Ag Production	242	0	0
Cumulative Reclaimed Ag Acreage	977	1,093	1,093
Total Agriculture Activity Under Mining Program	1,219	1,093	1,093
Acreage in Wheat	812	728	728
Acreage in Tomato Rotation	406	364	364
Total Value			
Wheat Value per Acre	420,041	376,634	376,634
Tomato Value/Acre	723,088	648,365	648,365
Total Value	1,143,129	1,025,000	1,025,000
<b>Total Direct Value Added: Mining Sequence</b>			
	32,569,689	32,451,560	32,451,560

## Direct & Indirect Employment

Economic & Planning Systems, Inc. 6/12/86

**Model 2**  
**Economic Impacts: Project-wide Soc  
 Yolo Gravel Economic Analysis**  
Annual Extraction Rate (tons):

Item	45	50
Mining	118	118
Reclamation	17	17
Ag	9	8
Total	143	142
<b>Direct &amp; Indirect Pers. Income</b>		
Mining	6,163,885	6,163,885
Reclamation	1,106,598	1,106,598
Ag	1,207,197	903,114
Total	8,277,680	8,173,598
<b>Direct &amp; Indirect Value Added</b>		
Mining	45,049,974	45,049,974
Reclamation	0	0
Ag	2,101,528	1,884,359
Total	47,151,502	46,934,333
NPV @		

**Model 2**  
**Economic Impacts: Project-wide Scenario**  
**Yolo Gravel Economic Analysis**  
Annual Extraction Rate (tons): 6,200,000

Item	Assumption	1	5	10	15	20	25	30	35	40
<b>II. AGRICULTURAL SCENARIO</b>										
Acreage Impact Analysis										
Co. Ag. Acreage: No Mining	445,000	445,000	445,000	445,000	445,000	445,000	445,000	445,000	445,000	445,000
Project Ag Acreage: No Mining	23,174	23,174	23,174	23,174	23,174	23,174	23,174	23,174	23,174	23,174
Total Acreage Removed as a Result of Mining		48	242	484	727	969	1,211	1,453	1,695	1,938
Land Reclaimed for Agriculture		0	47	163	279	395	512	628	744	860
Net Agricultural Acreage including mining: Co-wide	444,952	444,804	444,678	444,552	444,427	444,301	444,175	444,049	443,923	443,923
Net Agricultural Acreage including mining: Project-wide	23,126	22,978	22,852	22,726	22,601	22,475	22,349	22,223	22,097	22,097
Annual Loss of Ag Land		48	25	25	25	25	25	25	25	25
Cumulative Loss of Ag Land		48	196	322	448	574	699	825	951	1,077
Percent of 'No Mining' Scenario: Co-wide	99.95%	99.96%	99.93%	99.90%	99.87%	99.84%	99.81%	99.79%	99.76%	99.76%
Percent of 'No Mining' Scenario: Project-wide	99.79%	99.16%	98.61%	98.07%	97.53%	96.98%	96.44%	95.89%	95.35%	95.35%
Total Farmland Area	Equal to total mined area	2,422	2,422	2,422	2,422	2,422	2,422	2,422	2,422	2,422
Project Direct Ag. Empl.	260 acres per FTE	9,31	9,31	9,31	9,31	9,31	9,31	9,31	9,31	9,31
Direct Personal Income	\$142 / acre	343,107	343,107	343,107	343,107	343,107	343,107	343,107	343,107	343,107
Income per FTE		36,834	36,834	36,834	36,834	36,834	36,834	36,834	36,834	36,834
NPV of Personal Inc. @	4%	7,665,516								
Direct Output										
Total Acreage		2,422	2,422	2,422	2,422	2,422	2,422	2,422	2,422	2,422
Acreage in Wheat		1,615	1,615	1,615	1,615	1,615	1,615	1,615	1,615	1,615
Acreage in Tomatoes		807	807	807	807	807	807	807	807	807
Total Value										
Wheat Value per Acre		1,252,109	1,252,109	1,252,109	1,252,109	1,252,109	1,252,109	1,252,109	1,252,109	1,252,109
Tomato Value/Acre		4,310,938	4,310,938	4,310,938	4,310,938	4,310,938	4,310,938	4,310,938	4,310,938	4,310,938
Total Value		5,563,047	5,563,047	5,563,047	5,563,047	5,563,047	5,563,047	5,563,047	5,563,047	5,563,047
Ag NPV of Direct Value @	4%	124,298,656								
<b>Total Agricultural Impacts</b>										
Direct & Indirect Employment	Multiplier	1.8366	17	17	17	17	17	17	17	17
Direct & Indirect Personal Income										
NPV @	5.8337	2,001,583	2,001,583	2,001,583	2,001,583	2,001,583	2,001,583	2,001,583	2,001,583	2,001,583
Direct & Indirect Value Added	4%	44,718,321	10,227,105	10,227,105	10,227,105	10,227,105	10,227,105	10,227,105	10,227,105	10,227,105
NPV @	1.8384	228,488,588								

**Model 2**  
**Economic Impacts: Project-wide Scenarios**  
**Yolo Gravel Economic Analysis**  
**Annual Extraction Rate (tons):**

Item	45	50

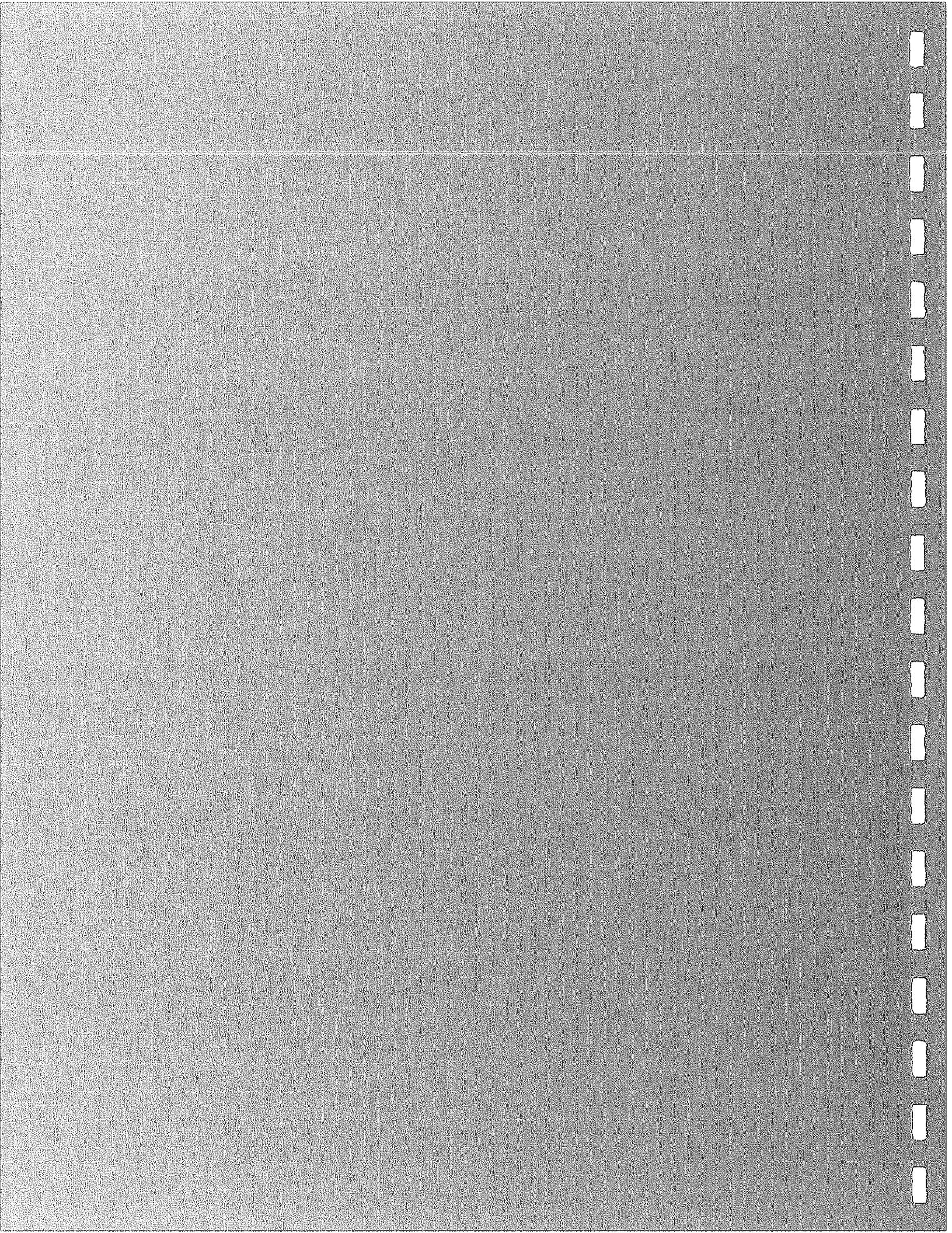
**II. AGRICULTURAL SCENARIO**

Acreage Impact Analysis			
Co. Ag. Acreage: No Mining	445,000	445,000	
Project Ag Acreage: No Mining	23,174	23,174	
Total Acreage Removed as a Result of Mining	2,180	2,422	
Land Reclaimed for Agriculture	977	1,093	
Net Agricultural Acreage including mining: Co-Ag	443,797	443,671	
Net Agricultural Acreage Including mining: Proj	21,971	21,845	
Annual Loss of Ag Land	25	25	
Cumulative Loss of Ag Land	1,203	1,329	
Percent of "No Mining" Scenario: Co-wide	99.73%	99.70%	
Percent of "No Mining" Scenario: Project-wide	94.81%	94.26%	
Total Farmland Area	2,422	2,422	
Project Direct Ag. Empl.	9.31	9.31	
Direct Personal Income	343,107	343,107	
Income per FTE	36,834	36,834	
NPV of Personal Inc. @			

Direct Output			
Total Acreage	2,422	2,422	
Acreage in Wheat	1,615	1,615	
Acreage in Tomatoes	807	807	
Total Value			
Wheat Value per Acre	1,252,109	1,252,109	
Total Value/Acre	4,310,938	4,310,938	
Total Value	5,563,047	5,563,047	
Ag NPV of Direct Value @			

Total Agricultural Impacts			
Direct & Indirect Employment	17	17	
Direct & Indirect Personal Income	2,001,583	2,001,583	
NPV @			
Direct & Indirect Value Added	10,227,105	10,227,105	
NPV @			

APPENDIX A-4:  
MODEL 2A  
COUNTY TAX REVENUE ANALYSIS:  
PROJECT-WIDE SCENARIO



**Model 2a**  
**County Tax Analysis: Project-wide Scenario**  
**Yolo Gravel Economic Analysis**  
**Annual Extraction Rate (tons): \$200,000**

Item	Assumption	Total	1	5	10	15	20	25	30	35	40
<b>MINING</b>											
<b>Property Tax</b>											
Mining Phase											
Gross Revenue	25%	72,429,820	45,049,974	45,049,974	45,049,974	45,049,974	45,049,974	45,049,974	45,049,974	45,049,974	45,049,974
NOI (before taxes/capital depreciation)	12%		11,262,493	11,262,493	11,262,493	11,262,493	11,262,493	11,262,493	11,262,493	11,262,493	11,262,493
Capitalized Value @											
Total Property Tax	1.0%	724,298	92,565	92,565	92,565	92,565	92,565	92,565	92,565	92,565	92,565
County's Share of Property Tax @	12.8%		0.0%	4,628,266	780,819						
Base Year Property Tax Increasing at Annual Rate =											
Total Property Tax to Yolo County (1)											
NPV of Property Tax @											
(1) Annual price per ton sold =	\$0.13										
Reclamation Phase											
Assumes Co. Pays Receipts Equivalent to Ag											
NPV of Property Tax @											
Agriculture Phase											
Tomato Production Land (acres)											
Gross Value/acre	1,780										
Rent	15%										
NOI	267										
Cap Rate	7%										
Williamson Act AV/acre	3,814										
Total Estimated Tomato AV											
Wheat Production Land (acres)											
Gross Value/acre	517										
Rent	30%										
NCI	155										
Cap Rate	7%										
Williamson Act AV/acre	2,216										
Total Estimated Wheat AV											
Total Agricultural AV											
Total Property Tax @											
County's Share of Property Tax @											
NPV of Property Tax @											
TOTAL PROPERTY TAX TO YOLO CO.											
TOTAL PROPERTY TAX (NPV)											
price per acre											
Sales Tax											
Mining Phase											
Sales Value	1.45%	2,252,498,668	45,049,974	45,049,974	45,049,974	45,049,974	45,049,974	45,049,974	45,049,974	45,049,974	45,049,974
County Sales Tax Rate	50%										
Percent of Sales Postponed in Yolo Co.	0.73%										
Effective Tax Rate											
Annual Sales Taxes											
NPV of Sales Taxes @											
Total Yolo Co. Tax Contribution											
		21,261,446									

**Model 2a**  
**County Tax Analysis: Project-wide Scenario**  
**Yolo Gravel Economic Analysis**  
**Annual Extraction Rate (tons):** 6,200,000

Item	Assumption	Total	1	5	10	15	20	25	30	35	40
Total Yolo Co. Tax Contrib. (NPV)		8,227,806									

**Model 2a**  
**County Tax Analysis: Project-wide \$**  
**Yolo Gravel Economic Analysis**  
Annual Extraction Rate (tons);

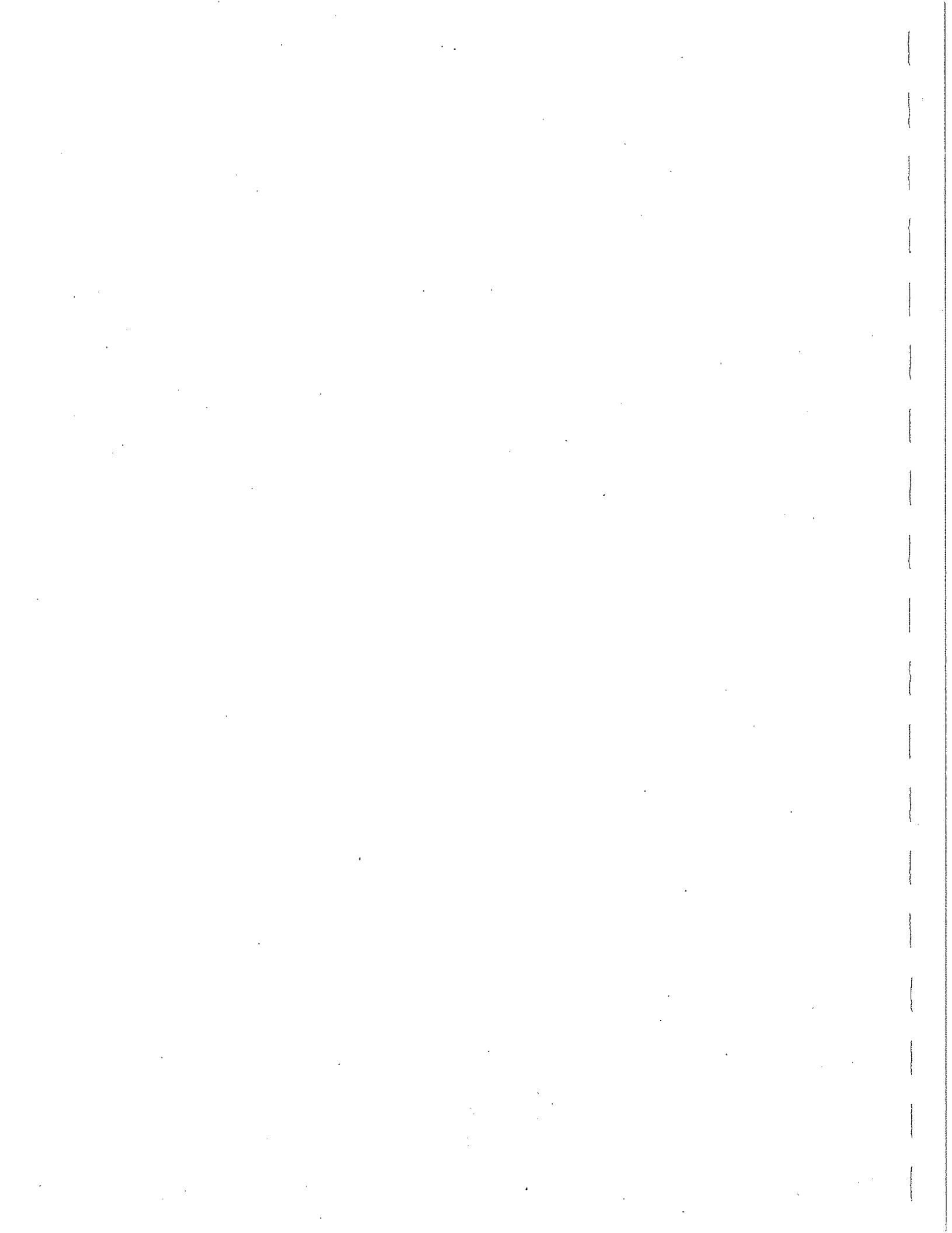
Item	45	50
<b>MINING</b>		
<b>Property Tax</b>		
Mining Phase		
Gross Revenue	45,049,974	45,049,974
NOI (before taxes/capital depreciation)	11,262,493	11,262,493
Capitalized Value @		
Total Property Tax		
County's Share of Property Tax @		
Base Year Property Tax Increasing at Annual		
Total Property Tax to Yolo County (1)	92,565	92,565
NPV of Property Tax @		
(1) Annual ptax per ton sold =		
Reclamation Phase		
Assumes Co. Ptax Receipts Equivalent to Ag	81	81
NPV of Property Tax @		
<b>Agriculture Phase</b>		
Tomato Production Land (acres)	406	364
Gross Value/AC		
Rent		
NOI		
Cap Rate		
Williamson Act AV/AC		
Total Estimated Tomato AV	1,549,474	1,389,354
Wheat Production Land (acres)	812	728
Gross Value/AC		
Rent		
NOI		
Cap Rate		
Williamson Act AV/AC		
Total Estimated Wheat AV	1,800,176	1,614,148
Total Agricultural AV	3,349,650	3,003,501
Total Property Tax @		
County's Share of Property Tax @		
NPV of Property Tax @		
TOTAL PROPERTY TAX TO YOLO CO.		
TOTAL PROPERTY TAX (NPV)		
ptax per acre	3.49	3.49
<b>Sales Tax</b>		
Mining Phase		
Sales Value	45,049,974	45,049,974
County Sales Tax Rate		
Percent of Sales Posting in Yolo Co.		
Effective Tax Rate		
Annual Sales Taxes		
NPV of Sales Taxes @		
Total Yolo Co. Tax Contribution		

**Model 2a**  
**County Tax Analysis: Project-wide Scenario**  
**Yolo Gravel Economic Analysis**  
Annual Extraction Rate (tons): **6,200,000**

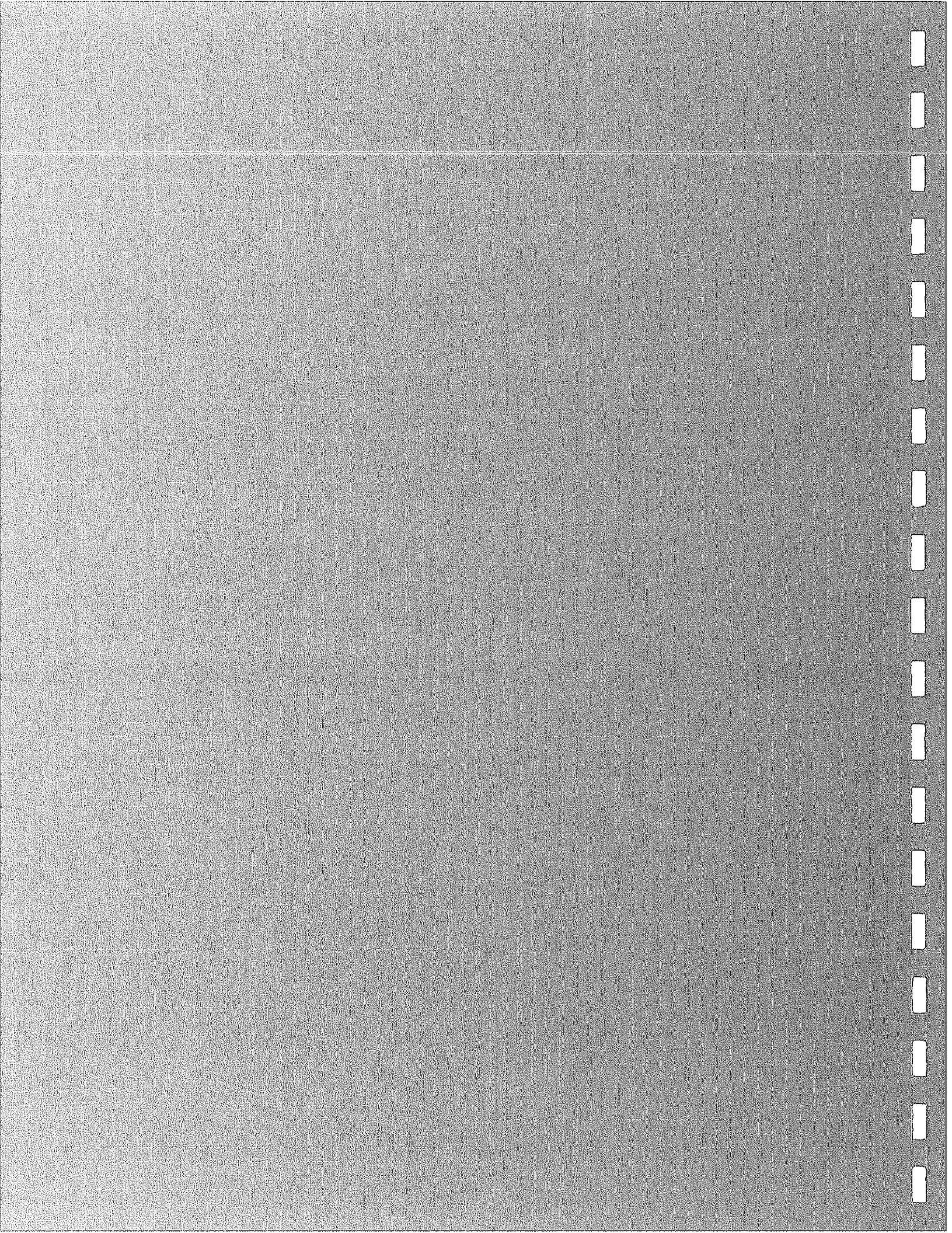
Item	Assumption	Total	1	5	10	15	20	25	30	35
<b>AGRICULTURE</b>										
Tomato Production Land (acres)		807	807	807	807	807	807	807	807	807
Gross Value/fac	1,780									
Rent	15%									
NOI	267									
Cap. Rate	7%									
Williamson Act AV/ac	3,814									
Total Estimated Tomato AV		3,079,241	3,079,241	3,079,241	3,079,241	3,079,241	3,079,241	3,079,241	3,079,241	3,079,241
Wheat Production Land (acres)		1,615	1,615	1,615	1,615	1,615	1,615	1,615	1,615	1,615
Gross Value/fac	517									
Rent	30%									
NOI	155									
Cap. Rate	7%									
Williamson Act AV/ac	2,216									
Total Estimated Tomato AV		3,577,455	3,577,455	3,577,455	3,577,455	3,577,455	3,577,455	3,577,455	3,577,455	3,577,455
Total Agricultural AV		6,656,696	6,656,696	6,656,696	6,656,696	6,656,696	6,656,696	6,656,696	6,656,696	6,656,696
Total Property Tax @	1.0%	66,567	66,567	66,567	66,567	66,567	66,567	66,567	66,567	66,567
County's Share of Property Tax @	12.7%	8,454	8,454	8,454	8,454	8,454	8,454	8,454	8,454	8,454
NPV of Property Tax @	4%	188,875								

**Model 2a**  
**County Tax Analysis: Project-wide S**  
**Yolo Gravel Economic Analysis**  
**Annual Extraction Rate (tons):**

Item	40	45	50
<b>AGRICULTURE</b>			
Tomato Production Land (acres)	807	807	807
Gross Value/ac			
Rent			
NOI			
Cap Rate			
Williamson Act AV/ac			
Total Estimated Tomato AV	3,079,241	3,079,241	3,079,241
Wheat Production Land (acres)	1,615	1,615	1,615
Gross Value/ac			
Rent			
NOI			
Cap Rate			
Williamson Act AV/ac			
Total Estimated Tomato AV	3,577,455	3,577,455	3,577,455
Total Agricultural AV	<b>6,656,696</b>	<b>6,656,696</b>	<b>6,656,696</b>
Total Property Tax @	<b>66,567</b>	<b>66,567</b>	<b>66,567</b>
County's Share of Property Tax @	<b>8,454</b>	<b>8,454</b>	<b>8,454</b>
NPV of Property Tax @			



**APPENDIX A-5:**  
**MODEL 2B**  
**ECONOMIC IMPACTS:**  
**PROJECT-WIDE SCENARIO LOW EXTRACTION RATE**



**Model 2b (low extraction)**  
**Economic Impacts: Project-wide Scenario**  
**Yolo Gravel Economic Analysis**  
**Annual Extraction Rate (tons): 2,600,000**

Item	Assumption	1	5	10	15	20	25	30	35	40	
<b>I. MINING SCENARIO</b>											
<b>Acreage</b>											
Tons Mined	(per DEIR)	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	
Annual Acreage Mined	128,000 tons per acre	20	20	20	20	20	20	20	20	20	
Cumulative	48% reclaimed to farmland	0	102	203	305	406	508	609	711	813	
Annual Reclaimed Farm Acreage	(per acre mined, three-year differential)	0	10	10	10	10	10	10	10	10	
Cumulative Reclaimed Farmland	0	20	68	117	166	215	263	312	361	361	
Recreational & Habitat Reclaimed Land	0	11	11	11	11	11	11	11	11	11	
Cumulative Reclaimed Recreational/Habitat Land	0	21	74	127	180	232	285	338	391	391	
<b>Direct Employment</b>											
Mining	81,579 tons per FTE (DEIR)	32	32	32	32	32	32	32	32	32	
Reclamation	2.0 active acres per FTE	0	5	5	5	5	5	5	5	5	
Ag	260 acres per FTE	4	4	3	3	3	3	3	2	2	
Subtotal		36	40	40	40	40	40	39	39	39	
<b>Total Direct Payroll</b>											
Mining	\$7,500 per FTE	1,832,581	1,832,581	1,832,581	1,832,581	1,832,581	1,832,581	1,832,581	1,832,581	1,832,581	
Reclamation	57,500 per FTE	0	280,313	280,313	280,313	280,313	280,313	280,313	280,313	280,313	
Ag	142 per acre	141,006	132,258	124,776	117,294	109,812	102,330	94,848	87,366	79,684	
Subtotal		1,973,587	2,245,151	2,237,659	2,230,187	2,222,705	2,215,223	2,207,741	2,200,259	2,192,777	
NPV @											
avg income per FTE											
<b>Total Direct Output</b>											
Mining Phase	2,600,000 tons per year	2,600,000	2,600,000	2,600,000	2,600,000	2,600,000	2,600,000	2,600,000	2,600,000	2,600,000	
Annual Tons Sold	88%	2,288,000	2,288,000	2,288,000	2,288,000	2,288,000	2,288,000	2,288,000	2,288,000	2,288,000	
Price per ton	\$5.76	\$5.76	\$5.76	\$5.76	\$5.76	\$5.76	\$5.76	\$5.76	\$5.76	\$5.76	
Value		13,178,880	13,178,880	13,178,880	13,178,880	13,178,880	13,178,880	13,178,880	13,178,880	13,178,880	
<b>II. Reclaimed Agricultural Production Phase</b>											
Mining Area in Temporary Ag Production											
Cumulative Reclaimed Ag Acreage	0	20	68	117	166	215	263	312	361	361	
Total Agriculture Activity Under Mining Program	995	934	881	828	775	722	670	617	564	564	
Acreage in Wheat	664	622	587	552	517	482	446	411	376	376	
Acreage in Tomato Rotation	332	311	294	276	258	241	223	206	188	188	
Total Value											
Wheat Value per Acre	343,051	321,768	303,585	285,362	267,160	248,957	230,754	212,552	194,349	194,349	
Tomato Value/Acre	590,552	553,914	522,578	491,243	459,907	428,572	397,237	365,901	334,566	334,566	
Total Value	933,603	875,682	826,143	776,805	727,067	677,529	627,991	578,453	528,915	528,915	
<b>Total Direct Value Added: Mining Sequence</b>											
NPV @	4%	\$299,221,804	14,112,483	14,054,562	14,005,024	13,955,485	13,905,947	13,856,409	13,806,871	13,757,333	13,707,795
<b>Direct &amp; Indirect Employment Multiplier</b>											
<b>Direct &amp; Indirect Employment</b>											

**Model 2b (low extraction)**  
**Economic Impacts: Project-wide Scenario**  
**Yolo Gravel Economic Analysis**  
**Annual Extraction Rate (tons):** 2,600,000

Item	Assumption	1	5	10	15	20	25	30	35	40
Mining	1,5517	49	49	49	49	49	49	49	49	49
Reclamation	1,4253	0	7	7	7	7	7	7	7	7
Ag	1,8356	7	6	6	5	5	5	4	4	4
Total	56	63	63	62	62	62	61	61	60	60
<b>Direct &amp; Indirect Pers. Income</b>										
Mining	2,584,855	2,584,855	2,584,855	2,584,855	2,584,855	2,584,855	2,584,855	2,584,855	2,584,855	2,584,855
Reclamation	0	464,057	464,057	464,057	464,057	464,057	464,057	464,057	464,057	464,057
Ag	822,386	771,552	727,905	684,257	640,610	596,963	553,315	509,668	466,020	
Total	3,407,441	3,820,465	3,776,817	3,733,170	3,689,522	3,645,875	3,602,228	3,558,580	3,514,933	
NPV @	4%	81,540,557								
<b>Direct &amp; Indirect Value Added</b>										
Mining	18,891,924	18,891,924	18,891,924	18,891,924	18,891,924	18,891,924	18,891,924	18,891,924	18,891,924	18,891,924
Reclamation	0	0	0	0	0	0	0	0	0	0
Ag	1,716,336	1,609,853	1,518,782	1,427,711	1,336,640	1,245,570	1,154,499	1,063,428	972,357	
Total	20,608,260	20,501,778	20,410,707	20,319,636	20,228,555	20,137,494	20,046,423	19,955,352	19,864,281	
NPV @	4%	452,875,974								

**Model 2b (low extraction)**  
**Economic Impacts: Project-wide Soc  
 Yolo Gravel Economic Analysis**  
Annual Extraction Rate (tons):

Item	45	50
<b>I. MINING SCENARIO</b>		
Acreage Tons Mined	2,600	2,600
Annual Acreage Mined	20	20
<i>Cumulative</i>	914	1,016
Annual Reclaimed Farm Acreage (per acre mined; three-year differential)	10	10
<i>Cumulative Reclaimed Farmland</i>	410	458
Recreational & Habitat Reclaimed Land	11	11
<i>Cumulative Reclaimed Recreational/Habitat</i>	444	496
<b>Direct Employment</b>		
Mining	32	32
Reclamation	5	5
Ag	2	2
<b>Subtotal</b>	39	39
<b>Total Direct Payroll</b>		
Mining	1,832,581	1,832,581
Reclamation	280,313	280,313
Ag	72,402	64,920
<b>Subtotal</b>	2,185,295	2,177,813
NPV @ avg income per FTE	36,834	36,834
<b>Total Direct Output</b>		
I. Mining Phase	2,600,000	2,600,000
Annual Tons Sold	2,288,000	2,288,000
Price per ton	\$5.76	\$5.76
<b>Value</b>	13,178,880	13,178,880
<b>II. Reclaimed Agricultural Production Phas</b>		
<i>Mining Area In Temporary Ag Production</i>	102	0
<i>Cumulative Reclaimed Ag Acreage</i>	410	458
<i>Total Agriculture Activity Under Mining Program</i>	511	458
Acreage in Wheat	341	305
Acreage in Tomato Rotation	170	153
<b>Total Value</b>		
Wheat Value per Acre	176,146	157,943
Tomato Value/Acre	303,230	271,895
<b>Total Value</b>	479,377	429,838
<b>Total Direct Value Added: Mining Sequence</b>	13,658,257	13,608,719
NPV @		
<b>Direct &amp; Indirect Employment</b>		

**Model 2b (low extraction)**  
**Economic Impacts: Project-wide Scenarios**  
**Yolo Gravel Economic Analysis**  
Annual Extraction Rate (tons):

Item	45	50
Mining	49	49
Reclamation	7	7
Ag	4	3
Total	60	60
<b>Direct &amp; Indirect Pers. Income</b>		
Mining	2,584,855	2,584,855
Reclamation	464,057	464,057
Ag	422,373	378,725
Total	3,471,255	3,427,638
<b>NPV @</b>		
<b>Direct &amp; Indirect Value Added</b>		
Mining	18,891,924	18,891,924
Reclamation	0	0
Ag	861,286	790,215
Total	19,773,210	19,682,140
NPV @		

**Model 2b (low extraction)**  
**Economic Impacts: Project-wide Scenario**  
**Yolo Gravel Economic Analysis**  
**Annual Extraction Rate (tons):** 2,600,000

Item	Assumption	1	5	10	15	20	25	30	35	40
<b>II. AGRICULTURAL SCENARIO</b>										
Acreage Impact Analysis										
Co. Ag. Acreage: No Mining	445,000	445,000	445,000	445,000	445,000	445,000	445,000	445,000	445,000	445,000
Project Ag. Acreage: No Mining	23,174	23,174	23,174	23,174	23,174	23,174	23,174	23,174	23,174	23,174
Total Acreage Removed as a Result of Mining		20	102	203	305	406	508	609	711	813
Land Reclaimed for Agriculture		0	20	68	117	166	215	263	312	361
Net Agricultural Acreage including mining: Co-wide	48%	444,980	444,918	444,865	444,812	444,760	444,707	444,654	444,601	444,548
Net Agricultural Acreage including mining: Project-wide		23,154	23,092	23,039	22,986	22,934	22,881	22,828	22,775	22,722
Annual Loss of Ag Land		20	11	11	11	11	11	11	11	11
Cumulative Loss of Ag Land		20	82	135	188	241	293	346	399	452
Percent of "No Mining" Scenario: Co-wide		100.00%	99.98%	99.97%	99.96%	99.95%	99.93%	99.92%	99.91%	99.90%
Percent of "No Mining" Scenario: Project-wide		99.91%	99.65%	99.42%	99.19%	98.89%	98.73%	98.51%	98.28%	98.05%
Total Farmland Area	Equal to total mined area	1,016	1,016	1,016	1,016	1,016	1,016	1,016	1,016	1,016
Project Direct Ag. Emp.	260 acres per FTE	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91
Direct Personal Income	\$142 / acre	143,884	143,884	143,884	143,884	143,884	143,884	143,884	143,884	143,884
Income per FTE		36,834	36,834	36,834	36,834	36,834	36,834	36,834	36,834	36,834
NPV of Personal Inc. @	4%	3,214,571								
Direct Output										
Total Acreage		1,016	1,016	1,016	1,016	1,016	1,016	1,016	1,016	1,016
Acreage in Wheat		67%	677	677	677	677	677	677	677	677
Acreage in Tomatoes		33%	339	339	339	339	339	339	339	339
Total Value										
Wheat Value per Acre	517	525,078	525,078	525,078	525,078	525,078	525,078	525,078	525,078	525,078
Tomato Value/Acre	1,780	1,807,813	1,807,813	1,807,813	1,807,813	1,807,813	1,807,813	1,807,813	1,807,813	1,807,813
Total Value		2,332,891	2,332,891	2,332,891	2,332,891	2,332,891	2,332,891	2,332,891	2,332,891	2,332,891
Ag NPV of Direct Value @	4%	52,120,211								
Total Agricultural Impacts	Multplier									
Direct & Indirect Employment	1.8366	7	7	7	7	7	7	7	7	7
Direct & Indirect Personal Income	5.8337	839,374	839,374	839,374	839,374	839,374	839,374	839,374	839,374	839,374
NPV @	4%	18,752,844	4,288,786	4,288,786	4,288,786	4,288,786	4,288,786	4,288,786	4,288,786	4,288,786
Direct & Indirect Value Added	1.8384	95,817,795								
NPV @	4%									

**Model 2b (low extraction)**  
**Economic Impacts: Project-wide Scenarios**  
**Yolo Gravel Economic Analysis**  
Annual Extraction Rate (tons):

Item	45	50
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**II. AGRICULTURAL SCENARIO**

Acreage Impact Analysis		
Co. Ag. Acreage: No Mining	445,000	445,000
Project Ag Acreage: No Mining	23,174	23,174
Total Acreage Removed as a Result of Mining	914	1,016
Land Reclaimed for Agriculture	410	458
Net Agricultural Acreage including mining: Co-wide	444,495	444,443
Net Agricultural Acreage including mining: Proj	22,669	22,617
Annual Loss of Ag Land	11	11
Cumulative Loss of Ag Land	505	557
Percent of "No Mining" Scenario: Co-wide	99.89%	99.87%
Percent of "No Mining" Scenario: Project-wide	97.82%	97.59%
Total Farmland Area	1,016	1,016

Project Direct Ag. Emplo.		
	3.91	3.91

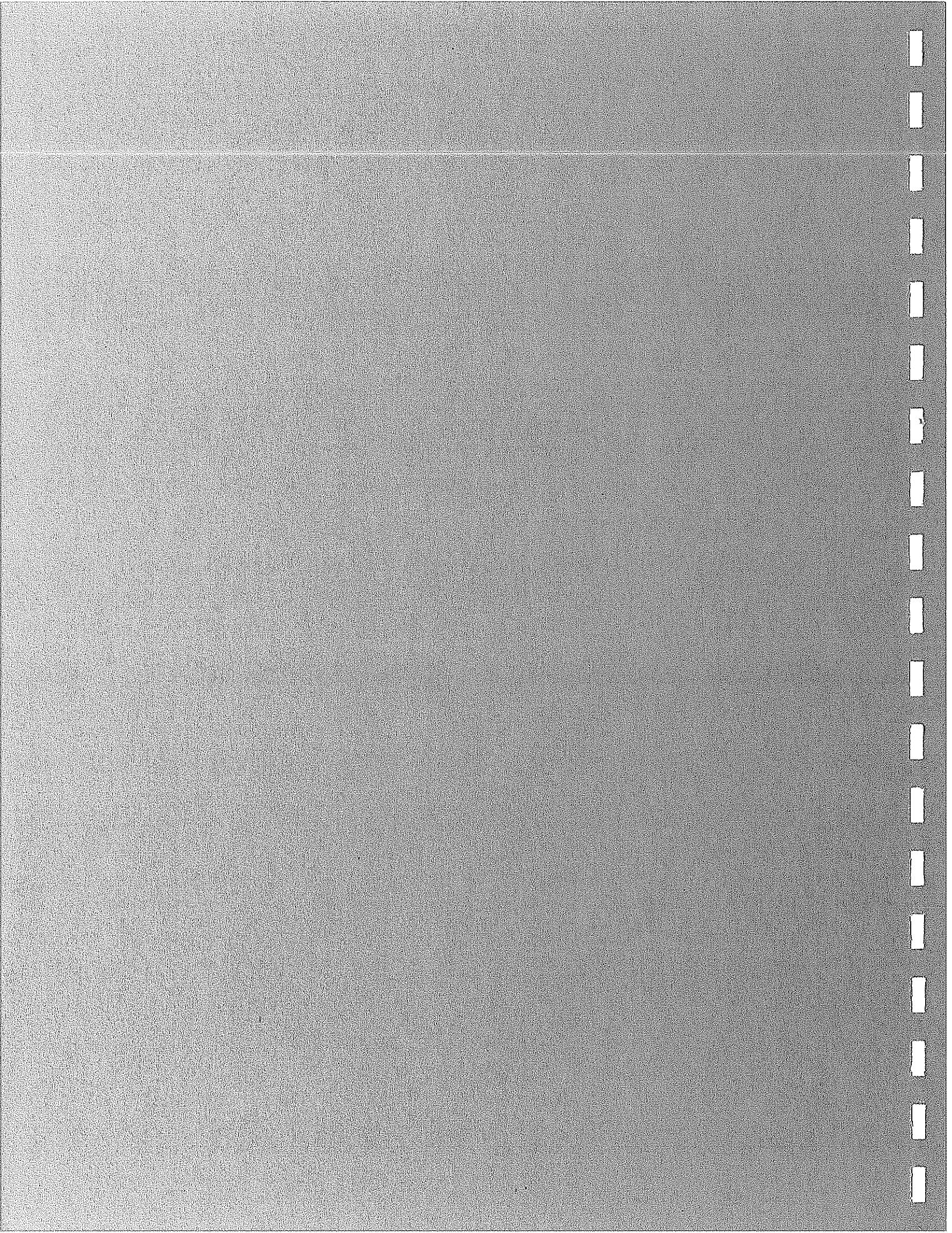
Direct Personal Income		
Income per FTE	143,884	143,884
NPV of Personal Inc. @	36,834	36,834

Direct Output		
Total/Acreage	1,016	1,016
Acreage in Wheat	677	677
Acreage in Tomatoes	339	339
Total Value		
Wheat Value per Acre	525,078	525,078
Tomato Value/Acre	1,807,813	1,807,813
Total Value	2,332,891	2,332,891

Ag NPV of Direct Value @

Total Agricultural Impacts		
Direct & Indirect Employment	7	7
Direct & Indirect Personal Income	839,374	839,374
NPV @		
Direct & Indirect Value Added	4,288,786	4,288,786
NPV @		

APPENDIX A-6:  
MODEL 2C  
COUNTY TAX REVENUE ANALYSIS:  
PROJECT-WIDE SCENARIO LOW EXTRACTION RATE



**Model 2c (low extraction)**  
**County Tax Analysis: Project-wide Scenario**  
**Yolo Gravel Economic Analysis**  
**Annual Extraction Rate (tons):** 2,600,000

Item	Assumption	Total	1	5	10	15	20	25	30	35	40
<b>MINING</b>											
<b>Property Tax</b>											
Mining Phase											
Gross Revenue		18,891,924	18,891,924	18,891,924	18,891,924	18,891,924	18,891,924	18,891,924	18,891,924	18,891,924	18,891,924
NOI (before taxes/capital depreciation)		4,722,981	4,722,981	4,722,981	4,722,981	4,722,981	4,722,981	4,722,981	4,722,981	4,722,981	4,722,981
Capitalized Value @		30,373,796									
Total Property Tax		1,0%	303,738								
Base Year Property Tax increasing at Annual Rate =		12.8%	38,818								
Total Property Tax to Yolo County (1)			0.0%	38,818							
NPV of Property Tax @			1,940,886								
(1) Annual price per ton sold =			327,440								
\$0.13											
Reclamation Phase											
Assumes Co. Pay Receipts Equivalent to Ag		1,634									
NPV of Property Tax @		545									
Agriculture Phase											
Tomato Production Land (acres)											
Gross Value/AC											
Rent											
NOI											
267											
Cap Rate											
7%											
Williamson Act AV/vac											
Total Estimated Tomato AV											
Wheat Production Land (acres)											
Gross Value/AC											
Rent											
NOI											
155											
7%											
Cap Rate											
Williamson Act AV/vac											
Total Estimated Wheat AV											
2,216		1,470,219	1,379,005	1,300,894	1,222,382	1,144,970	1,068,959	988,947	910,936	832,924	
Total Agricultural AV											
2,735,687		2,735,687	2,565,963	2,420,804	2,275,645	2,130,486	1,985,327	1,840,169	1,695,010	1,549,851	
986,210		986,210	25,660	24,208	22,756	21,305	19,853	18,402	16,950	15,499	
12.7%		125,249	3,474	3,259	3,074	2,990	2,706	2,521	2,337	2,153	1,988
4%		62,353									
TOTAL PROPERTY TAX TO YOLO CO.											
TOTAL PROPERTY TAX (NPV)											
per acre											
2,067,768		2,067,768									
350,338		350,338									
3.49		3.49									
Sales Tax											
Mining Phase											
Sales Value		18,891,924	18,891,924	18,891,924	18,891,924	18,891,924	18,891,924	18,891,924	18,891,924	18,891,924	18,891,924
County Sales Tax Rate		1.45%									
Percent of Sales Postponed in Yolo Co.		50%									
Effective Tax Rate		0.73%									
Annual Sales Taxes		-									
NPV of Sales Taxes @		4%									
Total Yolo Co. Tax Contribution		8,916,090									

**Model 2c (low extraction)**  
**County Tax Analysis: Project-wide Scenario**  
**Yolo Gravel Economic Analysis**  
**Annual Extraction Rate (tons):**

Item	Assumption	Total	1	5	10	15	20	25	30	35	40
Total Yolo Co. Tax Contrib. (NPV)		3,450,370									

**Model 2c (low extraction)  
County Tax Analysis: Project-wide S  
Yolo Gravel Economic Analysis  
Annual Extraction Rate (tons):**

Item	45	50
<b>MINING</b>		
<b>Property Tax</b>		
Mining Phase	18,891,924	18,891,924
Gross Revenue	4,722,981	4,722,981
NOI (before taxes/capital depreciation)		
Capitalized Value @		
Total Property Tax		
County's Share of Property Tax @		
Base Year Property Tax Increasing at Annual		
Total Property Tax to Yolo County (1)	38,818	38,818
NPV of Property Tax @		
(1) Annual ptax per ton sold =		
Reclamation Phase		
Assumes Co. Ptax Receipts Equivalent to Ag	34	34
NPV of Property Tax @		
Agriculture Phase		
Tomato Production Land (acres)	170	153
Gross Value/acre		
Rent		
NOI		
Cap Rate		
Williamson Act AV/acre		
Total Estimated Tomato AV	649,779	582,632
Wheat Production Land (acres)		
Gross Value/acre		
Rent		
NOI		
Cap Rate		
Williamson Act AV/acre		
Total Estimated Wheat AV	754,912	676,901
Total Agricultural AV		
Total Property Tax @		
County's Share of Property Tax @		
NPV of Property Tax @		
TOTAL PROPERTY TAX TO YOLO CO.		
PROPERTY TAX (NPV)		
ptax per acre		
Sales Tax		
Mining Phase	18,891,924	18,891,924
Sales Value		
County Sales Tax Rate		
Percent of Sales Posting in Yolo Co.		
Effective Tax Rate		
Annual Sales Taxes		
NPV of Sales Taxes @		
Total Yolo Co. Tax Contribution		

**Model 2c (low extraction)**

**County Tax Analysis: Project-wide Scenario**

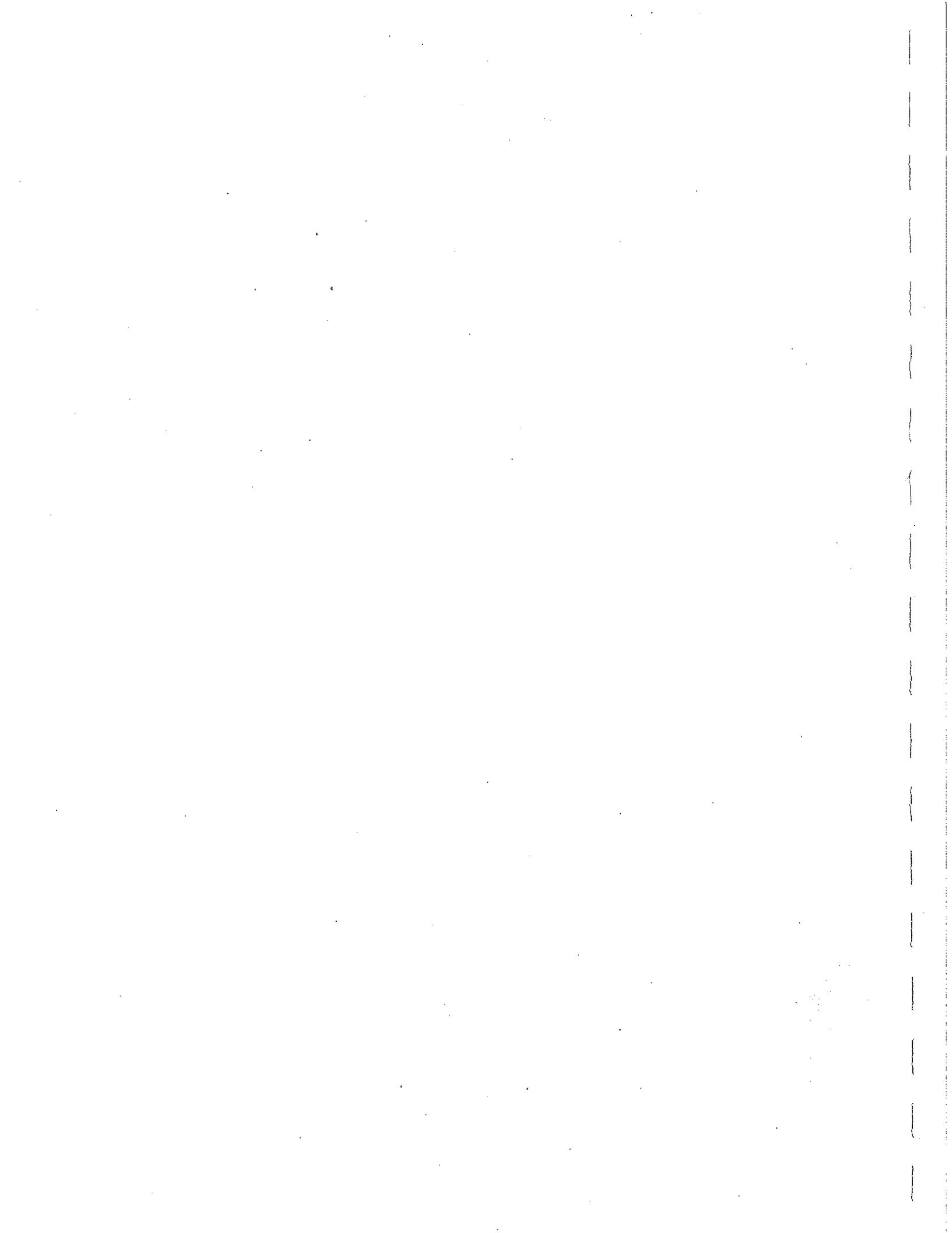
**Yolo Gravel Economic Analysis**

**Annual Extraction Rate (tons): 2,600,000**

Item	Assumption	Total	1	5	10	15	20	25	30	35
<b>AGRICULTURE</b>										
Tomato Production Land (acres)										
Gross Value/ac	1,780	339	339	339	339	339	339	339	339	339
Rent	15%									
NOI	267									
Cap Rate	7%									
Williamson Act AV/ac	3,814									
Total Estimated Tomato AV		1,291,295	1,291,295	1,291,295	1,291,295	1,291,295	1,291,295	1,291,295	1,291,295	1,291,295
Wheat Production Land (acres)										
Gross Value/ac	517	677	677	677	677	677	677	677	677	677
Rent	30%									
NOI	155									
Cap Rate	7%									
Williamson Act AV/ac	2,216									
Total Estimated Tomato AV		1,500,223	1,500,223	1,500,223	1,500,223	1,500,223	1,500,223	1,500,223	1,500,223	1,500,223
Total Agricultural AV										
Total Property Tax @										
County's Share of Property Tax @										
NPV of Property Tax @										
		1,395,759	2,791,518	2,791,518	2,791,518	2,791,518	2,791,518	2,791,518	2,791,518	2,791,518
		117,261	27,915	27,915	27,915	27,915	27,915	27,915	27,915	27,915
		79,206	3,545	3,545	3,545	3,545	3,545	3,545	3,545	3,545

**Model 2c (low extraction)**  
**County Tax Analysis: Project-wide S**  
**Yolo Gravel Economic Analysis**  
Annual Extraction Rate (tons):

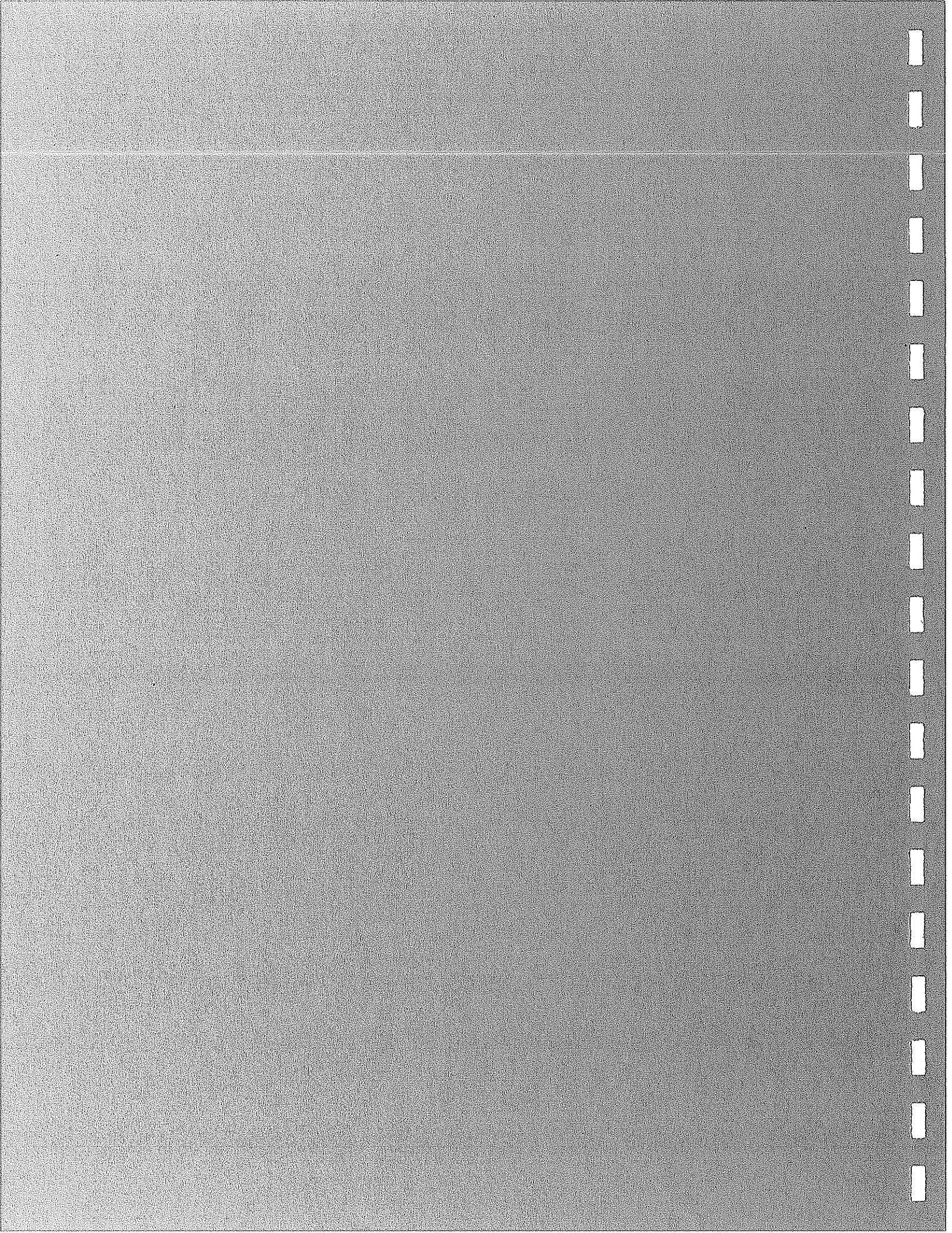
Item	40	45	50
<b>AGRICULTURE</b>			
Tomato Production Land (acres)	339	339	339
Gross Value/ac			
Rent			
NOI			
Cap Rate			
Williamson Act AV/ac			
Total Estimated Tomato AV	1,291,295	1,291,295	1,291,295
Wheat Production Land (acres)			
Gross Value/ac			
Rent			
NOI			
Cap Rate			
Williamson Act AV/ac			
Total Estimated Tomato AV	1,500,223	1,500,223	1,500,223
Total Agricultural AV	2,791,518	2,791,518	2,791,518
Total Property Tax @	27,915	27,915	27,915
County's Share of Property Tax @	3,545	3,545	3,545
NPV of Property Tax @			



ECONOMIC & PLANNING SYSTEMS

EPS

APPENDIX B:  
REAL ESTATE TRANSACTION DATA



**Table B-1**  
**Agricultural Land Value Analysis**  
**Yolo Gravel Study**

Parcel No.	Land Use	Lot Size	Total Assessed Value (1)	Total Sales Price (2)	Price/Acre (3)	Sales Date	Location Indicator
<u>Sale 1 (Multi-Parcels)</u> 048-140-05      Range-Low-Open/ Not By-Pass 048-140-07      Range-Low-Open/ Not By-Pass	373.0 298.0	\$55,441 \$55,441	\$1,500,500 \$1,500,500	2,236 2,236	06/26/90 06/26/90	OUTSIDE; West of area boundary. OUTSIDE; West of area boundary.	
<u>Sale 2 (Multi-Parcels)</u> 049-150-06      Row Crop III&IV Irrigated Land 049-150-27      Row Crop III&IV Irrigated Land	35.1 338.8	\$994,912 \$994,912	\$845,500 \$845,500	2,261 2,261	07/15/87 07/15/87	INSIDE; West of Highway 505. INSIDE; West of Highway 505; Adjacent to Creek.	
<u>Sale 3</u> 049-140-21      Row Crop III&IV Irrigated Land	19.6	\$145,000	\$145,000	7,383	07/01/94	UNMARKED; parcel page INSIDE, West of Highway 505.	
<u>Sale 4 (Multi-Parcels)</u> 049-150-14      Almond Orchard 049-150-15      Almond Orchard	14.0 13.6	\$297,834 \$297,834	\$57,000 \$57,000	2,065 2,065	10/29/93 10/29/93	UNMARKED; parcel page INSIDE and OUTSIDE, close to western area boundary. UNMARKED; parcel page INSIDE and OUTSIDE, close to western area boundary.	
<u>Sale 5 (Multi-Parcels)</u> 049-470-06      Rolling Land/ Irrigated 049-470-07      Rolling Land/ Irrigated	13.9 2.0	\$89,464 \$89,464	\$20,000 \$20,000	1,258 1,258	06/24/93 06/24/93	UNMARKED; parcel page INSIDE and OUTSIDE, close to western area boundary. UNMARKED; parcel page INSIDE and OUTSIDE, close to western area boundary.	
<u>Sale 6</u> 049-470-08      Almond Orchard	9.1	\$215,772	\$198,000	21,734	01/30/90	UNMARKED; parcel page INSIDE and OUTSIDE, close to western area boundary.	
<u>Sale 7</u> 025-290-08      Row Crop I&II Irrigated Land	40.0	\$95,034	\$140,000	3,500	11/17/89	INSIDE; East of Highway 505.	
<u>Sale 8 (Multi-Parcels)</u> 025-350-31      Row Crop III&IV Irrigated Land 025-350-33      Row Crop III&IV Irrigated Land	3.2 18.3	\$162,719 \$162,719	\$140,000 \$140,000	6,500 6,500	05/07/87 05/07/87	UNMARKED; parcel page INSIDE, East of Highway 505. UNMARKED; parcel page INSIDE, East of Highway 505.	
<u>Sale 9</u> 025-310-01      Walnut Orchard	26.9	\$305,465	\$200,000	7,435	07/13/92	OUTSIDE; Northeast of area boundary.	
<u>Sale 10 (Multi-Parcels)</u> 025-310-20      Row Crop I&II Irrigated Land 025-310-21      Waste Land/ Dry Land Not By-Pass	22.9 6.7	\$58,849 \$58,849	\$137,500 \$137,500	4,653 4,653	05/11/95 05/11/95	INSIDE; East of Highway 505; adjacent to Creek. INSIDE; East of Highway 505.	
<u>Sale 11</u> 025-450-05      Row Crop III&IV Irrigated Land	184.0	\$301,959	\$112,000	609	04/18/96	INSIDE; East of Highway 505.	
<u>Sale 12</u> 025-130-16      Walnut Orchard	22.0	\$306,041	\$285,000	12,955	09/28/90	INSIDE; East of Highway 505.	
<u>Sale 13</u> 025-340-07      Row Crop I&II Irrigated Land	84.0	\$518,663	\$150,000	1,786	08/05/86	INSIDE; East of Highway 505; adjacent to Creek.	
<u>Sale 14</u> 025-330-05      Prune Orchard	20.0	\$129,016	\$125,000	6,250	08/31/92	INSIDE; East of Highway 505.	

**Table B-1**  
**Agricultural Land Value Analysis**  
**Yolo Gravel Study**

Parcel No.	Land Use	Lot Size	Total Assessed Value (1)	Total Sales Price (2)	Price/Acre (3)	Sales Date	Location Indicator
<b>Sale 15 (Multi-Parcel)</b>							
025-330-14	Row Crop I&II Irrigated Land	153.0	\$488,776	\$360,000	1.549	07/26/94	OUTSIDE; East of area boundary.
025-330-16	Row Crop I&II Irrigated Land	79.4	\$488,776	\$360,000	1.549	07/26/94	OUTSIDE; East of area boundary.
<b>Sale 16</b>							
025-191-28	Row Crop III&IV Irrigated Land	21.0	\$150,000	\$75,000	3.571	08/01/95	INSIDE; East of Highway 505.
<b>Sale 17</b>							
048-210-04	Almond Orchard	33.0	\$261,684	\$260,000	7.879	04/02/87	INSIDE; West of Highway 505.
<b>Sale 18 (Multi-Parcel)</b>							
025-340-03	Row Crop I&II Irrigated Land	0.4	\$3,016	\$150,000	178.571	08/05/86	UNMARKED; parcel page INSIDE and OUTSIDE, close to eastern area boundary.
025-340-04	Row Crop I&II Irrigated Land	0.4	\$3,016	\$150,000	178.571	08/05/86	UNMARKED; parcel page INSIDE and OUTSIDE, close to eastern area boundary.

(1) In cases where sales were multi-parcel sales, total assessed value given is the total assessed value of all parcels included in the sale. The total assessed value can be compared to the total sales price, which represents the total sales price of all parcels involved in the sale.

(2) The price given is the total sales price; some sales were multi-parcel sales.

(3) Price per acre is the average price per acre for the land; if the sale was a multi-parcel sale, the total sales price was divided by the total acreage of all parcels included in the sale.

Sources: Dataquick; Economic & Planning Systems, Inc.

**Table B-1a**  
**List of Assessor Parcel Numbers in Planning Area**  
**Cache Creek Economic Analysis**

<b>Assessor Parcel Numbers</b>			
<b>Map Book: 025</b>	<b>Map Book: 048</b>	<b>Map Book: 049</b>	
025-120-06	025-340-23	048-140-19	049-040-03
025-120-07	025-340-24	048-140-20	049-040-05
025-120-13	025-340-25	048-140-22	049-040-06
025-120-16	025-340-29	048-190-08	049-040-07
025-120-17	025-340-30	048-190-09	049-040-07
025-120-32	025-340-32	048-190-10	049-040-08
025-120-35	025-350-01	048-190-12	049-040-08
025-120-38	025-350-04	048-190-13	049-040-09
025-130-01	025-350-10	048-190-14	049-050-04
025-130-02	025-350-14	048-210-01	049-050-07
025-130-08	025-350-15	048-210-03	049-050-10
025-130-16	025-350-16	048-210-04	049-060-01
025-130-17	025-350-19	048-210-05	049-060-02
025-130-26	025-350-20	048-210-06	049-060-07
025-130-27	025-350-26	048-210-08	049-060-11
025-130-28	025-350-28	048-210-10	049-070-01
025-130-29	025-350-30	048-210-11	049-070-04
025-130-32	025-350-32	048-220-02	049-070-05
025-130-73	025-350-35	048-220-03	049-070-06
025-130-75	025-360-13	048-220-16	049-070-08
025-191-28	025-360-16	048-220-17	049-070-09
025-290-02	025-360-18	048-470-10	049-070-11
025-290-04	025-360-20		049-070-12
025-290-06	025-360-20		049-070-13
025-290-07	025-360-21		049-120-01
025-290-08	025-360-26		049-120-02
025-290-12	025-360-37		049-120-03
025-290-13	025-360-39		049-120-05
025-290-16	025-360-40		049-120-06
025-290-17	025-360-41		049-120-07
025-300-02	025-360-42		049-120-08
025-300-04	025-360-43		049-120-09
025-300-07	025-360-44		049-120-16
025-300-08	025-360-46		049-120-17
025-300-16	025-360-47		049-130-01
025-300-22	025-360-48		049-130-05
025-300-25	025-360-49		049-130-06
025-300-26	025-360-52		049-130-24
025-300-30	025-360-54		049-130-27
025-300-33	025-360-55		049-140-24
025-310-10	025-430-01		049-140-28
025-310-20	025-430-01		049-140-30
025-310-22	025-430-02		049-140-32
025-310-23	025-430-03		049-150-23
025-310-28	025-430-08		049-150-40

**Table B-1a**  
**List of Assessor Parcel Numbers in Planning Area**  
**Cache Creek Economic Analysis**

<b>Assessor Parcel Numbers</b>		
<b>Map Book: 025</b>	<b>Map Book: 048</b>	<b>Map Book: 049</b>
025-330-03	025-440-09	049-220-15
025-330-04	025-440-16	049-220-16
025-330-05	025-440-17	049-470-11
025-330-08	025-440-41	049-470-18
025-330-21	025-440-42	
025-330-22	025-440-43	
025-340-01	025-450-01	
025-340-07	025-450-05	
025-340-08	025-450-07	
025-340-10	025-450-14	
025-340-11	025-450-15	
025-340-12	025-450-16	
025-340-16	025-450-17	

Sources: ECHOE Map Publishing Co.'s Yolo County California  
1994 Agri-Land Property Ownership Maps; Economic & Planning  
Systems, Inc.

**Table B-2**  
**Rural Residential Land Value Analysis**  
**Yolo Gravel Study**

Parcel No.	Land Use	Lot Size	Sales Price	Price/Acre	Sales Date	Location Indicator
<u>Sale 1</u> 049-130-11	Rural Residential/ 1 Residence	8.2	\$60,000	\$7,317	02/10/86	UNMARKED; parcel page INSIDE
<u>Sale 2 (Multi-Parcel)</u> 049-130-16 049-130-18	Rural HS 0-5 AC VAC/FRL RESDN Rural Residential/ 1 Residence	4.1 0.7	\$135,000 \$135,000	\$28,096 \$28,096	12/31/86 12/31/86	UNMARKED; parcel page INSIDE UNMARKED; parcel page INSIDE
<u>Sale 3</u> 049-140-11	Rural Residential/ 1 Residence	4.9	\$179,000	\$36,456	12/26/89	UNMARKED; parcel page INSIDE
<u>Sale 4</u> 049-140-15	Rural Residential/ 1 Residence	0.9	\$77,000	\$90,588	09/01/89	UNMARKED; parcel page INSIDE
<u>Sale 5</u> 049-150-43	Vacant R1/ Undeveloped	13.5	\$220,000	\$16,345	08/26/92	UNMARKED; parcel page INSIDE and OUTSIDE, close to south-western area boundary.
<u>Sale 6</u> 049-470-15	Rural HS W/MSC IMPROVEMENTS	0.3	\$50,000	\$172,414	09/17/90	UNMARKED; parcel page INSIDE and OUTSIDE, close to western area boundary.
<u>Sale 7</u> 025-350-29	Rural Residential/ 1 Residence	4.3	\$90,000	\$21,176	06/05/85	UNMARKED; parcel page INSIDE
<u>Sale 8</u> 025-440-08	Rural Residential/ 1 Residence	1.7	\$185,000	\$107,433	08/10/90	UNMARKED; parcel page INSIDE
<u>Sale 9</u> 025-120-29	Rural HS 5-20AC VAC/FRL RESDN	12.9	\$125,000	\$9,697	01/10/95	UNMARKED; parcel page INSIDE
<u>Sale 10</u> 025-120-30	Rural Residential/ 1 Residence	5.0	\$175,000	\$35,000	12/09/91	UNMARKED; parcel page INSIDE
<u>Sale 11</u>						

**Table B-2**  
**Rural Residential Land Value Analysis**  
**Yolo Gravel Study**

Parcel No.	Land Use	Lot Size	Sales Price	Price/Acre	Sales Date	Location Indicator
025-130-78	Rural HS 0-5AC VAC/RRL RESDTI	8.3	\$425,000	\$51,515	04/04/91	UNMARKED; parcel page INSIDE
<u>Sale 12</u> 025-191-02	Rural Residential w/ Secondary Uses	8.2	\$235,000	\$28,764	11/06/87	UNMARKED; parcel page INSIDE
<u>Sale 13</u> 025-191-08	Rural Residential/ 1 Residence	5.0	\$275,000	\$55,556	08/22/91	UNMARKED; parcel page INSIDE
<u>Sale 14</u> 025-191-16	Rural HS 0-5AC VAC/RRL RESDTI	1.5	\$14,000	\$9,333	06/23/86	UNMARKED; parcel page INSIDE
<u>Sale 15</u> 025-191-27	Rural Residential/ 1 Residence	5.1	\$102,000	\$19,961	06/06/85	UNMARKED; parcel page INSIDE
<u>Sale 16</u> 025-191-31	Rural Residential/ 1 Residence	1.0	\$127,500	\$127,500	06/08/94	UNMARKED; parcel page INSIDE
<u>Sale 17</u> 025-191-36	Rural Residential/ 1 Residence	2.0	\$72,500	\$36,250	02/28/86	UNMARKED; parcel page INSIDE
<u>Sale 18</u> 025-191-39	Rural HS 0-5AC VAC/RRL RESDTI	10.0	\$200,000	\$20,000	03/29/96	UNMARKED; parcel page INSIDE
<u>Sale 19</u> 025-191-46	Taxable Mobile Home/RRL RESDTI	5.0	\$303,000	\$60,359	05/23/95	UNMARKED; parcel page INSIDE
<u>Sale 20</u> 025-191-60	Taxable Mobile Home/ RRL RESDN	5.0	\$105,000	\$21,000	12/16/94	UNMARKED; parcel page INSIDE
<u>Sale 21</u> 025-191-64	Rural Residential/ 2+ Residence	5.0	\$55,000	\$11,000	12/23/87	UNMARKED; parcel page INSIDE

**Table B-2**  
**Rural Residential Land Value Analysis**  
**Yolo Gravel Study**

Parcel No.	Land Use	Lot Size	Sales Price	Price/Acre	Sales Date	Location Indicator
<u>Sale 22</u> 049-170-01	Rural Residential/ 1 Residence	8.3	\$180,000	\$21,713	06/30/89	OUTSIDE
<u>Sale 23</u> 048-040-11	Rural Residential/ 1 Residence	9.4	\$180,000	\$19,251	09/25/91	OUTSIDE
<u>Sale 25</u> 048-060-12	Rural Residential/ 1 Residence	10.0	\$297,000	\$29,700	12/28/90	OUTSIDE
<u>Sale 26</u> 048-080-11	Rural HS 0-5 AC VAC/RRL RESDT	5.1	\$169,000	\$33,465	11/09/95	OUTSIDE
<u>Sale 26</u> 048-090-14	Rural Residential/ 1 Residence	10.0	\$220,000	\$22,000	04/25/90	OUTSIDE
<u>Sale 27</u> 048-090-15	Rural Residential/ 1 Residence	10.0	\$105,000	\$10,500	10/30/86	OUTSIDE
<u>Sale 28</u> 048-090-17	Rural Residential/ 1 Residence	10.0	\$115,000	\$11,500	07/28/87	OUTSIDE
<u>Sale 29</u> 048-100-01	Rural Residential/ 1 Residence	3.3	\$190,000	\$56,886	02/10/94	OUTSIDE
<u>Sale 29</u> 048-100-17	Rural HS 5-20 AC VAC/RRL RESDN	7.4	\$50,000	\$6,720	08/15/90	OUTSIDE
<u>Sale 30</u> 027-240-01	Rural Residential/ 1 Residence	20.2	\$170,000	\$8,408	01/19/90	OUTSIDE
<u>Sale 31</u>						

**Table B-2**  
**Rural Residential Land Value Analysis**  
**Yolo Gravel Study**

Parcel No.	Land Use	Lot Size	Sales Price	Price/Acre	Sales Date	Location Indicator
027-240-02	Rural Residential/ 1 Residence	20.5	\$177,727	\$8,687	01/22/88	OUTSIDE
<u>Sale 31</u> 027-160-08	Rural Residential/ 1 Residence	0.5	\$229,500	\$441,346	04/01/94	OUTSIDE
<u>Sale 32</u> 027-170-04	Rural Residential/ 1 Residence	2.5	\$142,500	\$57,692	07/30/93	OUTSIDE
<u>Sale 32</u> 027-170-06	Rural Residential/ 1 Residence	2.9	\$135,000	\$47,038	09/26/85	OUTSIDE
<u>Sale 32</u> 027-170-16	Rural Residential/ 1 Residence	1.4	\$225,000	\$160,714	03/29/93	OUTSIDE
<u>Sale 33</u> 027-170-31	Rural Residential/ 1 Residence	0.6	\$275,000	\$450,820	02/22/93	OUTSIDE
<u>Sale 34</u> 027-020-28	Labor Camp/ Rural Residential	2.0	\$90,000	\$45,000	09/15/92	OUTSIDE
<u>Sale 35</u> 025-250-18	Rural HS 0-5 AC VAC/FRL RESNT	11.9	\$95,000	\$7,983	03/27/86	OUTSIDE
<u>Sale 36</u> 050-020-18	Rural Residential/ 1 Residence	6.4	\$750,000	\$117,371	12/31/85	OUTSIDE
<u>Sale 37</u> 050-030-22	Rural HS W/MSC IMPROVEMENTS	0.5	\$22,000	\$47,826	07/27/92	OUTSIDE
Average for sales of parcels inside study area						
		5.4	\$152,857	\$28,565		

**Table B-2**  
**Rural Residential Land Value Analysis**  
**Yolo Gravel Study**

Parcel No.	Land Use	Lot Size	Sales Price	Price/Acre	Sales Date	Location Indicator
Average for sales of parcels outside study area						
	7.1	\$190,886	\$26,740			

Sources: Dataquick; Economic & Planning Systems, Inc.

**Table B-3**  
**Residential Sales Data: Greater Bay Area**  
**Cache Creek Economic Analysis**

City	Development Name	Adjacent Quarry Name	Street Name	Bdrms	Bath	Age	Sq. Ft.	Sales Price (1)
Oakland	Crestmont	Leona Quarry	Campus Drive	5	3	5	3,644	\$639,000
Oakland	Crestmont	Leona Quarry	Campus Drive	4	4	3	5,063	\$1,400,500
Oakland	Crestmont	Leona Quarry	Campus Drive	3	2	4	2,425	\$386,000
Oakland	Crestmont	Leona Quarry	Campus Drive	4	3	4	3,026	\$529,000
Oakland	Crestmont	Leona Quarry	Campus Drive	4	4	3	5,063	\$1,600,000
Oakland	Crestmont	Leona Quarry	Campus Drive	4	3	6	3,026	\$509,000
Oakland	Crestmont	Leona Quarry	Ridgemont Drive	4	3	8	2,509	\$459,000
Oakland	Crestmont	Leona Quarry	Ridgemont Drive	3	2	10	n/a	\$469,000
Oakland	Crestmont	Leona Quarry	Ridgemont Drive	3	2	7	1,885	\$350,000
Oakland	Crestmont	Leona Quarry	Ridgemont Court	3	2	9	2,212	\$360,000
Oakland	Crestmont	Leona Quarry	Ridgemont Drive	3	2	7	2,330	\$380,000
Oakland	Crestmont	Leona Quarry	Ridgemont Court	4	3	9	2,682	\$380,000
Oakland	Crestmont	Leona Quarry	Ridgemont Drive	3	2	7	1,860	\$395,000
Oakland	Crestmont	Leona Quarry	Ridgemont Court	3	2	9	2,710	\$407,500
Oakland	Crestmont	Leona Quarry	Ridgemont Court	4	3	9	2,659	\$409,900
Oakland	Crestmont	Leona Quarry	View Crest Drive	3	2	6	2,524	\$379,900
Oakland	Crestmont	Leona Quarry	View Crest Court	4	3	7	2,690	\$391,000
Oakland	Crestmont	Leona Quarry	View Crest Drive	4	3	6	2,453	\$410,000
Oakland	Crestmont	Leona Quarry	View Crest Drive	3	2	6	2,524	\$385,000
Oakland	Crestmont	Leona Quarry	View Crest Drive	3	2	9	2,524	\$399,000
Oakland	Crestmont	Leona Quarry	View Crest Drive	3	2	6	2,524	\$41,900
Sunol	n/a	Sunol Quarry	Foothill Road	3	2	33	1,616	\$249,500
Sunol	n/a	Sunol Quarry	Kilkare Road	4	3	5	4,400	\$799,900
Sunol	n/a	Sunol Quarry	Foothill Road	4	2	0	3,064	\$598,000
Sunol	n/a	Sunol Quarry	Foothill Road	2	1	99	1,640	\$175,000
Sunol	n/a	Sunol Quarry	Foothill Road	3	2	52	1,288	\$180,000
Sunol	n/a	Sunol Quarry	Kilkare Road	3	2	60	1,890	\$425,000
Sunol	n/a	Sunol Quarry	Kilkare Road	4	3	40	4,392	\$480,000
Sunol	n/a	Sunol Quarry	Kilkare Road	4	3	4	4,400	\$825,000
Sunol	n/a	Sunol Quarry	Foothill Road	3	2	40	1,288	\$260,000
Sunol	n/a	Sunol Quarry	Foothill Road	3	2	32	1,616	\$295,000
Sunol	n/a	Sunol Quarry	Kilkare Road	3	2	19	2,700	\$430,000
Sunol	n/a	Sunol Quarry	Kilkare Road	3	3	32	2,455	\$585,000
Pleasanton	n/a	Kaiser	Nichole Avenue	3	3	5	3,107	\$590,000
Pleasanton	n/a	Kaiser	Trenergy Drive	4	2	16	3,404	\$649,000
Pleasanton	n/a	Kaiser	Courtney Avenue	4	3	5	3,338	\$769,500
Pleasanton	n/a	Kaiser	Courtney Avenue	4	2	5	3,211	\$575,000
Pleasanton	n/a	Kaiser	Courtney Avenue	5	3	5	3,739	\$700,000
Livermore	Toppen	RMC Lonestar	Orion Way	3	2	22	2,135	\$283,950
Livermore	Toppen	RMC Lonestar	Orion Way	3	2	22	1,664	\$252,000
Livermore	Toppen	RMC Lonestar	Holmes Street	4	2	31	2,000	\$433,000
Livermore	Toppen	RMC Lonestar	Orion Way	3	2	22	1,664	\$260,000
Livermore	n/a	RMC Lonestar	Bell Avenue	4	2	28	2,407	\$258,900
Livermore	n/a	RMC Lonestar	Via del Sol	4	2	28	2,196	\$274,950
Livermore	n/a	RMC Lonestar	Rhea Way	4	2	5	33,412	\$475,000
Livermore	n/a	RMC Lonestar	Regulus Court	4	2	5	3,392	\$599,950
Livermore	n/a	RMC Lonestar	Mars Road	4	2	25	1,674	\$249,980
Livermore	n/a	RMC Lonestar	Bell Avenue	3	2	27	1,519	\$207,500
Livermore	n/a	RMC Lonestar	Via del Sol	4	2	21	1,928	\$224,500
Livermore	n/a	RMC Lonestar	Fontonett Avenue	3	2	28	1,518	\$227,000
Livermore	n/a	RMC Lonestar	Mars Road	3	2	22	1,466	\$229,000
Livermore	n/a	RMC Lonestar	Saturn Way	4	2	23	1,674	\$234,000
Livermore	n/a	RMC Lonestar	Via del Paz	3	2	16	1,753	\$247,000
Livermore	n/a	RMC Lonestar	Desconsado Avenue	4	3	15	1,950	\$260,000
Livermore	n/a	RMC Lonestar	Neptune Road	3	2	23	1,664	\$260,000
Livermore	n/a	RMC Lonestar	Saturn Way	4	2	23	2,510	\$284,000
Livermore	n/a	RMC Lonestar	Via del Sol	4	3	25	2,523	\$295,000
Livermore	n/a	RMC Lonestar	Alden Lane	4	2	7	3,454	\$410,000
Livermore	n/a	RMC Lonestar	Alden Lane	4	2	6	2,846	\$435,000
Livermore	n/a	RMC Lonestar	Rhea Way	4	3	6	3,332	\$452,000
Livermore	n/a	RMC Lonestar	Fontonett Avenue	4	3	5	3,243	\$460,700
Livermore	n/a	RMC Lonestar	Pulsar Avenue	4	3	6	3,304	\$470,000
Livermore	n/a	RMC Lonestar	Rhea Way	4	2	5	3,367	\$495,000

**Table B-3**  
**Residential Sales Data: Greater Bay Area**  
**Cache Creek Economic Analysis**

City	Development Name	Adjacent Quarry Name	Street Name	Bdrms	Bath	Age	Sq. Ft.	Sales Price (1)
Livermore	n/a	RMC Lonestar	Serenidad Street	3	2	27	1,500	\$219,500
Livermore	n/a	RMC Lonestar	Via del Sol	4	3	26	2,090	\$289,900
Livermore	n/a	RMC Lonestar	Lagrange Lane	4	3	7	2,582	\$429,950
Livermore	n/a	RMC Lonestar	Alden Lane	4	2	6	2,900	\$449,000
Livermore	n/a	RMC Lonestar	Rhea	4	2	5	3,412	\$478,950
Fremont	n/a	Alameda Creek Quarries	Isherwood Way	4	2	22	1,830	\$222,000
Fremont	n/a	Alameda Creek Quarries	Isherwood Way	3	2	22	1,579	\$215,000
Fremont	n/a	Alameda Creek Quarries	Isherwood Way	3	2	22	1,579	\$205,000
Fremont	n/a	Alameda Creek Quarries	Isherwood Way	3	2	23	1,579	\$219,950
Fremont	n/a	Alameda Creek Quarries	Harrisburg Avenue	3	2	14	1,939	\$289,000
Fremont	n/a	Alameda Creek Quarries	Harrisburg Avenue	3	2	14	1,939	\$299,000
Fremont	n/a	Alameda Creek Quarries	Harrisburg Avenue	3	2	14	1,939	\$319,877
Fremont	n/a	Alameda Creek Quarries	Barnard Drive	4	3	15	2,191	\$349,950
Fremont	n/a	Alameda Creek Quarries	Barnard Drive	4	3	15	2,659	\$364,888
Fremont	n/a	Alameda Creek Quarries	Barnard Drive	4	3	14	2,888	\$395,000
Fremont	n/a	Alameda Creek Quarries	Barnard Drive	3	2	11	1,939	\$330,000
Fremont	n/a	Alameda Creek Quarries	Barrington	3	3	5	1,466	\$242,000
Fremont	n/a	Alameda Creek Quarries	Barrington	3	3	7	1,466	\$245,000
Fremont	n/a	Alameda Creek Quarries	Barrington	3	3	6	1,466	\$260,000
Fremont	n/a	Alameda Creek Quarries	Barrington	3	2	5	1,650	\$284,950
Fremont	n/a	Alameda Creek Quarries	Barrington	2	2	6	1,376	\$228,500
Fremont	n/a	Alameda Creek Quarries	Barrington	3	3	6	1,466	\$246,000
Fremont	n/a	Alameda Creek Quarries	Barrington	3	3	5	1,466	\$246,875
Fremont	n/a	Alameda Creek Quarries	Barrington	3	3	6	1,466	\$252,500
Fremont	n/a	Alameda Creek Quarries	Barrington	3	3	7	1,466	\$260,000
Fremont	n/a	Alameda Creek Quarries	Barrington	2	2	5	1,650	\$290,000
Fremont	n/a	Alameda Creek Quarries	Dickens Court	3	2	20	1,500	\$259,500
Fremont	n/a	Alameda Creek Quarries	Reynolds Court	4	3	22	2,320	\$269,999
Fremont	n/a	Alameda Creek Quarries	Reynolds Court	4	3	22	2,320	\$279,950
Fremont	n/a	Alameda Creek Quarries	Reynolds Court	4	3	21	2,320	\$289,995

(1) Utilizes 1994 data.

Source: Multiple Sales Listings; Economic & Planning Systems, Inc.

