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Mail Stop 204
Reno, Nevada 89557-0105

UCED
University of Nevada, Reno
Nevada Cooperative Extension
Department of Applied Economics and Statistics
Industrial Fiscal Impact Model

User’s Manual

for Lincoln County, Nevada

Study Conducted by

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March 1996
Industrial Fiscal Impact Model

User’s Manual

for Lincoln County, Nevada

EXECUTIVE SUMMARY

Introduction

- Attracting a new industry or expanding an existing industry creates new employment opportunity and raises local income levels.

- New or expanded economic development brings many benefits but also costs are realized.

- The fiscal impact model is a partial budget analysis addressing the specific impacts of industrial location.

Industrial Fiscal Impact Model

- An industrial fiscal impact model was developed for Lincoln County to estimate the fiscal impacts of economic growth.

- The fiscal impact model derives impacts from industrial location in Lincoln County.

- The Lincoln County fiscal impact model is divided into five sections: state, county, municipality, special district, and school district. These sectors are further delineated into sub-sectors consisting of employment, income, tax and community service impacts.

- Input sheets are provided as well as default data for the analysis.
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</tr>
<tr>
<td>Considerations</td>
<td></td>
</tr>
</tbody>
</table>

**INDUSTRIAL FISCAL IMPACT MODEL USER’S MANUAL**
FOR LINCOLN COUNTY, NEVADA

Introduction

Small and rural communities often promote industrial development as a means of strengthening their local economy. Attracting a new industry or expanding an existing industry creates new employment opportunities and raises local income levels. Strengthening the local tax base and improving the community’s net fiscal position are often cited as major advantages of a new industry (Reinschmiedt et al. 1978). However, statistics presented in support of industrialization may reveal only the gross benefits of industrial development in terms of total numbers of employees, total payroll, gross value of output and similar aggregate data.

Towns and communities may overstate industrial benefits and understate added costs from a new development for several reasons. These include: (1) some of the plant’s payroll leaks out of the community through commuters; (2) multiplier effects are smaller than expected because residents tend to consume outside the community; (3) local government is unable to convert economic growth into tax revenues by giving too many concessions to new or relocating industry or because of state tax policies; and (4) increased demand for community services (thus increased costs) are not fully considered. Hence, negative fiscal impacts may be underestimated.

Given the rapid growth of the state of Nevada and its counties, development of a fiscal impact model to estimate potential impacts to local government budgets would be of interest to local decision makers. The fiscal impact model developed for Lincoln County is a partial budget analysis addressing the very specific problem of industrial location. Impacts are measured in terms of net dollars gained or lost. The fiscal impacts to Lincoln County are important to its planning efforts.
Therefore, the primary objective of this study is to discuss the operation and provide examples of the Lincoln County Fiscal Impact Model. Specific objectives are:

1. Discuss the Lincoln County Fiscal Impact Model; and
2. Complete hypothetical examples of business developments in Lincoln County by employing the fiscal impact model.

A more detailed analysis of fiscal trends, economic development, and the fiscal impact model are presented in a referenced study by Lopez et al. (1996).

**FISCAL IMPACT MODEL**

In the past, new developments have been evaluated by the benefits that have occurred in a county. Evaluation based solely on benefits overlooks other important impacts associated with new developments. Costs, for example, are an impact which should be considered. Although a new development brings new benefits, such as higher ad valorem taxes and other revenue sources, the development will incur costs that will borne by others, such as increased costs in police protection and/or road maintenance. Therefore, the question that needs to be addressed is whether the benefits from the new development outweigh the associated costs.

Today, local governments are increasingly faced with the problem of limited revenue enhancement while maintaining budgets. Local government expenditure patterns are continually under scrutiny by taxpayers. For this reason, public officials request information about the fiscal benefits of a particular new development.

This model has been developed to provide County staff, planning commissioners and County commissioners with the tools required to assist in the evaluation of proposed developments on Lincoln County’s fiscal stability. Through the input of county data, along with data on a given development, fiscal projections can be made by using a series of formulae built into the model.

Various development scenarios can be evaluated by simply changing one or more of the initial inputs. For example, the location of a development will cause different impacts depending upon an area's tax rates.
Once the relative fiscal impact of a particular development is estimated, better decisions on possible economic incentives, or potential exactions, can be made. While every development does not have to be fiscally positive for the County, it is important that the overall development pattern is properly balanced in terms of County services required and revenues generated.

**Methodological Approach Taken**

Investigating past fiscal impact models, the Lincoln County Fiscal Impact Model had to have the following attributes:

1. The ability to be reduced to a worksheet format;
2. A structure that lends itself to characterizing the geographical area of interest;
3. Modest and obtainable data requirements with a minimum amount of user estimated inputs;
4. A structure that can be understood by the user;
5. The ability to be validated for accuracy and subsequent fine-tuning.

The “pen and pad” approach by Gordon (1982) was consequentially singled out for consideration since it came the nearest to meeting the criteria. Another model closely studied was the Business Impact Model (Allen et al. 1990). Other fiscal impact models are discussed in Appendix D. This Business Impact Model was delineated into its fundamental steps and converted to a worksheet framework. The worksheets of the first two models were quite detailed and would require a great amount of user generated inputs. Other fiscal impact models were eliminated because either they were too industry specific or so “highly computerized” as to render them unadaptable.

The worksheet that was developed is a synthesis of the two former models mentioned above. The synthesized model was simplified to eliminate user “guesstimates” as much as possible while still retaining an acceptable degree of relevance and accuracy. After completing a data needs questionnaire (Appendix A), the user is prepared to calculate a business’ impacts using the appropriate multipliers. Also, a housing development questionnaire (Appendix B) was developed to investigate impacts of new housing developments in Lincoln County from industrial
development. The model only yields a single period estimate. The impact over a period of time might be examined by applying appropriate assumptions about an industry’s growth rate.

**Impacts Considered**

The Lincoln County Industrial Fiscal Impact Model is an input-output based worksheet with logical step-by-step procedures for estimating the impacts of a business facility on employment, income, and tax revenues in the state, county, city, towns, special districts and school district. According to a Bureau of Labor Statistics Consumer Survey, approximately 35 percent of an individual’s disposable income is spent on goods generating sales tax revenues (Woods and Jones, 1982). Therefore, sales taxes are calculated by multiplying 35 percent of an area’s estimated disposable income by the area’s sales tax rate.

**Generation of Multipliers**

Income and employment multipliers are developed from an industry sector input-output model for a given Nevada county. The model is a semi-survey model basing the initial county input-output model on results of the non-survey microcomputer IMPLAN model (Alward et al., 1989). The initial model is augmented by primary data information for specific economic sectors in the agricultural, mining and casino gaming sectors. Indirect and induced sales and income taxes are derived by applying indirect and induced income estimates.

The Lincoln County Industrial Fiscal Impact Model is usable and straight forward. Listed in Appendix C is the data required to estimate business impacts on the state, county and local governments. Much of the data must be provided by the user based upon their knowledge of the locality. Other data are taken from secondary sources. Default values for both the geographical area and industry are provided in appropriate tables.

**Summary**

The Lincoln County Industrial Fiscal Impact Model worksheet is divided into six sections: state, county, school district, city, towns and special districts. These sectors are further divided into sub-sectors consisting of employment, income, tax and community service impacts. The Lincoln County Fiscal Impact Model input sheet (Appendix A) was completed using information
provided by local officials through a data needs questionnaire. Default data can be obtained for income and employment multipliers. Impacts are quickly estimated by using the appropriate data into separate parts of the worksheet and sequentially working through each step. All estimates assume one full year of operations.

MODEL OVERVIEW AND STRUCTURE

To operate the model, an IBM or compatible personal computer is required, along with a copy of Lotus 1-2-3, Release 4 or a newer version. This model has been created as a template on a Lotus 1-2-3 spreadsheet. Therefore, anyone familiar with the basics of Lotus will be able to use the model will little difficulty.

Once the data has been provided to the model, a predefined set of formulae will generate the fiscal impact analysis. To evaluate a different scenario, the user merely adjusts one or more of the input values and the program generates fiscal impacts based on the adjusted input.

The model is arranged in a series of pages, each containing a number of sections. Each page represents a level of government. The next to last page is a summary of the fiscal impact totals. The final page is a breakdown of the SCCRT.

STATE LEVEL

The state page of the model derives state government impacts. It shows the impacts associated with new development that the state will bear. Costs are not detailed, however, state revenues are derived.

COUNTY LEVEL

The next page derives county government impacts. This page shows both detailed revenues and costs associated with the new development for the county. The page first estimates employment impacts in the county. Through multipliers generated from IMPLAN, an employment impact is estimated. If a firm locates in an area, the jobs created (direct impacts) by the new firm lead to additional jobs caused by indirect and induced impacts. These new jobs will attract people to the area and/or surrounding area, i.e., population increase.
The next section incorporates the income derived from the new firm. Again, through IMPLAN multipliers, the income earned by employees in the firm leads to additional incomes in the county. However, income leakages do occur because of employees living outside the county. These are accounted for in this model.

The next section adds the housing impacts. The model uses the employment figure required to build new housing which is demanded by new development. Again, employment and income multipliers are used to derive total impacts from housing construction. These impacts cause further population increases in the area. The population increases due to housing development are added to the population growth caused by other new developments to estimate total population growth in the study area.

The following section details the expenses of the county. Per capita expenses were calculated for each of the county service categories. These per capita cost values were calculated from variable operating costs. These operating costs do not have wages and benefits in their values. Additional personnel required by a new development are added to the costs as deemed appropriate. These values are multiplied by the estimated increase in population to derive expenditure increases. In each county service category an investment cost can be calculated as well. If the new population requires new investment, such as a new building, equipment, etc., the investment cost is estimated through the model. The total cost for each county service category is added to derive a total cost to the county government from development.

Next, the increase in property values are estimated for the county (Total County Property Base). From this calculation, an assessed value is derived. Following this an income base is estimated. These calculated values are used for tax calculations.

The first revenue calculated is the Basic City County Relief Tax (BCCRT). This is one-half of a percent of the total sales tax base. After the BCCRT is calculated the Supplemental City County Relief Tax (SCCRT) is estimated. The estimated SCCRT is the second tier of distribution, the distribution within the county which involves estimating changes in property values, that in turn derive different assessment values. User fees are calculated next. User fees are a per capita figure multiplied by the new population. Finally, property tax revenues are estimated. Property tax revenues are calculated by multiplying the total county property base by the tax rate. These revenues are added together to estimate a Total County Tax Revenue. If tax
incentives are used to locate a firm, then the incentive costs are subtracted from Total County Tax Revenues to derive a Total Net County Tax Revenue.

Subtracting Total County Costs from Total County Revenues, the county government fiscal impacts are derived.

**SCHOOL DISTRICT LEVEL**

The School District fiscal impacts are calculated in a similar manner to county impacts. Both employment and income are considered for the School District. School Districts do have expenses, however, school districts have fewer categories than does the county government.

Differences between County and School District calculations occur with tax impacts, or revenues. The number of new students attributable to the new industrial development are initially computed by multiplying a student to population ratio by the new county population from the industrial development. The School District Basic Support is calculated next. School District Basic Support is the per pupil amount of support for operating expenses in Lincoln County as calculated by the state. Lincoln County’s School District Basic Support is calculated by multiplying Basic Per Pupil Support by the number of new students.

The first revenue calculation for the Lincoln County School District is the Local School Support Tax (LSST). LSST is calculated following procedures outlined for the county’s BCCRT revenues. Sales tax revenues for the school district are calculated by multiplying the taxable sales in the county from the new development by the school district’s sales tax rate of 2.25%.

To derive revenues to the school district from property taxes, total assessed value from the new development is multiplied by the school district’s property tax rate. These calculations derive school district revenues from property taxes.

A unique feature for school districts is the School District Basic Support value. From the School District Basic Support, the State Distributive Fund is calculated. The State Distributive Fund is derived by subtracting revenues from the LSST and school district property tax revenues from the School District Basic Support. The State Distributive Fund to the Lincoln County School District is the calculated remainder. Net School District Revenues from the new development are the sum of LSST, total school property tax revenues, and the State Distributive Fund less any tax incentives given to the firm to locate in Lincoln County.
The net fiscal impacts to the school district are derived by subtracting total costs from total revenues.

**CITY LEVEL**

The Caliente page of the fiscal impact model is exactly the same as the county page. Income and employment are both considered for the firm development. The revenues are calculated in a similar fashion as in the county page. The only difference between the Caliente page and the County page is that Caliente does not have as extensive expenses as does the county.

**TOWN LEVEL**

Three pages of the fiscal impact model are for the three towns in Lincoln County: Alamo, Panaca and Pioche. These three pages are the same as the County Level page, except income is not considered. Since towns do not receive any tax revenues from income, the income sectors are not used. The first two sections on these pages address employment impacts. The following section derives expenses for towns. Each town has its own expenses. They are calculated in the same manner as county expenses.

In Section IV town revenues are calculated. As stated earlier, a town does not receive revenues from income generated, thus no sales taxes are calculated in this section. Thus, towns do not receive BCCRT. All other calculations for the towns follow procedures outlined in the county section.

The final section derives net town fiscal impacts by subtracting Total Costs from Total Revenue.

**SPECIAL DISTRICT**

Lincoln County has six special districts. For the Lincoln County fiscal impact model, a separate page was developed for each special district. The fiscal impacts for each special district follows the same procedures as detailed in the Town Section. A unique aspect for a special district is that its SCCRT allocation may be impacted even though a new development does not occur in the special district’s boundaries. That is, SCCRT is allocated on assumed valuation of
new properties. If a new development occurs within a special district, its SCCRT revenues may increase because of the new assessed property. If the development does not occur in the special district’s boundaries, its share of SCCRT may decrease because the new assessed valuation occurred outside its boundaries.

**SCCRT: (SUPPLEMENTAL CITY-COUNTY RELIEF TAX)**

This tax is a state mandated county-imposed tax to partially replace local property taxes. Distribution is by a formula based on local entity assessed value and 1981 property tax rates. Thus, areas with a high property tax, such as a GID, would receive a high SCCRT.

In 1991, AB 104 changed the formula to allocate SCCRT to counties. The formula first allocates a fixed amount to specific counties, called guaranteed counties, then allocates the balance to other counties, called exporting counties, based upon their relative proportion of sales tax collected. Lincoln County is designated as a guaranteed county and receives a specified amount of SCCRT. Since the SCCRT is distributed within Lincoln County on the basis of assessed value, areas which are growing rapidly receive a higher share of SCCRT. Conversely, since the amount of SCCRT is fixed, an area that is not growing or not growing as rapidly as other areas will lose part of their share of SCCRT. If assessed value is constant while other areas are increasing, the area with no growth (increased assessed value) will be impacted, since it will lose some of the SCCRT that it had received before the industrial development.

**DEFAULT VALUES**

The default computer page of the Lincoln County Fiscal Impact Model contains the default values used in calculations throughout the model. The Default page contains: Multipliers; Employee Income Spending Patterns; Population Per Employee; Pupils Per Population; Sales Tax Rates; Property Tax Rates; Per Capita Operating Costs; Per Capita Capital Costs; Per Capita User Fees and State Per Capita Costs. These figures are calculated outside of the model and are based upon Lincoln County’s demographics, local government budgets and other state figures.
These default values, however, are not permanent. If these values are disputed, negotiations between the applicant and government officials may be utilized to arrive at figures that satisfy both parties.

**EXAMPLE APPLICATIONS OF FISCAL IMPACT MODEL**

To demonstrate how the Lincoln County Fiscal Impact Model can help decision makers, the model is applied to two different hypothetical development scenarios in Lincoln County. Assume further that local decision makers complete the data needs questionnaire and the relevant multipliers were obtained from Nevada Cooperative Extension.

The two hypothetical scenarios are designed to show different fiscal impacts in Lincoln County from alternative development strategies. In the first scenario, it is assumed that a manufacturing plant locates in Lincoln County. Also it is assumed that the manufacturing plant encompasses the town of Alamo and three special districts: Alamo Sewer and Water GID, Lincoln County Hospital District and Lincoln County T.V. District. The firm will hire 100 new employees with 91 percent employed from the county. Payroll will be $3,500,000. Of the county workers in the new plant, it is assumed they will spend 70 percent of their sales taxable income in Lincoln County.

With these new employees, it is assumed that 33 new homes will be built. It is further assumed that the average value of each house will be $150,000 requiring 35 housing construction jobs. It is also assumed that 75 percent of the housing construction jobs will be filled by in-county residents. As to location of the new homes, it is assumed that all 33 homes will be in Lincoln County, the town of Alamo, Alamo Sewer and Water GID, Lincoln County Hospital District, and Lincoln County T.V. District.

As for public service costs, the costs for these scenarios will cover only operating expenses. Additional labor or capital capacity need are not included for these three scenarios. Additions of personnel and capital capacity are classified as marginal costs and are different for each particular project.

The second scenario is the same as the first with 100 new employees, however, only 75 percent come from Lincoln County and housing construction employment is reduced 75 percent.
Results of Scenario I

Under the first scenario, a manufacturing plant is located within Lincoln County in the town of Alamo, encompassing three special districts as enumerated in the input sheet (Table 1). The input sheet enumerates the assumptions of Scenario I as noted in the previous section. Also, Table 2 shows the input page of housing developments for the 100 new employees.

Results of the fiscal impact model for Scenario I are shown in Tables 3 and 4. Table 3 shows the reallocation of SCCRT in Lincoln County from the hypothetical project. Table 4 shows the fiscal impact model results. Because the allocation of SCCRT funds are based on value of assessments within government jurisdictions, the government entities which did not directly participate in the Scenario I development are nonetheless impacted.

For this hypothetical example, the town of Alamo realized gains of approximately $13,000 from location of the manufacturing plant and housing in Alamo. However, the town of Caliente realizes a loss of revenues in the amount of $1440. The overall impact for Lincoln County government was favorable at $157,741. However, these results were derived for only average costs. The marginal costs of added personnel or capacity expansion of community services were not addressed in this analysis.

Results of Scenario II

For scenario II, the same manufacturing plant will locate within Lincoln County in the town of Alamo. However, for Scenario II only 75 percent of the manufacturing work force will be from Lincoln County, a reduction from Scenario I assumption of 91 percent, and housing employment and income is reduced by 75 percent.

Tables 5 and 6 show the input sheets used for the second scenario. Notice that the percentage of county workforce is reduced as well as number of workers and their income for the housing project. Results of the Scenario II are shown on Tables 7 and 8. Table 7 shows the reallocation of SCCRT funds, which does not change from scenario I. However, Table 8 shows the total impact analysis where some changes are realized. Because of less housing employment and fewer people coming from outside the county with housing construction, the positive impacts
to the town of Alamo are greater. Also, the overall impacts are slightly lower due to less generated sales taxes from fewer construction workers.
### Location of Firm

Place a "1" in the blank if the firm is going to be located in the area.

<table>
<thead>
<tr>
<th>Location</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Caliente</td>
<td></td>
</tr>
<tr>
<td>Alamo</td>
<td>1</td>
</tr>
<tr>
<td>Panaca</td>
<td></td>
</tr>
<tr>
<td>Pioche</td>
<td></td>
</tr>
<tr>
<td>Alamo Sewer and Water GID</td>
<td></td>
</tr>
<tr>
<td>Lincoln County Hospital District</td>
<td>1</td>
</tr>
<tr>
<td>Lincoln County T.V. District</td>
<td>1</td>
</tr>
<tr>
<td>Pahranagat Valley Fire District</td>
<td></td>
</tr>
<tr>
<td>Pahranagat Valley T.V. District</td>
<td></td>
</tr>
<tr>
<td>Pioche Fire District</td>
<td></td>
</tr>
</tbody>
</table>

### Type of Firm

(Place a "1" next to the industry which best resembles the new firm.)

<table>
<thead>
<tr>
<th>Industry</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock Production</td>
<td></td>
</tr>
<tr>
<td>Alfalfa Hay Production</td>
<td></td>
</tr>
<tr>
<td>Other Hay Production</td>
<td></td>
</tr>
<tr>
<td>Gold Mining</td>
<td></td>
</tr>
<tr>
<td>Other Mining</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td>1</td>
</tr>
<tr>
<td>Transportation and Communication</td>
<td></td>
</tr>
<tr>
<td>Utilities</td>
<td></td>
</tr>
<tr>
<td>Trade</td>
<td></td>
</tr>
<tr>
<td>Eating, Drinking and Lodging</td>
<td></td>
</tr>
<tr>
<td>Finance, Insurance and Real Estate</td>
<td></td>
</tr>
<tr>
<td>Services</td>
<td></td>
</tr>
<tr>
<td>Hotels, Gaming and Recreation</td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td></td>
</tr>
<tr>
<td>Local Government</td>
<td></td>
</tr>
<tr>
<td>General Multiplier (Housing Development)</td>
<td></td>
</tr>
</tbody>
</table>

### A: FIRM EMPLOYMENT

<table>
<thead>
<tr>
<th>Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of New Employees</td>
<td>100</td>
</tr>
<tr>
<td>Percentage from State</td>
<td>97%</td>
</tr>
<tr>
<td>Percentage from County</td>
<td>91%</td>
</tr>
</tbody>
</table>

### B: FIRM EMPLOYMENT INCOME

<table>
<thead>
<tr>
<th>Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Payroll (Dollars)</td>
<td>$3,500,000</td>
</tr>
</tbody>
</table>

Table 1. Input Form for Scenario I
### C: TAXES

**Property**

<table>
<thead>
<tr>
<th>Estimated Value of Firm</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Equipment Value (Dollars)</td>
<td>$6,000,000</td>
</tr>
<tr>
<td>Estimated Plant Value (Dollars)</td>
<td>$2,050,000</td>
</tr>
<tr>
<td>Estimated Land Value of firm (Dollars)</td>
<td>$250,000</td>
</tr>
</tbody>
</table>

**Sales**

<table>
<thead>
<tr>
<th>Estimated Value of Total Operation Inputs (Dollars)</th>
<th>$650,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>From State</td>
<td>5%</td>
</tr>
<tr>
<td>From County</td>
<td>1%</td>
</tr>
</tbody>
</table>

**Sales From Firm Construction (Dollars) $1,650,000**

<table>
<thead>
<tr>
<th>Proportion of Firm Construction That Is Taxable</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>From State</td>
<td>65%</td>
</tr>
<tr>
<td>From County</td>
<td>30%</td>
</tr>
</tbody>
</table>

**County Sales From Housing Construction (Dollars) $4,950,000**

<table>
<thead>
<tr>
<th>Proportion of Housing Construction That Is Taxable</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>From State</td>
<td>95%</td>
</tr>
<tr>
<td>From County</td>
<td>50%</td>
</tr>
</tbody>
</table>

**Percentage of Firm Workers’ Salary Spent In State By In-State Employees 70%**

**Percentage of Firm Workers’ Salary Spent In State By Out-of-State Employees 20%**

**Percentage of Housing Constructors’ Salary Spent In State By In-State Constructors 70%**

**Percentage of Housing Constructors’ Salary Spent In State By Out-of-State Constructors 20%**

**Percentage of Firm Workers’ Salary Spent In County By In-County Employees 70%**

**Percentage of Firm Workers’ Salary Spent In County By Out-of-County Employees 20%**

**Percentage of Housing Constructors’ Salary Spent In County By In-County Constructors 70%**

**Percentage of Housing Constructors’ Salary Spent In County By Out-of-County Constructors 20%**

**County Population 4,180**

**Employment 2,224**

**Pupils 1,993**

**Basic Support Per Pupil $5,843**

**Caliente Population 1,190**

*Table 1. Continued*
### Location of Homes

Place a "1" in the blank if home is built in that location.

<table>
<thead>
<tr>
<th>Location of Homes</th>
<th>(a) Number of Homes Built</th>
<th>(b) Average Value Of Homes</th>
<th>(c) Total Employment Required To Build Homes</th>
<th>(d) Of Column (d), Number That Are New</th>
<th>(e) Percentage From Area</th>
<th>(f) Payroll To Build Homes</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>33</td>
<td>$150,000</td>
<td>35</td>
<td>35</td>
<td>95%</td>
<td>$214,500</td>
</tr>
<tr>
<td>County</td>
<td>33</td>
<td>$150,000</td>
<td>35</td>
<td>35</td>
<td>70%</td>
<td>$214,500</td>
</tr>
<tr>
<td>Caliente</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alamo</td>
<td>1</td>
<td>$150,000</td>
<td>35</td>
<td>35</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Panaca</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pioche</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alamo Sewer</td>
<td>1</td>
<td>$150,000</td>
<td>35</td>
<td>35</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Lincoln Co. Hospital District</td>
<td>1</td>
<td>33</td>
<td>$150,000</td>
<td>35</td>
<td>35</td>
<td>20%</td>
</tr>
<tr>
<td>Lincoln Co. T.V. District</td>
<td>1</td>
<td>33</td>
<td>$150,000</td>
<td>35</td>
<td>35</td>
<td>20%</td>
</tr>
<tr>
<td>Panaskan Valley Fire District</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panaskan Valley T.V. District</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pioche Fire District</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

Table 2. Housing Input Form for Scenario 1.
<table>
<thead>
<tr>
<th>Entity</th>
<th>Estimated SCCRT</th>
<th>Current Assessment</th>
<th>Change in Assessment</th>
<th>New Assessed Value</th>
<th>1981 Tax Rate</th>
<th>Basic Ad Valorem</th>
<th>% of Ad Valorem</th>
<th>New SCCRT</th>
<th>Old SCCRT</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lincoln County</td>
<td>73,506,982</td>
<td>4637500</td>
<td>78,144,482</td>
<td>1.5150%</td>
<td>1,183,889</td>
<td>0.7321</td>
<td>666,277</td>
<td>670,923</td>
<td>($4,645)</td>
<td></td>
</tr>
<tr>
<td>Caliente</td>
<td>8,271,676</td>
<td>0</td>
<td>6,271,676</td>
<td>1.3000%</td>
<td>81,532</td>
<td>0.0504</td>
<td>45,855</td>
<td>49,120</td>
<td>($3,235)</td>
<td></td>
</tr>
<tr>
<td>Alamo</td>
<td>3,752,594</td>
<td>4637500</td>
<td>8,390,094</td>
<td>0.5800%</td>
<td>48,863</td>
<td>0.0301</td>
<td>27,387</td>
<td>13,113</td>
<td>($14,274)</td>
<td></td>
</tr>
<tr>
<td>Panaca</td>
<td>3,957,833</td>
<td>0</td>
<td>3,957,833</td>
<td>0.9200%</td>
<td>36,412</td>
<td>0.0225</td>
<td>20,492</td>
<td>21,937</td>
<td>($1,445)</td>
<td></td>
</tr>
<tr>
<td>Pioche</td>
<td>4,263,057</td>
<td>0</td>
<td>4,263,057</td>
<td>0.6000%</td>
<td>36,662</td>
<td>0.0227</td>
<td>20,633</td>
<td>22,088</td>
<td>($1,455)</td>
<td></td>
</tr>
<tr>
<td>Lincoln County Hospital Dist.</td>
<td>73,506,982</td>
<td>4637500</td>
<td>78,144,482</td>
<td>0.2015%</td>
<td>157,481</td>
<td>0.0974</td>
<td>88,817</td>
<td>89,235</td>
<td>($618)</td>
<td></td>
</tr>
<tr>
<td>Pahranagal Valley Fire</td>
<td>8,790,479</td>
<td>0</td>
<td>8,790,479</td>
<td>0.7500%</td>
<td>50,929</td>
<td>0.0315</td>
<td>28,662</td>
<td>30,083</td>
<td>($2,421)</td>
<td></td>
</tr>
<tr>
<td>Pioche Fire</td>
<td>5,259,789</td>
<td>0</td>
<td>5,259,789</td>
<td>0.4100%</td>
<td>21,565</td>
<td>0.0133</td>
<td>12,137</td>
<td>12,992</td>
<td>($856)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>910,090</td>
<td>177,309,392</td>
<td>191,221,892</td>
<td>6.5365%</td>
<td>1,617,112</td>
<td>1.0000</td>
<td>910,090</td>
<td>910,090</td>
<td>($0)</td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Reallocating of SCCRT Funds for Scenario I.
<table>
<thead>
<tr>
<th>Government Entity</th>
<th>Revenues</th>
<th>Costs</th>
<th>Sink Costs</th>
<th>Fiscal Impact</th>
<th>Total Fiscal Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lincoln County</td>
<td>$70,145</td>
<td>$101,487</td>
<td>$19,228</td>
<td>($31,341)</td>
<td>($50,569)</td>
</tr>
<tr>
<td>Lincoln County School District</td>
<td>$550,860</td>
<td>$207,838</td>
<td>$6,469</td>
<td>$343,022</td>
<td>$336,553</td>
</tr>
<tr>
<td>Caliente</td>
<td>($1,378)</td>
<td>$0</td>
<td>$0</td>
<td>($1,378)</td>
<td>($1,378)</td>
</tr>
<tr>
<td>Alamo</td>
<td>$21,597</td>
<td>$4,701</td>
<td>$3,355</td>
<td>$16,895</td>
<td>$13,541</td>
</tr>
<tr>
<td>Panaca</td>
<td>($1,445)</td>
<td>$0</td>
<td>$0</td>
<td>($1,445)</td>
<td>($1,445)</td>
</tr>
<tr>
<td>Pioche</td>
<td>($1,455)</td>
<td>$0</td>
<td>$0</td>
<td>($1,455)</td>
<td>($1,455)</td>
</tr>
<tr>
<td>Alamo Sewer and Water GID</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Lincoln County Hospital District</td>
<td>$17,464</td>
<td>$151,918</td>
<td>$175</td>
<td>($134,454)</td>
<td>($134,629)</td>
</tr>
<tr>
<td>Lincoln County T.V. District</td>
<td>$1,812</td>
<td>$906</td>
<td>$906</td>
<td>$906</td>
<td>$0</td>
</tr>
<tr>
<td>Pahranagat Valley Fire District</td>
<td>($2,021)</td>
<td>$0</td>
<td>$0</td>
<td>($2,021)</td>
<td>($2,021)</td>
</tr>
<tr>
<td>Pahranagat Valley T.V. District</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Pioche Fire District</td>
<td>($856)</td>
<td>$0</td>
<td>($856)</td>
<td>($856)</td>
<td>($856)</td>
</tr>
<tr>
<td>Lincoln County Total</td>
<td>$654,724</td>
<td>$466,850</td>
<td>$30,133</td>
<td>$187,874</td>
<td>$157,741</td>
</tr>
<tr>
<td>State</td>
<td>$136,478</td>
<td>$574,097</td>
<td></td>
<td>($437,619)</td>
<td>($437,619)</td>
</tr>
<tr>
<td>Total (Including State)</td>
<td>$791,202</td>
<td>$1,040,947</td>
<td>$30,133</td>
<td>($249,745)</td>
<td>($279,878)</td>
</tr>
</tbody>
</table>

Table 4. Results from Scenario I.
**Location of Firm**

Place a "1" in the blank if the firm is going to be located in the area.

<table>
<thead>
<tr>
<th>Location</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caliente</td>
<td></td>
</tr>
<tr>
<td>Alamo</td>
<td>1</td>
</tr>
<tr>
<td>Panaca</td>
<td></td>
</tr>
<tr>
<td>Pioche</td>
<td></td>
</tr>
<tr>
<td>Alamo Sewer and Water GID</td>
<td>1</td>
</tr>
<tr>
<td>Lincoln County Hospital District</td>
<td>1</td>
</tr>
<tr>
<td>Lincoln County T.V. District</td>
<td></td>
</tr>
<tr>
<td>Pahranagat Valley Fire District</td>
<td></td>
</tr>
<tr>
<td>Pahranagat Valley T.V. District</td>
<td></td>
</tr>
<tr>
<td>Pioche Fire District</td>
<td></td>
</tr>
</tbody>
</table>

**Type of Firm**

(Place a "1" next to the industry which best resembles the new firm.)

<table>
<thead>
<tr>
<th>Industry</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock Production</td>
<td></td>
</tr>
<tr>
<td>Alfalfa Hay Production</td>
<td></td>
</tr>
<tr>
<td>Other Hay Production</td>
<td></td>
</tr>
<tr>
<td>Gold Mining</td>
<td></td>
</tr>
<tr>
<td>Other Mining</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td>1</td>
</tr>
<tr>
<td>Transportation and Communication</td>
<td></td>
</tr>
<tr>
<td>Utilities</td>
<td></td>
</tr>
<tr>
<td>Trade</td>
<td></td>
</tr>
<tr>
<td>Eating, Drinking and Lodging</td>
<td></td>
</tr>
<tr>
<td>Finance, Insurance and Real Estate</td>
<td></td>
</tr>
<tr>
<td>Services</td>
<td></td>
</tr>
<tr>
<td>Hotels, Gaming and Recreation</td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td></td>
</tr>
<tr>
<td>Local Government</td>
<td></td>
</tr>
<tr>
<td>General Multiplier (Housing Development)</td>
<td></td>
</tr>
</tbody>
</table>

**A: FIRM EMPLOYMENT**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of New Employees</td>
<td>100</td>
</tr>
<tr>
<td>Percentage from State</td>
<td>97%</td>
</tr>
<tr>
<td>Percentage from County</td>
<td>75%</td>
</tr>
</tbody>
</table>

**B: FIRM EMPLOYMENT INCOME**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payroll (Dollars)</td>
<td>$3,500,000</td>
</tr>
</tbody>
</table>

*Table 5. Input Form for Scenario II.*
### C: TAXES

**Property**

<table>
<thead>
<tr>
<th>Estimated Value of Firm</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Equipment Value (Dollars)</td>
<td>$6,000,000</td>
</tr>
<tr>
<td>Estimated Plant Value (Dollars)</td>
<td>$2,050,000</td>
</tr>
<tr>
<td>Estimated Land Value of firm (Dollars)</td>
<td>$250,000</td>
</tr>
</tbody>
</table>

**Sales**

<table>
<thead>
<tr>
<th>Estimated Value of Total Operation Inputs (Dollars)</th>
<th>$650,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>From State</td>
<td>5%</td>
</tr>
<tr>
<td>From County</td>
<td>1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sales From Firm Construction (Dollars)</th>
<th>$1,650,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of Firm Construction That Is Taxable</td>
<td>35%</td>
</tr>
<tr>
<td>From State</td>
<td>65%</td>
</tr>
<tr>
<td>From County</td>
<td>30%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>County Sales From Housing Construction (Dollars)</th>
<th>$4,950,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of Housing Construction That Is Taxable</td>
<td>50%</td>
</tr>
<tr>
<td>From State</td>
<td>95%</td>
</tr>
<tr>
<td>From County</td>
<td>50%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percentage of Firm Workers' Salary Spent In State</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>By In-State Employees</td>
<td>70%</td>
</tr>
<tr>
<td>Percentage of Firm Workers' Salary Spent In State</td>
<td></td>
</tr>
<tr>
<td>By Out-of-State Employees</td>
<td>20%</td>
</tr>
<tr>
<td>Percentage of Housing Constructors' Salary Spent In State</td>
<td></td>
</tr>
<tr>
<td>By In-State Constructors</td>
<td>70%</td>
</tr>
<tr>
<td>Percentage of Housing Constructors' Salary Spent In State</td>
<td></td>
</tr>
<tr>
<td>By Out-of-State Constructors</td>
<td>20%</td>
</tr>
<tr>
<td>Percentage of Firm Workers' Salary Spent In County</td>
<td></td>
</tr>
<tr>
<td>By In-County Employees</td>
<td>70%</td>
</tr>
<tr>
<td>Percentage of Firm Workers' Salary Spent In County</td>
<td></td>
</tr>
<tr>
<td>By Out-of-County Employees</td>
<td>20%</td>
</tr>
<tr>
<td>Percentage of Housing Constructors' Salary Spent In County</td>
<td></td>
</tr>
<tr>
<td>By In-County Constructors</td>
<td>70%</td>
</tr>
<tr>
<td>Percentage of Housing Constructors' Salary Spent In County</td>
<td></td>
</tr>
<tr>
<td>By Out-of-County Constructors</td>
<td>20%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>County Population</th>
<th>4,180</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment</td>
<td>2,224</td>
</tr>
<tr>
<td>Pupils</td>
<td>1,093</td>
</tr>
<tr>
<td>Basic Support Per Pupil</td>
<td>$5,843</td>
</tr>
<tr>
<td>Caliente Population</td>
<td>1,190</td>
</tr>
</tbody>
</table>

Continued
<table>
<thead>
<tr>
<th>Location of Homes</th>
<th>(a) Location of Homes</th>
<th>(b) Number of Homes Built</th>
<th>(c) Average Value Of Homes</th>
<th>(d) Total Employment Required To Build Homes</th>
<th>(e) Of Column (d) Number That Are New</th>
<th>(f) Percentage From Area</th>
<th>(g) Payroll To Build Homes</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>33</td>
<td>$150,000</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>95%</td>
<td>$58,500</td>
</tr>
<tr>
<td>County</td>
<td>33</td>
<td>$150,000</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>70%</td>
<td>$58,500</td>
</tr>
<tr>
<td>Caliente</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alamo</td>
<td>1</td>
<td>33</td>
<td>$150,000</td>
<td>9</td>
<td>9</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Panaca</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pioche</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alamo Sewer</td>
<td>1</td>
<td>33</td>
<td>$150,000</td>
<td>9</td>
<td>9</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Lincoln Co. Hospital District</td>
<td>1</td>
<td>33</td>
<td>$150,000</td>
<td>9</td>
<td>9</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Lincoln Co. T.V. District</td>
<td>1</td>
<td>33</td>
<td>$150,000</td>
<td>9</td>
<td>9</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Pahrump Valley Fire District</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pahrump Valley T.V. District</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pioche Fire District</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6. Housing Input Form for Scenario II.
<table>
<thead>
<tr>
<th>Entity</th>
<th>Estimated SCCRT Available for Distribution</th>
<th>Current Assessment</th>
<th>Change in Assessment</th>
<th>New Assessed Value</th>
<th>1981 Tax Rate</th>
<th>Basic Ad Valorem</th>
<th>% of Ad Valorem</th>
<th>New SCCRT</th>
<th>Old SCCRT</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lincoln County</td>
<td>73,506,982</td>
<td>4637500</td>
<td>27,444,482</td>
<td>1.5150%</td>
<td>1,183,889</td>
<td>0.7321</td>
<td>666,277</td>
<td>670,923</td>
<td>($4,645)</td>
<td></td>
</tr>
<tr>
<td>Caliente</td>
<td>8,271,676</td>
<td>0</td>
<td>6,271,876</td>
<td>1.3000%</td>
<td>81,532</td>
<td>0.0504</td>
<td>45,885</td>
<td>49,120</td>
<td>($3,235)</td>
<td></td>
</tr>
<tr>
<td>Alamo</td>
<td>3,752,594</td>
<td>4637500</td>
<td>8,390,084</td>
<td>0.5800%</td>
<td>48,863</td>
<td>0.0301</td>
<td>27,387</td>
<td>13,113</td>
<td>$14,274</td>
<td></td>
</tr>
<tr>
<td>Panaca</td>
<td>3,957,833</td>
<td>0</td>
<td>3,957,833</td>
<td>0.9200%</td>
<td>36,412</td>
<td>0.0225</td>
<td>20,492</td>
<td>21,937</td>
<td>($1,445)</td>
<td></td>
</tr>
<tr>
<td>Pioche</td>
<td>4,263,057</td>
<td>4637500</td>
<td>4,263,057</td>
<td>0.8600%</td>
<td>36,662</td>
<td>0.0227</td>
<td>20,633</td>
<td>22,068</td>
<td>($1,455)</td>
<td></td>
</tr>
<tr>
<td>Lincoln County Hospital Dist.</td>
<td>73,506,982</td>
<td>4637500</td>
<td>78,144,482</td>
<td>0.2015%</td>
<td>157,461</td>
<td>0.0974</td>
<td>88,617</td>
<td>89,235</td>
<td>($618)</td>
<td></td>
</tr>
<tr>
<td>Pahranagat Valley Fire</td>
<td>6,790,479</td>
<td>0</td>
<td>6,790,479</td>
<td>0.7500%</td>
<td>50,929</td>
<td>0.0315</td>
<td>28,862</td>
<td>30,683</td>
<td>($1,821)</td>
<td></td>
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<tr>
<td>Pioche Fire</td>
<td>5,259,789</td>
<td>0</td>
<td>5,259,789</td>
<td>0.4100%</td>
<td>21,565</td>
<td>0.0133</td>
<td>12,137</td>
<td>12,992</td>
<td>($856)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>910,090</td>
<td>177,309,392</td>
<td>191,221,892</td>
<td>6.5365%</td>
<td>1,617,112</td>
<td>1.0000</td>
<td>910,090</td>
<td>910,090</td>
<td>($0)</td>
<td></td>
</tr>
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</table>

Table 7. Reallocating of SCCRT Funds for Scenario II.
<table>
<thead>
<tr>
<th>Government Entity</th>
<th>Revenues</th>
<th>Costs</th>
<th>Sink Costs</th>
<th>Fiscal Impact</th>
<th>Total Fiscal Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lincoln County</td>
<td>$64,434</td>
<td>$70,548</td>
<td>$13,366</td>
<td>($6,114)</td>
<td>($19,481)</td>
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<tr>
<td>Lincoln County School District</td>
<td>$382,930</td>
<td>$144,479</td>
<td>$4,497</td>
<td>$238,451</td>
<td>$233,954</td>
</tr>
<tr>
<td>Caliente</td>
<td>($1,332)</td>
<td>$0</td>
<td>$0</td>
<td>($1,332)</td>
<td>($1,332)</td>
</tr>
<tr>
<td>Alamo</td>
<td>$21,597</td>
<td>$3,668</td>
<td>$2,617</td>
<td>$17,929</td>
<td>$15,312</td>
</tr>
<tr>
<td>Panaca</td>
<td>($1,445)</td>
<td>$0</td>
<td>$0</td>
<td>($1,445)</td>
<td>($1,445)</td>
</tr>
<tr>
<td>Pioche</td>
<td>($1,455)</td>
<td>$0</td>
<td>$0</td>
<td>($1,455)</td>
<td>($1,455)</td>
</tr>
<tr>
<td>Alamo Sewer and Water GID</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Lincoln County Hospital District</td>
<td>$17,464</td>
<td>$118,520</td>
<td>$137</td>
<td>($101,056)</td>
<td>($101,193)</td>
</tr>
<tr>
<td>Lincoln County T.V. District</td>
<td>$1,413</td>
<td>$707</td>
<td>$707</td>
<td>$0</td>
<td>$0</td>
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<tr>
<td>Pahranagat Valley Fire District</td>
<td>($2,021)</td>
<td>$0</td>
<td>$0</td>
<td>($2,021)</td>
<td>($2,021)</td>
</tr>
<tr>
<td>Pahranagat Valley T.V. District</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Pioche Fire District</td>
<td>($856)</td>
<td>$0</td>
<td>$0</td>
<td>($856)</td>
<td>($856)</td>
</tr>
<tr>
<td>Lincoln County Total</td>
<td>$480,730</td>
<td>$337,921</td>
<td>$21,324</td>
<td>$142,809</td>
<td>$121,485</td>
</tr>
<tr>
<td>State</td>
<td>$135,265</td>
<td>$372,277</td>
<td>($237,012)</td>
<td>($237,012)</td>
<td>($237,012)</td>
</tr>
<tr>
<td>Total (Including State)</td>
<td>$615,995</td>
<td>$710,198</td>
<td>$21,324</td>
<td>($94,203)</td>
<td>($115,527)</td>
</tr>
</tbody>
</table>

Table 8. Results from Scenario II.
Key Items of Interest When Anticipating Economic Change

Several key questions should be considered when anticipating economic change in a local community. This change affects both the private sector and local government. Table 9 lists some important considerations regarding economic changes and the private sector. Table 10 is concerned with the impacts of economic change on the local government sector. Important considerations concerning local government involve tax jurisdiction, tax revenue and new public expenditures which may be required from economic change. Table 11 lists the nonmarket impacts of economic change which may be of importance to local communities. Community decision makers should review these questions and add or delete based on specific needs.

CONCLUSIONS

The state of Nevada is in a unique position to capture a significant portion of the nation’s business and industrial activity given its favorable tax structure and geographic location to California and the Far East markets. This report introduces a methodology designed to quickly estimate the impacts of these activities. This report describes the unique Nevada tax system, reviews development and tax considerations in the state of Nevada, and the technical considerations examined in developing the model. These hypothetical case studies were employed to illustrate the application of this model. Appendices contain a data needs questionnaire, the Fiscal Impact Model worksheet, and an annotated bibliography. It is hoped that this report will be helpful to those persons interested in evaluating the economic impact of facilities locating or expanding in the state of Nevada.

Every attempt was made to make this model’s worksheets easy to use. However, each application is unique and special circumstances may and do arise. Users must take care that the generated estimates make sense. If further assistance is required, please seek the help of an experienced impact analyst.
Table 9. Impacts of Economic Change on the Private Sector - Important Considerations

1. How many workers will be hired by the new business activity? What is the dollar value of the anticipated payroll? What will be the value of production or sales from the new business activity?

2. What is the "multiplier" effect and how can it be appraised in a community?

3. When will the new workers be hired? When will the payroll be generated? And when will the new purchases and sales be made in the local economy?

4. Is the new economy activity associated with construction or operation of the business?

5. Will the new economic activity stimulate construction in related businesses, housing, and service and trade sectors of the economy?

6. Do the changes in employment, income, and sales represent net or gross additions to the community's economic base?

7. How does the new economic activity compliment the local economic situation?

8. What will be the incidence of the impacts? More specifically, which people and businesses are likely to benefit, and which people and businesses are likely to bear the costs of the economic development.

Table 10. Impacts of Economic Change on the Local Government Sector-Important Considerations.

1. Within what governmental jurisdictions will new families live?

2. How many in-migrant families are expected, and what is their anticipated income level?

3. How many school-age children are expected?

4. Do the public services and schools have excess capacity, or would expansions be required to maintain the quality of service at predevelopment levels?

5. Are there migration fees to cover additional public service costs?

6. Will state and federal aid increase as population grows?

7. When will the project be completed?

8. Does the expenditure estimation procedure used only include the additional costs associated with the new growth?

9. Will new revenues be divided among more than one governmental unit, such as city, county, and school district? If so, how much additional revenue will each receive?

10. When will the public expenditures for the project begin and when will the community begin receiving project-generated revenues? How will these change over time?

11. Will projected demands for service require a change in tax rates or a change in the level of service?

12. Who benefits and who loses from the development?

13. Will tax abatements or other publicly supported inducements be used to encourage this growth?

14. Is the project capital-or labor-intensive?

15. What is the probability that the firm will remain in the area and operate successfully over a 5, 10, or 20 year period?

16. What are the income and employment multiplier effects of the new industry?

17. How will this development and associated population growth affect state aid to education and local property tax revenues in your state?

Table 11. Nonmarket Impacts of Economic Change-Important Considerations

I. Distribution: Who Will Be Affected?
   A. Will effects vary among geographic sectors of the community?
   B. What income groups will be affected and in what ways?
   C. Will all or just certain economic sectors of the community have to make adjustments?
   D. Will the impacts vary over time?

II. Employment-Related Impacts.
   A. Will the new jobs be satisfying to workers?
   B. Effects on commuting time and distance. How far must local residents travel to their new jobs?
   C. Will the jobs be permanent or will they be highly sensitive to managerial decision and economic trends?
   D. Will the workers perceive the new jobs as an improvement over previous conditions?

III. Population-Related Impacts.
   A. Demographic.
      1. How much in-migration will occur?
      2. Will the newcomers and their families match or be different from the prevalent age and family structure of the community?
      3. What value changes might occur?
      4. Can the newcomers be easily integrated into the community social structure or will adjustments be needed?
   B. Housing.
      1. How will the value of housing change?
      2. How will the quality of housing change?
      3. What changes in housing ownership will occur?
      4. What type of new housing will be needed?

IV. Community Ecology.
   A. How will communication networks be affected?
   B. How will religious organizations be affected?
   C. How will participation in community affairs be affected?
   D. What different internal-external linkages will appear?
   E. Will satisfaction with the community change?

V. Political and Local Government.
   A. Political
      1. What leadership changes will occur?
      2. Will voter participation change?
   B. How will public recreation facilities and use be altered?
   C. Will physical safety of workers and residents change?
   D. What short-and long-term health effects could occur?

References

A Methodology for Assessing the Impacts of Business Activity.  
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“State Restrictions on Local Government Ad Valorem Taxation: Base, Rate and Revenue Limitations.”  

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Lopez, Manuel N., Thomas R. Harris, Ted Oleson, Jr. and Glen W. Atkinson.  
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APPENDIX A:

INPUT SHEET FOR
INDUSTRIAL DEVELOPMENT
Rating of Firm

Place a "1" in the blank if the firm is going to be located in the area.

Caliente
Alamo
Panaca
Pioche
Alamo Sewer and Water GID
Lincoln County Hospital District
Lincoln County T.V. District
Pahranagat Valley Fire District
Pahranagat Valley T.V. District
Pioche Fire District

Type of Firm
(Place a "1" next to the industry which best resembles the new firm.)

Livestock Production
Alfalfa Hay Production
Other Hay Production
Gold Mining
Other Mining
Construction
Manufacturing
Transportation and Communication
Utilities
Trade
Eating, Drinking and Lodging
Finance, Insurance and Real Estate
Services
Hotels, Gaming and Recreation
Health
Local Government
General Multiplier (Housing Development)

A: FIRM EMPLOYMENT

Number of New Employees
Percentage from State
Percentage from County
**B: FIRM EMPLOYMENT INCOME**

- Payroll (Dollars) [__]  

**C: TAXES**

- **Property**
  - Estimated Value of Firm [__]  
  - Estimated Equipment Value (Dollars) [__]  
  - Estimated Plant Value (Dollars) [__]  
  - Estimated Land Value of firm (Dollars) [__]

- **Sales**
  - Estimated Value of Total Operation Inputs (Dollars) [__]  
  - From State [__]  
  - From County [__]  
  - Sales From Firm Construction (Dollars) [__]  
    - Proportion of Firm Construction That Is Taxable [__]  
    - From State [__]  
    - From County [__]  
  - County Sales From Housing Construction (Dollars) [__]  
    - Proportion of Housing Construction That Is Taxable [__]  
    - From State [__]  
    - From County [__]

- County Population [__] 4,180
- Employment [__] 2,224
- Pupils [__] 1,093
- Basic Support Per Pupil [__] $5,843
- Caliente Population [__] 1,190
APPENDIX B:

INPUT SHEET FOR
HOUSING DEVELOPMENT
<table>
<thead>
<tr>
<th>Location of Homes</th>
<th>(a) Location of Homes</th>
<th>(b) Number of Homes Built</th>
<th>(c) Average Value Of Homes</th>
<th>(d) Total Employment Required To Build Homes</th>
<th>(e) Of Column (d), Number That Are New</th>
<th>(f) Percentage From Area</th>
<th>(g) Payroll To Build Homes</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Caliente</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alamo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panaca</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pioche</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>Alamo Sewer</td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>Lincoln Co. Hospital District</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lincoln Co. T.V. District</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pahranagat Valley Fire District</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pahranagat Valley T.V. District</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pioche Fire District</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
APPENDIX C:

DATA REQUIREMENTS

AND SOURCES
DATA REQUIREMENTS AND SOURCES

The fiscal impact model worksheet is divided into six sections, which are the State, County, City, Towns, School District and Special Districts. These sections are further divided into sub-sections of employment, income, tax and community service impacts. This appendix describes and explains the nature, type and sources of data within a worksheet. Usually users of the fiscal impact model will only use the input pages shown in Appendix A and B. However, a user may wish to change default data within the LOTUS template. Most data is readily available from primary and secondary sources. Whenever exact information or data are unavailable, the user should provide their best estimates.

Description of Development:

Firm Name: ________________________
County: ________________________
Community: ________________________
SIC Code: ________________________
Multipliers:

State Sector Employment Multiplier:

Livestock Production: _________________
Dairy Production: _________________
Alfalfa Hay Production: _________________
Other Hay Production: _________________
Agricultural Services: _________________
Construction: _________________
Manufacturing: _________________
Transportation & Communication: _________________
Utilities: _________________
Trade: _________________
Eating, Drinking & Lodging: _________________
F.I.R.E. Services: _________________
Hotels, Gaming & Recreation: _________________
Health: _________________
Local Government: _________________
General Multiplier: _________________

State Sector Income Multiplier:

Livestock Production: _________________
Dairy Production: _________________
Alfalfa Hay Production: _________________
Other Hay Production: _________________
Agricultural Services: _________________
Construction: _________________
Manufacturing: _________________
Transportation & Communication: _________________
Utilities: __________________________
Trade: __________________________
Eating, Drinking & Lodging: ____________
F.I.R.E.____________________________
Services: __________________________
Hotels, Gaming & Recreation: __________
Health: __________________________
Local Government: _________________
General Multiplier: _________________

County Sector Employment Multiplier:

Livestock Production: ________________
Dairy Production: _________________
Alfalfa Hay Production: _____________
Other Hay Production: ______________
Agricultural Services: _______________
Construction: ______________________
Manufacturing: _____________________
Transportation & Communication: ______
Utilities: __________________________
Trade: ____________________________
Eating, Drinking & Lodging: __________
F.I.R.E.____________________________
Services: __________________________
Hotels, Gaming & Recreation: __________
Health: ____________________________
Local Government: __________________
General Multiplier: __________________

County Sector Income Multiplier:
Livestock Production:________________________
Dairy Production:__________________________
Alfalfa Hay Production:______________________
Other Hay Production:_______________________
Agricultural Services:_______________________
Construction:______________________________
Manufacturing:____________________________
Transportation & Communication:___________
Utilities:______________________________
Trade:____________________________________
Eating, Drinking & Lodging:_______________
F.I.R.E.___________________________________
Services:______________________________
Hotels, Gaming & Recreation:______________
Health:____________________________________
Local Government:________________________
General Multiplier:________________________

The State Sector Employment Multiplier and County Sector Employment Multiplier depend upon the type of firm and will estimate how many jobs will be created from the initial jobs created at the new firm. For example, a multiplier of 1.245 tells that for every job created by the new firm will lead to an additional .245 jobs in that market area.

The State Sector Income Multiplier and County Sector Income Multiplier tell how much income will be generated from the new income earned by the new employees of the new firm. For example, a multiplier of 2.245 tells that a dollar earned by the new employee will lead to an additional $1.245 in income for others in the market.

At the bottom of each multiplier category is a multiplier entitled: General Multiplier. This multiplier is simply a multiplier taken as an average from the other multipliers and will be used if a housing development occurs. The multipliers were generated from IMPLAN and are available...
from the University Center for Economic Development, Department of Applied Economics and Statistics at University of Nevada, Reno.

**Population Per Employee:**

Population: __________________________

*Estimate of the current population in the county.*

Employment: __________________________

*Estimate of the current employment in the county.*

**Pupils Per Population:**

Students: __________________________

*Estimate of the current enrollment of students in the school district.*

**Sales Tax Rates:**

State: __________________________

*State sales tax rate. This is constitutionally set at two percent (2%).*

County (BCCRT): __________________________

*Basic County City Relief Tax. This tax is one-half of a percent (0.5%).
Currently, the only government entities in Lincoln County which receives BCCRT are the County General Fund and the City of Caliente.*

Lincoln County School District (LSST): __________________________

*The rate is currently two and an quarter percent (2.25%) and is set by the state.*

**Property Tax Rates:**
Each government entity in Lincoln County sets its own tax rate. Property tax rates have to follow certain. Use the most recent tax rate. This information is available from the county assessor’s office.

State: ____________________________
County: __________________________
Lincoln Co. School District: __________
Alamo: ____________________________
Panaca: __________________________
Pioche: __________________________
Alamo Sewer and Water GID: __________
Lincoln Co. Hospital District: __________
Lincoln Co. T.V. District: __________
Pahranagat Valley Fire District: __________
Pahranagat Valley T.V. District: __________
Pioche Fire District: ________________

**Tax Incentives:**

**State Exemptions:**

State Sales Tax Exemptions: ________________

*Estimate any sales tax exemptions given to the firm by the State on the state sales tax.*

Investment/Job Tax Credit: ________________

*Estimate any investment and/or job tax credit given to the firm by the State.*
State Property Tax Exemptions:____________________

Estimate any property tax exemptions given to the firm by the State on the state property tax.

Other State Inducements:__________________________

Estimate any other inducements that the State may have given to the firm to locate in the state.

County Exemptions:
County Sales Tax Exemptions:______________________

Estimate any sales tax exemptions given to the firm by the County on the county sales tax.

Investment/Job Tax Credit:__________________________

Estimate any investment and/or job tax credit given to the firm by the County.

County Property Tax Exemptions:______________________

Estimate any property tax exemptions given to the firm by the County on the county property tax.

Other County Inducements:__________________________

Estimate any other inducements that the County may have given to the firm to locate in the county.

School District Exemptions:
School District Sales Tax Exemptions:____________________

Estimate any sales tax exemptions given to the firm by the School District on the school district sales tax.
Investment/Job Tax Credit:________________________

*Estimate any investment and/or job tax credit given to the firm by the School District.*

School District Property Tax Exemptions:___________

*Estimate any property tax exemptions given to the firm by the School District on the school district property tax.*

Other School District Inducements:________________

*Estimate any other inducements that the School District may have given to the firm to locate in the school district.*

**City Exemptions:**

City Sales Tax Exemptions: ______________________

*Estimate any sales tax exemptions given to the firm by the City on the city sales tax.*

Investment/Job Tax Credit:________________________

*Estimate any investment and/or job tax credit given to the firm by the City.*

City Property Tax Exemptions:_____________________  

*Estimate any property tax exemptions given to the firm by the City on the city property tax.*

Other City Inducements:__________________________

*Estimate any other inducements that the City may have given to the firm to locate in the city.*
Municipal Exemptions:

Investment/Job Tax Credit: ______________________

*Estimate any investment and/or job tax credit given to the firm by the Town.*

Municipal Property Tax Exemptions: ________________

*Estimate any property tax exemptions given to the firm by the Town on the town property tax.*

Other Municipal Inducements: ______________________

*Estimate any other inducements that the Town may have given to the firm to locate in the town.*

Special District Exemptions:

Investment/Job Tax Credit: ______________________

*Estimate any investment and/or job tax credit given to the firm by the District.*

District Property Tax Exemptions: ________________

*Estimate any property tax exemptions given to the firm by the District on the district property tax.*

Other District Inducements: ______________________

*Estimate any other inducements that the District may have given to the firm to locate in the district.*
Per Capita Operating Expenses:

These figures are derived from budgets of Lincoln County’s governments. Figures should be totaled for each category for each government entity and then be divided by its respective population. These figures show the average cost per person in the county and will be used to help determine the amount operating costs will increase with the increase in population.

County:

General Government: _________________
Public Safety: _________________
Judicial: _________________
District Attorney: _________________
Public Works: _________________
Health & Sanitation: _________________
Welfare: _________________
Culture & Recreation: _________________
Community Support: _________________
Other County Services: _________________
Lincoln County School District: _________________

Caliente:

Executive Activity: _________________
Judicial: _________________
Public Safety: _________________
Health & Sanitation: _________________
Culture & Recreation: _________________
Room Tax _________________
Nuclear Waste: _________________
Road: _________________
Utility: _________________
Alamo:

General Government: ________________
Culture & Recreation: ________________
P.V. Children’s Center: ________________
Parks: _____________________________
Health: _____________________________

Panaca:

General Government: ________________
Public Safety: _______________________
Culture & Recreation: ________________
Community Support: _________________

Pioche:

General Government: ________________
Culture & Recreation: ________________
Health: _____________________________

Alamo Sewer & Water GID: ________________
Lincoln County Hospital District: ________________
Lincoln County T.V. District: ________________
Pahrangat Valley Fire District: ________________
Pahrangat Valley T.V. District: ________________
Pioche Fire District: _______________________

**Per Capita Capital Costs:**

These figures are derived from budgets of Lincoln County’s budgets. Figures should be
totaled for each category for each government entity and then be divided by its respective
population. These figures show the average cost per person in the county and will be used to
determine how much capital costs will increase with the increase in population.
County:

General Government: ______________
Public Safety: ______________
Judicial: ______________
District Attorney: ______________
Public Works: ______________
Health & Sanitation: ______________
Welfare: ______________
Culture & Recreation: ______________
Community Support: ______________
Other County Services: ______________

Lincoln County School District: ______________

Caliente:

Executive Activity: ______________
Judicial: ______________
Public Safety: ______________
Health & Sanitation: ______________
Culture & Recreation: ______________
Room Tax ______________
Nuclear Waste: ______________
Road: ______________
Utility: ______________

Alamo:

General Government: ______________
Culture & Recreation: ______________
P.V. Children’s Center: ______________
Parks: ______________
Health: ______________
Panaca:
   General Government: _________________
   Public Safety: _________________
   Culture & Recreation: _______________
   Community Support: _______________

Pioche:
   General Government: _______________
   Culture & Recreation: _______________
   Health: ____________________________
   Alamo Sewer & Water GID: __________
   Lincoln County Hospital District: ______
   Lincoln County T.V. District: ________
   Pahrangat Valley Fire District: ________
   Pahrangat Valley T.V. District: ________
   Pioche Fire District: ________________

**New Investment:**

Under each of the categories listed for Per Capita Operating Costs and Per Capita Capital Costs is a New Investment category. This category will capture the cost for the government entity if the new firm leads to growth that is so immense that an investment in a new facility is required. For example, a firm is built and brings so many new employees that a new police station is required. The cost would be captured in the Public Safety category under the Lincoln County computer page. Unfortunately, if a new investment is required, the user of the model will have to go to each category and input them under each category. The reason for this is that a new development will probably not require a new investment. Thus, a section on the input page was not devoted to each type of new investment that may occur.

If a new investment did occur, the procedure is as follows:
Will Addition Require New Investment: Yes:_____________  
No:________________

_The user will have to calculate if the new firm, its new employees and their families will require an investment by the government entities involved._

Cost of Investment:__________________________

_If new investment is required, use the amount that the government entity will be required to pay to build the facility._

Number of Years Bond Will Be Amortized:_______

_List the number of years that the government entity will have to amortize a bond in order to build the facility._

Interest Rate:______________________________

_Use the interest rate that the government entity received on the bond._

**Per Capita User Fees:**

These figures are derived from budgets of Lincoln County’s governments. Figures should be totaled for each category for each government entity and then be divided by its respective population. These figures show the average revenue earned from user fees per person throughout the county and will be used to determine the increase in revenues from user fees due to the increase in population.

County:____________________________________
Caliente:____________________________________
Alamo:______________________________________
Panaca:______________________________________
Pioche:______________________________________
Alamo Sewer & Water GID:_____________________
Lincoln Co. Hospital District:___________________
Lincoln Co. T.V. District: 

Pahranagat Valley Fire District: 

Pahranagat Valley T.V. District:

Pioche Fire District: 

**State Per Capita Costs:**

State Expenditures: ______________

*Estimate the total expenditures by the State minus any costs to School Districts.*

Population: ______________

*Estimate the current population in the State.*

**Firm Inputs:**

The first computer page of the model is where the user will input data about the firm provided by the applicant.

**Location of Firm:**

In this section either the applicant or user will determine where the firm will locate. This section contains all of the government entities within Lincoln County. Neither the County General Fund nor the County School District are listed here because these government entities encompass the entire county and regardless of where the firm locates, it will be within each of their respective districts.

A number one, “1”, needs to be placed next to the government entity in which the firm will locate. Since many Special Districts overlap each other, the applicant may need assistance from the user or someone with knowledge of the boundaries for the government entities within Lincoln County in determining where the firm will be located.
**Type of Firm:**
In this section a one, “1”, should be placed next to the type of industry which most closely resembles the firm that is locating in Lincoln County. Through IMPLAN it was determined that the economy in Lincoln County contains sixteen major sectors. The seventeenth sector, General Multiplier, is simply an average taken from the other multipliers, as described earlier.

**Firm Employment:**

Number of New Employees: __________________________

*This number should be provided by the applicant. It should be all labor that management plans to hire to run the firm. The number should include all management and labor. The number should only be number employed for that year.*

Percentage from State: __________________________

*Estimate the percentage of people who will work at the firm and live within the state of Nevada’s borders.*

Percentage from County: __________________________

*Estimate the percentage of people who will work at the firm and live within the Lincoln County’s borders.*

Percentage from City, Percentage from Town, and Percentage from District were not used here due to the fact that such data may be difficult, if not impossible, to obtain or estimate.

**Firm Employment Income:**
Payroll (Dollars): __________________________

*Use the total annual payroll of the firm. This data should be provided by the applicant.*

**Taxes:**
Property:

Estimated Value of Firm:

Estimated Equipment Value: ____________

*Use the equipment dollar value of the new firm. This data should be provided by the applicant.*

Estimated Plant Value: ____________

*Use the plant dollar value of the new firm. This data should be provided by the applicant.*

Estimated Land Value of Firm: ____________

*Use the land dollar value of the new firm. This data may be obtained from the applicant or the County Assessor’s office.*

Sales:

Estimated Value of Total Taxable Operation Inputs: ____________

*Use the dollar value of total taxable operational inputs. This value should be provided by the applicant.*

From State: ____________

*Use the percentage of total taxable operation inputs that will be purchased within the state of Nevada. The applicant should have an estimate of this figure.*

From County: ____________

*Use the percentage of total taxable operation inputs that will be purchased within Lincoln County. The applicant should have an estimate of this figure.*

Sales From Firm Construction: ____________
Use the dollar value amount of sales needed to build the firm. The applicant should have an estimate of this figure.

Proportion of Firm Construction That Is Taxable:_______

Estimate the amount of sales from the firm’s construction that is taxable. It has been estimated by the Center for Economic Development, University of Nevada, Reno that this figure is 35%. However, this figure can be changed if the applicant has an alternative figure.

From State:________________________

Use the percentage of the firm’s construction that will be purchased from within the state of Nevada. The applicant may have an estimate.

From County.________________________

Use the percentage of the firm’s construction that will be purchased from within Lincoln County. The applicant may have an estimate.

Sales From Housing Construction:___________

This is the dollar amount of sales needed to build the new houses required for the new employees.
Proportion of Housing Construction that is Taxable: 

*Estimate the dollar amount of sales from the new housing construction that is taxable. It has been estimated by the Center for Economic Development, University of Nevada, Reno that this figure is 35%. However, this figure can be changed if the applicant has an alternative figure.*

From State: ____________________________

*Use the percentage of the housing construction that will be purchased from within the state of Nevada.*

From County: ____________________________

*Use the percentage of the firm’s construction that will be purchased from within Lincoln County.*

**Employee Income Spending Patterns:**

Percentage spent in-state by in-state employees: ____________________________

*Estimate the percentage of income spent in the state by employees who work in the state.*

Percentage spent in-state by out-of-state employees: ____________________________

*Estimate the percentage of income spent in the state by employees who work in the state but live outside of the state.*

Percentage spent in-county by in-county employees: ____________________________

*Estimate the percentage of income spent in the county by employees who live in the county.*
Percentage spent in-county by out-of-county employees: ____________

Estimate the percentage of income spent in the county by employees who live outside of the county but work in the county.

Estimates of spending patterns for city, towns and special districts are not used in the model because data are not readily available and the special districts may be overlapping, therefore estimates are not used. Thus, county spending patterns are used for these government levels.

**Current County Population:**

Use the current estimate of population for Lincoln County. This figure can be obtained from the State Demographer.

**Current Employment:**

Use the current estimate of employment for Lincoln County. This figure can be obtained from the State Demographer or the Nevada Employment Security Department.

**Current Pupils:**

Use the current number of students enrolled in the Lincoln County School District. This figure may be obtained from the Lincoln County School District office.

**Basic Support Per Pupil:**

This figure is determined by the State. This value is the amount of resources that should be available to each student. This figure can be obtained from the Lincoln County School District office.

**Caliente Population:**

Use the current estimate of population for Caliente. This figure can be obtained from the State Demographer.
**Homes Built:**

The second computer page of the model is where the user will input data about the homes to be built for the new employees of the new firm.

**Location of Homes:**

In column (a) of this computer page, either the applicant or user will determine where the home(s) will locate. This page contains all of the government entities within Lincoln County, except for the School District. The School District encompasses the entire county, therefore what locates within the county will also be in the School District.

A number one “1” should be placed next to the government entity in which the home(s) will locate. Neither the State or the County requires a “1” to be placed next to their respective locations because it is assumed that if homes are to be built, they will locate in both.

**Number of Homes Built:**

For column (b) of this computer page it must be determined how many homes will locate within each government entity’s boundaries. The number of homes to be built in that entity’s area should be placed in its appropriate spot. It should be noted that the number of homes built in the towns and special districts do not necessarily sum up to the amount built in the County.

**Average Value of Homes:**

In column (c) of the Homes Built computer page the average value of homes built in each government entity’s area should be listed.
**Employment Required to Build New Homes:**

Column (d) is where the amount of employment required to build the new homes should be entered. The amount of employment required per government entity may change due to the amount of homes, type of homes and time required to build the new homes. For assistance in determining the amount of labor required, contact local Contractor’s Association.

**Number That Are New:**

If any of the employees listed in column (d) are new, they be listed under column (e). For assistance in determining these values, contact local Contractor’s Association.

**Percentage From Area:**

For column (f) estimate the percentage of new construction employees that are required to build the new homes that are from within the respective government entity’s boundaries. Contact local Contractor’s Association for assistance in determining these percentages.

**Payroll To Build Homes:**

The amount of payroll to build the new homes should be placed in column (g). Only the State, County and Caliente are considered here because they are the only government entities that will have income impacts in the form of sales taxes.
MODEL ASSUMPTIONS

As is true with any model that projects future events, this model makes certain assumptions. The assumptions used have been made so that the impacts projected will be relatively accurate given the conditions in Lincoln County. The following is a list of assumptions used by the model:

(1) **Level of service is held constant.** The general level of service is assumed to remain at current levels.

(2) **Costs and prices are assumed to remain constant.** Inflation and/or deflation have not been built into the model. Since predictions of future levels of rising or declining costs are almost impossible to accurately predict, a system based on current known costs has been found to be the most effective.
APPENDIX D:

ANNOTATED BIBLIOGRAPHY OF PAST STUDIES

The complete software manual by Greg Alward, Eric Siverts, Doug Olson, John Wagner, Dave Senf, and Scott Lindall, describes the operation of the IMPLAN (Impact Analysis for Planning) model developed by the USDA Forest Service, Federal Emergency Management Agency, and the USDI Bureau of Land Management. The program requires an IBM XT or compatible with a math coprocessor chip, hard drive (10Mb free), 640 K Ram (568K free). Sections include: (1) Getting Started-installation and general commands; (2) Example Analysis; (3) Study Area Definition; (4) Regional Accounts; (5) Model Development; (6) Impact Analysis; (7) Other Options.


A computerized industrial impact model is presented. Benefits and costs in the form of tax exemptions are estimated for the state, county, municipality, and other jurisdictional levels. These governmental levels are further delineated into sub-sections consisting of employment, income, and tax impacts. The Business Impact Model uses data provided by local officials through a questionnaire. Default data for employment and income multipliers are used by the model. All estimates assume one full year of operation.


A community-level, Florida Economic Growth Impact Model is described as an “after the fact” evaluation of the impacts resulting from a new industry location. New fiscal surpluses or deficits are calculated at the city, county, and school district levels, including a break-even property tax rate. The model is packaged to include an input guidebook and report, and a default data set. User-provided data is also used in the model. Average per capita values are computed for 13 city and 9 county groupings based on 1973-74 comptroller data for the State of Florida. Additionally, annualized capital expenditure functions are estimated for the city, county, and school district revenues. Expenditures are estimated as per pupil coefficients. Multipliers are derived from input-output analysis.
Four models are presented that are used in rural development research: Input-output, From-to, Dynamic Input-output, and Simulation. Input-output and From-to models are static models that attempt to measure interindustry effects in the short-run. Dynamic input-output is used to measure interindustry effects over time. Short and long-run effects might be captured using Simulation models. The basics of each model are discussed, along with an application. A mathematical presentation is given within an appendix for readers wanting a deeper understanding.

BOOM 1 is a computer model used to describe the impacts of large power plants near rural communities. Typically, these communities experience an initial “boom” period from the construction phase, followed by periods of slower growth. Demographics of the new, immigrating population are often different from the community’s original population. Public services are often expanded to support the new population growth, thus a strain is placed on the local, public sector budget. A “bust” period often follows the initial rapid growth; tax revenues fall and excess capacity results. The BOOM 1 model projects annual changes resulting from the cycles.

Input-output and Export Base models allow estimation of changes in employment and/or income as a result of a new plant. The input-output model takes its name from the tables built for studies. The columns of such tables represent inputs and rows represent output of sectors in the local economy. An input coefficients table is built from the initial transaction table, which shows the amount of inputs bought by one sector from each of the other sectors. Coefficients are obtained by dividing the entries of each column (in the transaction table), by the total of the corresponding row. Next, multipliers are developed to reflect the changes in output associated with a $1 increase in exports from a sector, over all sectors. The direct effect is the immediate $1 increase in output to a sector. The first-round indirect effects are the required inputs needed to support the initial direct effect. Similarly, the second-round indirect effects are the inputs required to support the first-round indirect effects. This “round-by-round” procedure continues until magnitudes are negligible. Summing all rounds in each sector yields multipliers for that sector over all other sectors. While input-output multipliers are estimated for each sector, the export base multiplier is viewed as an average multiplier for all sectors. If the community knows the
particular type of firm locating in its community, then input-output is the most appropriate model. If the community wants to attract an unspecified type of activity, then export base provides an adequate estimate of impacts.

Secondary data is often used and assumes that the production coefficients found in the national input-output studies represent the coefficients in the local area studied. National input-output coefficients are readily available. Total output figures are estimated by obtaining the total value of production of a sector at the state or national level and dividing this by the total employment in that sector (state or national level) to obtain the output per man. This estimate is then multiplied by the sector’s employment within the area of study to get the total output in the area. Employment figures are generally not available for areas smaller than a county. Sub-county areas might be found in the Dunn and Bradstreet Market Indicators File.

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Instructions are given on estimating the economic, demographic, and fiscal impacts of a new industry location within a community using a simple, non-computerized worksheet. Impacts estimated for the private sector include employment, income, and sales. Demographic impacts include items such as new residents, new homes, and new students. Public sector impacts include new revenues and expenditures for the county, city, and school district. Multipliers, derived from an input-output model, are intended to be inputted into the worksheet by the user.


Two “rules” apply when reading an input-output table.

1. “To find the amount of purchases from one industry by another, locate the purchasing industry at the top of the table, then read down the column until you come to the producing industry.”

2. “To find the amount of sales from one industry to another, locate the selling industry along the left side of the table, then read across the row until you come to the buying industry.” (p. 11)

Sections include: (1) Input-Output analysis, an introduction to the transaction table and technical coefficients; (2) Applications of Input-Output Analysis, an introduction to multiplier analysis; (3) Regional and Interregional Input-Output Analysis, an introduction to data problems and variations of input-output analysis; (4) International Developments, an introduction to input-output analysis in planned economies and development; (5) The

Local governments’ provision of services depends upon the dollars generated by local taxes and users fees. Fiscal impact analysis estimates the fiscal consequences of alternative community economic development policies. A new development nearly always adds to a community’s cost of providing services. Five methods of estimating expenditures are:

1. **Expenditures Per Capita** - assumes average cost is constant, while population changes. Disadvantages include: a) everyone doesn’t use the services to the same degree; b) economies (diseconomies) of scale; c) some services don’t add to costs

2. **Department Estimates** - educated, best guesses. They can be biased by budgetary concerns.

3. **Service Budgets** - a detailed description of needs and costs. Disadvantage includes resources used in data collection. But, this is the “best” method.

4. **Standard Manpower Requirements** - the number of service personnel needed based on the Census of Government data per 1000 population. Doesn’t address unique local situations.

5. **Regression Analysis** - changes in expenditures are related to community characteristics. Assumes present services are at capacity.

Revenue estimates from new development depend upon:

1) location of new worker’s homes
2) income level and geographic spending patterns of new residents
3) multiplier effects
4) lags in revenue collection.

Growth affects local taxes (property, income and sales), state and federal aid, user fees, hook-up charges, and mitigation fees (impact fees)

The criteria for evaluating impact models should include considering the information requirements, the methodological form and validation, and the use characteristics. At a minimum, information must include economic, demographic, public service and the social changes that are likely to occur. It is also important to know the levels of geographic output and the ability of the model to predict over alternative time periods.

Factors to consider in model adaptation and development are: (1) Computer compatibility; (2) Estimations of necessary changes in the model structure; (3) Data acquisition; (4) Model implementation; and (5) model validation. Evaluation of a model over each of these factors and careful consideration of alternatives and problems are essential for effective model adaptation effort.


Equilibrium Planning Analysis disregards intermediate time periods as a system moves toward equilibrium. Planning models are inappropriate for impact analysis (p. 7). A planning model may be a “now-then” or “before-after” model. “Now-then” models estimate the adequacy of local government revenues to support services. They are appropriate to use with small communities with stable economic bases. “Before-after” models don’t separate the estimated results caused by a change from that caused by other changes. They are appropriate for expansions and contractions of small manufacturing plants in rural areas or large changes in cities.

Impact Analysis attempts to find the changes due to one project alone. Using a “with-without” approach, it may utilize either a dynamic or equilibrium model. The difference between estimates “with” and “without” a project are the project’s impacts. A source of large errors are the under-representation of a project’s employment

Input-output models have a high level of industrial disaggregation with linking coefficients that specifies the amount one sector buys from and sells to another sector. The advantage of input-output is the ability to face changes in each sector’s activity caused by some initial change in another (p. 17).

The Oklahoma Community Development Simulation Model (CSM) is the only model considered that “explicitly addressed the issue of the appropriate boundaries of an impact area” (p. 12) by using a gravity technique that defines points of equal influence. CSM is an input-output model using “with-without” techniques over a community. It uses cohort-survival techniques in estimating population. It uses the interface of employment, income, and population. A gravity model is used to analyze the spatial disaggregation of impacts, specifically, fiscal impacts.
A procedure is outlined, called the “New Gain to the Community” model, to measure the impacts of a new industry location. Two hypothetical communities and industries are used to illustrate the model. It uses partial budgeting techniques to determine the changes resulting from industrialization. The model projects the net gains or losses within a community’s private, municipal, and school district sectors. The model might be used to analyze the efficiency of incentives given to prospective plants. It is stressed that both the community and the industry must be right for each other in order for the association to be profitable to both.

Two changes are defined. Direct or primary changes are measured as employment by the new firm, including the resulting wages. Indirect and Induced or secondary changes are measured by multipliers. They are the additional income to local businesses as a result of the injection of the new income from the plant purchase and the new employed worker’s spending (indirect). Likewise, there are changes in local consumption due to the additional influx of people and income within the household sector (induced).

Several impact models are reviewed: Shaffer and Tweeten developed a model to measure the impact of a new industry on rural communities in Oklahoma. The framework calculated net gains/losses to the community. This allows decision-makers to evaluate incentives offered to prospective industry. It is based on partial budgeting techniques; however, it is a single-period model.

Andrew Ford’s BOOM 1 Model describes the impacts of large power plants on small communities. It follows the path of initial “boom” to “bust” periods after construction of a plant. It is a dynamic model.

The Florida model by Clayton and Whittington analyzes impacts within the private and public sector, including city, county, and school districts. Default data (research-based estimates) are used when local data are not available. The model calculates net fiscal surpluses or deficits, including a break-even property tax rate.

The North Dakota Model, by Leistritz, Murdock, Toman and Hersgaard, measures the impact of energy development. It gives annual projections of key variables, including settlement patterns, school enrollment, housing requirements, and public sector costs and revenues.
The Community Simulation Model is adapted from the above works. Model adaptation is possible as long as care is taken to use the appropriate data for the new area. The model simulates the new industry impacts on rural Oklahoma communities. It has four major data bases: economic, capital, demographic, and government accounts. It contains over 200 linking equations and utilizes a gravity model to define the community service area. It is an input-output based “with-without” model.


A computerized Industrial Impact Model is presented. Benefits and costs are estimated for the private, municipal, school district, and county sectors to arrive at an estimation of the net sector gains or losses brought about by a new industry location. This model uses discounting equations to amortize investment made by each sector. According to a Bureau of Labor Statistics Consumer Survey, 35% of an individual’s disposable income is spent on goods generating sales tax revenues in the local area.

When applied to rural Texas communities, it was found that most communities had net gains. Specifically, the private sector gained the most, while municipals, schools and the county gained less, broke even, or lost. This information could help decision-makers analyze the effects of a plant location in terms of inducements and resulting tax revenues.
A detailed review and comparison is given between three impact models: The Industrial Impact Model (IIM), the Texas Assessment Model (TAMS), and The Community Impact Model (CIM). Other models are briefly reviewed.

**Types of Output:**

Industrial Impact Model (IIM) - Single Time Period Projections - Private, City, Schools, County Sector Impacts.

Community Simulation Model (CSM) - Yearly, 15 year - County, City Impacts

Texas Assessment Model (TAMS) - Yearly, 25 years - Regional, County, City Impacts - Specific to the energy industry.

**Data Requirements:**

IIM - Most recent year, data-user input from secondary sources, primarily fiscal.
CSM - Historical, user input from secondary sources.
TAMS - Historical, large data base of demographic and economic.

In general, models should be flexible and fit local situations. IIM analyzes fiscal impacts during first year of operations. CSM emphasizes community service analysis. TAMS is 13 designed for large scale energy related projects, but is useful over a wide area. TAMS model can be intertemporal which requires greater data and uses more complex methodologies.