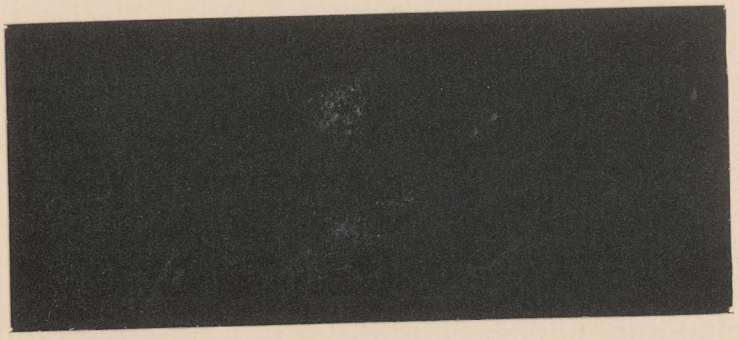

Texas Coastal Management Program

PILOT STUDY OF THE ACTIVITY ASSESSMENT ROUTINE SOCIAL AND ECONOMIC COMPONENT

Technical Paper No. 1

RPC, Inc.
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This is one of a series of technical papers, which cover a variety of topics. For information concerning other technical papers in this series, or to order more copies of this paper, contact:

Elizabeth Christian Wilds
RPC, Inc.
1705 Guadalupe
Austin, Texas 78701

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ABBREVIATIONS

AAR - activity assessment routine

ER - environmental report

I/O - input/output

ISD - independent school district

JER - joint environmental report; specifically, Joint Environmental Report Respecting the Proposed Algeria II Project, Docket Nos. CP73-258 et al., Vols. I - III, March 1, 1977, filed by the El Paso Eastern Company, El Paso LNG Terminal Company, and El Paso Natural Gas Company

LNG - liquefied natural gas

SEC - social and economic component of the activity assessment routine

TNRIS - Texas Natural Resources Information System

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Ron Jones, President
RPC, Inc.

1. INTRODUCTION

The construction phase of a liquefied natural gas (LNG) terminal, the La Salle Terminal, was selected as the pilot study for the social and economic component (SEC) of the activity assessment routine (AAR). This LNG terminal was proposed by El Paso Eastern Company, El Paso LNG Terminal Company, El Paso Natural Gas Company, and United LNG Company. The project site is adjacent to Matagorda Bay in Calhoun County. Construction is assumed to begin in April 1979 and extend for 48 months.

PURPOSE OF STUDY

The purpose of the pilot study is to test the social and economic component (SEC) of the activity assessment routine. It was undertaken (1) to identify areas in the SEC needing refinement, (2) to estimate the time and personnel required to perform the SEC, and (3) to test the computer programs for the SEC. The model predicts certain social and economic impacts of an industrial facility on the surrounding area.

The impacts identified during the course of this study are those associated with the construction phase of the project. These are short-term impacts. In contrast, the impacts of the operations phase will be of longer duration. Detailed analysis was limited to the construction phase because this phase provided a better test of the model than the operations phase, although the major impacts of the operations phase are also described.

DESCRIPTION OF SEC

The SEC is a series of systematic, analytical steps for evaluating certain potential social and economic effects of the proposed siting or expansion of a major facility. It is intended for use by permitting agencies, applicants, and local government officials concerned with social and economic impacts as well as by the interested general public. The SEC is intended to be a dynamic approach to assist state or other agencies in determining both the positive and negative effects of industrial development. The version of the SEC used for this study is described in detail in the SEC Draft User's Manual, April 1978, and the SEC Draft Technical Manual, April 1978. Revised publications reflecting refinement in the SEC resulting from this pilot study and other work will be published by the Texas Coastal Management Program in July 1978. The revised publications supersede the earlier versions.

The system elements are outlined in Figure 1. The first step is a review of the proposed activities which constitute the project. Data are collected regarding the activities and the geographic area surrounding the site, and impacts are determined. The determination of impacts includes an estimation of project-induced demands for governmental services and facilities and a comparison of predicted impacts to current conditions. For example, the number of new law enforcement personnel required as a result of the project is estimated by applying the present number of officers per capita to the new population projected to result from the project. The number of new personnel needed to maintain current ratios serves as an indicator of the impact on law enforcement. If relatively few additional personnel are required, it is inferred that the project has little or no effect on the level of police protection.

The next step, the impact summary, consists of summarizing the social and economic impacts of the project and identifying those likely to require increased local government expenditures. These impacts are defined as those which exceed the capacity of existing systems or require new personnel.

The final step, the formulation of recommendations, compares the impact assessment to the policies and guidelines of a permitting or planning agency.

Project-related impacts on 19 factors are considered; these are listed in Table 1. Depending on the nature of the impact factor and that of the project activity, impacts may be assessed for multicounty areas, cities, school districts, or other subcounty areas. Where feasible, impacts on each public service are projected for the units of government responsible for that service.

METHODOLOGY

Regional input/output (I/O) models form the framework for estimating the effects of a project on a regional economy. This is a quantitative model which describes the flows between categories of economic activities in a regional economy. This type of interindustry flow analysis permits estimation of gross output, employment, income, tax revenue, and water use which result both directly and indirectly from expansion or construction of a facility.

Five regional I/O models were derived from the 1972 State of Texas I/O Model maintained by the Texas Department of Water Resources. The I/O regions follow council-of-governments boundaries. Similar models could be constructed for other regions of the state.

The impact of the project on infrastructural factors such as health, education, and police and fire protection are determined by considering the expected population increase in an area as a result of workers moving into the area (new-resident workers) with their families. Current ratios of services to population are then used to estimate project-induced demands.

Figure 1

GENERAL DIAGRAM OF SYSTEM ELEMENTS
SOCIAL AND ECONOMIC COMPONENT

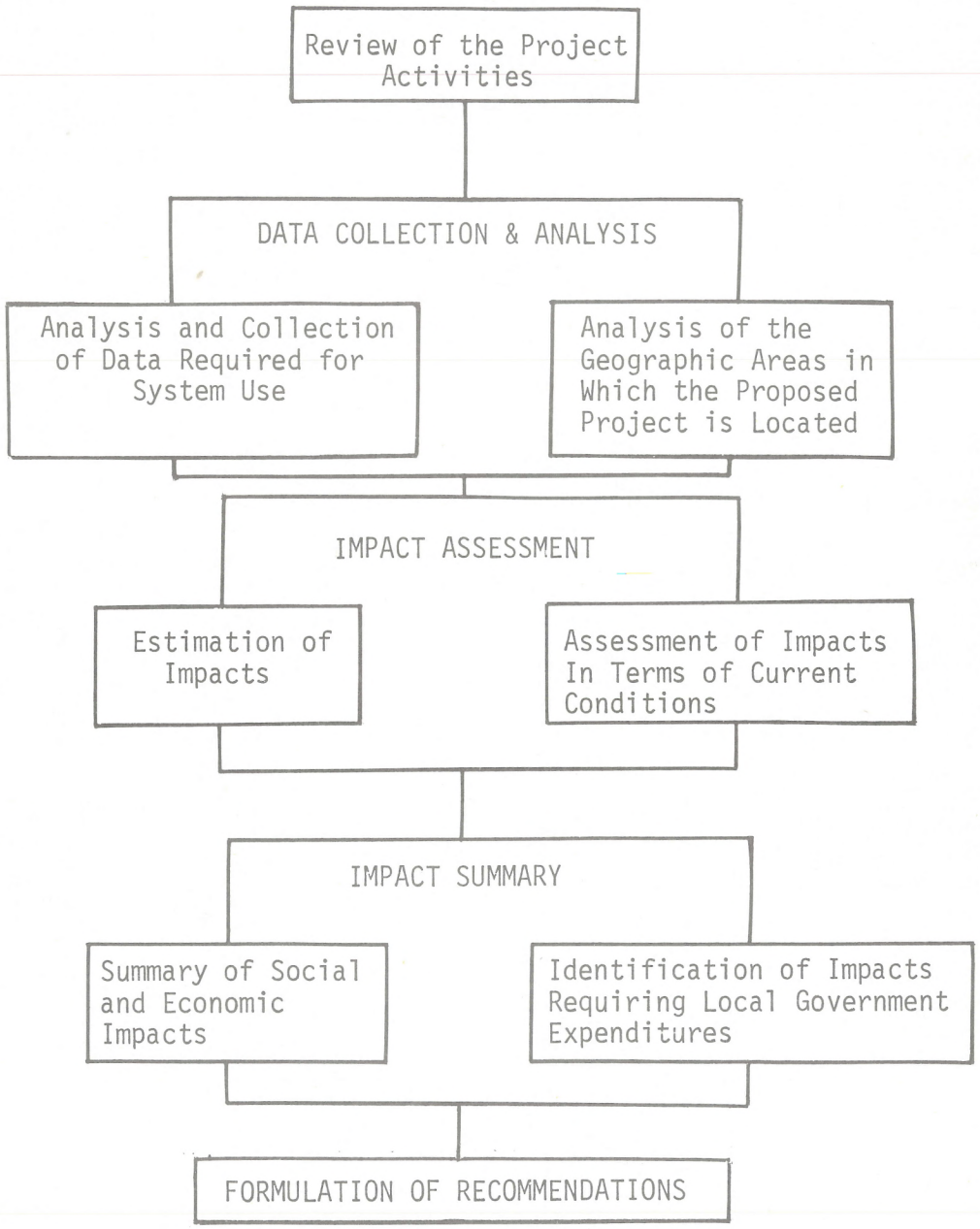


Table 1

IMPACT FACTORS EVALUATED BY AREA
SOCIAL AND ECONOMIC COMPONENT

	Immediate Project Area	Road Segments	Cities	School District	Impacted County Area	I/O Region	State
1. Employment						X	
2. Income						X	
3. Gross Output						X	
4. Industrial Water Use						X	
5. Population			X	X	X	X	
6. Housing			X				
7. Educational Services				X			
8. Law Enforcement			X				
9. Fire Protection			X				
10. Health Facilities					X		
11. Health Care Personnel					X		
12. Municipal Water Supply			X				
13. Wastewater Treatment and Disposal			X				
14. Solid Waste Disposal			X				
15. Traffic Count		X					
16. Road Damage		X					
17. Noise	X						
18. Administrative-Financial Capabilities			X	X			
19. State and Local Fiscal Impacts						X	X

X indicates that the factor is considered for the specific geographic area.

This process is shown graphically in Figure 2. For example, the present state ratio of population to public school students is applied to projected population increases to estimate the project-induced increase in student enrollment.

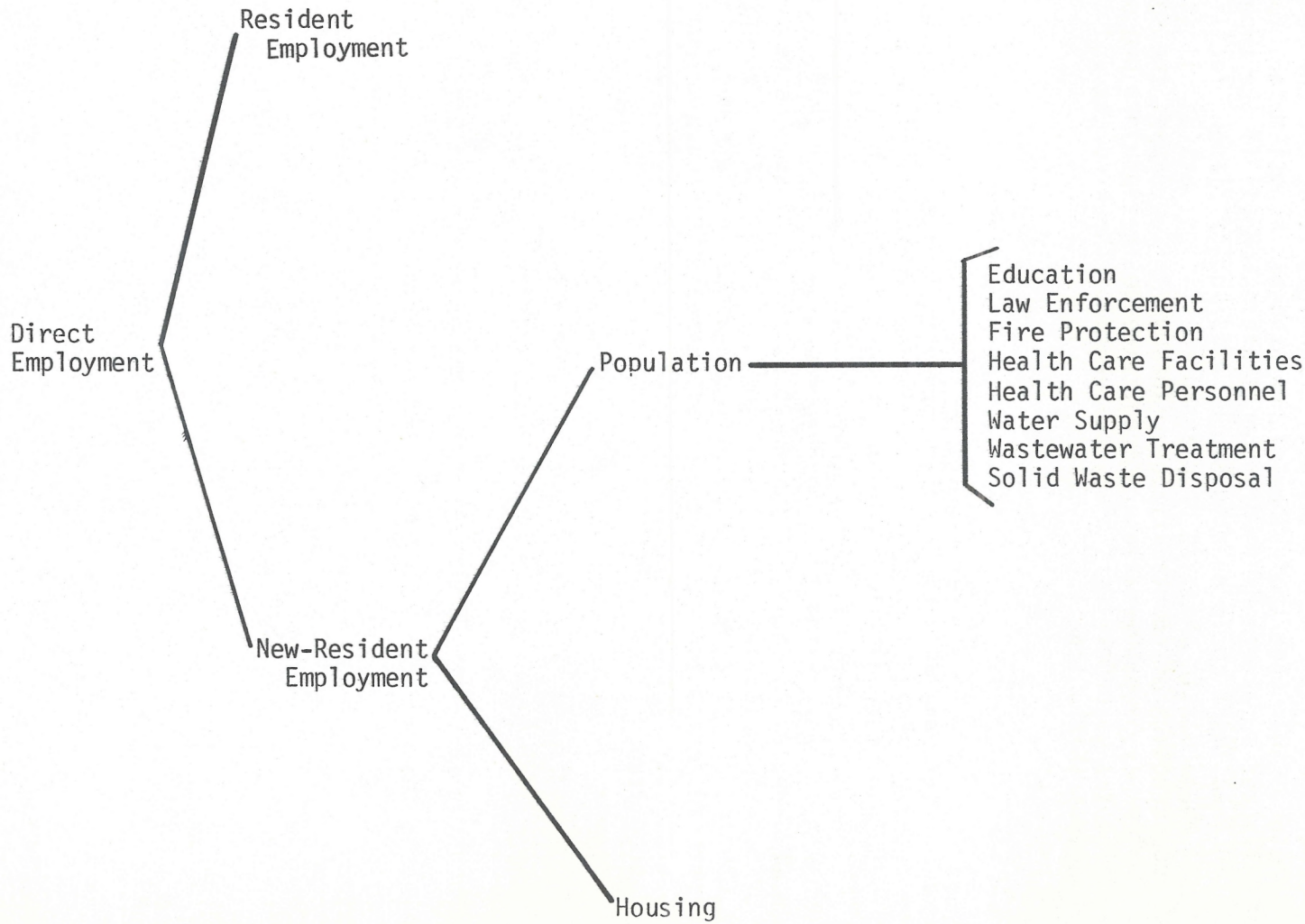
The new levels of demand are compared with existing service levels, and the capability of the local public services to absorb the new population is determined. Once the number of new students is estimated, for instance, the affected superintendents of schools are asked (1) if the expected increase in enrollment could be absorbed by existing or planned facilities, (2) if it would strain existing or planned facilities, or (3) if it will require construction of new facilities. Through this process, the social issues which may be problematic are identified so that project proponents and affected government officials are aware of the problems and can take appropriate action.

ORGANIZATION OF ANALYSIS

This analysis of the pilot study is divided into four major sections. The first part discusses the findings of the study and compares them with those of the joint environmental report filed by the El Paso Eastern Company, El Paso LNG Terminal Company, and El Paso Natural Gas Company (Joint Environmental Report Respecting the Proposed Algeria II Project, Docket Nos. CP73-258 et al. Vols. I-III, March 1, 1977). Also, the resources required to perform the analysis are outlined. The next part presents changes made in the SEC as a result of experience gained in the study. The third section estimates the resources which would be needed to analyze the entire project. Finally, aspects of the SEC appropriate for future development are suggested.

Figure 2

DERIVATION OF PROJECT-INDUCED DEMANDS



2. ANALYSIS OF THE PILOT STUDY

The pilot study is an analysis of social and economic impacts of the construction phase of the La Salle Terminal. Construction is expected to occur over 48 months, beginning in April 1979 and ending in March 1983. Construction activity will peak in 1981. The following analysis discusses the model's data requirements, summarizes the findings, outlines the resources used, and compares the results with those presented in the joint environmental report prepared for the Federal Power Commission (now the Federal Energy Regulatory Commission).

DATA REQUIREMENTS

Two types of data are needed to use the SEC: (1) those which describe the proposed activities and (2) those which describe the geographic areas surrounding the proposed project location.

The first type of data for the pilot study consists of information on the LNG terminal which was supplied by El Paso LNG Terminal Company. These data are displayed in Tables A1 and A2. The second type of data consists of data gathered on each of the geographic areas considered. The data collected for each area likely to be impacted by the project are presented in Tables A3-A14. This information was collected by RPC staff from a variety of publications and from interviews with city officials, school superintendents, state agency personnel, and others.

FINDINGS OF THE SEC

The areas likely to be affected by construction of the terminal are listed in Table 2 and shown on the major areas of impact map (Fig. 3). The impact area covers eight cities, five counties, six school districts, and three road segments.

Discussion with contractors with experience in the area indicated that about half of the construction work force will be new residents to the area. These residents and their families are expected to locate within 60 driving miles of the site for the duration of the project. The new population was allocated to incorporated cities within the commuting distance through a "gravity" model. With this model, the percentage of the total population increase moving to a given community varies directly with its present population and inversely with its distance from the site. In essence, present population is used as a proxy value to indicate attractiveness of a city based on the level

Table 2

AREAS LIKELY TO BE IMPACTED BY PROJECT

Cities	School Districts	Impacted County Area	I/O Region*	Highway Corridors	Other
Austwell	Austwell ISD	Refugio	Region 3	SH 185	State government
Victoria	Victoria-Consolidated ISD	Victoria		FM 1289	Immediate project area
Port Lavaca	Calhoun County ISD	Calhoun		SH 238	
Point Comfort	Edna ISD	Jackson			
Seadrift	Ganado ISD	Matagorda			
Edna	Palacios ISD				
Ganado					
Palacios					

* Consists of Calhoun, Jackson, Matagorda, Victoria, and Wharton Counties.

Figure 3

MAJOR AREAS OF IMPACT

LEGEND:

- I/O REGION (COUNTIES)
- IMPACTED COUNTY AREA
- HIGHWAY CORRIDORS
- △ IMPACT CITIES
- * PROJECT SITE

of services available. The model assumes that families attempt to locate near the place of employment. The allocation of the new population to each city and other preliminary calculations necessary to determine impacts are given in Tables A15-A20.

The new population was allocated to incorporated cities under the assumption that these communities provide a wider range of services to the public and thus would be more attractive to new workers. Two unincorporated communities, Port O'Connor and Indianola, are located within three to five miles of the project site. Leaders in Port O'Connor and Indianola should be alerted that some workers may decide to locate in these communities. The impact of a population increase on life and the provision of services in these communities should be examined as a special issue. Refinements in the treatment of unincorporated areas by the SEC are discussed in the next chapter.

SUMMARY OF SIGNIFICANT IMPACTS

Project impacts are presented in Tables A21-A43 and summarized in Table A44; those impacts which may require local government expenditures are delineated in Table A45. The major social and economic impacts of the construction of the La Salle Terminal are these:

1. The project will increase employment, income, and output in the region.

2. Although the fiscal impact of the project on specific units of local government was not determined, local governments as a whole within the region will experience net fiscal surpluses estimated to exceed $477,000. A fiscal surplus of about $110,000 as a result of activity generated within the I/O region is also expected for the state.

3. Housing will be difficult to obtain in most cities during the construction period.

4. Seadrift may have a problem meeting maximum daily water demand in 1981 (the year of peak activity), given current capacity and usage rates.

5. Victoria has no current reserve capacity in its wastewater system. As a result, the city's system will have difficulty handling any increase in population. Both Seadrift and Victoria appear to have adequate bonding capacity to finance the capital improvements necessary to meet their water and wastewater needs.

6. Traffic will increase along each road segment, and noise levels will increase at the construction site.

7. Road segments SH 238 and FM 1289 are expected to experience some subgrade damage, and SH 185 will experience major subgrade damage as a result of construction truck traffic.

DISCUSSION OF IMPACTS

The impact of construction activities on 19 factors was assessed; the results are presented in the following paragraphs. Administrative and financial capabilities of local government to deal with these impacts are not treated separately, but are included in the other topics where they apply. Health care facilities and health care personnel are discussed as one topic.

Total Employment

Employment in the region will increase as a result of the project (Table A21). During the period of peak activity (1981) total employment is estimated at 1,749, an increase of 2.7 percent over present employment in the region. The 1,749 peak employment figure can be broken down into 1,126 direct employment and 623 indirect and induced employment. Total employment will average 826 over the four-year project; this is an increase of 1.3 percent over present regional employment.

Total Personal Income

The income generated in the I/O region during construction is shown in Table A22 and totals $67 million during the construction phase. During the year of peak activity, total income is estimated to exceed $35.8 million; this represents a change of over four percent from current regional personal income. New personal income will average $16.6 million; this is an average change of almost two percent from current annual regional income.

Gross Output

Regional output will increase as a result of construction, as indicated in Table A23. The increase totals $140 million; of this, about $61 million will be generated during 1981, the year of peak activity. The increase in regional output will average almost $35 million.

Industrial Water Use

Water use during construction is shown in Table A24. During 1982, the year of peak use, about 86 acre-feet will be needed; use will average 40 acre-feet per year. El Paso LNG Terminal Company has been assured by the Guadalupe Blanco River Authority that the river authority can supply the needed water.

Population

The new-resident workers and their families are expected to locate in eight communities within commuting distance of the site. (See Tables A25-A29.) Victoria is expected to experience the largest absolute increase (828 in 1981); this represents an increase of 1.4 percent over present population. Port Lavaca will experience the largest percentage increase (2.9 percent in 1981).

The maximum change in population is estimated to range from 0.7 percent to 2.9 percent for the eight cities, and over the life of the project the average change will be from 0.4 to 1.4 percent.

A gravity model was used to allocate the new population to incorporated cities within commuting distance of the construction site. In addition to the eight cities so identified, two unincorporated communities, Port O'Connor and Indianola, are a few miles from the site. Some of the new population may choose to locate in these communities, resulting in fewer new residents and lower levels of impacts in the eight cities. The project may have disruptive effects on these two communities due to their small size and their proximity to the site. The potential impact of the project on Port O'Connor and Indianola is an example of a special issue which should be examined separately and in detail in order to provide a complete assessment of project impacts.

Fiscal Impact on State and Local Governments

Both the state and local governments in the I/O region are expected to experience increased tax revenue and infrastructural costs as a result of the construction activities. The former will occur due to the employment and income generated by the project and the latter as a consequence of expanded demand for public services by the new-resident population.

Tax revenue accruing to government in the five-county area was calculated by using tax multipliers from the regional I/O model and is an estimate of the direct and indirect revenues resulting from construction activities.

Due to data limitations, the revenue estimate for local governments cannot be allocated to specific units of government. The I/O model from which the estimate of tax revenue was derived is a model for a five-county region; as a result, tax revenue is estimated for all local governments within the I/O region. In actuality, revenue will accrue to a given local government to the extent to which expenditures are made and new-resident employees and their families locate within the local jurisdiction. Dispersion of economic activity throughout the region, however, implies a dispersion of tax revenue as well.

Infrastructural costs to governments were projected using a per capita cost model. Use of a per capita cost model assumes that an increase in population is the primary factor which leads to increased expenditures. It is likely that other variables also influence the level of expenditures. Geographical size of the government unit, government regulations, and employment statistics are just three examples of these variables. However, when these intervening variables are held constant, as this procedure assumes, increase in population becomes the dominant variable. The need for more detailed local revenue and expenditure models is discussed in Chapter 5 of this report.

The per capita cost model incorporates these additional assumptions:

1. The cost of providing services to the existing population and the cost of providing services to an increase in population (marginal cost) are comparable. While there is some evidence to indicate that service costs at the margin are greater than ongoing costs, this

procedure assumes that a unit of government's annual expenditures for physical plant and operating costs can absorb an increase in population at the same per capita rate.

2. All expenditures of a unit of government can be expressed meaningfully in, and are therefore included in, the cost per capita figure.

3. Increased services will be provided in the short run. Since the relative increase in population in any one community is expected to be small, it is possible that governments will not increase their expenditure levels. In this case, demand would be met with existing facilities and personnel, and any strain on public facilities and services would tend to be reflected in a temporary decrease in the level and/or quality of services provided. Although the per capita approach provides a measure of the project's impact on the provision of public services, it is quite possible that the new population could be absorbed into communities with little actual increase in government expenditure.

The fiscal impact of a project should be examined as a special issue whenever an analyst believes these assumptions do not hold for a specific case.

Net fiscal surpluses for the state government and for local governments in the I/O region are anticipated, as shown in Tables A30a and A30b. Total projected surpluses for the state and local governments are $110,000 and $477,000, respectively.

Projections were made for local governments in the region as a whole, as discussed above. Any given government could realize a surplus, a deficit, or no effect, depending upon the actual distribution of project-related expenditures and new-resident population within the region.

Housing

Local officials in six of the eight communities have indicated that housing is not presently available to accommodate the expected population increase. (See Table A31.) Vacant housing in Victoria, Port Lavaca, Point Comfort, and Palacios is expected to be scarce throughout the entire project. Housing in Ganado will be tight during the year of peak activity (1981) but will be generally available during the remainder of the project. Officials in Edna indicated that housing is presently very difficult to obtain because of the proximity of several major construction projects. By 1981, however, the other projects will have peaked and more housing should become available.

Education

Officials in the six school districts likely to experience enrollment increases as a result of construction activities have indicated that the new students can be absorbed by existing or planned facilities. (See Table A32.) Thus, the project should have no impact on educational systems.

Law Enforcement Personnel

Although demand for police services may increase somewhat as a result of the project, the ability of the affected municipal police departments to provide protection should be unaffected by construction activities (Table A33). No new law enforcement personnel will be needed as a result of the expected population influx. The greatest number of new law enforcement personnel required during the year of peak activity is 0.92 for the city of Victoria.

Fire Protection Personnel

Two cities, Victoria and Port Lavaca, have paid fire departments. At most, less than one new fire fighter would be required to maintain current ratios of fire fighters to population. Thus, no new fire fighting personnel will be needed as a result of the project.

The remaining six cities have volunteer fire departments. Since volunteer fire departments tend to be proportionately larger than nonvolunteer fire departments, it is difficult to assess the need for new volunteers, and any such estimate of needed volunteers tends to overstate the impact of the project on fire protection. Even so, only one city, Austwell, would need at lease one volunteer to maintain present ratios. In summary, although demand for fire protection may increase slightly, the ability of the volunteer fire departments to provide adequate protection should be unaffected by the project. (See Table A34.)

Health Care Facilities and Personnel

There will be some increase in demand for health services as a result of the project. A maximum of eight new hospital beds and one additional doctor will be needed to maintain the present ratios of beds and doctors per population (Tables A35 and A36). The relative changes in demand are small (an increase of about one percent from the current numbers of doctors and beds), however, and the project should not significantly affect the availability of health care.

Municipal Water Supply

The city of Seadrift is expected to have difficulty meeting maximum daily water use requirements during 1981, the year of maximum population increase. Projected new demand during that year would require use of 114 percent of the city's current reserve capacity. The city is presently using about 30 percent of its bonding capacity and thus does not appear to have a major bonding constraint if a decision were made to expand the water supply system. (See Tables A17 and A37e.) The projected new demands of the systems of other cities in the I/O region are within current reserve capacities.

Wastewater Treatment

The city of Victoria presently has no reserve capacity in its wastewater treatment system. Consequently, any increase in population will cause problems for the community. Presently about 47 percent of the city's bonding capacity is utilized; thus the city does not seem to have a major bonding constraint to improving the wastewater treatment system (Tables A17 and A37b). The projected new demands on other wastewater systems are within current reserve capacities.

Solid Waste Disposal

An increase in a community's population generally results in a proportionate increase in the amount of garbage generated. Consequently, all of the communities in the I/O region can expect a slight increase in demand for solid waste disposal services, as shown in Table A39.

Traffic Count

The analysis of project impacts on traffic count and road damage was made under assumptions which reflect the project's maximum impacts on traffic and roads. The impact assessment thus represents a "worst case" assessment. These assumptions are:

1. No dredged material will be used as plant fill, and consequently all fill material will be trucked to the site. These trips represent about 77 percent of all anticipated truck traffic. Preliminary analysis by El Paso LNG Terminal Company has assumed that about 40 percent of the required fill material could consist of dredged material near the plant site.

2. All materials for the marine structures will be barged to the site.

A substantial increase in average daily traffic count for two road segments, FM 1289 and SH 238, is expected (Table A40). During 1981, the period of maximum traffic, the percentage change in average daily traffic count for the two segments equals 381 percent and 276 percent, respectively.

The percentage of heavy truck mix will also increase on all three segments (Table A41). The change will be greatest for FM 1289; the new heavy truck mix for that segment during 1980, the year of peak truck traffic, is about 51 percent, compared to the current mix of 11 percent.

Road Damage

Subgrade damage is expected on all three segments (Table A42). Major damage to SH 185 is anticipated. State and federal highway monies are expected to be used to repair the damage. The assessment of damage was made by engineers for the District Office of the Texas State Department of Highways and Public

Transportation. Although FM 2433 is not expected to be used for truck traffic, highway officials indicated that this road between US 87 and SH 238 would also suffer major damage if used for hauling substantial loads.

Noise

Noise levels generally increase near the site of construction projects; this project is no exception. The distance from the site at which noise is reduced to preproject levels is estimated to be 1,469 feet. The site is a large, isolated tract of land; the terminal itself will be constructed on only a small portion of the site. Consequently, the increased noise should be heard only by the construction workers and should not disturb others.

IMPLICATIONS FOR OTHER PHASES OF PROJECT

The construction phase of the La Salle Terminal was examined in detail for the pilot study. The impacts identified will be experienced only during the four-year construction period.

A possible exception is housing. As discussed above, Victoria, Port Lavaca, Point Comfort, Edna, Palacios, and Ganada would require the construction of new units to meet the projected demand for housing. The first two cities, Victoria and Port Lavaca, have experienced chronic housing shortages in the past decade. Much of the demand, in fact, has been for apartment units to house construction workers associated with a variety of projects in the area. If new units were constructed in these communities, they would probably remain in demand after construction activities are complete and would serve to lessen the chronic shortage. A careful analysis would be required of these cities, and especially of the other communities, to guard against the construction of new units which would be vacant upon completion of the project.

Impacts of the operation of the terminal, in contrast, are long-term and would be felt for the life of the facility. These impacts, obtained from the environmental report and conversations with El Paso officials, are summarized below. It should be emphasized that an analysis of the operations phase comparable to that of the construction phase was not undertaken as part of the pilot study.

1. Regional employment and income will rise. About 120 employees would staff the terminal; of these, 100 would be hired from within commuting range, and only 20 would be new-resident employees.

2. Substantial property tax payments would be paid on the facility. Total annual payments to three jurisdictions (Calhoun County, Calhoun County Navigation District, and Calhoun County ISD) are estimated to exceed $1,037,000 initially (in 1983). The amount is expected to gradually decline until 1988, when it will level off at about $929,000.

3. Very few new-resident employees are expected. As a result, the expected increase in population in the area is very small, and few, if any impacts are expected on the provision of governmental services.

4. The major negative impacts of the terminal concern the increased traffic on the Matagorda Ship Channel and the loss of the turning basin and approach channel to commercial fishing operations when LNG carriers are at dock.

When the application for the entire project is reviewed by government officials, both the short-term construction and the long-term operation impacts must be considered.

RESOURCES REQUIRED TO PERFORM PILOT STUDY

Three individuals performed the SEC pilot study: a project manager, a research associate, and a research assistant. The project manager has an M.A. in economics and extensive experience in managing and conducting socio-economic impact assessments. The research associate has a Master of Public Administration degree; her experience includes work in government and analysis of governmental policies and procedures. The research assistant has a B.S. in education, with economics as a first field and research experience in comprehensive planning and infrastructural issues.

The tasks performed can be grouped into five broad categories: data gathering, calculations, analysis/write-up, system refinement, and supervision. Data gathering includes the compilation of data for the pilot study itself and the accumulation of general information needed for the SEC.

Table 3 summarizes the time devoted to each task by each staff member. About 78 percent of the project manager's time was spent in system refinement and analysis/write-up. In contrast, about 71 and 68 percent of the research associate's and research assistant's time, respectively, were spent in data gathering and performing calculations. Overall, between 21 and 27 percent of staff time was spent on data gathering, calculations, analysis/write-up, and system refinement. The remaining four percent was devoted to supervision.

During the pilot study, data sources were clarified and refinements were made to the system that substantially decrease the amount of time needed to perform the assessment. The estimated working days and hours required, given the changes made in the SEC as a result of the pilot study, are shown in Table 4, for both manual calculations and computer calculations. It would take approximately one month in elapsed time to perform the analysis. Assuming computerization and the present level of development, the amount of time needed for a similar analysis would be less than half the actual time required for the pilot study.

The primary benefit of computerization is the decrease in time spent in calculations. As use of the SEC becomes common, the amount of time necessary for data gathering and analysis/write-up should also decrease for two reasons. First, agency staff members will become more familiar with the assessment process and the types of analyses required. Second, a data base for the area-related information requirements can be developed and data contacts can be established.

Table 3

ACTUAL TIME ALLOCATIONS BY STAFF MEMBER
SEC PILOT STUDY

Task	Project Manager		Research Associate		Research Assistant		Total	
	Hours	Percent	Hours	Percent	Hours	Percent	Hours	Percent
Data Gathering	12.0	6%	100.0	39%	52.5	30%	164.5	27%
Pilot Study	8.0	4%	100.0	39%	28.5	16%	136.5	22%
System Requirements	4.0	2%	0.0	0%	24.0	14%	28.0	5%
Calculations	4.0	2%	82.0	32%	67.5	38%	153.5	25%
Analysis/Write-up	42.0	23%	52.0	21%	36.0	20%	130.0	21%
System Refinement	102.2	55%	20.0	8%	20.5	12%	142.7	23%
Supervison/Review	25.0	14%	0.0	0%	0.0	0%	25.0	4%
Total	185.2	100%	254.0	100%	176.5	100%	615.7	100%
Percent of Total Time	30.1%		41.2%		28.7%		100.0%	

Table 4

ESTIMATED TIME ALLOCATIONS
GIVEN CHANGES IN SEC AS RESULT
OF PILOT STUDY

	Manual Calculation			Computerization		
	Working Days	Person Days Hours	Percent	Working Days	Person Days Hours	Percent
Data Gathering	6	106.5	30%	6	106.5	42%
Calculations	9	137.5	38%	4	32.0	13%
Analysis/Write-up	9	88.0	25%	9	88.0	35%
Supervision/Review	1	25.0	7%	1	25.0	10%
Total	25	357.0	100%	20	251.5	100%

Professionals with substantial education and work experience were used in the pilot study. As the SEC becomes routinized, certain portions could be performed by individuals with less skill. Data gathering and calculations could be performed by a person in a clerical position. The analysis/write-up and supervision/review tasks would still need to be done by a professional with a background in social economic analysis.

COMPARISON OF PILOT STUDY WITH ENVIRONMENTAL REPORT

Pursuant to their application for certification by the Federal Power Commission (now the Federal Energy Regulatory Commission), El Paso LNG Terminal Company, El Paso Eastern Company, and El Paso Natural Gas Company filed a joint environmental report (JER). These three companies are hereafter referred to as El Paso. This section compares the results of the SEC pilot study with the El Paso JER in terms of findings and data requirements.

FINDINGS

The JER detailed the social and economic considerations for the construction and operations phase of both the terminal and the proposed natural gas pipeline. Because the SEC pilot study was limited to the construction phase of the LNG terminal, only those social and economic considerations described in the JER that are relevant to this phase will be discussed.

The significant differences in findings stem from different estimates of the percentage of the construction work force to be hired locally and of the number of construction truck trips. In the SEC pilot study, considerably fewer workers are projected to be hired locally than in the JER; consequently, the projected new population-related impacts on government services are greater. The number of truck trips estimated in the SEC is greater than the number in the JER; as a result, the projected impacts on traffic and roads are greater.

Methodology statements are not typically included in environmental reports. Consistent with this practice, the methodology used to determine impacts was not explicitly stated in the JER. In contrast, the SEC's assessment process is fully documented in the footnotes to the tables in the appendix. Because the underlying methods and techniques are clearly outlined in this "audit trail," a clearer discussion of the reasonableness of the pilot study results is possible.

Local Labor Availability

In its JER, El Paso assumed that most, if not all, of the construction work force would come from within the region. The basis for this assumption is the fact that three large construction projects are already underway and two large industrial projects are proposed for the region, all of which will require a large labor force. The labor force peak of these projects will be reached before the peak of the El Paso project; the workers are then assumed to be available to work on the terminal. However, El Paso acknowledged in the report that the assumption is valid only if the timing of each of the projects remains on schedule. Otherwise, the assumption may require modification.

In the pilot study, it was assumed that about 50 percent of the labor force would be hired from within commuting distance of the site, based on conversations with construction firms that have had projects in the area. Subsequent conversations with El Paso officials validated the reasonableness of this estimate.

Employment

El Paso estimated that the peak construction work force would be 1,126 workers in 1981. In 1980, employment at the terminal would represent about 19 percent of the available construction labor pool; average project employment of 540 would represent about 8.3 percent of the available labor pool. Construction of berthing facilities may require temporary labor to be brought in from outside the region. Secondary employment increases, resulting from increased activity of local firms supplying building materials to the site, should be minimal.

The JER's estimates of direct project employment were used in the pilot study. Of these, about half would become new residents of the region. Secondary employment was estimated to be about 623 at the project's peak.

Income

The JER presented information on payroll of workers and projected disposable income. Disposable income was estimated to equal 77 percent of gross payroll; indirect income was not determined. The wage payments presented in the ER were used in the pilot study. In addition, indirect and induced income generated in the region as a result of the project was estimated by the SEC.

Gross Output

Estimates of changes in output in the region as a result of the project were not presented in the JER. The SEC provided estimates of increases in direct and indirect output in the region of $75 million and $65 million, respectively.

Population

In the JER it was postulated that there will be no direct effect on regional population because the construction labor force would be drawn from within the area. The JER did point out that there may be a secondary population increase due to secondary employment in the local construction supply business, although estimates of secondary employment were not provided.

In contrast, information gathered during the pilot study indicated that about half of the work force will originate from outside of the region, thereby increasing the population of the region. Through the use of a gravity model, the new residents and their families were allocated to cities within commuting distance of the project.

Fiscal Impact

In the JER, it is stated that the "greatest impact of the construction project will be in the form of property tax revenues associated with the incremental value of construction at the site and in sales taxes derived from employees and contractor expenditures in the region." Estimates were provided of property tax payments for construction put in place for three taxing jurisdictions (Calhoun County, Calhoun County Navigation District, and Calhoun County Independent School District). Total tax revenues resulting from construction and increased government expenditures required to service the expanded population were not estimated. As a result, the net fiscal impact of construction on taxing jurisdictions was not provided.

The SEC permits the determination of a net fiscal impact for the state government and all local governments in the I/O region. That is, total tax revenues and net of increased governmental service costs were estimated. Surpluses were projected for the state and for all local governments. The net fiscal impact on a particular unit of local government, however, was not determined by either the JER or the SEC.

Housing

Minimal impacts on housing were predicted in the JER because of the assumption that few workers would be new residents. The report did indicate, though, that a shortage of housing currently exists in the region.

It was found in the pilot study that suitable housing would be difficult to obtain in six of the eight cities.

Education

El Paso indicated in its JER that no increase in demand on the education systems in the region is expected, because few new residents are projected. Expected increases in enrollment in the affected school districts were estimated in the pilot study; officials in each of the districts indicated that the new students could be absorbed by existing or planned facilities.

Law Enforcement

In its report, El Paso indicated that supplemental police protection services will not be required of counties or municipalities during the construction phase of the project. According to El Paso, in case of emergency, the coastal and local law enforcement departments of Port Lavaca, Port O'Connor, and Seadrift have executed a mutual aid agreement to answer calls in outlying areas.

The results of the pilot study showed that no new law enforcement personnel will be needed in the region during the construction phase of the project.

Fire Protection Personnel

According to the JER, supplemental fire protection personnel are not expected to be necessary in the region. The fire departments of Port Lavaca, Seadrift, and Port O'Connor have executed a mutual aid agreement in the event of an emergency to answer calls outside of their service areas.

The need for additional fire fighters in the eight cities likely to be affected by the population influx was examined in the pilot study. It was determined that it will not be necessary to hire additional personnel and that the provision of fire protection should be unaffected by the project.

Health Care Facilities and Personnel

The JER did not provide an estimate of increased demands for health care facilities and personnel in the region. Instead, it mentioned that in March 1977, Port Lavaca had 75 beds and seven doctors spread among three hospitals; in Victoria County there were 370 beds and 24 doctors. Port Lavaca is judged to be equipped to accomodate minor accidents during construction.

In the pilot study, the number of new hospital beds and doctors needed to maintain current bed/population and doctor/population ratios were estimated. In general, it was concluded that, although demand for health care will increase, no significant impact on regional health care is expected.

Industrial Water Use, Water Supply, Wastewater Treatment, and Solid Waste Disposal

El Paso made only a site-specific assessment regarding the impact of the construction phase on utilities. According to the JER, chemical toilets will be provided for the labor force during the construction phase and there will be no impact on public sanitation facilities. Although the report did not address the question of industrial water use, supplemental evidence submitted to the Federal Power Commission indicated that the Guadalupe Blanco River Authority has agreed to supply the needed water.

The pilot study projected new demand for industrial water, municipal water, wastewater treatment, and solid waste disposal services. During the period of peak population increase, the capacities of the utility systems of two cities (water supply for Seadrift and wastewater for Victoria) will be exceeded given SEC estimates of these communities' population increases.

Traffic and Road Damage

El Paso stated in the JER that "significant" increases in local traffic due to commuting and materials delivery are anticipated. In the Response of El Paso Eastern Company to the Federal Power Commission, El Paso indicated that construction worker traffic on SH 316 is expected to increase by 20 percent. Such an increase would be within the limits of the design capacity of the highway. Construction worker traffic on FM 1289 is expected to increase by 75 percent, according to El Paso; this increase is also within the limits of the design capacity of the road. El Paso pointed out that trucks will also use SH 185.

Although El Paso made no direct statements in the JER as to the amount of road damage expected as a result of the construction phase of the project, it did indicate that increased traffic on SH 316 and FM 1289 will be within the design capacity of the road segments. Because of revisions in its dredged material disposal plan, however, El Paso has since increased its estimates of truck traffic. El Paso currently plans to truck fill to the site instead of using dredged material as initially proposed. These new estimates formed the basis for the pilot study's analysis of impacts on traffic and road damage and may be high since some of the fill material could be barged to the project site.

The pilot study analyzed average daily traffic, heavy truck traffic mix, and road damage on the three segments which are nearest to the project site. The road segments are SH 185, FM 1289, and SH 238.

The results of the study indicate that each of the three segments will have definite and significant increases in both average daily traffic and heavy truck traffic mix during construction of the LNG terminal.

According to the Texas State Department of Highways and Public Transportation, definite road damage can be expected on each of the three road segments. Some subgrade damage can be expected on FM 1289 and SH 238; major subgrade damage can be expected on SH 185.

Noise

In the JER it is stated that noise levels at the property line may be as high as 90 decibels, based on experience with similar construction activities.

The SEC permits the determination of the distance from the project site at which noise is reduced to preproject levels; this distance was estimated to be 1,469 feet.

Table 5

COMPARISON OF DATA IN JER WITH SEC DATA NEEDS

Class I: Data in JER and Required for SEC

A. Obtained from JER
   1. Time periods and number of months in time period
   2. Size of work force
   3. Labor payments
   4. Project start date
   5. Current activity on site
   6. Proposed activity on site
   7. Current landscape
   8. Use of condemnation proceedings

B. Available in JER but updated for pilot study
   1. Number of construction truck trips
   2. Percent of work force hired locally
   3. Assessed valuation for selected cities and school districts
   4. Population for counties and selected cities
   5. State employment
   6. Law enforcement, fire protection, water, and wastewater information for selected cities
   7. Physicians and hospital beds for selected counties
   8. Traffic information for selected road segments

Class II: Data in JER and Not Required for SEC

1. Historical background of region
2. Narrative profile and trends of social and economic factors of region
3. Explanation of local public finance in Texas
4. Breakdown of county tax values and gross revenues into special categories
5. Population projections
6. Population distribution within 20 miles of project site
7. Cultural and archaeological resources information

Class III: Raw Data Not Published in JER and Required for SEC

A. Activity-specific
   1. Project expenditures*
   2. Industrial water use*
   3. Number and average gross vehicle weight (GVW) of loaded truck trips needing overload permits
   4. Average GVW of loaded truck trips not needing overload permits
   5. Projected truck routes and distribution of loads among routes
   6. Number of residences displaced

B. Geographic area-related
   1. State population and student enrollment
   2. Economic data for I/O region
   3. Physicians and hospital beds for selected counties
   4. Municipal information requirements for selected cities
   5. Financial data for selected school districts
   6. Traffic information for selected road segments

C. Assessment of impacts
   1. On housing by local city officials
   2. On education by superintendents of schools
   3. On roads by district engineers of Texas State Department of Highways and Public Transportation

*Although not listed in the JER, these data were submitted either as part of the permit application or as supplemental evidence.

DATA NEEDS

Both the El Paso JER and the SEC pilot study gathered a considerable amount of data on the construction phase of the La Salle Terminal. The two sets of data can be grouped into three categories: (1) those items that are both in the JER and necessary for the SEC; (2) those items listed in the JER but not required for the SEC; and (3) those items which may have been used in the preparation of the JER but were not published in the JER and which are necessary for the SEC. The specific data items in each category are listed in Table 5.

The first category, those items needed for the SEC which were found in the JER, comprise the bulk of the project-specific information required from the applicant. A few items listed in the JER, such as number of truck trips and percent of work force hired locally, were updated or revised for the pilot study.

The second category consists of certain types of social and economic data presented in the JER which, although interesting and often required by present Federal Power Commission (FPC) guidelines on the preparation of an ER, are not necessary for the SEC. Most of the items were needed to present a socioeconomic profile of the region.

Items in the third category consist of raw data needed for the SEC which were not published in the JER. This class includes activity-specific information concerning project expenditures and anticipated truck traffic. Much of the area-related data also were in this category. These data are needed to determine project impacts for specific jurisdictions. Examples are the number of law enforcement personnel and maximum daily water use. Finally, the JER also lacks an assessment by government officials of impacts of the project on housing, education, and roads.

3. CHANGES MADE IN THE SEC

The pilot study was undertaken, in part, to identify areas in the SEC requiring refinement and to provide data to test the computerization of the SEC. The refinements made can be grouped into two categories: changes in methodology and changes related to data collection and data needs. These revisions and the computerization of the SEC are discussed in this chapter.

CHANGES IN METHODOLOGY

Methodological changes include both the refinement of existing methods and development of new methods of assessing the effects of a project on a given factor.

REVISION OF METHODS OF IMPACT ASSESSMENT

The manner in which impacts are assessed for these factors has been changed as a result of the pilot study: administrative/financial capability of cities, gross output, fire protection, solid waste disposal, and traffic count/road damage. These revisions are discussed below.

Administrative/Financial Capability of Cities

The method described in the SEC Draft User's Manual for measuring a city's bonding capacity was based on (1) the city's maximum legal bonding rate and (2) the principal outstanding on its general obligation bonds. Subsequent investigation revealed, however, that the bonding rate is the amount in bonds that a city can sell per year, whereas the principal outstanding is payable over a long period of time. The two variables are thus not comparable.

The alternate method used in the pilot study to measure the financial capabilities of cities is a yardstick measure used by Texas Attorney General's Office. According to this rule, a city's principal outstanding on general obligation bonds should not exceed 10 percent of its assessed valuation. This "10 percent" rule is used as the upper limit in the determination of a city's administrative/financial capability.

Gross Output

In the draft version of the SEC user's manual, gross output during the construction and operations phases were calculated in the same manner. A revision in the determination of output generated during construction was necessary to account for the fact that the construction firm may be based outside the I/O region and thus not have the same economic impacts on the region as a local construction firm.

Fire Protection

A city with a volunteer fire department usually has a lower expenditure for fire protection and more fire fighters per person than a city with a paid force. Because the ratio of volunteer fire fighters to population tends to be high, the projected number of volunteer fire fighters needed to maintain the ratio with the project often overstates the impact on a community's fire protection. For this reason, the type of force is noted, and a distinction is made between paid and volunteer departments in the analysis.

Solid Waste Disposal

In the SEC Draft User's Manual, the impact of new population on a city's solid waste disposal was derived by determining the "percent of current reserve disposal capacity utilized by new demand." This measure of impact was dropped due to conceptual difficulties associated with "current reserve disposal capacity" and to data limitations.

For reserve capacity to be a meaningful measure for impact assessment, it must remain constant with a constant level of use. For example, the reserve capacity of a municipal water system is the difference between the system's maximum potential production and maximum daily use, measured in million gallons per day (mgd). The reserve capacity remains constant if use is constant; if use increases to the point where capacity is exceeded, the system will need to be expanded. Unlike the capacity of a water system, the capacity of a solid waste disposal site is "used up" in that use of a site will fill up the site and thus decrease the reserve capacity. Reserve capacity does not remain constant with a constant level of use. Thus, the question is not whether the capacity of the system will be exceeded, but when.

Another reason the method of assessment was revised is because of difficulty in obtaining meaningful and reliable data on solid waste disposal. This problem also constrained the selection of alternate impact measures. Since sites may serve a number of communities and may also accept waste from individuals, crucial information such as total population served and total waste disposal in tons per day may not be available. Even a measure as simple as estimated life of the site is highly variable because it depends on factors in addition to weight of waste collected. These factors include acreage, total site depth, degree of compaction, and the number and depth of layers of refuse and fill. As a result, most estimates of the life of a solid waste disposal site are in such terms as "five years," "over five years," or "ten years."

In addition, a new method of assessment was necessary because of conceptual and data problems. The impact of the effect of the new population on solid waste disposal is now based on the amount of solid waste generated by the new residents and is equal to the percentage increase in solid waste disposal in the community.

Traffic Count/Road Damage

The methods for determining the effects of increased truck traffic and road damage were refined to permit the distrubution of total truck trips over road segments. This change will permit a more accurate assessment of impact on a particular road segment.

DEVELOPMENT OF METHODS TO MEASURE IMPACTS

The Draft User's Manual for the SEC did not specify a methodology to determine the fiscal impact of a project. However, a way to assess the fiscal impact of the project on the state government and on local governments within the I/O region was developed during the pilot study. Expected tax revenues are estimated through the use of tax coefficients from the regional I/O models. The government costs associated with the project are determined by multiplying per capita government expenditures net of intergovernmental transfer revenues by the expected increase in population.

With this approach, the fiscal impact is assessed for all governments within the I/O region because the extimate of tax revenue is based on the regional I/O models. Calculation of impacts for specific units of government would require the assumption that all direct and indirect economic activity associated with the project will occur in a given community or within a given group of activities. Such an assumption is unwarranted. It can be said, though, that revenue will accrue to a given unit of government and that government expenditures will be incurred to the extent to which project-related expenditures are made and new residents locate within that government's jurisdiction.

DATA-RELATED REFINEMENTS

The data-related revisions to the SEC consist of changes in definitions, terminology, data requirements, and data sources.

DEFINITION CHANGES

The definition of the commuting range was changed from the area within a 60-mile radius of the project site to the area within a 60-mile driving distance of the site. Likewise, the definition of the impacted county area was changed to all counties containing a city in the commuting range, rather than all counties of which a portion is within a 60-mile radius of the project site.

CHANGES IN TERMINOLOGY

The terminology of some data items was changed during the pilot study to more precisely coincide with terms used by the data source. As a result, data collection will be easier and consistency will be increased. These changes are listed in Table 6.

DATA SOURCE REVISIONS

The recommended sources were changed for some data items, and alternate sources provided for others. These revisions were made to ensure use of the most up-to-date information and to facilitate data collection. These revisions are detailed in Table 7. Examples include the use of U.S. Census Bureau population estimates in lieu of those listed in the Texas Almanac and the identification of the Texas Department of Water Resources (Municipal Services Division) as an alternative source for wastewater information.

COMPUTERIZATION OF THE SEC

The SEC was computerized in June 1978. This will eliminate much of the time previously required for calculations. The system will be on file with the Texas Natural Resources Information System (TNRIS) and will be available to the general public.

USING THE SEC

With computerization complete, the steps required to perform the SEC are as follows:

1. Gather the activity-specific and area-related data.

2. Transfer the data to coding sheets provided by TNRIS and submit to TNRIS. The program will then be run in batch mode by TNRIS for a nominal fee.

3. Review the printout.

4. Contact local and state officials to obtain an assessment of the project's effects on housing, education, and roads.

5. Complete the "Impact Summary" portions of the tables by determining the direction and probability of change for each factor. Transfer this information to the General Impact Summary Table.

Table 6

CHANGES IN TERMINOLOGY AND DATA REQUIREMENTS

Terminology Revisions

Changed From	Changed To
Reserve Water Storage Capacity	Reserve Drinking Water Production Capacity
Peak Daily Water Demand	Maximum Daily Water Usage
Reserve Wastewater Treatment Flow	Reserve Wastewater Daily Flow
Peak Daily Wastewater Treatment Flow	Maximum Daily Wastewater Flow
Number of Hospital Beds	Number of Licensed Hospital Beds
Current Value of General Obligation Bonds	Amount of Principal Outstanding on General Obligation Bonds

Changes in Data Requirements

Deletions	Additions
Activity-Specific	Activity-Specific
None	Delivery routes and distribution among routes for truck loads not needing overload permits
	Delivery routes and distribution among routes for truck loads needing overload permits
Area-Related	Area-Related
For each city, reserve disposal capacity	For each road segment, percent of non-overload truck trips using segments
	For each road segment, percent of overload truck trips using segment
	Type II Local Government Tax Multiplier
	Regional Per Capita State Government Expenditures
	Regional Per Capita Local Government Expenditures

Table 7

CHANGES IN DATA SOURCES

Data Item	Recommended Change
New Data Sources	Substitute these sources for those listed in Draft report:
County and city population estimates	Most recent U.S. Census Bureau's P-25 population series.
Number of physicians	Texas Health Facilities Commissior
Alternative Data Sources	Other sources of information:
Assessed valuation for cities and school districts	Municipal Advisory Council of Texa Taxing Jurisdictions of Texas: Assessed Valuations, Basis of Asse ment and Tax Rates
Water supply data	Texas Department of Health
Wastewater data	Texas Department of Water Resource
Amount of principal outstanding on general obligation bonds	Municipal Advisory Council of Texas, Texas Municipal Reports

6. Complete the final table in which the impacts requiring local government expenditures are summarized.

7. Prepare a narrative report discussing the findings of the project analysis.

8. Formulate recommendations for action based on the results of the SEC and the permitting policies and guidelines of the agency.

TRANSFERABILITY TO OTHER COMPUTER SYSTEMS

The TNRIS computer system is a Univac 1100/41, with an Exec 8 Operating System. The SEC programs are written in Fortran V.

Complete coding information and program documentation are available from TNRIS. Permanent support staff, including a systems analyst and a users analyst, will be present to assist others who might want to transfer the set of programs to another system.

The programs are written in standard code such that the programs could be adapted to any size system. Some recoding will be necessary, of course, to ensure efficient use of the new system.

4. ANALYSIS OF ENTIRE PROJECT

The pilot study focused on the construction phase of the La Salle Terminal. A brief analysis of the impacts of the operations phase was presented in Chapter 2. In this chapter, the resources required to analyze both phases and the ability of such an analysis to satisfy federal agency requirements are discussed.

RESOURCES NEEDED TO ANALYZE ENTIRE PROJECT

The operations phase of the La Salle Terminal was not analyzed in the pilot study for these reasons:

1. Preliminary analysis indicated that there would be few new-resident workers during the operations phase, and therefore this phase would not provide a very good test of certain portions of the SEC model.

2. Personnel requirements and expenditures vary through time only during the construction phase, and thus this phase provides a better test of the model.

3. Time constraints precluded an assessment of both phases.

A projected work plan for an assessment of the entire project in which tasks and staffing requirements are delineated is shown in Figure 4 and Table 8. The work plan assumes the present level of development of the SEC and present computerization. Time actually spent in the pilot study to perform such tasks as refining the system and clarifying data sources and terms is not reflected in the work plan. Since system refinement would not be necessary, and because the SEC model has been "debugged," the amount of project manager and research associate time shown is less. Conversely, more research assistant time is shown.

Considering the operations phase of a project would increase the time required by eight person-days, or by 25 percent. Assuming a staff of four, the analysis could be completed in about 28 working days (six weeks). The time required is not doubled because the area-related data requirements remain the same. The added time is necessary for calculations and analysis/write-up.

Figure 4

ANALYSIS OF ENTIRE LA SALLE TERMINAL PROJECT
PERT CHART

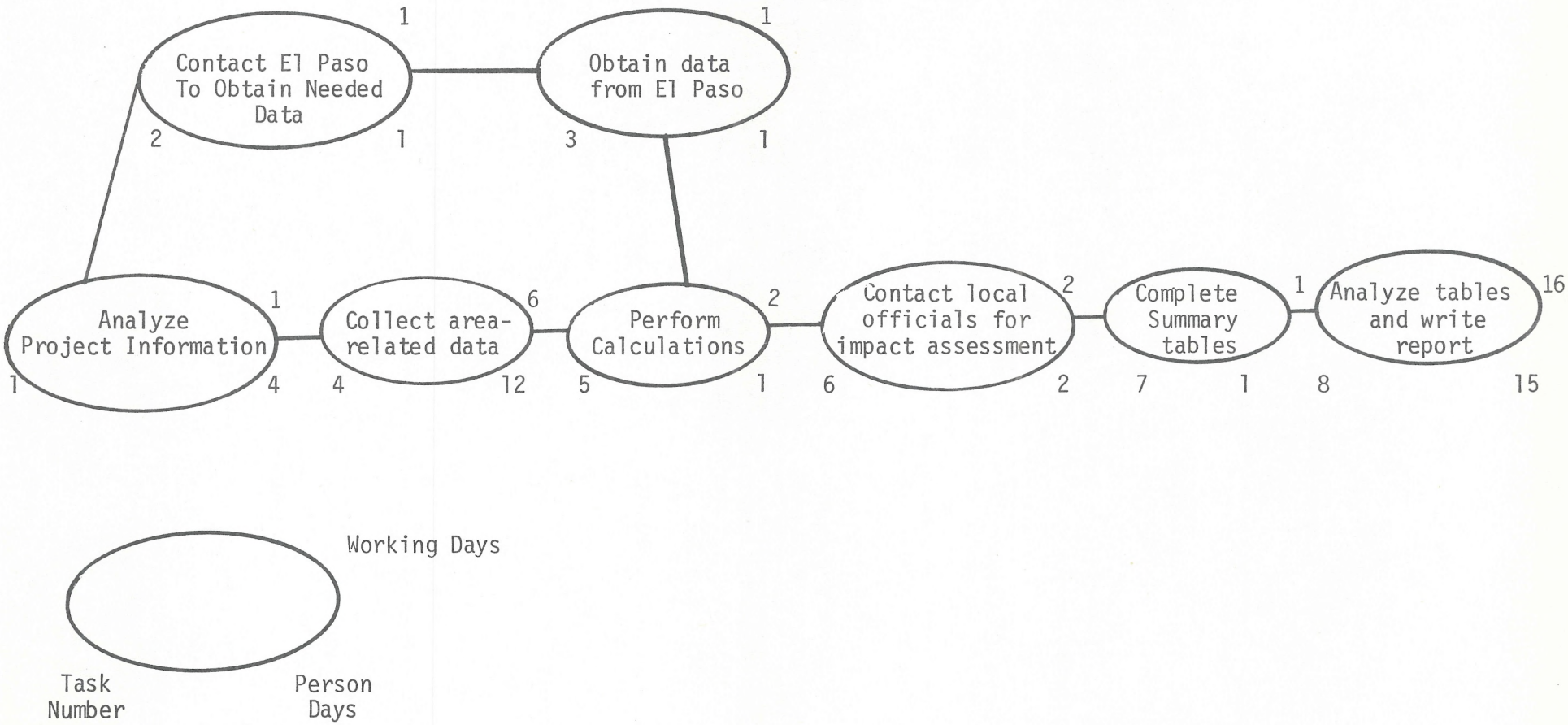


Table 8

ESTIMATED STAFFING REQUIREMENTS FOR ANALYSIS OF ENTIRE LA SALLE TERMINAL PROJECT[1]

Estimated Time Allocations by Task[2]

	Construction Phase Only		Construction and Operation Phases	
	Working Days	Person Days	Working Days	Person Days
Data Gathering (Tasks 2,3,4)	6	14	6	14
Calculations (Tasks 5,6)	4	3	4	3
Analysis/Write-up (Tasks 1,7,8)	9	12	17	20
Supervision/Review	1	3	1	3
Total	20	32	28	40

Staffing Requirements for Both Phases

Type of Personnel		Person Days
Project Manager	(1)	4
Research Associate	(1)	18
Research Assistant	(2)	18

[1]Assumes present level of development of SEC computerization and two days computer turnaround time. Manual performance of the routine would increase research assistant time by 29 person days and 12 working days.

[2]Based on Figure 4 and Table 4.

ABILITY TO SATISFY FEDERAL ER REQUIREMENTS

The SEC determines the impacts of a project on a number of social and economic factors. It addresses those issues which can be quantitatively considered in a routine manner. It is not a complete impact assessment in that it does not address the impacts of a project on cultural or archaeological resources, recreation, or qualitative factors such as quality of life or community cohesion, nor does it provide an analysis of special issues which must be identified and examined on a case-by-case basis. Examples of the latter are the impacts of an unincorporated community or the long-term direct and indirect effects of the project on the economic structure of the region.

Nonetheless, the issues which are addressed cover a substantial number of the topics which must be addressed in an environmental report (ER). The El Paso joint environmental report, for example, covered the entire El Paso LNG project, pursuant to Federal Power Commission guidelines governing the preparation of environmental reports. The social and economic sections of such a report are outlined in Table 9; those portions which could have been addressed based on information provided by the SEC are noted.

Major portions of Section 2.3, "Socioeconomic Considerations," are not addressed by the SEC. The purpose of this part, in essence, is to provide a social and economic profile of the region and to identify trends of development. While some of the area-specific information required for the SEC could form the basis for a discussion of the present status of some social factors, other portions would have to be completed without the use of the SEC.

The SEC does present a factor-by-factor description of impacts of the construction and operation phases at a level of detail rarely found in ERs and, with a few minor additions, would satisfy the requirements of Sections 3.1.3 and 3.2.3. The remaining parts, Sections 5.1, 6.1, 6.2, and 7.3, are based to a great extent on the impacts identified as likely to occur in the construction and operations phases (Sections 3.1.3 and 3.2.3). Those topics not addressed by the SEC concern the effects on qualitative sociocultural factors and the possible destruction of historical or archaeological areas. Analyses of these factors tend to be judgmental and are not suitable for routinization; consequently, they were not included in the SEC. The Texas Coastal Management Program is presently conducting discussions with federal agencies on the acceptability of SEC outputs as partial satisfaction of ER requirements.

In summary, the SEC addresses most of the issues required in an ER in a more comprehensive manner than is presently found in most reports. Additional time would be needed to answer the remaining questions raised by an ER and to present the answers in the form required by the federal agency, in this case the FPC. By providing an "audit trail," the SEC permits better documentation of methodologies and assumptions than normally is found in an ER. Furthermore, the results are predictable and consistent, in that the same results will be obtained each time, given the same data set.

Table 9

SOCIOECONOMIC SECTIONS OF ENVIRONMENTAL REPORT

Section	Description	Addressed by SEC?
2.3	Socioeconomic Considerations	
	a. socioeconomic future without project	No
	b. economic development in vicinity, especially tax base and per capita income	No
	c. trends in economic development	No
	1. historical viewpoint	
	2. prospective viewpoint	
	d. population densities and distance to nearby cities	Yes
	e. number and type of residences and businesses needing relocation	Yes
3.13	Construction - Socioeconomic Consideratons	
	a. effect on development in relation to labor, housing, local industry, public services, and tax base	Yes
	b. need for relocation	Yes
3.2.3	Operation and Maintenance - Socioeconomic Considerations	
	a. effect on development in relation to labor, housing, local industry, public services, and tax base	Yes
	b. extent to which maintenance depends on new energy sources or use of vital resources	No

(continued)

(Table 9, continued)

Section	Description	Addressed by SEC?
5.1	Human Resources Impacted	
	a. magnitude and duration of impacts	Yes
	b. effect on qualitative factors such as aesthetic and cultural values	
	1. noise in immediate area	Yes
	2. other factors	No
6.1, 6.2	Short-term Uses VS Long-term Productivity	Yes
7.3	Commitment of Resources - Socioeconomic Considerations	
	a. commitment of resources	Yes
	b. destruction of historical, archaeological, or scenic areas	No

5. FUTURE DEVELOPMENT OF THE SEC

The procedures employed in the SEC are based on a set of regional models. Since the field of regional modeling is rapidly developing, advances in this art should be continually incorporated into the model. With this in mind, six areas of future development are suggested for the SEC.

DEVELOPMENT AND IMPLEMENTATION OF PROCEDURES FOR UPDATING AND REVISING THE I/O MODELS

In the present version of the SEC, the indirect and induced economic impacts are estimated through the use of five I/O models which were developed to describe the economies of the coastal region. These models are based on the 1972 state of Texas input/output model. As a result, the regional models describe the structure of the coastal economies as they were in 1972. Over time, of course, changes in the structure of the coastal economies will render the present models increasingly inadequate as descriptions of the regional economies.

Effort should be directed toward developing procedures for updating the regional I/O models. Specifically, attention should be focused on devising procedures for periodic revision of the coefficients of the direct requirements table for each region.

Currently, the regional models are derived from the state of Texas model. The next version of the state of Texas I/O model will not be available for a few years; when it is finally available, it will represent the 1977 state economy. As a result, unless other estimating procedures are developed, revision of the present regional models will not be possible until the early 1980s; even then the models will represent a 1977 economy.

Development of procedures for periodic revision independent of the state of Texas I/O model would permit the development of more timely and adequate representations of the regional economies.

REFINEMENT OF METHODS TO ASSESS FISCAL IMPACTS

The method currently used by the SEC to assess fiscal impacts estimates tax revenues through the use of a tax multiplier (derived from the regional I/O models) and estimates government expenditures by current estimates of per capita direct general expenditures (net of intergovernmental transfers). Refinement of the methodology should focus on these areas:

1. Development of procedures for determining the fiscal impact on a given community or unit of government

2. Examination of alternative methods for estimating tax revenues

3. Examination of alternative methods for estimating government expenditures

The three areas are interrelated; for example, accomplishments of the first will require the latter two.

The present approach estimates the fiscal impact on the state and all local governments within the I/O region; the net effect on a given community or unit of government cannot be determined, even though the latter is often of more interest than the former. As a result, considerable attention should be paid to the determination of fiscal impact at the community level.

Tax revenues are estimated in total through the use of tax multipliers from the I/O models. The multiplier, if used without adjustment, underestimates tax revenue because certain government activities (for example, education) are considered in the I/O models as part of processing sectors, rather than as part of the government sector. Even though adjustments have been made to the tax multipliers in the regional I/O models, efforts should be directed toward developing alternative methods for estimating tax revenues in order to avoid the difficulties associated with the use of the I/O tax multiplier and to permit the derivation of project-associated revenues at the community level.

An example of a more detailed fiscal analysis is the model developed by Dr. Lonnie Jones, Texas A&M University. His Industrial Impact Model permits the determination of benefits and costs of an industrial plant to three sectors of a community economy: the private sector, the municipal government, and the school district. High, intermediate,

and low estimates or a single-value estimate are provided. The system is computerized; information on 59 factors is required as system input. Estimates made by the model exclude the construction phase.

Total government expenditures are estimated in the present model by using an estimate of per capita costs. This approach assumes constant average and marginal costs for all government services for a community. A refinement of the methodology in order to estimate expenditures by major types would permit a more accurate assessment of the impact of project-related population growth on a given unit of government.

RESEARCH AND DEVELOPMENT OF PROCEDURES FOR EXTENDING THE ECONOMIC-ECOLOGICAL LINKS REPRESENTED IN THE INPUT/OUTPUT MODEL

A third area requiring consideration for future development relates to the further development of the economic-ecological linkages represented by the input/output model. The development of linkages between industry activity and environmental pollutants within an input/output framework has become an area of intense research. As this research continues, it will become possible to extend the present regional input/output models to represent more of these linkages.

EXTENSION OF SOCIAL IMPACT PROCEDURES TO INCLUDE QUALITATIVE FACTORS

The considerations of social impacts currently contained in the SEC are, for the most part, concerned with the infrastructural elements of a community. That is, the SEC evaluates the more tangible and quantifiable social services which communities provide and identifies situations in which those services may be stressed beyond capacity by a new development in the community. Though the regulations of the various federal and state agencies specify that social factors such as community cohesion, values, cultural opportunities, and family stability should be addressed, the assessment models and methodologies which have been used to date do not provide a conceptual context for validly assessing impacts on these factors. Sociology provides such a conceptual context, but in most cases the empirical link between demographic/infrastructural changes and those more nebulous social factors such as values, norms, stability, and cohesion have not been made. As a result, these factors have either been ignored or have been addressed in a perfunctory manner that risks a serious glossing over of what may be major impacts. Efforts should focus on extending the social assessment methodology to measure changes in social values, norms, stability, and cohesion.

USE OF FOLLOWUP STUDIES TO REFINE PROCEDURES

A fifth area which is suggested for ongoing development concerns the use of the SEC to further improve its predictive accuracy. The use of followup studies of the actual impacts of projects on areas and comparison of such studies with the original projected impacts may be used to identify components of the SEC requiring revision. This will provide feedback for the improvement of the SEC methodology.

CONTINUED UPDATING OF DATA BASE AND DEVELOPMENT OF COMMUNITY LEVEL MODELING

The final area suggested for future development is that of the empirical basis of the SEC methodology. The maintained data base of the SEC should be updated and expanded. In addition, improvements should be made in the specification of variable relationships based upon statistical analyses of these relationships within the Texas coastal region.

Complete economic data required to analyze the economic factors are provided for the user. These variables are (1) regional employment, (2) regional personal income, (3) per capita government expenditures in the region, and (4) per capita local government expenditures in the region. Periodic updating of the data will be necessary to ensure that the most up-to-date information is used in the impact analysis.

An example of efforts directed to improving the modeling techniques employed in the SEC would be a statistical study of the factors affecting the resident location of construction workers during the construction phase of a project. This was done, for instance, as part of a study conducted by Dr. James Chalmers for the Bureau of Reclamation (Construction Worker Survey, October 1977). The expansion of the data base will probably be required as the SEC is improved.

APPENDIX

SEC WORKSHEETS

Table A1

Applicant-Supplied Activity-Specific Information

Time Period[1] (ASIR 6)	No. of Months in Time Period[1] (ASIR 7)	Size of Workforce in Each Time Period[1] (ASIR 1)	Labor Payments in Each Time Period[1] (ASIR 2)	Project Expenditures (or Output) in Each Time Period[2] (ASIR 3)	Water Use (Acre-Feet) in Each Time Period[2] (ASIR 4)	Number of Loaded Truck Trips Not Requiring Overload Permits[2] (ASIR 9)	Number of Loaded Truck Trips Requiring Overload Permits (ASIR 11)	Average Gross Vehicle Weight of Trucks Requiring Overload Permits (Tons) (ASIR 12)
(1) 1979	9	38	$ 561,000	$ 10,425,000	0.00	0	0	0
(2) 1980	12	317	6,257,000	83,755,000	26.09	172,684	12	69
(3) 1981	12	1,126	23,551,000	143,709,000	36.83	30,873	6	69
(4) 1982	12	636	13,277,000	94,241,000	85.93	4,817	0	0
(5) 1983	3	118	607,000	3,632,000	52.17	0	0	0

Total No. of Months in Project (ASIR 8) 48

1. Joint Environmental Report Respecting the Proposed Algeria II Project, p. 3.5-2 and 3.5-3.

2. Personal communication with El Paso LNG Terminal Company.

Table A2

Applicant-Supplied Activity-Specific Information

Description	Value	Label
Average GVW of trucks[1]	22 tons	ASIR10
Project start date (construction)[2]	4-1-79	ASIR5
Project start date (operation)	NA	ASIR5
Percent local hires (construction)[3]	50%	ASIR13
Percent local hires (operation)	NA	ASIR13
Number of residences displaced by project[1]	1	ASIR14
Use of condemnation proceedings[1]	No	ASIR15
Current activity on site[2]	2	ASIR16
Proposed activity on site (construction)[2]	14	ASIR17
Proposed activity on site (operation)	NA	ASIR17
Current landscape type on site[4]	3	ASIR18
Percent of direct expenditures to be made in Input/Output Region (construction only)[1]	22.4%	ASIR24

NA = not applicable

1. From information supplied by El Paso LNG Terminal Company.
2. Joint Environmental Report Respecting the Proposed Algeria II Project, p. 3.1-1, 3.5-2.
3. From conversations with major construction contractors with experience in project area.
4. Draft SEC User's Manual, Table II-3.

Table A3

User-Supplied Activity Specific Information

Description	Value	Label
SIC Code (construction)[1]	1629	ASIR19
SIC Code (operation)	NA	ASIR19
Primary activity sector (construction)[2]	12	ASIR20
Primary activity sector (operation)	NA	ASIR20
Noise level of current activity on project site[3]	40 dBA	ASIR21
Noise level of proposed activity on project site (construction)[1]	85 dBA	ASIR22
Noise level of proposed activity on project site (operation)	NA	ASIR22
Noise Reduction Factor[4]	3	ASIR23

1. 1972 Standard Industrial Classification Manual (Washington, D.C.: GPO).
2. Draft SEC User's Manual, Table II-5.
3. Table A2 and Draft SEC User's Manual, Table II-2.
4. Table A2 and Draft SEC User's Manual, Table II-3.

Table A4

Cities in Commuting Range

Cities in Commuting Range[1]

No.	Name of City	Name of County
1.	Austwell	Refugio
2.	Victoria	Victoria
3.	Port Lavaca	Calhoun
4.	Point Comfort	Calhoun
5.	Seadrift	Calhoun
6.	Edna	Jackson
7.	Ganado	Jackson
8.	Palacios	Matagorda

1. Derived from examination of road map and 1978-1979 Texas Almanac.

Table A5

Impacted Counties and I/O Region

I. Counties in Impacted County Area[1]

No.	Name
1.	Refugio
2.	Victoria
3.	Calhoun
4.	Jackson
5.	Matagorda

II. A. Project County Name: Calhoun[2] No. 3

B. Input/Output Region Name: Golden Crescent Council of Governments[2] No. 3

1. From Table A4.

2. Draft SEC User's Manual, Figure III-2 and Table III-2.

Table A6

Cities in Commuting Range and in I/O Region [1]

No.	Name
2	Victoria
3	Port Lavaca
4	Point Comfort
5	Seadrift
6	Edna
7	Ganado
8	Palacios

1. From Tables A4 and A5, and Draft SEC User's Manual, Table III-2.

Table A7

School Districts in Commuting Range[1]

School Districts	Cities Served					
No.	No.	Name	No.	Name	No.	Name
1. Austwell-Tivoli ISD	1	Austwell				
2. Victoria Consolidated	2	Victoria				
3. Calhoun Co. ISD	3	Port Lavaca	4	Point Comfort	5	Seadrift
4. Edna ISD	6	Edna				
5. Ganado ISD	7	Ganado				
6. Palacios ISD	8	Palacios				

1. Personal communication, Texas Education Agency, Austin.

Table A8

Highway Corridors[1]

Road Segment		Road Segment		Road Segment	
No.	Name	No.	Name	No.	Name
1	SH 185	2	FM 1289	3	SH 238
Intersects with		Intersects with		Intersects with	
FM 1289/SH 238		SH 185/SH 238		SH 185/SH 316	

City(s)		City(s)		City(s)	
No.	Name	No.	Name	No.	Name
5	Seadrift	2	Victoria	2	Victoria
1	Austwell	4	Point Comfort	4	Point Comfort
		7	Ganado	7	Ganado
		6	Edna	6	Edna
		3	Port Lavaca	3	Port Lavaca
		1	Austwell	8	Palacios
		5	Seadrift		
		8	Palacios		

1. From road map and Table A4.

Table A9

System Information Requirements

STATE[1]

Description	Value	Label
State Population (July, 1976)	12,487,000	SIRST1
Total State Employment (Annual average, 1976)	5,217,000	SIRST2
Total State Number of Students (1975-1976)	2,944,925	SIRST3

1. From 1978-1979 Texas Almanac.

Table A10

System Information Requirements

Construction

INPUT-OUT REGION 3 (No.) Golden Crescent (Name) Council of Governments

Regional Input-Output Information
for Primary Activity Sector 12

Description	Value	Label
Type II Employment Multiplier (Output)	1.553137	SIRRG1
Type II Income Multiplier (Output)	1.521104	SIRRG2
Type II Environmental Self Multiplier	.0000000	SIRRG3
Type II Output Multiplier	1.876765	SIRRG4
Type II State Government Tax Multiplier (Output)	0.012249	SIRRG5
Total Regional Employment (1975)	64,446	SIRRG6
Total Regional Personal Income (1975)	$844,226,000	SIRRG7
Type II Local Government Tax Multiplier (Output)	0.022282	SIRRG8
Regional Per Capita State Government Expenditures ($ 1977)	$312	SIRRG9
Regional Per Capita Local Government Expenditures ($ 1977)	$459	SIRRG10

Table A 11a

System Information Requirements

COUNTY 1 (No.) Refugio (Name)

Description	Value	Label
County Population[1] (1976)	8,900	SIRC01
Number of Physicians[2]	4	SIRC02
Number of Licensed Hospital Beds[3]	60	SIRC03

1. From Bureau of Census, Population Estimates Projections, Series P-25, No. 717 (Washington, D.C.: GPO, 1978).
2. From Texas Health Facilities Commission, Austin.
3. From Texas Department of Health - Medical Facilities Planning Division, Austin.

Table A 11b

System Information Requirements

COUNTY 2 (No.) Victoria (Name)

Description	Value	Label
County Population (1976)[1]	59,700	SIRC01
Number of Physicians[2]	60	SIRC02
Number of Licensed Hospital Beds[3]	421	SIRC03

1. From Bureau of Census, Population Estimates Projections, Series P-25, No. 717 (Washington, D.C.: GPO,1978).

2. From Texas Health Facilities Commission, Austin.

3. From Texas Department of Health - Medical Facilities Planning Division, Austin.

Table A 11c

System Information Requirements

COUNTY 3 (No.) Calhoun (Name)

Description	Value	Label
County Population (1976) [1]	17,300	SIRC01
Number of Physicians [2]	8	SIRC02
Number of Licensed Hospital Beds [3]	75	SIRC03

1. From Bureau of Census, Population Estimates Projections, Series P-25, No. 717 (Washington, D.C.: GPO,1978).

2. From Texas Health Facilities Commission, Austin.

3. From Texas Department of Health - Medical Facilities Planning Division, Austin.

Table A 11d

System Information Requirements

COUNTY 4 (No.) Jackson (Name)

Description	Value	Label
Current Population (1976) [1]	13,000	SIRC01
Number of Physicians [2]	5	SIRC02
Number of Licensed Hospital Beds [3]	85	SIRC03

1. From Bureau of Census, Population Estimates Projections, Series P-25, No. 717 (Washington, D.C.: GPO,1978).

2. From Texas Health Facilies Commission, Austin.

3. From Texas Department of Health - Medical Facilities Planning Division, Austin.

Table A 11e

System Information Requirements

COUNTY 5 (No.) Matagorda (Name)

Description	Value	Label
County Population (1976)[1]	28,600	SIRC01
Number of Physicians[2]	20	SIRC02
Number of Licensed Hospital Beds[3]	150	SIRC03

1. From Bureau of Census, Population Estimates Projections, Series P-25, No. 717 (Washington, D.C.: GPO,1978).
2. From Texas Health Facilities Commission, Austin.
3. From Texas Department of Health - Medical Facilities Planning Division, Austin.

Table A 12a

System Information Requirements

SCHOOL DISTRICT 1 (No.) Austwell-Tivoli ISD (Name)

Description	Value	Label
Current Assessed Valuation[1]	$92,421,384	SIRSD1
Amount of Principal Outstanding on General Obligation Bonds[2]	0	SIRSD2

1. Municipal Advisory Council of Texas, Taxing Jurisdictions in Texas: Assessed Valuation, Basis of Assessment and Tax Rates, Special Report 120, February, 1978.

2. From the Superintendent of Schools, Austwell-Tivoli ISD.

Table A 12b

System Information Requirements

SCHOOL DISTRICT 2 (No.) Victoria-Consolidated (Name)

Description	Value	Label
Current Assessed Valuation[1]	$473,495,370	SIRSD1
Amount of Principal Outstanding on General Obligation Bonds[2]	$ 11,053,000	SIRSD2

1. Municipal Advisory Council of Texas, Taxing Jurisdictions in Texas: Assessed Valuation, Basis of Assessment and Tax Rates, Special Report 120, February, 1978.

2. From the Superintendent of Schools, Victoria Consolidated School District.

Table A 12c

System Information Requirements

SCHOOL DISTRICT 3 Calhoun County ISD
No. Name

Description	Value	Label
Current Assessed Valuation[1]	$352,127,173	SIRSD1
Amount of Principal Outstanding on General Obligation Bonds[2]	$ 6,655,000	SIRSD2

1. Municipal Advisory Council of Texas, Taxing Jurisdictions in Texas: Assessed Valuation, Basis of Assessment and Tax Rates, Special Report 120, February, 1978.

2. From the Superintendent of Schools, Calhoun County ISD.

Table A 12d

System Information Requirements

SCHOOL DISTRICT 4 (No.) Edna ISD (Name)

Description	Value	Label
Current Assessed Valuation	$71,416,180	SIRSD1
Amount of Principal Outstanding on General Obligation Bonds	$ 1,834,794	SIRSD2

1. Municipal Advisory Council of Texas, Taxing Jurisdictions in Texas: Assessed Valuation, Basis of Assessment and Tax Rates, Special Report 120, February, 1978.

2. From the Superintendent of Schools, Edna ISD.

Table A 12e

System Information Requirements

SCHOOL DISTRICT 5 (No.) Ganado ISD (Name)

Description	Value	Label
Current Assessed Valuation[1]	$37,675,270	SIRSD1
Amount of Principal Outstanding on General Obligation Bonds[2]	$ 620,000	SIRSD2

1. Municipal Advisory Council of Texas, Taxing Jurisdictions in Texas: Assessed Valuation, Basis of Assessment and Tax Rates, Special Report 120, February, 1978.

2. From the Superintendent of Schools, Ganado ISD.

Table A 12f

System Information Requirements

SCHOOL DISTRICT 6 (No.) Palacios ISD (Name)

Description	Value	Label
Current Assessed Valuation [1]	$162,163,900	SIRSD1
Amount of Principal Outstanding on General Obligation Bonds [2]	$ 678,000	SIRSD2

1. Municipal Advisory Council of Texas, Taxing Jurisdictions in Texas: Assessed Valuation, Basis of Assessment and Tax Rates, Special Report 120, February, 1978.

2. From the Superintendent of Schools, Palacios ISD.

Table A 13a

System Information Requirements

CITY 1 (No.) Austwell (Name)

Description	Value	Label
City Population (1975)[1]	272	SIRCI1
City Law Enforcement Officers[2]	0	SIRCI2
City Fire Fighters[2]	200v	SIRCI3
Reserve Drinking Water Production Capacity (mgd)[3]	0.216	SIRCI4
Maximum Daily Water Usage (mgd)[3]	0.02	SIRC15
Reserve Wastewater Daily Flow (mgd)[4]	0.093	SIRC16
Maximum Daily Peak Wastewater Flow (mgd)[4]	0.027	SIRC17
Average Daily Solid Waste Disposal (tons/day)[2]	0.083	SIRC19
Amount of Principal Outstanding on General Obligation Bonds[2]	0	SIRC110
Current Total Assessed Valuation[5]	$426,725	SIRC111
Distance from Project Site (miles)[6]	44	SIRC112

1. Bureau of Census, Population Estimates and Projections, Series P-25, No. 691 (Washington, D.C.: GPO, 1977)
2. From city officials."v" indicates volunteer fire fighters.
3. From Texas Department of Health, Division of Sanitary Engineering, Water Supply Program, Austin.
4. From Texas Department of Water Resources, Municipal Services Division, Austin.
5. Municipal Advisory Council of Texas, Taxing Jurisdictions in Texas: Assessed Valuation, Basis of Assessment and Tax Rates, Special Report 120, February, 1978.
6. From road map.

Table A 13b

System Information Requirements

CITY 2 (No.) Victoria (Name)

Description	Value	Label
City Population (1978)[1]	58,065	SIRCI1
City Law Enforcement Officers[1]	65	SIRCI2
City Fire Fighters[1]	58	SIRCI3
Reserve Drinking Water Production Capacity (mgd)[1]	8.5	SIRCI4
Maximum Daily Water Usage (mgd)[1]	11.0	SIRCI5
Reserve Wastewater Daily Flow (mgd)[2]	0	SIRCI6
Maximum Daily Peak Wastewater Flow (mgd)[2]	11.63	SIRCI7
Average Daily Solid Waste Disposal (tons/day)[1]	188.00	SIRCI9
Amount of Principal Outstanding on General Obligation Bonds[1]	$10,963,000	SIRCI10
Current Total Assessed Valuation[3]	$233,319,420	SIRCI11
Distance from Project Site (miles)[4]	38	SIRCI12

1. From city officials.
2. From Texas Department of Water Resources, Municipal Services Division, Austin.
3. Municipal Advisory Council of Texas, Taxing Jurisdictions in Texas: Assessed Valuation, Basis of Assessment and Tax Rates, Special Report 120, February, 1978.
4. From road map.

Table A 13c

System Information Requirements

CITY 3 (No.) Port Lavaca (Name)

Description	Value	Label
City Population (1978)[1]	10,491	SIRCI1
City Law Enforcement Officers[1]	18	SIRCI2
City Fire Fighters[1]	9	SIRCI3
Reserve Drinking Water Production Capacity (mgd)[2]	0.25	SIRCI4
Maximum Daily Water Usage (mgd)[2]	4.25	SIRCI5
Reserve Wastewater Daily Flow (mgd)[3]	0.609	SIRCI6
Maximum Daily Peak Wastewater Flow (mgd)[3]	0.391	SIRCI7
Average Daily Solid Waste Disposal (tons/day)[1]	23.91	SIRCI9
Amount of Principal Outstanding on General Obligation Bonds[4]	$ 1,859,000	SIRCI10
Current Total Assessed Valuation[5]	$40,805,380	SIRCI11
Distance from Project Site (miles)[6]	19	SIRCI12

1. From city officials.

2. From Texas Department of Health, Division of Sanitary Engineering, Water Supply Program, Austin.

3. From Texas Department of Water Resources, Municipal Services Division, Austin.

4. Municipal Advisory Council of Texas, Report on City of Port Lavaca, December, 1977.

5. Municipal Advisory Council of Texas, Taxing Jurisdictions in Texas: Assessed Valuation, Basis of Assessment and Tax Rates, Special Report 120, February, 1978.

6. From road map.

Table A 13d

System Information Requirements

CITY 4 (No.) Point Comfort (Name)

Description	Value	Label
City Population (1978)[1]	1450	SIRCI1
City Law Enforcement Officers[1]	2	SIRCI2
City Fire Fighters[1]	30v	SIRCI3
Reserve Drinking Water Production Capacity (mgd)[2]	0.005	SIRCI4
Maximum Daily Water Usage (mgd)[3]	0.19	SIRCI5
Reserve Wastewater Daily Flow (mgd)[4]	0.050	SIRCI6
Maximum Daily Peak Wastewater Flow (mgd)[4]	0.350	SIRCI7
Average Daily Solid Waste Disposal (tons/day)[5]	1.07	SIRCI9
Amount of Principal Outstanding on General Obligation Bonds[1]	0	SIRCI10
Current Total Assessed Valuation[6]	$47,467,000	SIRCI11
Distance from Project Site (miles)[7]	24	SIRCI12

1. From city officials. "v" indicates volunteer fire fighters.
2. Personal communication with officials at ALCOA, Point Comfort, Texas.
3. From Texas Department of Health, Division of Sanitary Engineering, Water Supply Program, Austin.
4. From Texas Department of Water Resources, Municipal Services Division, Austin.
5. From Texas Department of Health, Solid Waste Division, Austin.
6. Municipal Advisory Council of Texas, Taxing Jurisdictions in Texas: Assessed Valuation, Basis of Assessment and Tax Rates, Special Report 120, February, 1978.
7. From road map.

Table A 13e

System Information Requirements

CITY 5 (No.) Seadrift (Name)

Description	Value	Label
City Population[1]	1,500	SIRCI1
City Law Enforcement Officers[1]	2	SIRCI2
City Fire Fighters[1]	42v	SIRCI3
Reserve Drinking Water Production Capacity (mgd)[2]	0.003	SIRCI4
Maximum Daily Water Usage (mgd)[2]	0.177	SIRCI5
Reserve Wastewater Daily Flow (mgd)[3]	0.496	SIRCI6
Maximum Daily Peak Wastewater Flow (mgd)[3]	0.106	SIRCI7
Average Daily Solid Waste Disposal (tons/day)[4]	1.71	SIRCI9
Amount of Principal Outstanding on General Obligation Bonds[5]	$103,000	SIRCI10
Current Total Assessed Valuation[6]	$3,390,907	SIRCI11
Distance from Project Site (miles)	29	SIRCI12

1. From city officials. "v" indicates volunteer fire fighters.
2. From Texas Department of Health, Division of Sanitary Engineeering, Water Supply Program, Austin.
3. From Texas Department of Water Resources, Municipal Services Division, Austin.
4. From Texas Department of Health, Solid Waste Division, Austin.
5. Municipal Advisory Council of Texas, Report on City of Seadrift, November, 1977.
6. Municipal Advisory Council of Texas, Taxing Jurisdictions in Texas: Assessed Valuation, Basis of Assessment and Tax Rates, Special Report 120, February, 1978.
7. From road map.

Table A 13g

System Information Requirements

CITY 7 (No.) Ganado (Name)

Description	Value	Label
City Population (1978)[1]	1,640	SIRCI1
City Law Enforcement Officers[1]	0.5	SIRCI2
City Fire Fighters[1]	32v	SIRCI3
Reserve Drinking Water Production Capacity (mgd)[2]	0.787	SIRCI4
Maximum Daily Water Usage (mgd)[2]	0.321	SIRCI5
Reserve Wastewater Daily Flow (mgd)[3]	0.108	SIRCI6
Maximum Daily Peak Wastewater Flow (mgd)[3]	0.252	SIRCI7
Average Daily Solid Waste Disposal (ton/day)[4]	0.075	SIRCI9
Amount of Principal Outstanding on General Obligation Bonds[5]	$36,000	SIRCI10
Current Total Assessed Valuation[6]	$4,191,341	SIRCI11
Distance from Project Site (miles)[7]	44	SIRCI12

1. From city officials. "v" indicates volunteer fire fighters.
2. From Texas Department of Health, Division of Sanitary Engineering, Water Supply Program, Austin.
3. From Texas Department of Water Resources, Municipal Services Division, Austin.
4. From Texas Department of Health, Solid Waste Division, Austin.
5. Municipal Advisory Council of Texas, Report on City of Ganado, December, 1977.
6. Municipal Advisory Council of Texas, Taxing Jurisdictions in Texas: Assessed Valuation, Basis of Assessment and Tax Rates, Special Report 120, February, 1978.
7. From road map.

Table A 13f

System Information Requirements

CITY 6 (No.) Edna (Name)

Description	Value	Label
City Population (1978)[1]	5,900	SIRCI1
City Law Enforcement Officers[1]	6	SIRCI2
City Fire Fighters[1]	25v	SIRCI3
Reserve Drinking Water Production Capacity (mgd)[2]	1.58	SIRCI4
Maximum Daily Water Usage (mgd)[2]	1.30	SIRCI5
Reserve Wastewater Daily Flow (mgd)[3]	0.315	SIRCI6
Maximum Daily Peak Wastewater Flow (mgd)[3]	1.879	SIRCI7
Average Daily Solid Waste Disposal (tons/day)[1]	18.0	SIRCI9
Amount of Principal Outstanding on General Obligation Bonds[1]	$308,710	SIRCI10
Current Total Assessed Valuation[4]	$15,998,850	SIRCI11
Distance from Project Site (miles)[5]	44	SIRCI12

1. From city officials. "v" indicates volunteer fire fighters.
2. From Texas Department of Health, Division of Sanitary Engineering, Water Supply Program, Austin.
3. From Texas Department of Water Resources, Municipal Services Division, Austin.
4. Municipal Advisory Council of Texas, Taxing Jurisdictions in Texas: Assessed Valuation, Basis of Assessment and Tax Rates, Special Report 120, February, 1978.
5. From road map.

Table A 13h

System Information Requirements

CITY 8 Palacios

Description	Value	Label
City Population (1978)[1]	4,500	SIRCI1
City Law Enforcement Officers[1]	5	SIRCI2
City Fire Fighters[1]	40v	SIRCI3
Reserve Drinking Water Production Capacity (mgd)[1]	0.700	SIRCI4
Maximum Daily Water Usage (mgd)[1]	1.000	SIRCI5
Reserve Wastewater Daily Flow (mgd)[2]	0.530	SIRCI6
Maximum Daily Peak Wastewater Flow (mgd)[2]	0.470	SIRCI7
Average Daily Solid Waste Disposal (tons/day)[1]	30	SIRCI9
Amount of Principal Outstanding on General Obligation Bonds[1]	$288,000	SIRCI10
Current Total Assessed Valuation[3]	$10,460,594	SIRCI11
Distance from Project Site (miles)[4]	38	SIRCI12

1. From city officials. "v" indicates volunteer fire fighters.
2. From Texas Department of Health, Division of Sanitary Engineering, Water Supply Program, Austin.
3. Municipal Advisory Council of Texas, Taxing Jurisdictions in Texas: Assessed Valuation, Basis of Assessment and Tax Rates, Special Report 120, February, 1978.
4. From road map.

Table A 14a

System Information Requirements

ROAD SEGMENT 1 SH 185
No. Name

Description	Value	Label
Current Average Daily Traffic Count[1]	1150	SIRRS1
Current % Heavy Truck Traffic Mix[1]	11.5%	SIRRS2

1. From State Highway Department, Austin Traffic Section, Austin.

Table A 14b

System Information Requirements

ROAD SEGMENT 2 FM 1289
No. Name

Description	Value	Label
Current Average Daily Traffic Count[1]	770	SIRRS1
Current % Heavy Truck Traffic Mix[1]	11%	SIRRS2

1. From State Highway Department, Austin Traffic Section, Austin.

Table A 14c

System Information Requirements

ROAD SEGMENT 3 (No.) SH 238 (Name)

Description	Value	Label
Current Average Daily Traffic Count[1]	1040	SIRRS1
Current % Heavy Truck Traffic Mix[1]	11.2%	SIRRS2

1. From State Highway Department, Austin Traffic Section, Austin.

Table A 15

Impacted County Area

County ①	Population ②	Number of Physicians ③	Number of Licensed Hospital Beds
1. Refugio	8,900	4	60
2. Victoria	59,700	60	421
3. Calhoun	17,300	8	75
4. Jackson	13,000	5	85
5. Matagorda	28,600	20	150
Impacted County Area Totals	⑤ 127,500	⑥ 97	791

Note:
(i) ① from Table A5
(ii) ② from Tables A 11a through A 11e (SIRC01)
(iii) ③ from Tables A 11a through A 11e (SIRC02)
(iv) ④ from Tables A 11a through A 11e (SIRC03)
(v) ⑤ = Σ ② (⑤ is SIRICA 1)
(vi) ⑥ = Σ ③ (⑥ is SIRICA 2)
(vii) ⑦ = Σ ④ (⑦ is SIRICA 3)

Table A16

Administrative - Financial Capabilities

School Districts

School District ①		Current Assessed ② Valuation	Current Value ③ of General Obligation Bonds	% of Bonding ④ Capacity Currently Utilized
No.	Name			
1.	Austwell-Tivoli ISD	$ 92,421,384	$ 0	0.00%
2.	Victoria Consolidated ISD	473,495,370	11,053,000	23.34%
3.	Calhoun County ISD	352,127,173	6,655,000	18.89%
4.	Edna ISD	71,416,180	1,834,794	25.69%
5.	Ganado ISD	37,675,270	620,000	16.45%
6.	Palacios ISD	162,163,900	678,800	4.18%

Notes:
(i) ① from Table A7
(ii) ② from Tables A 12a through A 12f (SIRSD 1)
(iii) ③ from Tables A 12a through A 12f (SIRSD 2)
(iv) ④ = ③ ÷ $\frac{②}{10}$ x 100)

Table A17

Administrative - Financial Capabilities:

Cities

City ① No.	Name	Current Value of General Obligation Bonds ②	Current Assessed Valuation ③	% of Bonding Capacity Currently Utilized ④
1	Austwell	$ 0	$ 426,725	0.00%
2	Victoria	10,963,000	233,319,420	46.98%
3	Port Lavaca	1,859,000	40,805,380	45.55%
4	Point Comfort	0	47,467,000	0.00%
5	Seadrift	103,000	3,390,907	30.37%
6	Edna	308,710	15,998,850	19.29%
7	Ganado	36,000	4,191,341	8.58%
8	Palacios	288,000	10,460,594	27.53%

Notes:
(i) ① from Table A4
(ii) ② from Tables A 13a through A 13h
(iii) ③ from Tables A 13a through A 13h
(iv) ④ = ② ÷ $\frac{③}{10}$ x 100)

Table A18

Gravity Factor Calculation

City ①		Population ② of City	Distance from ③ Project Site (miles)	Population: ④ Distance Ratio	Gravity ⑤ Factor
No.	Name				
1	Austwell	272	44	6.18	0.0025
2	Victoria	58,065	38	1528.00	0.6141
3	Port Lavaca	10,491	19	552.15	0.2219
4	Point Comfort	1,450	24	60.41	0.0243
5	Seadrift	1,500	29	51.72	0.0208
6	Edna	5,900	44	134.09	0.0538
7	Ganado	1,640	44	37.27	0.0150
8	Palacios	4,500	38	118.42	0.0476
				⑥ 2488.24	

Note:

(i) ① from Table A4

(ii) ② from Tables A 13a through A 13h (SIRCI 1)

(iii) ③ from Tables A 13a through A 13h (SIRCI 12)

(iv) ④ = ② ÷ ③

(v) ⑥ = Σ ④

(vi) ⑤ = ④ ÷ ⑥ for each city

Table A19

New-Resident Employees

① Time Period	② Total Direct Project Employment for Each Time Period	③ Number of Local Hires for Each Time Period	④ Number of New-Resident Employees in Each Time Period
(1) 1979	38	19	19
(2) 1980	317	158	159
(3) 1981	1126	563	563
(4) 1982	636	318	318
(5) 1983	118	59	59

Notes:
(i) ① from Table A1 (ASIR 6)
(ii) ② from Table 1 (ASIR 1)
(iii) % local new hires = 50% (from ASIR 13)
(iv) ③ = ② x (iii)
(v) ④ = ② - ③

Table A20

New-Resident Employees' Allocation

① Time Period	② Number of New-Resident Employees in Each Time Period	③ Total New-Resident Employees City 1	④ Total New-Resident Employees City 2	⑤ Total New-Resident Employees City 3	⑥ Total New-Resident Employees City 4	⑦ Total New-Resident Employees City 5	⑧ Total New-Resident Employees City 6	⑨ Total New-Resident Employees City 7	⑩ Total New-Resident Employees City 8	⑪ Total New-Resident Employees City 9	⑫ Total New-Resident Employees City 10
(1) 1979	19	0	12	4	0	1	1	0	1		
(2) 1980	159	0	98	35	4	3	9	2	8		
(3) 1981	563	1	346	125	14	12	30	8	27		
(4) 1982	318	1	195	71	8	6	17	5	15		
(5) 1983	59	0	36	13	2	1	3	1	3		
		⑬ Gravity Factor for City 1 .0025	⑭ Gravity Factor for City 2 .6141	⑮ Gravity Factor for City 3 .2219	⑯ Gravity Factor for City 4 .0243	⑰ Gravity Factor for City 5 .0208	⑱ Gravity Factor for City 6 .0538	⑲ Gravity Factor for City 7 .0150	⑳ Gravity Factor for City 8 .0476	㉑ Gravity Factor for City 9	㉒ Gravity Factor for City 10

Notes: (i) ① from Table A1 (ASIR 6)

(ii) ② from Table A19, column ④

(iii) Gravity factors ⑬ through ㉒ from Table A18, column ⑤ for each city in Commuting Range

(iv) ③ through ⑫ new-resident employees = ② x ⑬ through ㉒ for each city in Commuting Range

Table A21

Indirect and Total Employment

Region 3

① Time Period	② Months in Time Period	③ New Direct Employment	④ Fraction of Year Adjustment	⑤ New Indirect Employment	⑥ New Total Employment	⑦ Percent Change from Current Employment	⑧ Time-Weighted Factor	⑨ Time-Weighted New Total Employment
(1) 1979	9	38	0.75	15.8	53.8	0.08%	0.1875	10
(2) 1980	12	317	1.00	175.3	492.3	0.76%	0.2500	123
(3) 1981	12	1126	1.00	622.8	1748.8	2.71%	0.2500	437
(4) 1982	12	636	1.00	351.8	987.8	1.53%	0.2500	247
(5) 1983	3	118	0.25	16.3	134.3	0.21%	0.0625	8

Total Months	⑩ 48	
Current Regional Employment	⑫ 64,446	
Average Time-Weighted New Total Employment		⑪ 826
Average Percent Change from Current Employment		⑬ 1.28%

Note:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A1 (ASIR 1)

(iv) ④ = ② ÷ Twelve

(v) Type II Employment Multiplier for Primary Sector (from SIRRG1) = 1.553137

(vi) Indirect Employment Coefficient = (v) - one

(vii) ⑤ = ③ x (vi) x ④ = 0.553137

(viii) ⑥ = ③ + ⑤

(ix) ⑫ = Total Regional Employment (from SIRRG 5)

(x) ⑦ = ⑥ ÷ ⑫ x 100

(xi) ⑩ = from Table A1 (ASIR 8)

(xii) ⑧ = ② ÷ ⑩

(xiii) ⑨ = ⑥ x ⑧

(xiv) ⑪ = Σ ⑨

(xv) ⑬ = ⑪ ÷ ⑫ x 100

Impact Summary

(xvi) Direction (increase, decrease, no change)

(xvii) Probability (definite, probable, possible)

(xviii) Magnitude Maximum impact (largest of ⑦) 2.71%

(xix) Average impact (from ⑬) 1.28%

(xx) Duration Maximum impact (from ②) for largest of ⑦ 12 months

(xxi) Average impact (from ⑩) 48 mont

Table A22

Total Personal Income
$ Thousands

Region 3

① Time Period	② Months in Time Period	③ Direct Payments to Labor	④ Fraction of Year Adjustment	⑤ Indirect Payments to Labor	⑥ Total Payments to Labor	⑦ Percent Change from Current Personal Income	⑧ Time-Weighted Factor	⑨ Time-Weighted New Total Personal Income
(1) 1979	9	$ 561	0.75	$ 219	$ 780	0.09	0.1875	146
(2) 1980	12	6,257	1.00	3,261	9,518	1.13	0.2500	2,379
(3) 1981	12	23,551	1.00	12,273	35,824	4.24	0.2500	8,956
(4) 1982	12	13,277	1.00	6,919	20,196	2.39	0.2500	5,049
(5) 1983	3	607	0.25	79	686	0.08	0.0625	43

Total Months	⑩ 48	Average Time-Weighted New Personal Income	⑪ 16,573
Current Regional Personal Income	⑫ $844,226	Average Percent Change from Current Personal Income	⑬ 1.96%

Note:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A1 (ASIR 2)

(iv) ④ = ② ÷ Twelve

(v) Type II Income Multiplier for Primary Sector (from SIRRG2) = 1.521104

(vi) Indirect Income Coefficient = (v) - one

(vii) ⑤ = ③ x (vi) x ④ = 0.521104

(viii) ⑥ = ③ + ⑤

(ix) ⑫ = Total Regional Personal Income (from SIRRG 7).

(x) ⑦ = ⑥ ÷ ⑫ x 100

(xi) ⑩ = ASIR 8, from Table A1

(xii) ⑧ = ② ÷ ⑩

(xiii) ⑨ = ⑥ x ⑧

(xiv) ⑪ = Σ⑨

(xv) ⑬ = ⑪ ÷ ⑫ x 100

Impact Summary

(xvi) Direction (increase, decrease, no change)

(xvii) Probability (possible, probable, definite)

(xviii) Magnitude Maximum impact (largest of ⑦) 4.24%

(xix) Average Impact (from ⑬) 1.96%

(xx) Duration Maximum impact (from ② for largest of ⑦) 12 months

(xxi) Average impact (from ⑩) 48 months

Table A23

Gross Output (Within Input-Output Region)

Region 3

① Time Period	② Months in Time Period	Project ③ Expenditure (or Output)	Direct ④ Expenditures for Regional Goods and Services (Construction Phase Only)	⑤ Fraction of Year Adjustment	⑥ Indirect Output	⑦ Change in Total Regional Output	⑧ Time-Weighted Factor	Time-Weighted ⑨ Change in Total Regional Output
1979	9	$ 10,425,000	$ 2,416,500	0.75	$ 1,589,027	$ 4,005,527	0.1875	$ 751,036
1980	12	83,755,000	18,674,100	1.00	16,372,797	35,046,897	0.2500	8,761,724
1981	12	143,709,000	32,468,650	1.00	28,467,375	60,936,025	0.2500	15,234,006
1982	12	94,241,000	20,870,000	1.00	18,298,085	39,168,085	0.2500	9,792,021
1983	3	3,632,000	876,250	0.25	192,066	1,068,316	0.0625	66,770
Total Months	48 ⑩						Average Time-Weighted Total Regional Output	⑪ $34,605,557

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A1 (ASIR 3)

(iv) Type II Output Multiplier (from Table 10) = 1.876765

(v) Indirect Output Coefficient = (iv) - one = 0.876765

(vi) Percent of Direct Expenditure to be Made in Input-Output Region (from Table 2 for construction phase only) = 22.4%

(vii) ④ = ③ x (vi)

(viii) ⑤ = ② ÷ twelve

(ix) ⑥ = ④ x ⑤ x (v)

(x) ⑦ = ④ + ⑥

(xi) ⑩ = Table A1 (ASIR 8)

(xii) ⑧ = ② ÷ ⑩

(xiii) ⑨ = ⑦ x ⑧

(xiv) ⑪ = $\sum$ ⑨

Impact Summary

(xv) Direction (circle one) (increase), decrease, no change

(xvi) Probability (circle one) (definite), probable, possible

Magnitude

(xvii) Maximum impact (largest of ⑦) $60,936,025

(xviii) Average impact (from ⑪) $34,605,557

Duration

(xix) Maximum impact (from ② for largest of ⑦) 12 months

(xx) Average impact (from ⑩) 48 months

Table A 24

Indirect and Total Industrial Water

Region 3

① Time Period	② Months in Time Period	③ Primary Water Requirements (Acre-feet)	④ Fraction of Year Adjustment	⑤ Indirect Water Use (Acre-feet)	⑥ Total Water Use (Acre-feet)	⑦ Time-Weighted Factor	⑧ Time-Weighted New Total Water (Acre-feet)
1979	9	0.00	0.75	0.00	0.00	0.1875	0.00
1980	12	26.09	1.00	0.00	26.09	0.2500	6.52
1981	12	36.83	1.00	0.00	36.83	0.2500	9.21
1982	12	85.93	1.00	0.00	85.93	0.2500	21.48
1983	3	52.17	0.25	0.00	52.17	0.0625	3.26
Total Months	⑨ 48					Average Time-Weighted New Total Water	⑩ 40.47

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A2 (ASIR 7)

(iii) ③ from Table A1 (ASIR 4)

(iv) ④ = ② ÷ twelve

(v) Type II Environmental Self-multiplier (from Table 10) = 0.00

(vi) Indirect Water Coefficient = 0

(vii) ⑤ = ③ x (vi) x ④

(viii) ⑥ = ③ + ⑤

(ix) ⑨ from Table A1 (ASIR 8)

(x) ⑦ = ② ÷ ⑨

(xi) ⑧ = ⑥ x ⑦

(xii) ⑩ = Σ⑧

Impact Summary*

(xiii) Direction (increase, decrease, no change)

(xiv) Probability (possible, probable, definite)

Magnitude

(xv) Maximum impact (largest of ⑥) 85.93

(xvi) Average impact (from ⑩) 40.47

Duration

(xvii) Maximum impact (from ② for largest of ⑥) 12 months

(xviii) Average impact (from ⑨) 48 months

* El Paso LNG Terminal Company has received assurances from the Guadalupe Blanco River Authority that the Authority would be able to meet construction water needs with no difficulty.

Table A25a

Population

City Austwell No. 1

① Time Period	② Months in Time Period	③ Total New Resident Employees	④ Total New Residents	⑤ Percent Change from Current City Population	⑥ Time-Weighting Factor	⑦ Time-Weighted New Residents
1979	9	0	0	0.00%	0.1875	0.0
1980	12	0	0	0.00%	0.2500	0.0
1981	12	1	2	0.73%	0.2500	0.5
1982	12	1	2	0.73%	0.2500	0.5
1983	3	0	0	0.00%	0.0625	0.0

Total Months	⑧ 48	Average Time-Weighted New Residents	⑨ 1.0
Current City Population	⑩ 272	Average Percent Change from Current Population	⑪ 0.37%

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A7 (ASIR 7)

(iii) ③ from Table A20, column ③

(iv) ⑩ City Population from Table A 13a

(v) Current Total State Population (from Table A9) = 12, 487,000

(vi) Total State Employment (from Table A9) = 5,217,000

(vii) Population Multiplier = (v) ÷ (vi) = 2.393

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑩ x 100

(x) ⑧ = from Table A1 (ASIR 8)

(xi) ⑥ = ② ÷ ⑧

(xii) ⑦ = ④ x ⑥

(xiii) ⑨ = Σ⑦

(xiv) ⑪ = ⑨ ÷ ⑩ x 100

Impact Summary

(xv) Direction (circle one) (increase), decrease, no change

(xvi) Probability (circle one) definite, probable, (possible)

Magnitude:

(xvii) Maximum impact (largest of ⑤) 0.73%

(xviii) Average impact (from ⑪) 0.37%

Duration:

(xix) Maximum impact (from ② for largest of ⑤) 12 months

(xx) Average impact (⑧) 48 months

Table A 25b

Population

City Victoria No. 2

① Time Period	② Months in Time Period	③ Total New Resident Employees	④ Total New Residents	⑤ Percent Change from Current City Population	⑥ Time-Weighting Factor	⑦ Time-Weighted New Residents
1979	9	12	28	0.05%	0.1875	5.25
1980	12	98	235	0.40%	0.2500	58.75
1981	12	346	828	1.43%	0.2500	207.00
1982	12	195	467	0.80%	0.2500	116.75
1983	3	36	86	0.15%	0.0625	5.38

Total Months	⑧ 48	Average Time-Weighted New Residents	⑨ 393.13
Current City Population	⑩ 58,065	Average Percent Change from Current Population	⑪ 0.68%

Notes:

(i) ① from Table A1 (ASIR 6)
(ii) ② from Table A1 (ASIR 7)
(iii) ③ from Table A20 column ④
(iv) ⑩ City Population from Table A 13b
(v) Current Total State Population (from Table A9) = 12,487,000
(vi) Total State Employment (from Table A9) = 5,217,000
(vii) Population Multiplier = (v) ÷ (vi) = 2.393
(viii) ④ = ③ x (vii)
(ix) ⑤ = ④ ÷ ⑩ x 100
(x) ⑧ = from Table A1 (ASIR 8)
(xi) ⑥ = ② ÷ ⑧
(xii) ⑦ = ④ x ⑥
(xiii) ⑨ = Σ⑦
(xiv) ⑪ = ⑨ ÷ ⑩ x 100

Impact Summary

(xv) Direction (circle one) increase, decrease, no change
(xvi) Probability (circle one) definite, probable, possible
Magnitude:
(xvii) Maximum impact (largest of ⑤) 1.43%
(xviii) Average impact (from ⑪) 0.68%
Duration:
(xix) Maximum impact (from ② for largest of ⑤) 12 months
(xx) Average impact (⑧) 48 months

Table A 25c

Population

City Port Lavaca No. 3

① Time Period	② Months in Time Period	③ Total New Resident Employees	④ Total New Residents	⑤ Percent Change from Current City Population	⑥ Time-Weighting Factor	⑦ Time-Weighted New Residents
1979	9	4	10	0.10%	0.1875	1.88
1980	12	35	84	0.80%	0.2500	21.00
1981	12	125	299	2.85%	0.2500	74.75
1982	12	71	170	1.62%	0.2500	42.50
1983	3	13	31	0.30%	0.0625	1.93

Total Months	⑧ 48	Average Time-Weighted New Residents	⑨ 142.055
Current City Population	⑩ 10,491	Average Percent Change from Current Population	⑪ 1.35%

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A2 (ASIR 7)

(iii) ③ from Table A20, column ⑤

(iv) ⑩ City Population from Table A 13c

(v) Current Total State Population from Table A9 = 12,487,000

(vi) Total State Employment (from Table A9) = 5,217,000

(vii) Population Multiplier = (v) ÷ (vi) = 2.393

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑩ x 100

(x) ⑧ = from Table A1 (ASIR 8)

(xi) ⑥ = ② ÷ ⑧

(xii) ⑦ = ④ x ⑥

(xiii) ⑨ = Σ⑦

(xiv) ⑪ = ⑨ ÷ ⑩ x 100

Impact Summary

(xv) Direction (circle one) increase, decrease, no change

(xvi) Probability (circle one) definite, probable, possible

Magnitude:

(xvii) Maximum impact (largest of ⑤) 2.85%

(xviii) Average impact (from ⑪) 1.35%

Duration:

(xix) Maximum impact (from ② for largest of ⑤) 12 months

(xx) Average impact (⑧) 48 months

Table A25d

Population

City Point Comfort No. 4

① Time Period	② Months in Time Period	③ Total New Resident Employees	④ Total New Residents	⑤ Percent Change from Current City Population	⑥ Time-Weighting Factor	⑦ Time-Weighted New Residents
1979	9	0	0	0.00%	0.1875	0.00
1980	12	4	10	0.69%	0.2500	2.50
1981	12	14	34	2.34%	0.2500	8.50
1982	12	8	19	1.30%	0.2500	4.75
1983	3	2	5	0.34%	0.0625	0.31

Total Months	⑧ 48	Average Time-Weighted New Residents	16.06 ⑨
Current City Population	1,450 ⑩	Average Percent Change from Current Population	1.11% ⑪

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A20, column ⑥

(iv) ⑩ City Population from Table A13d

(v) Current Total State Population (from Table A9) = 12,487,000

(vi) Total State Employment (from Table A9) = 5,217,000

(vii) Population Multiplier = (v) ÷ (vi) = 2.393

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑩ x 100

(x) ⑧ = from Table A1 (ASIR 8)

(xi) ⑥ = ② ÷ ⑧

(xii) ⑦ = ④ x ⑥

(xiii) ⑨ = Σ⑦

(xiv) ⑪ = ⑨ ÷ ⑩ x 100

Impact Summary

(xv) Direction (circle one) (increase), decrease, no change

(xvi) Probability (circle one) definite, (probable), possible

Magnitude:

(xvii) Maximum impact (largest of ⑤) 2.34%

(xviii) Average impact (from ⑪) 1.11%

Duration:

(xix) Maximum impact (from ② for largest of ⑤) 24 months

(xx) Average impact (⑧) 48 months

Table A25e

Population

City Seadrift No. 5

① Time Period	② Months in Time Period	③ Total New Resident Employees	④ Total New Residents	⑤ Percent Change from Current City Population	⑥ Time-Weighting Factor	⑦ Time-Weighted New Residents
1979	9	1	2	0.13%	0.1875	0.375
1980	12	3	7	0.47%	0.2500	1.75
1981	12	12	29	1.93%	0.2500	7.25
1982	12	6	14	0.93%	0.2500	3.50
1983	3	1	2	0.13%	0.0625	0.125

Total Months	⑧ 48	Average Time-Weighted New Residents	13.00 ⑨
Current City Population	⑩ 11,500	Average Percent Change from Current Population	⑪ 0.87%

Notes:

(i) ① from Table A1 (ASIR 6)
(ii) ② from Table A1 (ASIR 7)
(iii) ③ from Table A20, column ⑦
(iv) ⑩ City Population from Table A13e
(v) Current Total State Population (from Table A9) = 12,487,000
(vi) Total State Employment (from Table A9) = 5,217,000
(vii) Population Multiplier = (v) ÷ (vi) = 2.393
(viii) ④ = ③ x (vii)
(ix) ⑤ = ④ ÷ ⑩ x 100
(x) ⑧ = from Table A1 (ASIR 8)
(xi) ⑥ = ② ÷ ⑧
(xii) ⑦ = ④ x ⑥
(xiii) ⑨ = Σ⑦
(xiv) ⑪ = ⑨ ÷ ⑩ x 100

Impact Summary

(xv) Direction (circle one) increase, decrease, no change
(xvi) Probability (circle one) definite, probable, possible

Magnitude:

(xvii) Maximum impact (largest of ⑤) 1.93%
(xviii) Average impact (from ⑪) 0.87%

Duration:

(xix) Maximum impact (from ② for largest of ⑤) 12 months
(xx) Average impact (⑧) 48 months

Table A25f

Population

City Edna No. 6

① Time Period	② Months in Time Period	③ Total New Resident Employees	④ Total New Residents	⑤ Percent Change from Current City Population	⑥ Time-Weighting Factor	⑦ Time-Weighted New Residents
1979	9	1	2	0.03%	0.1875	0.375
1980	12	9	22	0.37%	0.2500	5.500
1981	12	30	72	1.22%	0.2500	18.000
1982	12	17	41	0.69%	0.2500	10.250
1983	3	3	7	0.12%	0.0625	0.438

Total Months	⑧ 48	Average Time-Weighted New Residents	⑨ 34.563
Current City Population	⑩ 5,900	Average Percent Change from Current Population	⑪ 0.59%

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A20, column ⑧

(iv) ⑩ City Population from Table A13f

(v) Current Total State Population (from Table A9) = 12,487,000

(vi) Total State Employment (from Table A9) = 5,217,000

(vii) Population Multiplier = (v) ÷ (vi) = 2.393

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑩ x 100

(x) ⑧ = from Table A1 (ASIR 8)

(xi) ⑥ = ② ÷ ⑧

(xii) ⑦ = ④ x ⑥

(xiii) ⑨ = Σ⑦

(xiv) ⑪ = ⑨ ÷ ⑩ x 100

Impact Summary

(xv) Direction (circle one) (increase), decrease, no change

(xvi) Probability (circle one) definite, probable, (possible)

Magnitude:

(xvii) Maximum impact (largest of ⑤) 1.22%

(xviii) Average impact (from ⑪) 0.59%

Duration:

(xix) Maximum impact (from ② for largest of ⑤) 12 months

(xx) Average impact (⑧) 48 months

Table A25g

Population

City Ganado No. 7

① Time Period	② Months in Time Period	③ Total New Resident Employees	④ Total New Residents	⑤ Percent Change from Current City Population	⑥ Time-Weighting Factor	⑦ Time-Weighted New Residents
1979	9	0	0	0.00%	0.1875	0.000
1980	12	2	5	0.30%	0.2500	1.250
1981	12	8	19	1.16%	0.2500	4.750
1982	12	5	12	0.73%	0.2500	3.000
1983	3	1	2	0.12%	0.0625	0.125
Total Months	48 ⑧				Average Time-Weighted New Residents	9.125 ⑨
Current City Population	1,640 ⑩				Average Percent Change from Current Population	0.56% ⑪

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A2 (ASIR 7)

(iii) ③ from Table A20, column ⑨

(iv) ⑩ City Population from Table A13g

(v) Current Total State Population (from Table A9) = 12,487,000

(vi) Total State Employment (from Table A9) = 5,217,000

(vii) Population Multiplier = (v) ÷ (vi) = 2.393

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑩ x 100

(x) ⑧ = from Table A1 (ASIR 8)

(xi) ⑥ = ② ÷ ⑧

(xii) ⑦ = ④ x ⑥

(xiii) ⑨ = Σ⑦

(xiv) ⑪ = ⑨ ÷ ⑩ x 100

Impact Summary

(xv) Direction (circle one) (increase), decrease, no change

(xvi) Probability (circle one) definite, probable, (possible)

Magnitude:

(xvii) Maximum impact (largest of ⑤) 1.16%

(xviii) Average impact (from ⑪) 0.56%

Duration:

(xix) Maximum impact (from ② for largest of ⑤) 12 months

(xx) Average impact (⑧) 48 months

Table A25h

Population

City Palacios No. 8

① Time Period	② Months in Time Period	③ Total New Resident Employees	④ Total New Residents	⑤ Percent Change from Current City Population	⑥ Time-Weighting Factor	⑦ Time-Weighted New Residents
1979	9	1	2	0.04%	0.1875	0.375
1980	12	8	19	0.42%	0.2500	4.750
1981	12	27	65	1.44%	0.2500	16.250
1982	12	15	36	0.80%	0.2500	9.000
1983	3	3	7	0.15%	0.0625	0.440

Total Months	⑧ 48	Average Time-Weighted New Residents	⑨ 30.815
Current City Population	⑩ 4,500	Average Percent Change from Current Population	⑪ 0.68%

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A20, column ⑩

(iv) ⑩ City Population from Table A13h

(v) Current Total State Population (Table A9) = 12,487,000

(vi) Total State Employment (from Table A9) = 5,217,000

(vii) Population Multiplier = (v) ÷ (vi) = 2.393

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑩ x 100

(x) ⑧ = from Table A1 (ASIR 8)

(xi) ⑥ = ② ÷ ⑧

(xii) ⑦ = ④ x ⑥

(xiii) ⑨ = Σ⑦

(xiv) ⑪ = ⑨ ÷ ⑩ x 100

Impact Summary

(xv) Direction (circle one) (increase), decrease, no change

(xvi) Probability (circle one) definite, probable, (possible)

Magnitude:

(xvii) Maximum impact (largest of ⑤) 1.44%

(xviii) Average impact (from ⑪) 0.68%

Duration:

(xix) Maximum impact (from ② for largest of ⑤) 12 months

(xx) Average impact (⑧) 48 months

Table A26

Population

Commuting Range _____.

① Time Period	Total ② New Residents City 1	Total ③ New Residents City 2	Total ④ New Residents City 3	Total ⑤ New Residents City 4	Total ⑥ New Residents City 5	Total ⑦ New Residents City 6	Total ⑧ New Residents City 7	Total ⑨ New Residents City 8	Total ⑩ New Residents City 9	Total ⑪ New Residents City 10	⑫ Total New Residents in Commuting Range
1979	0	28	10	0	2	2	0	2			44
1980	0	235	84	10	7	22	5	19			382
1981	2	828	299	34	29	72	19	65			1,348
1982	2	467	170	19	14	41	12	36			761
1983	0	86	31	5	2	7	2	7			140
										Average New Residents in Commuting Range	⑬ 639

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② through ⑪ from Tables A25a - A25h, column ④ for each city in Commuting Range

(iii) ⑫ = Σ② through ⑪ for each time period

(iv) ⑬ = Σbox ⑨ from Tables A25a - A25h for each city in Commuting Range

Table A27a

Population

School District Austwell-Tivoli .

(i) Time Period	(2) Total New Residents City 1	(3) Total New Residents City 2	(4) Total New Residents City 3	(5) Total New Residents City 4	(6) Total New Residents City 5	(7) Total New Residents City 6	(8) Total New Residents City 7	(9) Total New Residents City 8	(10) Total New Residents City 9	(11) Total New Residents City 10	(12) Total New Residents in School District
1979	0										0
1980	0										0
1981	2										2
1982	2										2
1983	0										0
										Average New Residents in School District	(13) 1.0

Notes:

(i) (1) from Table A1 (ASIR 6)

(ii) (2) through (11) from Tables A25a - A25h, column (4) for each city in School District

(iii) (12) = Σ (2) through (11) for each time period

(iv) (13) = Σ box (9) from Tables A25a - A25h for each city in School District

Table A27b

Population

School District Victoria Consolidated

① Time Period	Total ② New Residents City 1	Total ③ New Residents City 2	Total ④ New Residents City 3	Total ⑤ New Residents City 4	Total ⑥ New Residents City 5	Total ⑦ New Residents City 6	Total ⑧ New Residents City 7	Total ⑨ New Residents City 8	Total ⑩ New Residents City 9	Total ⑪ New Residents City 10	⑫ Total New Residents in School District
1979		28									28
1980		235									235
1981		828									828
1982		467									467
1983		86									86
										Average New Residents in School District	⑬ 393

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② through ⑪ from Tables A25a - A25h, column ④ for each city in School District

(iii) ⑫ = ∑ ② through ⑪ for each time period

(iv) ⑬ = ∑ box ⑨ from Tables A25a - A25h for each city in School District

Table A27c

Population

School District Calhoun County ISD

① Time Period	Total ② New Residents City 1	Total ③ New Residents City 2	Total ④ New Residents City 3	Total ⑤ New Residents City 4	Total ⑥ New Residents City 5	Total ⑦ New Residents City 6	Total ⑧ New Residents City 7	Total ⑨ New Residents City 8	Total ⑩ New Residents City 9	Total ⑪ New Residents City 10	⑫ Total New Residents in School District
1979			10	0	2						12
1980			84	10	7						101
1981			299	34	29						362
1982			170	19	14						203
1983			31	5	2						38
										Average New Residents in School District	⑬ 173

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② through ⑪ from Tables A25a - A25h, column ④ for each city in School District

(iii) ⑫ = Σ ② through ⑪ for each time period

(iv) ⑬ = Σ box ⑨ from Tables A25a - A25h for each city in School District

Table A27d

Population

School District Edna ISD

(i) Time Period	Total New (2) Residents City 1	Total New (3) Residents City 2	Total New (4) Residents City 3	Total New (5) Residents City 4	Total New (6) Residents City 5	Total New (7) Residents City 6	Total New (8) Residents City 7	Total New (9) Residents City 8	Total New (10) Residents City 9	Total New (11) Residents City 10	(12) Total New Residents in School District
1979						2					2
1980						22					22
1981						72					72
1982						41					41
1983						7					7
										Average New Residents in School District	(13) 35

Notes:

(i) (1) from Table A1 (ASIR 6)

(ii) (2) through (11) from Tables A25a - A25h, column (4) for each city in School District

(iii) (12) = Σ (2) through (11) for each time period

(iv) (13) = Σ box (9) from Tables A25a - A25h for each city in School District

Table A27e

Population

School District Ganado ISD .

(1) Time Period	Total New (2) Residents City 1	Total New (3) Residents City 2	Total New (4) Residents City 3	Total New (5) Residents City 4	Total New (6) Residents City 5	Total New (7) Residents City 6	Total New (8) Residents City 7	Total New (9) Residents City 8	Total New (10) Residents City 9	Total New (11) Residents City 10	(12) Total New Residents in School District
1979							0				0
1980							5				5
1982							19				19
1983							12				12
							2				2
										Average New Residents in School District	(13) 9

Notes:

(i) (1) from Table A1 (ASIR 6)

(ii) (2) through (11) from Tables A25a - A25h, column (4) for each city in School District

(iii) (12) = Σ (2) through (11) for each time period

(iv) (13) = Σ box (9) from Tables A25a - A25h for each city in School District

Table A27f

Population

School District Palacios ISD

① Time Period	Total ② New Residents City 1	Total ③ New Residents City 2	Total ④ New Residents City 3	Total ⑤ New Residents City 4	Total ⑥ New Residents City 5	Total ⑦ New Residents City 6	Total ⑧ New Residents City 7	Total ⑨ New Residents City 8	Total ⑩ New Residents City 9	Total ⑪ New Residents City 10	⑫ Total New Residents in School District
1979								2			2
1980								19			19
1981								65			65
1982								36			36
1983								7			7
										Average New Residents in School District	⑬ 31

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② through ⑪ from Tables A25a - A25h, column ④ for each city in School District

(iii) ⑫ = Σ ② through ⑪ for each time period

(iv) ⑬ = Σ box ⑨ from Tables A25a - A25h for each city in School District

Table A28a

Population

Road Segment SH 185, No. 1

① Time Period	Total ② New Residents City 1	Total ③ New Residents City 2	Total ④ New Residents City 3	Total ⑤ New Residents City 4	Total ⑥ New Residents City 5	Total ⑦ New Residents City 6	Total ⑧ New Residents City 7	Total ⑨ New Residents City 8	Total ⑩ New Residents City 9	Total ⑪ New Residents City 10	⑫ Total New Residents in Impact Area
1979	0				2						2
1980	0				7						7
1981	2				29						31
1982	2				14						16
1983	0				2						2
										Average New Residents in Highway Corridor Terminus	⑬ 14

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② through ⑪ from Tables A25a - A25h, column ④ for each city in Highway Corridor Terminus

(iii) ⑫ = Σ ② through ⑪ for each time period

(iv) ⑬ = Σ box ⑨ from Tables A25a - A25h for each city in Highway Corridor Terminus

Table A28b

Population

Road Segment FM 1289, No. 2 .

① Time Period	Total ② New Residents City 1	Total ③ New Residents City 2	Total ④ New Residents City 3	Total ⑤ New Residents City 4	Total ⑥ New Residents City 5	Total ⑦ New Residents City 6	Total ⑧ New Residents City 7	Total ⑨ New Residents City 8	Total ⑩ New Residents City 9	Total ⑪ New Residents City 10	⑫ Total New Residents in Impact Area
1979	0	28	10	0	2	2	0	2			44
1980	0	235	84	10	7	22	5	19			382
1981	2	828	299	34	29	72	19	65			1,348
1982	2	467	170	19	14	41	12	36			761
1983	0	86	31	5	2	7	2	7			140
										Average New Residents in Highway Corridor Terminus	⑬ 639

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② through ⑪ from Tables A25a - A25h, column ④ for each city in Highway Corridor Terminus

(iii) ⑫ = Σ ② through ⑪ for each time period

(iv) ⑬ = Σ box ⑨ from Tables A25a - A25h for each city in Highway Corridor Terminus

Table A28c

Population

Road Segment SH 238, No. 3

① Time Period	Total ② New Residents City 1	Total ③ New Residents City 2	Total ④ New Residents City 3	Total ⑤ New Residents City 4	Total ⑥ New Residents City 5	Total ⑦ New Residents City 6	Total ⑧ New Residents City 7	Total ⑨ New Residents City 8	Total ⑩ New Residents City 9	Total ⑪ New Residents City 10	⑫ Total New Residents in Impact Area
1979		28	10	0		2	0	2			42
1980		235	84	10		22	5	19			375
1981		828	299	34		72	19	65			1,317
1982		467	170	19		41	12	36			745
1983		86	31	5		7	2	7			138
										Average New Residents in Highway Corridor Terminus	⑬ 625

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② through ⑪ from Tables A25a - A25h, column ④ for each city in Highway Corridor Terminus

(iii) ⑫ = Σ ② through ⑪ for each time period

(iv) ⑬ = Σ box ⑨ from Tables A25a - A25h for each city in Highway Corridor Terminus

Table A29

Population

I/O Region 3

① Time Period	Total ② New Residents City 1	Total ③ New Residents City 2	Total ④ New Residents City 3	Total ⑤ New Residents City 4	Total ⑥ New Residents City 5	Total ⑦ New Residents City 6	Total ⑧ New Residents City 7	Total ⑨ New Residents City 8	Total ⑩ New Residents City 9	Total ⑪ New Residents City 10	⑫ Total New Residents in I/O Region
1979		28	10	0	2	2	0	2			44
1980		235	84	10	7	22	5	19			382
1981		828	299	34	29	72	19	65			1,346
1982		467	170	19	14	41	12	36			759
1983		86	31	5	2	7	2	7			140
										Average New Residents in I/O Region	⑬ 639

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② through ⑪ from Tables A25a - A25h, column ④ for each city listed in Table A6

(iii) ⑫ = Σ ② through ⑪ for each time period

(iv) ⑬ = Σ box ⑨ from Tables A25a - A25h for each city listed in Table A6

Table A30a

Fiscal Impact: Local Governments

(Within Input-Output Region)

Region 3

① Time Period	② Months in Time Period	Direct Regional Output ③	④ Fraction of Year Adjustment	⑤ Total Tax Revenue	⑥ Change in Population	Change in ⑦ Government Cost	⑧ Government Surplus (+) or Deficit (-)	⑩ Time-Weighted Factor	⑫ Time-Weighted Surplus (+) or Deficit (-)
1979	9	$ 2,416,500	0.75	$ 40,383	44	$ 15,147	$ +25,236	0.1875	$ +4,732
1980	12	18,674,100	1.00	416,096	382	175,338	+240,758	0.2500	+60,190
1981	12	32,468,650	1.00	723,466	1,346	617,814	+105,652	0.2500	+26,413
1982	12	20,870,000	1.00	465,025	759	348,381	+116,644	0.2500	+29,161
1983	3	876,250	0.25	4,881	140	16,065	-11,184	0.0625	-699
Total Months	48 ⑪					Total Surplus or Deficit	⑨ $ +477,106	Average Surplus (+) or Deficit (-)	$ +119,797 ⑬

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ = ④ from Table A23

(iv) ④ = ② ÷ Twelve

(v) Type II Local Tax Multiplier (from Table A10) = 0.022282

(vi) ⑤ = ③ x ④ x (v)

(vii) ⑥ = column ⑫ from Table A29

(viii) Per Capita Local Government Expenditures (from Table A10) = $459

(ix) ⑦ = ④ x ⑥ x (viii)

(x) ⑧ = ⑤ - ⑦

(xi) ⑨ = Σ⑧

(xii) ⑪ from Table A1 (ASIR 8)

(xiii) ⑩ = ② ÷ ⑪

(xiv) ⑫ = ⑧ x ⑩

(xv) ⑬ = Σ⑫

Impact Summary

(xvi) Direction (circle one): (surplus), deficit

(xvii) Probability (circle one): definite, (probable), possible

Magnitude

(xviii) Maximum impact (largest surplus or deficit value of ⑧) $ +240,758

(xix) Average impact (from ⑬ $ +119,797

Duration

(xx) Maximum impact (from ② for largest surplus or deficit value of ⑧) 12 months

(xxi) Average impact (from ⑪) 48 months

Table A30b

Fiscal Impact: State Government

(Within Input-Output Region)

Region 3

① Time Period	② Months in Time Period	③ Direct Regional Output	④ Fraction of Year Adjustment	⑤ Total Tax Revenue	⑥ Change in Population	⑦ Change in Government Cost	⑧ Government Surplus (+) or Deficit(-)	⑩ Time-Weighted Factor	⑫ Time-Weighted Surplus (+) or Deficit (-)
1979	9	$ 2,416,500	0.75	$ 22,200	44	$ 10,296	$ +11,904	0.1875	$ +2,232
1980	12	18,674,100	1.00	228,739	382	119,184	+109,555	0.2500	+27,388
1981	12	32,468,650	1.00	397,708	1,346	419,952	-22,244	0.2500	-5,561
1982	12	20,870,000	1.00	255,637	759	236,808	+18,829	0.2500	+4,707
1983	3	876,250	0.25	2,683	140	10,920	-8,237	0.0625	-515
Total Months	48 ⑪					Total Surplus or Deficit	$ +109,807 ⑨	Average Surplus (+) or Deficit (-)	$ +28,248 ⑬

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ = ④ from Table A23

(iv) ④ = ② ÷ Twelve

(v) Type II Local Tax Multiplier (from Table A10) = 0.012249

(vi) ⑤ = ③ x ④ x (v)

(vii) ⑥ = column ⑫ from Table A29

(viii) Per Capita State Government Expenditures (from Table A10) = $312

(ix) ⑦ = ④ x ⑥ x (viii)

(x) ⑧ = ⑤ - ⑦

(xi) ⑨ = Σ ⑧

(xii) ⑪ from Table A1 (ASIR 8)

(xiii) ⑩ = ② ÷ ⑪

(xiv) ⑫ = ⑧ x ⑩

(xv) ⑬ = Σ ⑫

Impact Summary

(xvi) Direction (circle one): (surplus), deficit

(xvii) Probability (circle one): definite, (probable), possible

Magnitude

(xviii) Maximum impact (largest surplus or deficit value of ⑧) $ +109,555

(xix) Average impact (from ⑬ $ +28,248

Duration

(xx) Maximum impact (from ② for largest surplus or deficit value of ⑧) 12 months

(xxi) Average impact (from ⑪) 48 months

Table A31a

Housing Units

City Austwell, No. 1

① Time Period	② Months in Time Period	③ Resident Employees	④ Housing Units Required	Additional Housing Demand	Local Assessment of City's Capability to Absorb Additional Demand for Housing
1979	9	0	0	Maximum	Check one ⑪
1980	12	0	0	⑦ Housing units required 1	a. can be absorbed by existing vacant housing units X
1981	12	1	1		b. will require construction of new housing units
1982	12	1	1	⑧ Duration 12 months	
1983	3	0	0	Average	Check one ⑫
				⑨ Housing units required 0	a. can be absorbed by existing vacant housing units X
				⑩ Duration 48 months	b. will require construction of new housing units
Total Months	⑤ 48	Average Number Of Housing Units Required	⑥ 0		

Notes:

(i) ① from Table A1 (ASIR 6)
(ii) ② from Table A1 (ASIR 7)
(iii) ③ from Table A25a, column ③
(iv) ④ = ③ x one
(v) ⑤ from Table A1 (ASIR 8)
(vi) ⑥ from Table A25a, box ⑨ ÷ note vii, Table A25a
(vii) ⑦ = largest of ④
(viii) ⑧ (from ② for largest of ④)
(ix) ⑨ = ⑥
(x) ⑩ = ⑤
(xi) ⑪ from City Officials regarding ⑦ , ⑧
(xii) ⑫ from City Officials regarding ⑨ , ⑩

Impact Summary

(xiii) Direction (circle one) increase, decrease, no change
(xiv) Probability (circle one) definite, probable, possible
Magnitude:
(xv) Maximum impact (⑪ a or b) a
(xvi) Average impact (⑫ a or b) a
Duration:
(xvii) Maximum impact (⑧) 12 months
(xviii) Average impact (⑩) 48 months

Table A31b

Housing Units

City Victoria, No. 2

① Time Period	② Months in Time Period	③ Resident Employees	④ Housing Units Required	Additional Housing Demand	Local Assessment of City's Capability to Absorb Additional Demand for Housing
1979	9	12	12	Maximum	Check one ⑪
1980	12	98	98	⑦ Housing units required 346	a. can be absorbed by existing vacant housing units ___
1981	12	346	346		
1982	12	195	195	⑧ Duration 12 months	b. will require construction of new housing units X
1983	3	36	36		
				Average	Check one ⑫
				⑨ Housing units required 164	a. can be absorbed by existing vacant housing units ___
				⑩ Duration 48 months	b. will require construction of new housing units X
Total Months	⑤ 48	Average Number Of Housing Units Required	⑥ 164		

Notes:

(i) ① from Table A1 (ASIR 6)
(ii) ② from Table A1 (ASIR 7)
(iii) ③ from Table A25b, column ③
(iv) ④ = ③ x one
(v) ⑤ from Table A1 (ASIR 8)
(vi) ⑥ from Table A25b, box ⑨ ÷ note vii, Table A25b
(vii) ⑦ = largest of ④
(viii) ⑧ (from ② for largest of ④)
(ix) ⑨ = ⑥
(x) ⑩ = ⑤
(xi) ⑪ from Chamber of Commerce officials regarding ⑦ , ⑧
(xii) ⑫ from Chamber of Commerce officials regarding ⑨ , ⑩

Impact Summary

(xiii) Direction (circle one) increase, decrease, no change
(xiv) Probability (circle one) definite, probable, possible
Magnitude:
(xv) Maximum impact (⑪ a or b) b
(xvi) Average impact (⑫ a or b) b
Duration:
(xvii) Maximum impact (⑧) 12 months
(xviii) Average impact (⑩) 48 months

Table A31c

Housing Units

City Port Lavaca, No. 3

① Time Period	② Months in Time Period	③ Resident Employees	④ Housing Units Required	Additional Housing Demand	Local Assessment of City's Capability to Absorb Additional Demand for Housing
1979	9	4	4	Maximum	Check one ⑪
1980	12	35	35	⑦ Housing units required 125	a. can be absorbed by existing vacant housing units ___
1981	12	125	125	⑧ Duration 12 months	b. will require construction of new housing units X
1982	12	71	71	Average	Check one ⑫
1983	3	13	13	⑨ Housing units required 59	a. can be absorbed by existing vacant housing units ___
				⑩ Duration 48 months	b. will require construction of new housing units X
Total Months	⑤ 48	Average Number Of Housing Units Required	⑥ 59		

Notes:

(i) ① from Table A1 (ASIR 6)
(ii) ② from Table A1 (ASIR 7)
(iii) ③ from Table A25c, column ③
(iv) ④ = ③ x one
(v) ⑤ from Table A1 (ASIR 8)
(vi) ⑥ from Table A25c box ⑨ ÷ note vii, Table A25c
(vii) ⑦ = largest of ④
(viii) ⑧ (from ② for largest of ④)
(ix) ⑨ = ⑥
(x) ⑩ = ⑤
(xi) ⑪ from City Manager's Office regarding ⑦ , ⑧
(xii) ⑫ from City Manager's Office regarding ⑨ , ⑩

Impact Summary

(xiii) Direction (circle one) increase, decrease, no change
(xiv) Probability (circle one) definite, probable, possible

Magnitude:

(xv) Maximum impact (⑪ a or b) b
(xvi) Average impact (⑫ a or b) b

Duration:

(xvii) Maximum impact (⑧) 12 months
(xviii) Average impact (⑩) 48 months

Table A3ld

Housing Units

City Point Comfort, No. 4

① Time Period	② Months in Time Period	③ Resident Employees	④ Housing Units Required	Additional Housing Demand	Local Assessment of City's Capability to Absorb Additional Demand for Housing
1979	9	0	0	Maximum	Check one ⑪
1980	12	4	4	⑦ Housing units required 14	a. can be absorbed by existing vacant housing units ___
1981	12	14	14		
1982	12	8	8	⑧ Duration 12 months	b. will require construction of new housing units X
1983	3	2	2		
				Average	Check one ⑫
				⑨ Housing units required 7	a. can be absorbed by existing vacant housing units ___
				⑩ Duration 48 months	b. will require construction of new housing units X
Total Months	⑤ 48	Average Number Of Housing Units Required	⑥ 7		

Notes:

(i) ① from Table A1 (ASIR 6)
(ii) ② from Table A1 (ASIR 7)
(iii) ③ from Table A25d, column ③
(iv) ④ = ③ x one
(v) ⑤ from Table A1 (ASIR 8)
(vi) ⑥ from Table A25d, box ⑨ ÷ note vii, Table A25d
(vii) ⑦ = largest of ④
(viii) ⑧ (from ② for largest of ④)
(ix) ⑨ = ⑥
(x) ⑩ = ⑤
(xi) ⑪ from City Manager's Office regarding ⑦ , ⑧
(xii) ⑫ from City Manager's Office regarding ⑨ , ⑩

Impact Summary

(xiii) Direction (circle one) increase, decrease, no change
(xiv) Probability (circle one) definite, probable, possible
Magnitude:
(xv) Maximum impact (⑪ a or b) b
(xvi) Average impact (⑫ a or b) b
Duration:
(xvii) Maximum impact (⑧) 12 months
(xviii) Average impact (⑩) 48 months

Table A3le

Housing Units

City Seadrift, No. 5

① Time Period	Months in ② Time Period	③ Resident Employees	④ Housing Units Required	Additional Housing Demand	Local Assessment of City's Capability to Absorb Additional Demand for Housing
1979	9	1	1	Maximum	Check one ⑪
1980	12	3	3	⑦ Housing units required 12	a. can be absorbed by existing vacant housing units X
1981	12	12	12	⑧ Duration 12 months	b. will require construction of new housing units
1982	12	6	6		
1983	3	1	1	Average	Check one ⑫
				⑨ Housing units required 5	a. can be absorbed by existing vacant housing units X
				⑩ Duration 48 months	b. will require construction of new housing units
Total Months	⑤ 48	Average Number Of Housing Units Required	⑥ 5		

Notes:

(i) ① from Table A1 (ASIR 6)
(ii) ② from Table A1 (ASIR 7)
(iii) ③ from Table A25e, column ③
(iv) ④ = ③ x one
(v) ⑤ from Table A1 (ASIR 8)
(vi) ⑥ from Table A25e, box ⑨ ÷ note vii, Table A25e
(vii) ⑦ = largest of ④
(viii) ⑧ (from ② for largest of ④)
(ix) ⑨ = ⑥
(x) ⑩ = ⑤
(xi) ⑪ from City Manager's Office regarding ⑦ , ⑧
(xii) ⑫ from City Manager's Office regarding ⑨ , ⑩

Impact Summary

(xiii) Direction (circle one) (increase), decrease, no change
(xiv) Probability (circle one) definite, (probable), possible
Magnitude:
(xv) Maximum impact (⑪ a or b) a
(xvi) Average impact (⑫ a or b) a
Duration:
(xvii) Maximum impact (⑧) 12 months
(xviii) Average impact (⑩) 48 months

Table A31f

Housing Units

City Edna, No. 6

① Time Period	② Months in Time Period	③ Resident Employees	④ Housing Units Required	Additional Housing Demand	Local Assessment of City's Capability to Absorb Additional Demand for Housing
1979	9	1	1	Maximum	Check one ⑪
1980	12	9	9	⑦ Housing units required 30	a. can be absorbed by existing vacant housing units X
1981	12	30	30	⑧ Duration 12 months	b. will require construction of new housing units
1982	12	17	17		
1983	3	3	3		
				Average	Check one ⑫
				⑨ Housing units required 14	a. can be absorbed by existing vacant housing units
				⑩ Duration 48 months	b. will require construction of new housing units X
Total Months	⑤ 48	Average Number Of Housing Units Required	⑥ 14		

Notes:

(i) ① from Table A1 (ASIR 6)
(ii) ② from Table A1 (ASIR 7)
(iii) ③ from Table A25f, column ③
(iv) ④ = ③ x one
(v) ⑤ from Table A1 (ASIR 8)
(vi) ⑥ from Table A25f, box ⑨ ÷ note vii, Table A25f
(vii) ⑦ = largest of ④
(viii) ⑧ (from ② for largest of ④)
(ix) ⑨ = ⑥
(x) ⑩ = ⑤
(xi) ⑪ from City Manager's Office regarding ⑦ , ⑧
(xii) ⑫ from City Manager's Office regarding ⑨ , ⑩

Impact Summary

(xiii) Direction (circle one) (increase), decrease, no change
(xiv) Probability (circle one) definite, (probable), possible

Magnitude:

(xv) Maximum impact (⑪ a or b) a
(xvi) Average impact (⑫ a or b) b

Duration:

(xvii) Maximum impact (⑧) 12 months
(xviii) Average impact (⑩) 48 months

Table A31g

Housing Units

City Ganado, No. 7

① Time Period	② Months in Time Period	③ Resident Employees	④ Housing Units Required	Additional Housing Demand	Local Assessment of City's Capability to Absorb Additional Demand for Housing
1979	9	0	0	Maximum	Check one ⑪
1980	12	2	2	⑦ Housing units required 8	a. can be absorbed by existing vacant housing units ___
1981	12	8	8	⑧ Duration 12 months	b. will require construction of new housing units X
1982	12	5	5		
1983	3	1	1	Average	Check one ⑫
				⑨ Housing units required 4	a. can be absorbed by existing vacant housing units X
				⑩ Duration 48 months	b. will require construction of new housing units ___
Total Months	⑤ 48	Average Number Of Housing Units Required	⑥ 4		

Notes:

(i) ① from Table A1 (ASIR 6)
(ii) ② from Table A1 (ASIR 7)
(iii) ③ from Table A25g, column ③
(iv) ④ = ③ x one
(v) ⑤ from Table A1 (ASIR 8)
(vi) ⑥ from Table A25g, box ⑨ ÷ note vii, Table A25g
(vii) ⑦ = largest of ④
(viii) ⑧ (from ② for largest of ④)
(ix) ⑨ = ⑥
(x) ⑩ = ⑤
(xi) ⑪ from City Manager's Office regarding ⑦ , ⑧
(xii) ⑫ from City Manager's Office regarding ⑨ , ⑩

Impact Summary

(xiii) Direction (circle one) (increase), decrease, no change
(xiv) Probability (circle one) definite, probable, (possible)
Magnitude:
(xv) Maximum impact (⑪ a or b) b
(xvi) Average impact (⑫ a or b) a
Duration:
(xvii) Maximum impact (⑧) 12 months
(xviii) Average impact (⑩) 48 months

Table A31h

Housing Units

City Palacios, No. 8

① Time Period	② Months in Time Period	③ Resident Employees	④ Housing Units Required	Additional Housing Demand	Local Assessment of City's Capability to Absorb Additional Demand for Housing
1979	9	1	1	Maximum	Check one ⑪
1980	12	8	8	⑦ Housing units required 27	a. can be absorbed by existing vacant housing units ___
1981	12	27	27		
1982	12	15	15	⑧ Duration 12 months	b. will require construction of new housing units X
1983	3	3	3		
				Average	Check one ⑫
				⑨ Housing units required 13	a. can be absorbed by existing vacant housing units ___
				⑩ Duration 48 months	b. will require construction of new housing units X
Total Months	⑤ 48	Average Number Of Housing Units Required	⑥ 13		

Notes:

(i) ① from Table A1 (ASIR 6)
(ii) ② from Table A1 (ASIR 7)
(iii) ③ from Table A25h, column ③
(iv) ④ = ③ x one
(v) ⑤ from Table A1 (ASIR 8)
(vi) ⑥ from Table A25h, box ⑨ ÷ note vii, Table A25h
(vii) ⑦ = largest of ④
(viii) ⑧ (from ② for largest of ④)
(ix) ⑨ = ⑥
(x) ⑩ = ⑤
(xi) ⑪ from City Manager's Office regarding ⑦ , ⑧
(xii) ⑫ from City Manager's Office regarding ⑨ , ⑩

Impact Summary

(xiii) Direction (circle one) increase, decrease, no change
(xiv) Probability (circle one) definite, probable, possible
Magnitude:
(xv) Maximum impact (⑪ a or b) b
(xvi) Average impact (⑫ a or b) b
Duration:
(xvii) Maximum impact (⑧) 12 months
(xviii) Average impact (⑩) 48 months

Table A32a

Education

School District Austwell-Tivoli ISD, No. 1

① Time Period	② Months in Time Period	③ Total New Residents	④ Estimated Number of New Students	Additional New Students	Local Assessment of School District Capability to Absorb Additional Students
1979	9	0	0.00	Maximum	⑪ Check one:
1980	12	0	0.00	⑦ Number of Students 0	a. Can be absorbed by existing or planned facilities X
1981	12	2	0.47		b. Will strain existing or planned facilities
1982	12	2	0.47	⑧ Duration 12 months	c. Will require construction of new facilities
1983	3	0	0.00	Average	⑫ Check one:
				⑨ Number of Students 0	a. Can be absorbed by existing or planned facilities X
				⑩ Duration 48 months	b. Will strain existing or planned facilities
					c. Will require construction of new facilities
Total Months	⑤ 48	Average Number of Estimated New Students	⑥ 0.24		

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A27a, column ⑫

(iv) Total State Population (from Table A9) = 12,487,000

(v) Total Number of Students in State (from Table A9) = 2,944,925

(vi) Student Multiplier = (v) ÷ (iv) = 0.2358

(vii) ④ = ③ x (vi)

(viii) Average New Residents from Table A27a, box ⑬ = 1

(ix) ⑥ = (vi) x (viii)

(x) ⑦ = largest of ④

(xi) ⑧ = ② for largest of ④

(xii) ⑨ = ⑥

(xiii) ⑩ = ⑤

(xiv) ⑪ from local superintendents regarding ⑦, ⑧

(xv) ⑫ from local superintendents regarding ⑨, ⑩

Impact Summary

(xvi) Direction (circle one) increase, decrease, (no change)

(xvii) Probability (circle one) definite, (probable), possible

Magnitude:

(xviii) Maximum impact (⑪ a, b, or c) a

(xix) Average impact (⑫ a, b, or c) a

Duration:

(xx) Maximum impact (⑧) 12 months

(xxi) Average impact (⑩) 48 months

Table A32b

Education

School District Victoria Consolidated ISD No. 2

① Time Period	② Months in Time Period	③ Total New Residents	④ Estimated Number of New Students	Additional New Students	Local Assessment of School District Capability to Absorb Additional Students
1979	9	28	6.60	Maximum	⑪ Check one:
1980	12	235	55.41	⑦ Number of Students 195	a. Can be absorbed by existing or planned facilities — X
1981	12	828	195.24		b. Will strain existing or planned facilities —
1982	12	467	110.12	⑧ Duration 12 months	c. Will require construction of new facilities —
1983	3	86	20.28	Average	⑫ Check one:
				⑨ Number of Students 93	a. Can be absorbed by existing or planned facilities — X
				⑩ Duration 48 months	b. Will strain existing or planned facilities —
					c. Will require construction of new facilities —
Total Months	⑤ 48	Average Number of Estimated New Students	⑥ 92.66		

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A27b, column ⑫

(iv) Total State Population (from Table A9) = 12,487,000

(v) Total Number of Students in State (from Table A9) = 2,944,925

(vi) Student Multiplier = (v) ÷ (iv) = 0.2358

(vii) ④ = ③ x (vi)

(viii) Average New Residents from Table A27b, box ⑬ = 393

(ix) ⑥ = (vi) x (viii)

(x) ⑦ = largest of ④

(xi) ⑧ = ② for largest of ④

(xii) ⑨ = ⑥

(xiii) ⑩ = ⑤

(xiv) ⑪ from local superintendents regarding ⑦, ⑧

(xv) ⑫ from local superintendents regarding ⑨, ⑩

Impact Summary

(xvi) Direction (circle one) (increase), decrease, no change

(xvii) Probability (circle one) (definite), probable, possible

Magnitude:

(xviii) Maximum impact (⑪ a, b, or c) a

(xix) Average impact (⑫ a, b, or c) a

Duration:

(xx) Maximum impact (⑧) 12 months

(xxi) Average impact (⑩) 48 months

Table A32c

Education

School District Calhoun Co. ISD, No. 3

① Time Period	② Months in Time Period	③ Total New Residents	④ Estimated Number of New Students	Additional New Students	Local Assessment of School District Capability to Absorb Additional Students
1979	9	12	2.38	Maximum	⑪ Check one:
1980	12	101	23.82	⑦ Number of Students 85	a. Can be absorbed by existing or planned facilities X
1981	12	362	85.36		b. Will strain existing or planned facilities
1982	12	203	47.87	⑧ Duration 12 months	c. Will require construction of new facilities
1983	3	38	8.96	Average	⑫ Check one:
				⑨ Number of Students 41	a. Can be absorbed by existing or planned facilities X
				⑩ Duration 48 months	b. Will strain existing or planned facilities
					c. Will require construction of new facilities
Total Months	⑤ 48	Average Number of Estimated New Students	⑥ 40.79		

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A27c, column ⑫

(iv) Total State Population (from Table A9) = 12,487,000

(v) Total Number of Students in State (from Table A9) = 2,944,925

(vi) Student Multiplier = (v) ÷ (iv) = 0.2358

(vii) ④ = ③ x (vi)

(viii) Average New Residents from Table A27c, box ⑬ = 173

(ix) ⑥ = (vi) x (viii)

(x) ⑦ = largest of ④

(xi) ⑧ = ② for largest of ④

(xii) ⑨ = ⑥

(xiii) ⑩ = ⑤

(xiv) ⑪ from local superintendents regarding ⑦, ⑧

(xv) ⑫ from local superintendents regarding ⑨, ⑩

Impact Summary

(xvi) Direction (circle one) (increase), decrease, no change

(xvii) Probability (circle one) (definite), probable, possible

Magnitude:

(xviii) Maximum impact (⑪ a, b, or c) a

(xix) Average impact (⑫ a, b, or c) a

Duration:

(xx) Maximum impact (⑧) 12 months

(xxi) Average impact (⑩) 48 months

Table A32d

Education

School District Edna ISD, No. 4

① Time Period	② Months in Time Period	③ Total New Residents	④ Estimated Number of New Students	Additional New Students	Local Assessment of School District Capability to Absorb Additional Students
1979	9	2	0.47	Maximum	⑪ Check one:
1980	12	22	5.19	⑦ Number of Students 17	a. Can be absorbed by existing or planned facilities X
1981	12	72	16.98		b. Will strain existing or planned facilities
1982	12	41	9.67	⑧ Duration 12 months	c. Will require construction of new facilities
1983	3	7	1.65	Average	⑫ Check one:
				⑨ Number of Students 8	a. Can be absorbed by existing or planned facilities X
				⑩ Duration 48 months	b. Will strain existing or planned facilities
					c. Will require construction of new facilities
Total Months	⑤ 48	Average Number of Estimated New Students	⑥ 7.78		

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A27d, column ⑫

(iv) Total State Population (from Table A9) = 12,487,000

(v) Total Number of Students in State (from Table A9) = 2,944,925

(vi) Student Multiplier = (v) ÷ (iv) = 0.2358

(vii) ④ = ③ x (vi)

(viii) Average New Residents from Table A27d, box ⑬ = 33

(ix) ⑥ = (vi) x (viii)

(x) ⑦ = largest of ④

(xi) ⑧ = ② for largest of ④

(xii) ⑨ = ⑥

(xiii) ⑩ = ⑤

(xiv) ⑪ from local superintendents regarding ⑦, ⑧

(xv) ⑫ from local superintendents regarding ⑨, ⑩

Impact Summary

(xvi) Direction (circle one) increase, decrease, no change

(xvii) Probability (circle one) definite, probable, possible

Magnitude:

(xviii) Maximum impact (⑪ a, b, or c) a

(xix) Average impact (⑫ a, b, or c) a

Duration:

(xx) Maximum impact (⑧) 12 months

(xxi) Average impact (⑩) 48 months

Table A32e

Education

School District Ganado, No. 5 .

① Time Period	② Months in Time Period	③ Total New Residents	④ Estimated Number of New Students	Additional New Students	Local Assessment of School District Capability to Absorb Additional Students
1979	9	0	0.00	Maximum	⑪ Check one:
1980	12	5	1.13	⑦ Number of Students 4	a. Can be absorbed by existing or planned facilities X
1981	12	19	4.48		b. Will strain existing or planned facilities
1982	12	12	2.83	⑧ Duration 12 months	c. Will require construction of new facilities
1983	3	2	0.47	Average	⑫ Check one:
				⑨ Number of Students 2	a. Can be absorbed by existing or planned facilities X
				⑩ Duration 48 months	b. Will strain existing or planned facilities
					c. Will require construction of new facilities
Total Months	⑤ 48	Average Number of Estimated New Students	⑥ 2.12		

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A27e, column ⑫

(iv) Total State Population (from Table A9) = 12,487,000

(v) Total Number of Students in State (from Table A9) = 2,944,925

(vi) Student Multiplier = (v) ÷ (iv) = 0.2358

(vii) ④ = ③ x (vi)

(viii) Average New Residents from Table A27e, box ⑬ = 9

(ix) ⑥ = (vi) x (viii)

(x) ⑦ = largest of ④

(xi) ⑧ = ② for largest of ④

(xii) ⑨ = ⑥

(xiii) ⑩ = ⑤

(xiv) ⑪ from local superintendents regarding ⑦, ⑧

(xv) ⑫ from local superintendents regarding ⑨, ⑩

Impact Summary

(xvi) Direction (circle one) (increase), decrease, no change

(xvii) Probability (circle one) definite, probable, (possible)

Magnitude:

(xviii) Maximum impact (⑪ a, b, or c) a

(xix) Average impact (⑫ a, b, or c) a

Duration:

(xx) Maximum impact (⑧) 12 months

(xxi) Average impact (⑩) 48 months

Table A32f

Education

School District Palacios, No. 6 .

① Time Period	② Months in Time Period	③ Total New Residents	④ Estimated Number of New Students	Additional New Students	Local Assessment of School District Capability to Absorb Additional Students
1979	9	2	0.47	Maximum	⑪ Check one:
1980	12	19	4.48	⑦ Number of Students 15	a. Can be absorbed by existing or planned facilities X
1981	12	65	15.33		b. Will strain existing or planned facilities
1982	12	36	8.49	⑧ Duration 12 months	c. Will require construction of new facilities
1983	3	7	1.65	Average	⑫ Check one:
				⑨ Number of Students 7	a. Can be absorbed by existing or planned facilities X
				⑩ Duration 48 months	b. Will strain existing or planned facilities
					c. Will require construction of new facilities
Total Months	⑤ 48	Average Number of Estimated New Students	⑥ 7.07		

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A27f, column ⑫

(iv) Total State Population (from Table A9) = 12,487,000

(v) Total Number of Students in State (from Table A9) = 2,944,925

(vi) Student Multiplier = (v) ÷ (iv) = 0.2358

(vii) ④ = ③ x (vi)

(viii) Average New Residents from Table A27f, box ⑬ = 30

(ix) ⑥ = (vi) x (viii)

(x) ⑦ = largest of ④

(xi) ⑧ = ② for largest of ④

(xii) ⑨ = ⑥

(xiii) ⑩ = ⑤

(xiv) ⑪ from local superintendents regarding ⑦, ⑧

(xv) ⑫ from local superintendents regarding ⑨, ⑩

Impact Summary

(xvi) Direction (circle one) (increase), decrease, no change

(xvii) Probability (circle one) definite, (probable), possible

Magnitude:

(xviii) Maximum impact (⑪ a, b, or c) a

(xix) Average impact (⑫ a, b, or c) a

Duration:

(xx) Maximum impact (⑧) 12 months

(xxi) Average impact (⑩) 48 months

Table A33a

Law Enforcement Personnel

City Austwell, No. 1

① Time Period	② Months in Time Period	③ Total New Residents	Change in ④ Number of Law Enforcement Personnel
1979	9	0	0.00
1980	12	0	0.00
1981	12	2	0.00
1982	12	2	0.00
1983	3	0	0.00
Total Months	⑤ 48	Average Number Of New Law Enforcement Personnel Needed	⑥ 0

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25a, column ④

(iv) City Population (from Table A13a) = 272

(v) City Law Enforcement Personnel (from Table A13a) = 0

(vi) City Population Per Law Enforcement Personnel = (iv) ÷ (v) = 0

(vii) ④ = ③ (for each time period) ÷ (vi)

(viii) ⑤ from Table A1 (ASIR 8)

(ix) Average Change in Impact Area Population (from Table A25a, box ⑨) = 1

(x) ⑥ = (ix) ÷ (vi)

Impact Summary

(xi) Direction (circle one) increase, decrease, no change

(xii) Probability (circle one) definite, probable, possible

Magnitude:

(xiii) Maximum impact (largest of ④) 0

(xiv) Average impact (⑥) 0

Duration:

(xv) Maximum impact (from ② for largest of ④) 12 months

(xvi) Average impact (⑤) 48 months

Table A33b

Law Enforcement Personnel

City Victoria, No. 2

① Time Period	② Months in Time Period	③ Total New Residents	Change in ④ Number of Law Enforcement Personnel
1979	9	28	0.03
1980	12	235	0.26
1981	12	828	0.92
1982	12	467	0.52
1983	.3	86	0.10
Total Months	⑤ 48	Average Number Of New Law Enforcement Personnel Needed	⑥ 0.44

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25b, column ④

(iv) City Population (from Table A13b) = 58,065

(v) City Law Enforcement Personnel (from Table A13b) = 65

(vi) City Population Per Law Enforcement Personnel = (iv) ÷ (v) = 893

(vii) ④ = ③ (for each time period) ÷ (vi)

(viii) ⑤ from Table A1 (ASIR 8)

(ix) Average Change in Impact Area Population (from Table A25b) box ⑨) = 393

(x) ⑥ = (ix) ÷ (vi)

Impact Summary

(xi) Direction (circle one) increase, decrease, (no change)

(xii) Probability (circle one) definite, probable, (possible)

Magnitude:

(xiii) Maximum impact (largest of ④) 0.92

(xiv) Average impact (⑥) 0.44

Duration:

(xv) Maximum impact (from ② for largest of ④) 12 months

(xvi) Average impact (⑤) 48 months

Table A33c

Law Enforcement Personnel

City Port Lavaca, No. 3

① Time Period	② Months in Time Period	③ Total New Residents	Change in ④ Number of Law Enforcement Personnel
1979	9	10	0.02
1980	12	84	0.14
1981	12	299	0.51
1982	12	170	0.29
1983	.3	31	0.05
Total Months	⑤ 48	Average Number Of New Law Enforcement Personnel Needed	⑥ 0.25

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25c, column ④

(iv) City Population (from Table A13c) = 10,491

(v) City Law Enforcement Personnel (from Table A13c) = 18

(vi) City Population Per Law Enforcement Personnel = (iv) ÷ (v) = 583

(vii) ④ = ③ (for each time period) ÷ (vi)

(viii) ⑤ from Table A1 (ASIR 8)

(ix) Average Change in Impact Area Population (from Table A25c, box ⑨)= 143

(x) ⑥ = (ix) ÷ (vi)

Impact Summary

(xi) Direction (circle one) increase, decrease, no change

(xii) Probability (circle one) definite, probable, possible

Magnitude:

(xiii) Maximum impact (largest of ④) 0.51

(xiv) Average impact (⑥) 0.25

Duration:

(xv) Maximum impact (from ② for largest of ④) 12 months

(xvi) Average impact (⑤) 48 months

Table A33d

Law Enforcement Personnel

City Point Comfort, No. 4

① Time Period	② Months in Time Period	③ Total New Residents	Change in ④ Number of Law Enforcement Personnel
1979	9	0	0.00
1980	12	10	0.01
1981	12	34	0.05
1982	12	19	0.03
1983	3	5	0.01
Total Months	⑤ 48	Average Number Of New Law Enforcement Personnel Needed	⑥ 0.02

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25d, column ④

(iv) City Population (from Table A13d) = 1,450

(v) City Law Enforcement Personnel (from Table A13d) = 2

(vi) City Population Per Law Enforcement Personnel = (iv) ÷ (v) = 725

(vii) ④ = ③ (for each time period) ÷ (vi)

(viii) ⑤ from Table A1 (ASIR 8)

(ix) Average Change in Impact Area Population (from Table A25d, box ⑨) = 17

(x) ⑥ = (ix) ÷ (vi)

Impact Summary

(xi) Direction (circle one) increase, decrease, no change

(xii) Probability (circle one) definite, probable, possible

Magnitude:

(xiii) Maximum impact (largest of ④) 0.05

(xiv) Average impact (⑥) 0.02

Duration:

(xv) Maximum impact (from ② for largest of ④) 12 months

(xvi) Average impact (⑤) 48 months

Table 33e

Law Enforcement Personnel

City Seadrift, No. 5

① Time Period	② Months in Time Period	③ Total New Residents	④ Change in Number of Law Enforcement Personnel
1979	9	2	0.00
1980	12	7	0.01
1981	12	29	0.04
1982	12	14	0.02
1983	3	2	0.00
Total Months	⑤ 48	Average Number Of New Law Enforcement Personnel Needed	⑥ 0.02

Notes:

(i) ① from Table 1 (ASIR 6)

(ii) ② from Table 1 (ASIR 7)

(iii) ③ from Table 25e, column ④

(iv) City Population (from Table 13e) = 1,500

(v) City Law Enforcement Personnel (from Table 13e) = 2

(vi) City Population Per Law Enforcement Personnel = (iv) ÷ (v) = 750

(vii) ④ = ③ (for each time period) ÷ (vi)

(viii) ⑤ from Table 1 (ASIR 8)

(ix) Average Change in Impact Area Population (from Table 25e, box ⑨) = 13

(x) ⑥ = (ix) ÷ (vi)

Impact Summary

(xi) Direction (circle one) increase, decrease, no change

(xii) Probability (circle one) definite, probable, possible

Magnitude:

(xiii) Maximum impact (largest of ④) 0.04

(xiv) Average impact (⑥) 0.02

Duration:

(xv) Maximum impact (from ② for largest of ④) 12 months

(xvi) Average impact (⑤) 48 months

Table 33f

Law Enforcement Personnel

City Edna, No. 6

① Time Period	② Months in Time Period	③ Total New Residents	④ Change in Number of Law Enforcement Personnel
1979	9	2	0.00
1980	12	22	0.02
1981	12	72	0.07
1982	12	41	0.04
1983	.3	7	0.01
Total Months	⑤ 48	Average Number Of New Law Enforcement Personnel Needed	⑥ 0.03

Notes:

(i) ① from Table 1 (ASIR 6)

(ii) ② from Table 1 (ASIR 7)

(iii) ③ from Table 25f, column ④

(iv) City Population (from Table 13f) = 5,900

(v) City Law Enforcement Personnel (from Table 13f) = 6

(vi) City Population Per Law Enforcement Personnel = (iv) ÷ (v) = 983

(vii) ④ = ③ (for each time period) ÷ (vi)

(viii) ⑤ from Table 1 (ASIR 8)

(ix) Average Change in Impact Area Population (from Table 25f, box ⑨) =33

(x) ⑥ = (ix) ÷ (vi)

Impact Summary

(xi) Direction (circle one) increase, decrease, no change

(xii) Probability (circle one) definite, probable, possible

Magnitude:

(xiii) Maximum impact (largest of ④) 0.07

(xiv) Average impact (⑥) 0.03

Duration:

(xv) Maximum impact (from ② for largest of ④) 12 months

(xvi) Average impact (⑤) 48 months

Table A33g

Law Enforcement Personnel

City Ganado, No. 7

① Time Period	② Months in Time Period	③ Total New Residents	④ Change in Number of Law Enforcement Personnel
1979	9	0	0.00
1980	12	5	0.00
1981	12	19	0.01
1982	12	12	0.00
1983	3	2	0.00
Total Months	⑤ 48	Average Number Of New Law Enforcement Personnel Needed	⑥ 0.00

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25g, column ④

(iv) City Population (from Table A13g) = 1,640

(v) City Law Enforcement Personnel (from Table A13g) = 0.5

(vi) City Population Per Law Enforcement Personnel = (iv) ÷ (v) = 3,280

(vii) ④ = ③ (for each time period) ÷ (vi)

(viii) ⑤ from Table A1 (ASIR 8)

(ix) Average Change in Impact Area Population (from Table A25g, box ⑨) = 9

(x) ⑥ = (ix) ÷ (vi)

Impact Summary

(xi) Direction (circle one) increase, decrease, no change

(xii) Probability (circle one) definite, probable, possible

Magnitude:

(xiii) Maximum impact (largest of ④) 0.01

(xiv) Average impact (⑥) 0.00

Duration:

(xv) Maximum impact (from ② for largest of ④) 12 months

(xvi) Average impact (⑤) 48 months

Table A33h

Law Enforcement Personnel

City Palacios, No. 8

① Time Period	② Months in Time Period	③ Total New Residents	Change in Number of Law Enforcement Personnel ④
1979	9	2	0.00
1980	12	19	0.02
1981	12	65	0.07
1982	12	36	0.04
1983	3	7	0.01
Total Months	⑤ 48	Average Number Of New Law Enforcement Personnel Needed	⑥ 0.03

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25h, column ④

(iv) City Population (from Table A13h) = 4,500

(v) City Law Enforcement Personnel (from Table A13h) = 5

(vi) City Population Per Law Enforcement Personnel = (iv) ÷ (v) = 2,900

(vii) ④ = ③ (for each time period) ÷ (vi)

(viii) ⑤ from Table A1 (ASIR 8)

(ix) Average Change in Impact Area Population (from Table A25h, box ⑨) = 30

(x) ⑥ = (ix) ÷ (vi)

Impact Summary

(xi) Direction (circle one) increase, decrease, no change

(xii) Probability (circle one) definite, probable, possible

Magnitude:

(xiii) Maximum impact (largest of ④) 0.07

(xiv) Average impact (⑥) 0.03

Duration:

(xv) Maximum impact (from ② for largest of ④) 12 months

(xvi) Average impact (⑤) 48 months

Table A34a

Fire Protection Personnel *

City Austwell, No. 1

① Time Period	② Months in Time Period	③ Change in City Population	④ Change in Number of Fire Protection Personnel
1979	9	0	0.00v
1980	12	0	0.00v
1981	12	2	1.47v
1982	12	2	1.47v
1983	3	0	0.00v
Total Months	⑤ 48	Average Number of New Fire Personnel Needed	⑥ 0.74v

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25a, column ④

(iv) City Population (from Table A13a) = 272

(v) City Fire Protection Personnel (from Table A13a) = 200v

(vi) City Population Per Fire Protection Personnel = (iv) ÷ (v) = 1.36**

(vii) ④ = ③ (for each time period) ÷ (vi)

(viii) ⑤ from Table A1 (ASIR 8)

(ix) Average Change in Impact Area Population (from Table A25a, box ⑨) = 1

(x) ⑥ = (ix) ÷ (vi)

* "v" indicates volunteer

** The whole town is said to assist when there is a fire. Based on this information, the number of volunteer fire fighters has been estimated at 200.

Impact Summary

(xi) Direction (circle one) increase, decrease, (no change)

(xii) Probability (circle one) definite, probable, (possible)

Magnitude:

(xiii) Maximum impact (largest of ④) 1.47 v

(xiv) Average impact (⑥) 0.74 v

Duration:

(xv) Maximum impact (from ② for largest of ④) 12 months

(xvi) Average impact (⑤) 48 months

Table A34b

Fire Protection Personnel

City Victoria, No. 2

① Time Period	② Months in Time Period	③ Change in City Population	④ Change in Number of Fire Protection Personnel
1979	9	28	0.03
1980	12	235	0.23
1981	12	828	0.83
1982	12	467	0.47
1983	3	86	0.09
Total Months	⑤ 48	Average Number of New Fire Personnel Needed	⑥ 0.39

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25b, column ④

(iv) City Population (from Table A13b) = 58,065

(v) City Fire Protection Personnel (from Table A13b) = 53

(vi) City Population Per Fire Protection Personnel = (iv) ÷ (v) = 1,001

(vii) ④ = ③ (for each time period) ÷ (vi)

(viii) ⑤ from Table A1 (ASIR 8)

(ix) Average Change in Impact Area Population (from Table A25b, box ⑨) = 393

(x) ⑥ = (ix) ÷ (vi)

Impact Summary

(xi) Direction (circle one) increase, decrease, (no change)

(xii) Probability (circle one) definite, probable, (possible)

Magnitude:

(xiii) Maximum impact (largest of ④) 0.83

(xiv) Average impact (⑥) 0.39

Duration:

(xv) Maximum impact (from ② for largest of ④) 12 months

(xvi) Average impact (⑤) 48 months

Table A34c

Fire Protection Personnel

City Port Lavaca, No. 3

① Time Period	② Months in Time Period	③ Change in City Population	④ Change in Number of Fire Protection Personnel
1979	9	10	0.01
1980	12	84	0.07
1981	12	299	0.26
1982	12	170	0.15
1983	3	31	0.03
Total Months	⑤ 48	Average Number of New Fire Personnel Needed	⑥ 0.12

Notes:

(i) ① from Table A1(ASIR 6)

(ii) ② from Table A1(ASIR 7)

(iii) ③ from Table A25c, column ④

(iv) City Population (from Table A13c) = 10,491

(v) City Fire Protection Personnel (from Table A13c) = 9

(vi) City Population Per Fire Protection Personnel = (iv) ÷ (v) = 1,166

(vii) ④ = ③ (for each time period) ÷ (vi)

(viii) ⑤ from Table A1 (ASIR 8)

(ix) Average Change in Impact Area Population (from Table A25c, box ⑨) = 143

(x) ⑥ = (ix) ÷ (vi)

Impact Summary

(xi) Direction (circle one) increase, decrease, no change

(xii) Probability (circle one) definite, probable, possible

Magnitude:

(xiii) Maximum impact (largest of ④) 0.26

(xiv) Average impact (⑥) 0.12

Duration:

(xv) Maximum impact (from ② for largest of ④) 12 months

(xvi) Average impact (⑤) 48 months

Table A34d

Fire Protection Personnel *

City Point Comfort, No. 4

① Time Period	② Months in Time Period	③ Change in City Population	④ Change in Number of Fire Protection Personnel
1979	9	0	0.00v
1980	12	10	0.21v
1981	12	34	0.71v
1982	12	19	0.40v
1983	3	5	0.10v
Total Months	⑤ 48	Average Number of New Fire Personnel Needed	⑥ 0.35 v

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25d, column ④

(iv) City Population (from Table A13d) = 1,450

(v) City Fire Protection Personnel (from Table A13d) = 30v

(vi) City Population Per Fire Protection Personnel = (iv) ÷ (v) = 48

(vii) ④ = ③ for each time period ÷ (vi)

(viii) ⑤ from Table A1 (ASIR 8)

(ix) Average Change in Impact Area Population (from Table A25d , box ⑨) = 17

(x) ⑥ = (ix) ÷ (vi)

* "v" indicates volunteer.

Impact Summary

(xi) Direction (circle one) increase, decrease, (no change)

(xii) Probability (circle one) definite, probable, (possible)

Magnitude:

(xiii) Maximum impact (largest of ④) 0.71 v

(xiv) Average impact (⑥) 0.35 v

Duration:

(xv) Maximum impact (from ② for largest of ④) 12 months

(xvi) Average impact (⑤) 48 months

Table A34e

Fire Protection Personnel *

City Seadrift, No. 5

① Time Period	② Months in Time Period	③ Change in City Population	Change in ④ Number of Fire Protection Personnel
1979	9	2	0.06 v
1980	12	7	0.19 v
1981	12	29	0.81 v
1982	12	14	0.39 v
1983	3	2	0.06 v
Total Months	⑤ 48	Average Number of New Fire Personnel Needed	⑥ 0.36 v

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25e, column ④

(iv) City Population (from Table A13e) = 1,500

(v) City Fire Protection Personnel (from Table A13e) = 42v

(vi) City Population Per Fire Protection Personnel = (iv) ÷ (v) = 36

(vii) ④ = ③ (for each time period) ÷ (vi)

(viii) ⑤ from Table A1 (ASIR 8)

(ix) Average Change in Impact Area Population (from Table A25e, box ⑨) = 13

(x) ⑥ = (ix) ÷ (vi)

* "v" indicates volunteer.

Impact Summary

(xi) Direction (circle one) increase, decrease, (no change)

(xii) Probability (circle one) definite, probable, (possible)

Magnitude:

(xiii) Maximum impact (largest of ④) 0.81 v

(xiv) Average impact (⑥) 0.36 v

Duration:

(xv) Maximum impact (from ② for largest of ④) 12 months

(xvi) Average impact (⑤) 48 months

Table A34f

Fire Protection Personnel *

City Edna, No. 6

① Time Period	② Months in Time Period	③ Change in City Population	④ Change in Number of Fire Protection Personnel
1979	9	2	0.01v
1980	12	22	0.09v
1981	12	72	0.31v
1982	12	41	0.17v
1983	3	7	0.03v
Total Months	⑤ 48	Average Number of New Fire Personnel Needed	⑥ 0.14 v

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25f, column ④

(iv) City Population (from Table A13f) = 5,900

(v) City Fire Protection Personnel (from Table A13f) = 25v

(vi) City Population Per Fire Protection Personnel = (iv) ÷ (v) = 236

(vii) ④ = ③ (for each time period) ÷ (vi)

(viii) ⑤ from Table A1 (ASIR 8)

(ix) Average Change in Impact Area Population (from Table A25f, box ⑨)=33

(x) ⑥ = (ix) ÷ (vi)

* "v" indicates volunteer

Impact Summary

(xi) Direction (circle one) increase, decrease, (no change)

(xii) Probability (circle one) definite, probable, (possible)

Magnitude:

(xiii) Maximum impact (largest of ④) 0.31 v

(xiv) Average impact (⑥) 0.14 v

Duration:

(xv) Maximum impact (from ② for largest of ④) 12 months

(xvi) Average impact (⑤) 48 months

Table A34g

Fire Protection Personnel *

City Ganado, No. 7

① Time Period	② Months in Time Period	③ Change in City Population	④ Change in Number of Fire Protection Personnel
1979	9	0	0.00 v
1980	12	5	0.10 v
1981	12	19	0.37 v
1982	12	12	0.24 v
1983	3	2	0.04 v
Total Months	⑤ 48	Average Number of New Fire Personnel Needed	⑥ 0.18 v

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25g, column ④

(iv) City Population (from Table A13g) = 1,640

(v) City Fire Protection Personnel (from Table A13g) = 32v

(vi) City Population Per Fire Protection Personnel = (iv) ÷ (v) = 51

(vii) ④ = ③ (for each time period) ÷ (vi)

(viii) ⑤ from Table A1 (ASIR 8)

(ix) Average Change in Impact Area Population (from Table A25g, box ⑨)= 9

(x) ⑥ = (ix) ÷ (vi)

* "v" indicates volunteer

Impact Summary

(xi) Direction (circle one) increase, decrease, no change

(xii) Probability (circle one) definite, probable, possible

Magnitude:

(xiii) Maximum impact (largest of ④) 0.37v

(xiv) Average impact (⑥) 0.18v

Duration:

(xv) Maximum impact (from ② for largest of ④) 12 months

(xvi) Average impact (⑤) 48 months

Table A34h

Fire Protection Personnel *

City Palacios, No. 8

① Time Period	② Months in Time Period	③ Change in City Population	④ Change in Number of Fire Protection Personnel
1979	9	2	0.02 v
1980	12	19	0.17 v
1981	12	65	0.58 v
1982	12	36	0.32 v
1983	3	7	0.06 v
Total Months	⑤ 48	Average Number of New Fire Personnel Needed	⑥ 0.27 v

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25h, column ④

(iv) City Population (from Table A13h) = 4,500

(v) City Fire Protection Personnel (from Table A13h) = 4v

(vi) City Population Per Fire Protection Personnel = (iv) ÷ (v) = 113

(vii) ④ = ③ (for each time period) ÷ (vi)

(viii) ⑤ from Table A1 (ASIR 8)

(ix) Average Change in Impact Area Population (from Table A25h, box ⑨) = 30

(x) 6 = (ix) ÷ (vi)

* "v" indicates volunteer

Impact Summary

(xi) Direction (circle one) increase, decrease, (no change)

(xii) Probability (circle one) definite, probable, (possible)

Magnitude:

(xiii) Maximum impact (largest of ④) 0.58v

(xiv) Average impact (⑥) 0.27v

Duration:

(xv) Maximum impact (from ② for largest of ④) 12 months

(xvi) Average impact (⑤) 48 months

Table A35

Health Care Facilities

Commuting Range

① Time Period	② Months in Time Period	③ Change in Impact Area Population	④ Change in Number of Licensed Hospital Beds
1979	9	44	0.27
1980	12	382	2.37
1981	12	1,348	8.37
1982	12	761	4.73
1983	3	140	0.87
Total Months	⑤ 48	Average Number of New Hospital Beds Needed	⑥ 3.97

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A26, column ⑫

(iv) Impacted County Area Population (from Table A15) = 127,500

(v) Impacted County Area Number of Licensed Hospital Beds (from Table A15) = 791

(vi) Impacted County Area Population Per Licensed Hospital Bed = (iv) ÷ (v) = 161

(vii) ④ = ③ (for each time period) ÷ (vi)

(viii) ⑤ from Table A1 (ASIR 8)

(ix) Average Change in Commuting Range Population (from Table A26, box ⑬) = 639

(x) ⑥ = (ix) ÷ (vi)

Impact Summary

(xi) Direction (circle one) increase, decrease, no change

(xii) Probability (circle one) definite, probable, possible

Magnitude

(xiii) Maximum impact (largest of ④) 8.37

(xiv) Average impact (⑥) 3.97

Duration

(xv) Maximum impact (from ② for largest of ④) 12 months

(xvi) Average impact (⑤) 48 months

Table A36

Health Care Personnel

Commuting Range

① Time Period	② Months in Time Period	③ Change in Impact Area Population	④ Change in Number of Physicians
1979	9	44	0.03
1980	12	382	0.29
1981	12	1,348	1.03
1982	12	761	0.58
1983	3	140	0.11
Total Months	⑤ 48	Average Number Of New Physicians Needed	⑥ .49

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A26, column ⑫

(iv) Impacted County Area Population (from Table A15) = 127,500

(v) Impacted County Area Number of Physicans (from Table A15) = 97

(vi) Impacted County Area Population Per Physician = (iv) ÷ (v) = 1,314

(vii) ④ = ③ (for each time period) ÷ (vi)

(viii) ⑤ from Table A1 (ASIR 8)

(ix) Average Change in Commuting Range Population (from Table A26, box ⑬) = 639

(x) ⑥ = (ix) ÷ (vi)

Impact Summary

(xi) Direction (circle one) (increase), decrease, no change

(xii) Probability (circle one) definite, probable, (possible)

Magnitude

(xiii) Maximum impact (largest of ④) 1.03

(xiv) Average impact (⑥) 0.49

Duration

(xv) Maximum impact (from ② for largest of ④) 12 months

(xvi) Average impact (⑤) 48 months

Table A37a

City Austwell, No. 1

Water Supply*

① Time Period	② Months in Time Period	③ Change in City Population	④ New Demand Water in Gallons Per Day	⑤ % of Current Reserve Production Capacity Utilized by New Demand
1979	9	0	0.0	0.00%
1980	12	0	0.0	0.00%
1981	12	2	147.0	0.07%
1982	12	2	147.0	0.07%
1983	3	0	0.0	0.00%

Total Months	48 ⑥	Average New Demand for Water in Gallons Per Day	73.5 ⑦
Reserve Drinking Water Production Capacity (mgd)	0.216 ⑧	Average Percent of Current Reserve Storage Capacity Utilized by New Demand	0.03% ⑨

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25a, column ④

(iv) ⑧ = Reserve Drinking Water Production Capacity (mgd) (from Table A13a)

(v) Maximum Daily Water Usage (from Table A13a) = 0.02mgd

(vi) City Population (from Table A13a) = 272

(vii) Per Capita Water Demand in gallons per day = (v) ÷ (vi) = 73.5

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑧ x 100

(x) ⑥ from Table A1 (ASIR 8)

(xi) Average Change in City Population (from Table A25a, box ⑨) = 1.0

(xii) ⑦ = (xi) x (vii)

(xiii) ⑨ = ⑦ ÷ ⑧ x 100

* Mgd = million gallons per day

Impact Summary

(xiv) Direction (circle one) (increase), decrease, no change

(xv) Probability (circle one) definite, probable, (possible)

Magnitude:

(xvi) Maximum impact (largest of ⑤) 0.07%

(xvii) Average impact (⑨) 0.03%

Duration

(xviii) Maximum impact (from ② for largest of ⑤) 12 months

(xix) Average impact (⑥) 48 months

Table A37b

City Victoria, No. 2

Water Supply*

① Time Period	② Months in Time Period	③ Change in City Population	New Demand ④ Water in Gallons Per Day	% of Current ⑤ Reserve Production Capacity Utilized by New Demand
1979	9	28	5,303	0.06%
1980	12	235	44,509	0.52%
1981	12	828	156,823	1.84%
1982	12	467	88,450	1.04%
1983	3	86	16,288	0.19%

Total Months	⑥ 48	Average New Demand for Water in Gallons Per Day	⑦ 74,451
Reserve Drinking Water Production Capacity (mgd)	⑧ 8.5	Average Percent of Current Reserve Storage Capacity Utilized by New Demand	⑨ 0.88%

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25b, column ④

(iv) ⑧ = Reserve Drinking Water Production Capacity (mgd) (from Table A13b)

(v) Maximum Daily Water Usage (from Table A13b) = 11.0 mgd

(vi) City Population (from Table A13b) = 58,065

(vii) Per Capita Water Demand in gallons per day = (v) ÷ (vi) = 189.4

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑧ x 100

(x) ⑥ from Table A1 (ASIR 8)

(xi) Average Change in City Population (from Table A25b, box ⑨) = 393

(xii) ⑦ = (xi) x (vii)

(xiii) ⑨ = ⑦ ÷ ⑧ x 100

* Mgd = million gallons per day

Impact Summary

(xiv) Direction (circle one) (increase), decrease, no change

(xv) Probability (circle one) (definite), probable, possible

Magnitude:

(xvi) Maximum impact (largest of ⑤) 1.84%

(xvii) Average impact (⑨) 0.88%

Duration

(xviii) Maximum impact (from ② for largest of ⑤) 12 months

(xix) Average impact (⑥) 48 months

Table A37c

City Port Lavaca, No. 3

Water Supply *

① Time Period	② Months in Time Period	③ Change in City Population	New Demand ④ Water in Gallons Per Day	% of Current ⑤ Reserve Production Capacity Utilized by New Demand
1979	9	10	4,051	1.62%
1980	12	84	34,028	13.61%
1981	12	299	121,125	48.45%
1982	12	170	68,867	27.55%
1983	3	31	12,558	5.02%

Total Months	⑥ 48	Average New Demand for Water in Gallons Per Day	⑦ 57,929
Reserve Drinking Water Production Capacity (mgd)	⑧ 0.25	Average Percent of Current Reserve Storage Capacity Utilized by New Demand	⑨ 23.17%

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25c, column ④

(iv) ⑧ = Reserve Drinking Water Production Capacity (mgd) (from Table A13c)

(v) Maximum Daily Water Usage (from Table A13c) = 4.25 mgd

(vi) City Population (from Table A13c) = 10,491

(vii) Per Capita Water Demand in gallons per day = (v) ÷ (vi) = 405.1

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑧ x 100

(x) ⑥ from Table A1 (ASIR 8)

(xi) Average Change in City Population (from Table A25c, box ⑨) = 143

(xii) ⑦ = (xi) x (vii)

(xiii) ⑨ = ⑦ ÷ ⑧ x 100

* Mgd = million gallons per day

Impact Summary

(xiv) Direction (circle one) (increase), decrease, no change

(xv) Probability (circle one) (definite), probable, possible

Magnitude:

(xvi) Maximum impact (largest of ⑤) 48.45%

(xvii) Average impact (⑨) 23.17%

Duration

(xviii) Maximum impact (from ② for largest of ⑤) 12 months

(xix) Average impact (⑥) 48 months

Table A37d

City Point Comfort, No. 4

Water Supply *

① Time Period	② Months in Time Period	③ Change in City Population	New Demand ④ Water in Gallons Per Day	% of Current ⑤ Reserve Production Capacity Utilized by New Demand
1979	9	0	0	0.00%
1980	12	10	1,310	26.20%
1981	12	34	4,454	89.08%
1982	12	19	2,489	49.78%
1983	3	5	655	13.11%

Total Months	48 ⑥	Average New Demand for Water in Gallons Per Day	2,227 ⑦
Reserve Drinking Water Production Capacity (mgd)	0.005 ⑧	Average Percent of Current Reserve Storage Capacity Utilized by New Demand	44.54% ⑨

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25d, column ④

(iv) ⑧ = Reserve Drinking Water Production Capacity (mgd) (from Table A13d)

(v) Maximum Daily Water Usage (from Table A13d) = 0.19 mgd

(vi) City Population (from Table A13d) = 1,450

(vii) Per Capita Water Demand in gallons per day = (v) ÷ (vi) = 131.0

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑧ x 100

(x) ⑥ from Table A1 (ASIR 8)

(xi) Average Change in City Population (from Table A25d, box ⑨) = 17

(xii) ⑦ = (xi) x (vii)

(xiii) ⑨ = ⑦ ÷ ⑧ x 100

* Mgd = million gallons per day

Impact Summary

(xiv) Direction (circle one) (increase), decrease, no change

(xv) Probability (circle one) definite, (probable), possible

Magnitude:

(xvi) Maximum impact (largest of ⑤) 89.08%

(xvii) Average impact (⑨) 44.54%

Duration

(xviii) Maximum impact (from ② for largest of ⑤) 12 months

(xix) Average impact (⑥) 48 months

Table A37e

City Seadrift, No. 5

Water Supply *

① Time Period	② Months in Time Period	③ Change in City Population	New Demand ④ Water in Gallons Per Day	% of Current ⑤ Reserve Production Capacity Utilized by New Demand
1979	9	2	236	7.87%
1980	12	7	826	27.53%
1981	12	29	3,422	114.07%
1982	12	14	1,652	55.07%
1983	3	2	236	7.87%

Total Months	48 ⑥	Average New Demand for Water in Gallons Per Day	1,534 ⑦
Reserve Drinking Water Production Capacity (mgd)	0.003 ⑧	Average Percent of Current Reserve Storage Capacity Utilized by New Demand	51.13% ⑨

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25e, column ④

(iv) ⑧ = Reserve Drinking Water Production Capacity (mgd) (from Table A13e)

(v) Maximum Daily Water Usage (from Table A13e) = 0.177 mgd

(vi) City Population (from Table A13e) = 1,500

(vii) Per Capita Water Demand in gallons per day = (v) ÷ (vi) = 118.0

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑧ x 100

(x) ⑥ from Table A1 (ASIR 8)

(xi) Average Change in City Population (from Table A25e, box ⑨)=13

(xii) ⑦ = (xi) x (vii)

(xiii) ⑨ = ⑦ ÷ ⑧ x 100

* Mgd = million gallons per day

Impact Summary

(xiv) Direction (circle one) increase, decrease, no change

(xv) Probability (circle one) definite, probable, possible

Magnitude:

(xvi) Maximum impact (largest of ⑤) 114.07%

(xvii) Average impact (⑨) 51.13%

Duration

(xviii) Maximum impact (from ② for largest of ⑤) 12 months

(xix) Average impact (⑥) 48 months

Table A37f

City Edna, No. 6

Water Supply *

① Time Period	② Months in Time Period	③ Change in City Population	④ New Demand Water in Gallons Per Day	⑤ % of Current Reserve Production Capacity Utilized by New Demand
1979	9	2	441	0.03%
1980	12	22	4,847	0.31%
1981	12	72	15,862	1.00%
1982	12	41	9,032	0.57%
1983	3	7	1,542	0.10%

Total Months	48 ⑥	Average New Demand for Water in Gallons Per Day	7,270 ⑦
Reserve Drinking Water Production Capacity (mgd)	1.58 ⑧	Average Percent of Current Reserve Storage Capacity Utilized by New Demand	0.46% ⑨

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25f, column ④

(iv) ⑧ = Reserve Drinking Water Production Capacity (mgd) (from Table A13f)

(v) Maximum Daily Water Usage (from Table A13f) = 1.30 mgd

(vi) City Population (from Table A13f) = 5,900

(vii) Per Capita Water Demand in gallons per day = (v) ÷ (vi) = 220.3

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑧ x 100

(x) ⑥ from Table A1 (ASIR 8)

(xi) Average Change in City Population (from Table A25f, box ⑨) = 33

(xii) ⑦ = (xi) x (vii)

(xiii) ⑨ = ⑦ ÷ ⑧ x 100

* Mgd = million gallons per day

Impact Summary

(xiv) Direction (circle one) increase, decrease, no change

(xv) Probability (circle one) definite, probable, possible

Magnitude:

(xvi) Maximum impact (largest of ⑤) 1.00%

(xvii) Average impact (⑨) 0.46%

Duration

(xviii) Maximum impact (from ② for largest of ⑤) 12 months

(xix) Average impact (⑥) 48 months

Table A37g
Water Supply*

City Ganado, No. 7

① Time Period	② Months in Time Period	③ Change in City Population	New Demand ④ Water in Gallons Per Day	% of Current ⑤ Reserve Production Capacity Utilized by New Demand
1979	9	0	0	0.00%
1980	12	5	979	0.12%
1981	12	19	3,718	0.47%
1982	12	12	2,348	0.30%
1983	3	2	391	0.05%

Total Months	⑥ 48	Average New Demand for Water in Gallons Per Day	⑦ 1,762
Reserve Drinking Water Production Capacity (mgd)	⑧ 0.787	Average Percent of Current Reserve Storage Capacity Utilized by New Demand	⑨ 0.22%

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25g, column ④

(iv) ⑧ = Reserve Drinking Water Production Capacity (mgd) (from Table A13g)

(v) Maximum Daily Water Usage (from Table A13g) = 0.321 mgd

(vi) City Population (from Table A13g) = 1,640

(vii) Per Capita Water Demand in gallons per day = (v) ÷ (vi) = 195.7

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑧ x 100

(x) ⑥ from Table A1 (ASIR 8)

(xi) Average Change in City Population (from Table A25g, box ⑨) = 9

(xii) ⑦ = (xi) x (vii)

(xiii) ⑨ = ⑦ ÷ ⑧ x 100

* Mgd = million gallons per day

Impact Summary

(xiv) Direction (circle one) increase, decrease, no change

(xv) Probability (circle one) definite, probable, possible

Magnitude:

(xvi) Maximum impact (largest of ⑤) 0.47%

(xvii) Average impact (⑨) 0.22%

Duration

(xviii) Maximum impact (from ② for largest of ⑤) 12 months

(xix) Average impact (⑥) 48 months

Table A37h

City Palacios, No. 8

Water Supply *

① Time Period	② Months in Time Period	③ Change in City Population	④ New Demand Water in Gallons Per Day	⑤ % of Current Reserve Production Capacity Utilized by New Demand
1979	9	2	444	0.06%
1980	12	19	4,222	0.61%
1981	12	65	14,443	2.06%
1982	12	36	7,999	1.14%
1983	3	7	1,555	0.22%

Total Months	⑥ 48	Average New Demand for Water in Gallons Per Day	⑦ 6,666
Reserve Drinking Water Production Capacity (mgd)	⑧ 0.700	Average Percent of Current Reserve Storage Capacity Utilized by New Demand	⑨ 0.95%

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25h, column ④

(iv) ⑧ = Reserve Drinking Water Production Capacity (mgd) (from Table A13h)

(v) Maximum Daily Water Usage (from Table A13h) = 1.000 mgd

(vi) City Population (from Table A13h) = 4,500

(vii) Per Capita Water Demand in gallons per day = (v) ÷ (vi) = 222.2

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑧ x 100

(x) ⑥ from Table A1 (ASIR 8)

(xi) Average Change in City Population (from Table A25h, box ⑨) = 30

(xii) ⑦ = (xi) x (vii)

(xiii) ⑨ = ⑦ ÷ ⑧ x 100

* Mgd = million gallons per day

Impact Summary

(xiv) Direction (circle one) increase, decrease, no change

(xv) Probability (circle one) definite, probable, possible

Magnitude:

(xvi) Maximum impact (largest of ⑤) 2.06%

(xvii) Average impact (⑨) 0.95%

Duration

(xviii) Maximum impact (from ② for largest of ⑤) 12 months

(xix) Average impact (⑥) 48 months

Table A38a

Wastewater Treatment and Disposal *

City Austwell, No. 1

① Time Period	② Months in Time Period	③ Change in City Population	④ New Demand for Water Treatment in Gallons Per Day	⑤ % of Current Reserve Wastewater Daily Flow Utilized by New Demand
1979	9	0	0	0.00%
1980	12	0	0	0.00%
1981	12	2	199	0.21%
1982	12	2	199	0.21%
1983	3	0	0	0.00%

Total Months	48 ⑥	Average New Demand for Wastewater Treatment In Gallons Per Day	.99 ⑦
Current Reserve Wastewater Daily Flow (Mgd)	0.093 ⑧	Average Percent of Current Reserve Treatment Capacity Utilized by New Demand	0.11% ⑨

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25a, column ④

(iv) ⑧ = Current Reserve Wastewater Daily Flow (mgd) (from Table A13a)

(v) Current Maximum Daily Wastewater Flow (from Table A13a) = 0.027mgd

(vi) City Population (from Table A13a) = 272

(vii) Per Capita Wastewater Flow in gallons per day = (v) ÷ (vi) = 99.3

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑧ x 100

(x) ⑥ from Table A1 (ASIR 8)

(xi) Average Change in City Population (from Table A25a, box ⑨) = 1.0

(xii) ⑦ = (xi) x (vii)

(xiii) ⑨ = ⑦ ÷ ⑧ x 100

Impact Summary

(xiv) Duration (circle one) (increase), decrease, no change

(xv) Probability (circle one) definite, probable, (possible)

Magnitude:

(xvi) Maximum impact (largest of ⑤) 0.21%

(xvii) Average impact (⑨) 0.11%

Duration:

(xviii) Maximum impact (from ② for largest of ⑤) 12 months

(xix) Average impact (⑥) 48 months

* Mgd = million gallons per day

Table A38b

Wastewater Treatment and Disposal *

City Victoria, No. 2

① Time Period	② Months in Time Period	③ Change in City Population	④ New Demand for Water Treatment in Gallons Per Day	⑤ % of Current Reserve Wastewater Daily Flow Utilized by New Demand
1979	9	28	5,608	No Reserve Capacity Exists
1980	12	235	47,071	No Reserve Capacity Exists
1981	12	828	165,848	No Reserve Capacity Exists
1982	12	467	93,540	No Reserve Capacity Exists
1983	9	86	17,226	No Reserve Capacity Exists
Total Months	48 ⑥	Average New Demand for Wastewater Treatment In Gallons Per Day		78,718 ⑦
Current Reserve Wastewater Daily Flow (Mgd)	0.0 ⑧	Average Percent of Current Reserve Treatment Capacity Utilized by New Demand		No Reserve Capacity Exists ⑨

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25b, column ④

(iv) ⑧ = Current Reserve Wastewater Daily Flow (mgd) (from Table A13b)

(v) Current Maximum Daily Wastewater Flow (from Table A13b) = 11.63 mgd

(vi) City Population (from Table A13b) = 58,065

(vii) Per Capita Wastewater Flow in gallons per day = (v) ÷ (vi) = 200.3

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑧ x 100

(x) ⑥ from Table A1 (ASIR 8)

(xi) Average Change in City Population (from Table A25b, box ⑨) = 393

(xii) ⑦ = (xi) x (vii)

(xiii) ⑨ = ⑦ ÷ ⑧ x 100

Impact Summary

(xiv) Duration (circle one) increase, decrease, no change

(xv) Probability (circle one) definite, probable, possible

Magnitude:

(xvi) Maximum impact (largest of ⑤) No Reserve Capacity Exists

(xvii) Average impact (⑨) No Reserve Capacity Exists

Duration:

(xviii) Maximum impact (from ② for largest of ⑤) 12 months

(xix) Average impact (⑥) 48 months

Table A38c

City Port Lavaca, No. 3

Wastewater Treatment and Disposal *

① Time Period	② Months in Time Period	③ Change in City Population	④ New Demand for Water Treatment in Gallons Per Day	⑤ % of Current Reserve Wastewater Daily Flow Utilized by New Demand
1979	9	10	373	0.07%
1980	12	84	3,133	0.51%
1981	12	299	11,153	1.83%
1982	12	170	6,341	1.04%
1983	3	31	1,156	0.19%

Total Months	48 ⑥	Average New Demand for Wastewater Treatment In Gallons Per Day	5,334 ⑦
Current Reserve Wastewater Daily Flow (Mgd)	0.609 ⑧	Average Percent of Current Reserve Treatment Capacity Utilized by New Demand	0.88% ⑨

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25c, column ④

(iv) ⑧ = Current Reserve Wastewater Daily Flow (mgd) (from Table A13c)

(v) Current Maximum Daily Wastewater Flow (from Table A13c) = 0.391 mgd

(vi) City Population (from Table A13c) = 10,491

(vii) Per Capita Wastewater Flow in gallons per day = (v) ÷ (vi) = 37.3

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑧ x 100

(x) ⑥ from Table A1 (ASIR 8)

(xi) Average Change in City Population (from Table A25c, box ⑨) = 143

(xii) ⑦ = (xi) x (vii)

(xiii) ⑨ = ⑦ ÷ ⑧ x 100

* Mgd = million gallons per day

Impact Summary

(xiv) Duration (circle one) increase, decrease, no change

(xv) Probability (circle one) definite, probable, possible

Magnitude:

(xvi) Maximum impact (largest of ⑤) 1.83%

(xvii) Average impact (⑨) 0.88%

Duration:

(xviii) Maximum impact (from ② for largest of ⑤) 12 months

(xix) Average impact (⑥) 48 months

Table A38d

City Point Comfort, No. 4

Wastewater Treatment and Disposal *

① Time Period	② Months in Time Period	③ Change in City Population	④ New Demand for Water Treatment in Gallons Per Day	⑤ % of Current Reserve Wastewater Daily Flow Utilized by New Demand
1979	9	0	0	0.00%
1980	12	10	2,414	4.83%
1981	12	34	8,208	16.40%
1982	12	19	4,587	9.17%
1983	3	5	1,207	2.41%
Total Months	⑥ 48	Average New Demand for Wastewater Treatment In Gallons Per Day		⑦ 4,104
Current Reserve Wastewater Daily Flow (Mgd)	⑧ 0.050	Average Percent of Current Reserve Treatment Capacity Utilized by New Demand		⑨ 8.2%

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25d, column ④

(iv) ⑧ = Current Reserve Wastewater Daily Flow (mgd) (from Table A13d)

(v) Current Maximum Daily Wastewater Flow (from Table A13d) = 0.350 mgd

(vi) City Population (from Table A13d) = 1,450

(vii) Per Capita Wastewater Flow in gallons per day = (v) ÷ (vi) = 241.4

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑧ x 100

(x) ⑥ from Table A1 (ASIR 8)

(xi) Average Change in City Population (from Table A25d, box ⑨) = 17

(xii) ⑦ = (xi) x (vii)

(xiii) ⑨ = ⑦ ÷ ⑧ x 100

* Mgd = million gallons per day

Impact Summary

(xiv) Duration (circle one) increase, decrease, no change

(xv) Probability (circle one) definite, probable, possible

Magnitude:

(xvi) Maximum impact (largest of ⑤) 16.4%

(xvii) Average impact (⑨) 8.2%

Duration:

(xviii) Maximum impact (from ② for largest of ⑤) 12 months

(xix) Average impact (⑥) 48 months

Table A38e

City Seadrift, No. 5

Wastewater Treatment and Disposal *

① Time Period	② Months in Time Period	③ Change in City Population	④ New Demand for Water Treatment in Gallons Per Day	⑤ % of Current Peserve Wastewater Daily Flow Utilized by New Demand
1979	9	2	141	0.03%
1980	12	7	495	0.10%
1981	12	29	2,050	0.41%
1982	12	14	990	0.20%
1983	3	2	141	0.03%
Total Months	⑥ 48	Average New Demand for Wastewater Treatment In Gallons Per Day	⑦ 919	
Current Reserve Wastewater Daily Flow (Mgd)	⑧ 0.496	Average Percent of Current Reserve Treatment Capacity Utilized by New Demand	⑨ 0.19%	

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25e, column ④

(iv) ⑧ = Current Reserve Wastewater Daily Flow (mgd) (from Table A13e)

(v) Current Maximum Daily Wastewater Flow (from Table A13e) = 0.106 mgd

(vi) City Population (from Table A13e) = 1,500

(vii) Per Capita Wastewater Flow in gallons per day = (v) ÷ (vi) = 70.7

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑧ x 100

(x) ⑥ from Table A1 (ASIR 8)

(xi) Average Change in City Population (from Table A25e, box ⑨) = 13

(xii) ⑦ = (xi) x (vii)

(xiii) ⑨ = ⑦ ÷ ⑧ x 100

* Mgd = million gallons per day

Impact Summary

(xiv) Duration (circle one) increase, decrease, no change

(xv) Probability (circle one) definite, probable, possible

Magnitude:

(xvi) Maximum impact (largest of ⑤) 0.41%

(xvii) Average impact (⑨) 0.19%

Duration:

(xviii) Maximum impact (from ② for largest of ⑤) 12 months

(xix) Average impact (⑥) 48 months

Table A38f

Wastewater Treatment and Disposal *

City Edna, No. 6

① Time Period	② Months in Time Period	③ Change in City Population	④ New Demand for Water Treatment in Gallons Per Day	⑤ % of Current Reserve Wastewater Daily Flow Utilized by New Demand
1979	9	2	637	0.20%
1980	12	22	7,007	2.22%
1981	12	72	22,932	7.28%
1982	12	41	13,059	4.15%
1983	3	7	2,230	0.71%

Total Months	⑥ 48	Average New Demand for Wastewater Treatment In Gallons Per Day	⑦ 10,510
Current Reserve Wastewater Daily Flow (Mgd)	⑧ 0.315	Average Percent of Current Reserve Treatment Capacity Utilized by New Demand	⑨ 3.34%

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25f, column ④

(iv) ⑧ = Current Reserve Wastewater Daily Flow (mgd) (from Table A13f)

(v) Current Maximum Daily Wastewater Flow (from Table A13f) = 1.879 mgd

(vi) City Population (from Table A13f) = 5,900

(vii) Per Capita Wastewater Flow in gallons per day = (v) ÷ (vi) = 318.5

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑧ x 100

(x) ⑥ from Table A1 (ASIR 8)

(xi) Average Change in City Population (from Table A25f, box ⑨) = 33

(xii) ⑦ = (xi) x (vii)

(xiii) ⑨ = ⑦ ÷ ⑧ x 100

* Mgd = million gallons per day

Impact Summary

(xiv) Duration (circle one) increase, decrease, no change

(xv) Probability (circle one) definite, probable, possible

Magnitude:

(xvi) Maximum impact (largest of ⑤) 7.28%

(xvii) Average impact (⑨) 3.34%

Duration:

(xviii) Maximum impact (from ② for largest of ⑤) 12 months

(xix) Average impact (⑥) 48 months

Table A38g

City Ganado, No. 7

Wastewater Treatment and Disposal *

① Time Period	② Months in Time Period	③ Change in City Population	④ New Demand for Water Treatment in Gallons Per Day	⑤ % of Current Reserve Wastewater Daily Flow Utilized by New Demand
1979	9	0	0	0.00%
1980	12	5	769	0.71%
1981	12	19	2,920	2.70%
1982	12	12	1,844	1.71%
1983	3	2	307	0.28%

Total Months	⑥ 48	Average New Demand for Wastewater Treatment In Gallons Per Day	⑦ 1,383
Current Reserve Wastewater Daily Flow (Mgd)	⑧ 0.108	Average Percent of Current Reserve Treatment Capacity Utilized by New Demand	⑨ 1.28%

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25g, column ④

(iv) ⑧ = Current Reserve Wastewater Daily Flow (mgd) (from Table A13g)

(v) Current Maximum Daily Wastewater Flow (from Table A13g) = 0.252 mgd

(vi) City Population (from Table A13g) = 1,640

(vii) Per Capita Wastewater Flow in gallons per day = (v) ÷ (vi) = 153.7

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑧ x 100

(x) ⑥ from Table A1 (ASIR 8)

(xi) Average Change in City Population (from Table A25g, box ⑨) = 9

(xii) ⑦ = (xi) x (vii)

(xiii) ⑨ = ⑦ ÷ ⑧ x 100

* Mgd = million gallons per day

Impact Summary

(xiv) Duration (circle one) (increase), decrease, no change

(xv) Probability (circle one) definite, (probable), possible

Magnitude:

(xvi) Maximum impact (largest of ⑤) 2.70%

(xvii) Average impact (⑨) 1.28%

Duration:

(xviii) Maximum impact (from ② for largest of ⑤) 12 months

(xix) Average impact (⑥) 48 months

Table A38h

City Palacios, No. 8

Wastewater Treatment and Disposal *

① Time Period	② Months in Time Period	③ Change in City Population	④ New Demand for Water Treatment in Gallons Per Day	⑤ % of Current Reserve Wastewater Daily Flow Utilized by New Demand
1979	9	2	209	0.04%
1980	12	19	1,984	0.37%
1981	12	65	6,786	1.28%
1982	12	36	3,758	0.71%
1983	3	7	731	0.14%

Total Months	⑥ 48	Average New Demand for Wastewater Treatment In Gallons Per Day	7 3,132
Current Reserve Wastewater Daily Flow (Mgd)	⑧ 0.530	Average Percent of Current Reserve Treatment Capacity Utilized by New Demand	0.59% 9

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25h, column ④

(iv) ⑧ = Current Reserve Wastewater Daily Flow (mgd) (from Table A13h)

(v) Current Maximum Daily Wastewater Flow (from Table A13h) = 0.470 mgd

(vi) City Population (from Table A13h) = 4,500

(vii) Per Capita Wastewater Flow in gallons per day = (v) ÷ (vi) = 104.4

(viii) ④ = ③ x (vii)

(ix) ⑤ = ④ ÷ ⑧ x 100

(x) ⑥ from Table A1 (ASIR 8)

(xi) Average Change in City Population (from Table A25h, box ⑨) = 30

(xii) ⑦ = (xi) x (vii)

(xiii) ⑨ = ⑦ ÷ ⑧ x 100

* Mgd = million gallons per day

Impact Summary

(xiv) Duration (circle one) increase, decrease, no change

(xv) Probability (circle one) definite, probable, possible

Magnitude:

(xvi) Maximum impact (largest of ⑤) 1.28%

(xvii) Average impact (⑨) 0.59%

Duration:

(xviii) Maximum impact (from ② for largest of ⑤) 12 months

(xix) Average impact (⑥) 48 months

Table A39a

Solid Waste Disposal

City Austwell, No. 1

① Time Period	② Months in Time Period	③ Change in City Population	④ New Demand for Solid Waste Disposal in Tons Per Day	⑤ % Increase in Solid Waste Disposal
1979	9	0	0.0000	0.00%
1980	12	0	0.0000	0.00%
1981	12	2	0.0006	0.73%
1982	12	2	0.0006	0.73%
1983	3	0	0.0000	0.00%
Total Months	⑥ 48	Average % Increase in Solid Waste Disposal		⑦ 0.37%

Notes:

(i) ① from Table A1(ASIR 6)

(ii) ② from Table A1(ASIR 7)

(iii) ③ from Table A25a, column ④

(iv) Current Average Daily Waste Disposal, tons per day (from Table A13a) = .083

(v) City Population (from Table A13a) = 272

(vi) Per Capita Solid Waste Disposal in tons per day = (iv) ÷ (v) = 0.000305

(vii) ④ = ③ x (vi)

(viii) ⑤ = ④ ÷ (iv) x 100

(ix) ⑥ from Table A1(ASIR 8)

(x) Average Change in City Population (from Table A25a, box ⑨) = 1

(xi) ⑦ = (vi) x (x) ÷ (iv) x 100

Impact Summary

(xii) Direction (circle one) (increase), decrease, no change

(xiii) Probability (circle one) definite, probable, (possible)

Magnitude

(xiv) Maximum impact (largest of ⑤) 0.73%

(xv) Average impact (⑦) 0.37%

Duration

(xvi) Maximum impact (from ② for largest of ⑤) 12 months

(xvii) Average impact (⑥) 48 months

Table A39b

City Victoria, No. 2

Solid Waste Disposal

① Time Period	② Months in Time Period	③ Change in City Population	④ New Demand for Solid Waste Disposal in Tons Per Day	⑤ % Increase in Solid Waste Disposal
1979	9	28	0.0907	0.05%
1980	12	235	0.7609	0.40%
1981	12	828	2.6811	1.43%
1982	12	467	1.5121	0.80%
1983	3	86	0.2785	0.15%
Total Months	⑥ 48	Average % Increase in Solid Waste Disposal		⑦ 0.68%

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25b, column ④

(iv) Current Average Daily Waste Disposal, tons per day (from Table A13b) = 188

(v) City Population (from Table A13b = 58, 065

(vi) Per Capita Solid Waste Disposal in tons per day = (iv) ÷ (v) = 0.003238

(vii) ④ = ③ x (vi)

(viii) ⑤ = ④ ÷ (iv) x 100

(ix) ⑥ from Table A1 (ASIR 8)

(x) Average Change in City Population (from Table A25b, box ⑨) = 393

(xi) ⑦ = (vi) x (x) ÷ (iv) x 100

Impact Summary

(xii) Direction (circle one) increase, decrease, no change

(xiii) Probability (circle one) definite, probable, possible

Magnitude

(xiv) Maximum impact (largest of ⑤) 1.43%

(xv) Average impact (⑦) 0.68%

Duration

(xvi) Maximum impact (from ② for largest of ⑤) 12 months

(xvii) Average impact (⑥) 48 months

Table A39c

Solid Waste Disposal

City Port Lavaca, No. 3

① Time Period	② Months in Time Period	③ Change in City Population	④ New Demand for Solid Waste Disposal in Tons Per Day	5 % Increase in Solid Waste Disposal
1979	9	10	0.0228	0.10%
1980	12	84	0.1914	0.80%
1981	12	299	0.6814	2.85%
1982	12	170	0.3874	1.62%
1983	3	31	0.0706	0.30%
Total Months	⑥ 48	Average % Increase in Solid Waste Disposal		⑦ 1.36%

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25c, column ④

(iv) Current Average Daily Waste Disposal, tons per day (from Table A13c) = 23.91

(v) City Population (from Table A13c) = 10,491

(vi) Per Capita Solid Waste Disposal in tons per day = (iv) ÷ (v) = 0.002279

(vii) ④ = ③ x (vi)

(viii) ⑤ = ④ ÷ (iv) x 100

(ix) ⑥ from Table A1 (ASIR 8)

(x) Average Change in City Population (from Table A25c, box ⑨) = 143

(xi) ⑦ = (vi) x (x) ÷ (iv) x 100

Impact Summary

(xii) Direction (circle one) increase, decrease, no change

(xiii) Probability (circle one) definite, probable, possible

Magnitude

(xiv) Maximum impact (largest of ⑤) 2.85%

(xv) Average impact (⑦) 1.36%

Duration

(xvi) Maximum impact (from ② for largest of ⑤) 12 months

(xvii) Average impact (⑥) 48 months

Table A39d

Solid Waste Disposal

City Point Comfort, No. 4

① Time Period	② Months in Time Period	③ Change in City Population	④ New Demand for Solid Waste Disposal in Tons Per Day	⑤ % Increase in Solid Waste Disposal
1979	9	0	0.0000	0.00%
1980	12	10	0.0074	0.69%
1981	12	34	0.0251	2.35%
1982	12	19	0.0140	1.31%
1983	3	5	0.0037	0.35%
Total Months	⑥ 48	Average % Increase in Solid Waste Disposal		⑦ 1.71%

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25d, column ④

(iv) Current Average Daily Waste Disposal, tons per day (from Table A13d) = 1.07

(v) City Population (from Table A13d) = 1,450

(vi) Per Capita Solid Waste Disposal in tons per day = (iv) ÷ (v) = 0.000738

(vii) ④ = ③ x (vi)

(viii) ⑤ = ④ ÷ (iv) x 100

(ix) ⑥ from Table A1 (ASIR 8)

(x) Average Change in City Population (from Table A25d, box ⑨) = 17

(xi) ⑦ = (vi) x (x) ÷ (iv) x 100

Impact Summary

(xii) Direction (circle one) (increase), decrease, no change

(xiii) Probability (circle one) definite, (probable), possible

Magnitude

(xiv) Maximum impact (largest of ⑤) 2.35%

(xv) Average impact (⑦) 1.17%

Duration

(xvi) Maximum impact (from ② for largest of ⑤) 12 months

(xvii) Average impact (⑥) 48 months

Table A39e

Solid Waste Disposal

City Seadrift, No. 5

① Time Period	② Months in Time Period	③ Change in City Population	④ New Demand for Solid Waste Disposal in Tons Per Day	⑤ % Increase in Solid Waste Disposal
1979	9	2	0.0023	0.13%
1980	12	7	0.0080	0.47%
1981	12	29	0.0331	1.93%
1982	12	14	0.0160	0.93%
1983	3	2	0.0023	0.13%
Total Months	⑥ 48	Average % Increase in Solid Waste Disposal		0.87% ⑦

Notes:

(i) ① from Table A1(ASIR 6)

(ii) ② from Table A1(ASIR 7)

(iii) ③ from Table A25e, column ④

(iv) Current Average Daily Waste Disposal, tons per day (from Table A13e) = 1.71

(v) City Population (from Table A13e = 1,500

(vi) Per Capita Solid Waste Disposal in tons per day = (iv) ÷ (v) = 0.00114

(vii) ④ = ③ x (vi)

(viii) ⑤ = ④ ÷ (iv) x 100

(ix) ⑥ from Table A1(ASIR 8)

(x) Average Change in City Population (from Table A25e, box ⑨) = 13

(xi) ⑦ = (vi) x (x) ÷ (iv) x 100

Impact Summary

(xii) Direction (circle one) increase, decrease, no change

(xiii) Probability (circle one) definite, probable, possible

Magnitude

(xiv) Maximum impact (largest of ⑤) 1.93%

(xv) Average impact (⑦) 0.87%

Duration

(xvi) Maximum impact (from ② for largest of ⑤) 12 months

(xvii) Average impact (⑥) 48 months

Table A39f

Solid Waste Disposal

City Edna, No. 6

① Time Period	② Months in Time Period	③ Change in City Population	New Demand ④ for Solid Waste Disposal in Tons Per Day	⑤ % Increase in Solid Waste Disposal
1979	9	2	0.0061	0.03%
1980	12	22	0.0671	0.37%
1981	12	72	0.2197	1.22%
1982	12	41	0.1251	0.69%
1983	3	7	0.0214	0.12%
Total Months	⑥ 48	Average % Increase in Solid Waste Disposal		0.56% ⑦

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25f, column ④

(iv) Current Average Daily Waste Disposal, tons per day (from Table A13f) = 18.0

(v) City Population (from Table A13f) = 5,900

(vi) Per Capita Solid Waste Disposal in tons per day = (iv) ÷ (v) = 0.003051

(vii) ④ = ③ x (vi)

(viii) ⑤ = ④ ÷ (iv) x 100

(ix) ⑥ from Table A1 (ASIR 8)

(x) Average Change in City Population (from Table A25f, box ⑨) = 33

(xi) ⑦ = (vi) x (x) ÷ (iv) x 100

Impact Summary

(xii) Direction (circle one) increase, decrease, no change

(xiii) Probability (circle one) definite, probable, possible

Magnitude

(xiv) Maximum impact (largest of ⑤) 1.22%

(xv) Average impact (⑦) 0.56%

Duration

(xvi) Maximum impact (from ② for largest of ⑤) 12 months

(xvii) Average impact (⑥) 48 months

Table A39g

Solid Waste Disposal

City Ganado, No. 7

① Time Period	② Months in Time Period	③ Change in City Population	④ New Demand for Solid Waste Disposal in Tons Per Day	⑤ % Increase in Solid Waste Disposal
1979	9	0	0.0000	0.00%
1980	12	5	0.0002	0.31%
1981	12	19	0.0009	1.17%
1982	12	12	0.0006	0.74%
1983	3	2	0.0001	0.12%
Total Months	⑥ 48	Average % Increase in Solid Waste Disposal		⑦ 0.55%

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25g, column ④

(iv) Current Average Daily Waste Disposal, tons per day (from Table A13g) = .075

(v) City Population (from Table A13g) = 1,640

(vi) Per Capita Solid Waste Disposal in tons per day = (iv) ÷ (v) = 0.000046

(vii) ④ = ③ x (vi)

(viii) ⑤ = ④ ÷ (iv) x 100

(ix) ⑥ from Table A1 (ASIR 8)

(x) Average Change in City Population (from Table A25g, box ⑨) = 9

(xi) ⑦ = (vi) x (x) ÷ (iv) x 100

Impact Summary

(xii) Direction (circle one) increase, decrease, no change

(xiii) Probability (circle one) definite, probable, possible

Magnitude

(xiv) Maximum impact (largest of ⑤) 1.17%

(xv) Average impact (⑦) 0.55%

Duration

(xvi) Maximum impact (from ② for largest of ⑤) 12 months

(xvii) Average impact (⑥) 48 months

Table A39h

Solid Waste Disposal

City Palacios, No. 8

① Time Period	② Months in Time Period	③ Change in City Population	④ New Demand for Solid Waste Disposal in Tons Per Day	⑤ % Increase in Solid Waste Disposal
1979	9	2	0.0133	0.04%
1980	12	19	0.1267	0.42%
1981	12	65	0.4334	1.44%
1982	12	36	0.2400	0.80%
1983	3	7	0.0467	0.16%
Total Months	⑥ 48	Average % Increase in Solid Waste Disposal		0.67% ⑦

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A25h, column ④

(iv) Current Average Daily Waste Disposal, tons per day (from Table A13h) = 30

(v) City Population (from Table A13h) = 4,500

(vi) Per Capita Solid Waste Disposal in tons per day = (iv) ÷ (v) = .006667

(vii) ④ = ③ x (vi)

(viii) ⑤ = ④ ÷ (iv) x 100

(ix) ⑥ from Table A1 (ASIR 8)

(x) Average Change in City Population (from Table A25h, box ⑨) = 30

(xi) ⑦ = (vi) x (x) ÷ (iv) x 100

Impact Summary

(xii) Direction (circle one) increase, decrease, no change

(xiii) Probability (circle one) definite, probable, possible

Magnitude

(xiv) Maximum impact (largest of ⑤) 1.44%

(xv) Average impact (⑦) 0.67%

Duration

(xvi) Maximum impact (from ② for largest of ⑤) 12 months

(xvii) Average impact (⑥) 48 months

Table A40a

Traffic Count (Average Daily Traffic)

Road Segment SH 185, No. 1

① Time Period	② Months in Time Period	③ No. of Workdays in Time Period	④ Loaded Truck Trips Not Needing Permit in Segment	⑤ Loaded Truck Trips Needing Permit in Segment	⑥ Total No. of Truck Trips in Time Period	⑦ Avg. No. of Truck Trips Per Workday During Time Period	⑧ No. of New Resident Workers in City at Terminus of Road Segment	⑨ Avg. No. of Worker Auto Trips Per Day	⑩ New Avg. Daily Traffic Count	⑪ % Change in Avg. Daily Traffic Count For Each Time Period	⑬ Time-Weighting Factor	⑭ Time-Weighted New Average Daily Traffic Count
1979	9	180	0	0	0	0	2	4	1,154	0.3%	0.1875	216
1980	12	240	1,104	0	2,208	9	7	14	1,173	2.0%	0.2500	293
1981	12	240	2,592	0	5,184	22	31	62	1,234	7.3%	0.2500	309
1982	12	240	404	0	808	3	16	32	1,185	3.0%	0.2500	296
1983	3	60	0	0	0	0	2	4	1,154	0.3%	0.0625	72
Total Months	⑫ 48											

Average Daily Traffic Count for Duration of Project = ⑮ 1,186

Avg. % Change in Average Daily Traffic Count = ⑯ 3.1%

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ = ② x twenty

(iv) ④ based on information received from El Paso LNG Terminal Company

(v) ⑤ based on information received from El Paso LNG Terminal Company

(vi) ⑥ = (④ + ⑤) x two

(vii) ⑦ = ⑥ ÷ ③

(viii) ⑧ from Table A28a, column ⑫

(ix) ⑨ = ⑧ x two

(x) Current average daily traffic count (from Table A14a) = 1,150

(xi) ⑩ = ⑦ + ⑨ + (x)

(xii) ⑪ = $\frac{⑩ - (x)}{(x)}$ x 100

(xiii) ⑫ from Table A1 (ASIR 8)

(xiv) ⑬ = ② ÷ ⑫

(xv) ⑭ = ⑩ x ⑬

(xvi) ⑮ = $\sum$ ⑭

(xvii) ⑯ = $\frac{⑮ - (x)}{(x)}$ x 100

Impact Summary

(xviii) Direction (circle one) increase, decrease, no change

(xix) Probability (circle one) definite, probable, possible

Magnitude

(xx) Maximum impact (largest of ⑪) 7.3%

(xxi) Average impact (⑯) 3.1%

Duration

(xxii) Maximum impact (from ② for largest of ⑪) 12 months

(xxiii) Average impact (⑫) 48 months

Table A40b

Traffic Count (Average Daily Traffic)

Road Segment FM 1289, No. 2

① Time Period	② Months in Time Period	③ No. of Workdays in Time Period	④ Loaded Truck Trips Not Needing Permit in Segment	⑤ Loaded Truck Trips Needing Permit in Segment	⑥ Total No. of Truck Trips in Time Period	⑦ Avg. No. of Truck Trips Per Workday During Time Period	⑧ No. of New Resident Workers in City at Terminus of Road Segment	⑨ Avg. No. of Worker Auto Trips Per Day	⑩ New Avg. Daily Traffic Count	⑪ % Change in Avg. Daily Traffic Count For Each Time Period	⑬ Time-Weighting Factor	⑭ Time-Weighted New Average Daily Traffic Count
1979	9	180	0	0	0	0	44	88	858	11.4%	0.1875	161
1980	12	240	171,580	12	343,184	1,430	382	764	2,964	284.9%	0.2500	741
1981	12	240	28,281	6	56,574	236	1,348	2,696	3,702	380.8%	0.2500	926
1982	12	240	4,413	0	8,826	37	761	1,522	2,329	202.5%	0.2500	582
1983	3	60	0	0	0	0	140	280	1,050	36.4%	0.0625	66
Total Months	48 ⑫											

Average Daily Traffic Count for Duration of Project = 2,476 ⑮

Avg. % Change in Average Daily Traffic Count = 221.6% ⑯

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ = ② x twenty

(iv) ④ based on information received from El Paso LNG Terminal Company

(v) ⑤ based on information received from El Paso LNG Terminal Company

(vi) ⑥ = (④ + ⑤) x two

(vii) ⑦ = ⑥ ÷ ③

(viii) ⑧ from Table A28b, column ⑫

(ix) ⑨ = ⑧ x two

(x) Current average daily traffic count (from Table A14b) = 770

(xi) ⑩ = ⑦ + ⑨ + (x)

(xii) ⑪ = $\frac{⑩ - (x)}{(x)}$ x 100

(xiii) ⑫ from Table A1 (ASIR 8)

(xiv) ⑬ = ② ÷ ⑫

(xv) ⑭ = ⑩ x ⑬

(xvi) ⑮ = Σ ⑭

Impact Summary

(xviii) Direction (circle one) (increase), decrease, no change

(xix) Probability (circle one) (definite), probable, possible

Magnitude

(xx) Maximum impact (largest of ⑪) 380.8%

(xxi) Average impact (⑯) 221.6%

Duration

(xxii) Maximum impact (from ② for largest of ⑪) 12 months

(xxiii) Average impact (⑫) 48 months

Table A40c

Traffic Count (Average Daily Traffic)

Road Segment SH 238, No. 3

① Time Period	② Months in Time Period	③ No. of Workdays in Time Period	④ Loaded Truck Trips Not Needing Permit in Segment	⑤ Loaded Truck Trips Needing Permit in Segment	⑥ Total No. of Truck Trips in Time Period	⑦ Avg. No. of Truck Trips Per Workday During Time Period	⑧ No. of New Resident Workers in City at Terminus of Road Segment	⑨ Avg. No. of Worker Auto Trips Per Day	⑩ New Avg. Daily Traffic Count	⑪ % Change in Avg. Daily Traffic Count For Each Time Period	⑬ Time-Weighting Factor	⑭ Time-Weighted New Average Daily Traffic Count
1979	9	180	0	0	0	0	42	84	1,124	8.1%	0.1875	211
1980	12	240	171,580	12	343,184	1,430	375	750	3,220	209.6%	0.2500	805
1981	12	240	28,281	6	56,574	236	1,317	2,634	3,910	276.0%	0.2500	978
1982	12	240	4,413	0	8,826	37	745	1,490	2,567	146.8%	0.2500	642
1983	3	60	0	0	0	0	138	276	1,316	26.5%	0.0625	82
Total Months	⑫ 48											

Average Daily Traffic Count for Duration of Project = ⑮ 2,718

Avg. % Change in Average Daily Traffic Count = ⑯ 161.3%

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ = ② x twenty

(iv) ④ based on information received from El Paso LNG Terminal Company

(v) ⑤ based on information received from El Paso LNG Terminal Company

(vi) ⑥ = (④ + ⑤) x two

(vii) ⑦ = ⑥ ÷ ③

(viii) ⑧ from Table A28c, column ⑫

(ix) ⑨ = ⑧ x two

(x) Current average daily traffic count (from Table A14c) = 1,040

(xi) ⑩ = ⑦ + ⑨ + (x)

(xii) ⑪ = $\frac{⑩ - (x)}{(x)}$ x 100

(xiii) ⑫ from Table A1 (ASIR 8)

(xiv) ⑬ = ② ÷ ⑫

(xv) ⑭ = ⑩ x ⑬

(xvi) ⑮ = Σ ⑭

(xvii) ⑯ = $\frac{⑮ - (x)}{(x)}$ x 100

Impact Summary

(xviii) Direction (circle one) increase, decrease, no change

(xix) Probability (circle one) definite, probable, possible

Magnitude

(xx) Maximum impact (largest of ⑪) 276.0%

(xxi) Average impact (⑯) 161.3%

Duration

(xxii) Maximum impact (from ② for largest of ⑪) 12 months

(xxiii) Average impact (⑫) 48 months

Table A41a

Traffic Count
Heavy Truck Mix (% of Total Traffic)

Road Segment SH 185, No. 1

① Time Period	② No. of Months in Time Period	③ Average No. of Truck Trips per Workday During Time Period	④ Average No. of Worker Auto Trips per Day	⑤ New Percent Heavy Truck Mix	⑥ Time Weighting Factor for Each Time Period	⑦ Time Weighted New Percent Heavy Truck Mix
1979	9	0	4	11.4%	0.1875	2.1%
1980	12	9	14	12.0%	0.2500	3.0%
1981	12	22	62	12.5%	0.2500	3.1%
1982	12	3	32	11.4%	0.2500	2.9%
1983	3	0	4	11.4%	0.0625	0.7%
Total No. of Months in Project	⑧ 48				Average Percent Change in Heavy Truck Mix	⑨ 11.8%

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A40a, column ⑦

(iv) Current % Heavy Truck Traffic Mix (from Table A14a) = 11.5%

(v) Current average daily traffic count (from Table A14a) = 1,150

(vi) Number of current Truck Trips per day ((iv) x (v)) = 132

(vii) ④ = Avg. No. of worker Auto Trips per day (from Table A40a, column ⑨)

(viii) $⑤ = \frac{③ + (vi)}{③ + ④ + (v)} \times 100$

(ix) ⑧ from Table A1(ASIR 8)

(x) ⑥ = ② ÷ ⑧

(xi) ⑦ = ⑤ x ⑥

(xii) ⑨ = Σ⑦

Impact Summary

(xiii) Direction (circle one) (increase), decrease, no change

(xiv) Probability (circle one) (definite), probable, possible

Magnitude

(xv) Maximum impact (largest of ⑤) 12.5%

(xvi) Average impact (⑨) 11.8%

Duration

(xvii) Maximum impact (from ② for largest of ⑤) 12 months

(xviii) Average impact (⑧) 48 months

Table A41b

Traffic Count
Heavy Truck Mix (% of Total Traffic)

Road Segment FM 1289, No. 2

① Time Period	② No. of Months in Time Period	③ Average No. of Truck Trips per Workday During Time Period	④ Average No. of Worker Auto Trips per Day	⑤ New Percent Heavy Truck Mix	⑥ Time Weighting Factor for Each Time Period	⑦ Time Weighted New Percent Heavy Truck Mix
1979	9	0	88	9.9%	0.1875	1.9%
1980	12	1,430	764	51.1%	0.2500	12.8%
1981	12	236	2,696	8.7%	0.2500	2.2%
1982	12	37	1,522	5.2%	0.2500	1.3%
1983	3	0	280	8.1%	0.0625	0.5%
Total No. of Months in Project	⑧ 48				Average Percent Change in Heavy Truck Mix	⑨ 18.7%

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A40b, column ⑦

(iv) Current % Heavy Truck Traffic Mix (from Table A14b) = 11.0%

(v) Current average daily traffic count (from Table A14b) = 770

(vi) Number of current Truck Trips per day ((iv) x (v)) = 85

(vii) ④ = Avg. No. of worker Auto Trips per day (from Table A40b, column ⑨)

(viii) $⑤ = \frac{③ + (vi)}{③ + ④ + (v)} \times 100$

(ix) ⑧ from Table A1 (ASIR 8)

(x) ⑥ = ② ÷ ⑧

(xi) ⑦ = ⑤ x ⑥

(xii) ⑨ = Σ⑦

Impact Summary

(xiii) Direction (circle one) increase, decrease, no change

(xiv) Probability (circle one) definite, probable, possible

Magnitude

(xv) Maximum impact (largest of ⑤) 51.1%

(xvi) Average impact (⑨) 18.7%

Duration

(xvii) Maximum impact (from ② for largest of ⑤) 12 months

(xviii) Average impact (⑧) 48 months

Table A41c

Traffic Count
Heavy Truck Mix (% of Total Traffic)

Road Segment SH 238, No. 3

① Time Period	② No. of Months in Time Period	③ Average No. of Truck Trips per Workday During Time Period	④ Average No. of Worker Auto Trips per Day	⑤ New Percent Heavy Truck Mix	⑥ Time Weighting Factor for Each Time Period	⑦ Time Weighted New Percent Heavy Truck Mix
1979	9	0	84	10.3%	0.1875	1.9%
1980	12	1,430	750	48.0%	0.2500	12.0%
1981	12	236	2,634	9.0%	0.2500	2.3%
1982	12	37	1,490	6.0%	0.2500	1.5%
1983	3	0	276	8.8%	0.0625	0.6%
Total No. of Months in Project	⑧ 48				Average Percent Change in Heavy Truck Mix	⑨ 18.3%

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A40c, column ⑦

(iv) Current % Heavy Truck Traffic Mix (from Table A14c) = 11.2%

(v) Current average daily traffic count (from Table A14c) = 1,040

(vi) Number of current Truck Trips per day ((iv) x (v)) = 116

(vii) ④ = Avg. No. of worker Auto Trips per day (from Table A40c, column ⑨)

(viii) $⑤ = \frac{③ + (vi)}{③ + ④ + (v)} \times 100$

(ix) ⑧ from Table A1 (ASIR 8)

(xi) ⑦ = ⑤ x ⑥

Impact Summary

(xiii) Direction (circle one) increase, decrease, no change

(xiv) Probability (circle one) definite, probable, possible

Magnitude

(xv) Maximum impact (largest of ⑤) 48.0%

(xvi) Average impact (⑨) 18.3%

Duration

(xvii) Maximum impact (from ② for largest of ⑤) 12 months

(xviii) Average impact (⑧) 48 months

Table A42a

Road Damage

Road Segment SH 185, No. 1

① Time Period	Months ② in Time Period	# of Loaded ③ Truck Trips Not Needing Permits	Avg. Loaded ④ Gross Vehicle Weight (tons)	# of Loaded ⑤ Truck Trips Needing Permits	Average ⑥ GVW of Overloads (tons)	⑦ Local Assessment of Damage Resulting from ③, ④, ⑤, ⑥ A	B
1979	9	0	22	0	69	a	Place appropriate letter in column "A"
1980	12	1,104	22	0	69	d	a. no damage
1981	12	2,592	22	0	69	e	b. some surface damage
1982	12	404	22	0	69	b	c. major surface damage
1983	3	0	22	0	69	a	d. some subgrade damage
							e. major subgrade damage

Notes:

(i) ① from Table A1(ASIR 6)

(ii) ② from Table A1(ASIR 7)

(iii) ③ from Table A40a, column ④

(iv) ④ from Table A2(ASIR 10)

(v) ⑤ from Table A40a, column ⑤

(vi) ⑥ from Table A1(ASIR 12)

(vii) ⑦ from local district of Texas Department of Highways and Public Transportation

Impact Summary

(viii) Direction (circle one) [increased road damage], no change

(ix) Probability (circle one) possible, probable, (definite)

(x) Magnitude: (most severe from ⑦A) e

(xi) Duration: (② for most severe of ⑦A) 12 months

Table A42b

Road Damage

Road Segment FM 1289, No. 2

① Time Period	② Months in Time Period	③ # of Loaded Truck Trips Not Needing Permits	④ Avg. Loaded Gross Vehicle Weight (tons)	⑤ # of Loaded Truck Trips Needing Permits	⑥ Average GVW of Overloads (tons)	⑦ Local Assessment of Damage Resulting from ③, ④, ⑤, ⑥ A	B
1979	9	0	22	0	69	a	Place appropriate letter in column "A"
1980	12	171,580	22	12	69	d	a. no damage
1981	12	28,281	22	6	69	b	b. some surface damage
1982	12	4,413	22	0	69	b	c. major surface damage
1983	3	0	22	0	69	a	d. some subgrade damage
							e. major subgrade damage

Notes:

(i) ① from Table A1 (ASIR 6)

(ii) ② from Table A1 (ASIR 7)

(iii) ③ from Table A40b, column ④

(iv) ④ from Table A2 (ASIR 10)

(v) ⑤ from Table A40b, column ⑤

(vi) ⑥ from Table A1 (ASIR 12)

(vii) ⑦ from local district of Texas Department of Highways and Public Transportation

Impact Summary

(viii) Direction (circle one) [increased road damage,] no change

(ix) Probability (circle one) possible probable (definite)

(x) Magnitude: (most severe from ⑦A) d

(xi) Duration: (② for most severe of ⑦A) 12 months

Table A42c
Road Damage

Road Segment SH 238, No. 3

① Time Period	② Months in Time Period	③ # of Loaded Truck Trips Not Needing Permits	④ Avg. Loaded Gross Vehicle Weight (tons)	⑤ # of Loaded Truck Trips Needing Permits	⑥ Average GVW of Overloads (tons)	⑦ Local Assessment of Damage Resulting from ③, ④, ⑤, ⑥ A	B
1979	9	0	22	0	69	a	Place appropriate letter in column "A"
1980	12	171,580	22	12	69	d	a. no damage
1981	12	28,281	22	6	69	b	b. some surface damage
1982	12	4,413	22	0	69	b	c. major surface damage
1983	3	0	22	0	69	a	d. some subgrade damage
							e. major subgrade damage

Notes:

(i) ① from Table A1(ASIR 6)
(ii) ② from Table A1(ASIR 7)
(iii) ③ from Table A40c, column ④
(iv) ④ from Table A2(ASIR 10)
(v) ⑤ from Table A40c, column ⑤
(vi) ⑥ from Table A1(ASIR 12)
(vii) ⑦ from local district of Texas Department of Highways and Public Transportation

Impact Summary

(viii) Direction (circle one) increased road damage, no change
(ix) Probability (circle one) possible probable definite
(x) Magnitude: (most severe from 7A) d
(xi) Duration: (② for most severe of 7A) 12 months

Table A43

Noise

Noise level in dBA of Existing Activity ①	Noise level in dBA of Proposed Activity ②	Additional Noise in dBA Introduced by Proposed Activity ③	Distance Noise Loss Factor ④	Noise Absorption Capacity of Landscape Type ⑤	Noise Absorption Factor of Landscape ⑥	Landscape Noise Loss Factor ⑦	Distance (ft) from site needed to reduce noise to pre-project level ⑧
40	85	45	1,778	4	29.90	309	1,469

Notes:

(i) ① from Table A3 (ASIR 21) = 40 dBA

(ii) ② from Table A3 (ASIR 22) = 85 dBA

(iii) ③ = ② - ①

(iv) $\frac{③}{\text{twenty}}$ + one = 3.25

(v) ④ = $\text{ten}^{(iv)}$

(vi) ⑤ from Table A3 (ASIR 23) = 4

(vii) ④ ÷ ten = 177.8

(viii) $\frac{\text{log of (vii)}}{0.301}$ = 7.47

(ix) ⑥ = (viii) x ⑤ = 29.88

(x) $\frac{⑥}{\text{twenty}}$ + one = 2.49

(xi) ⑦ = $(\text{ten})^{(x)}$

(xii) ⑧ = ④ - ⑦

Impact Summary

(xiii) Direction (circle one) increase, decrease, no change

(xiv) Probability (circle) possible, probable, definite

(xv) Magnitude

Distance from site needed to reduce noise to pre-project level (from ⑧) 1,469 feet

(xvi) Duration (from Table 1, ASIR 8) 48 months

Table A44
General Impact Summary Sheet

Imoact Factor	Area	Direction	Probability	Magnitude		Duration	
				Maximum Impact	Average Impact	Maximum Impact	Average Impact
Total Employment	I/O Region 3	Increase	Definite	% Change from Current Employ-ment 2.71%	% Change From Current Employ-ment 1.28%	12 Months	48 Months
Total Personal Income	I/O Region 3	Increase	Definite	% Change From Current Personal Income 4.24%	% Change From Current Personal Income 1.96%	12 Months	48 Months
Gross Out-put	I/O Region 3	Increase	Definite	New Gross Output $60,936,025	New Gross Output $34,605,557	12 Months	48 Months
Industrial Water Use	Region 3	Increase	Definite	New Industrial Water Use 85.93 Acre feet	New Industrial Water Use 40.47 Acre feet	12 Months	48 Months
Population				% Change From Current Popula-tion	% Change From Current Popula-tion		
	Austwell	Increase	Possible	0.73%	0.37%	12 Months	48 Months
	Victoria	Increase	Definite	1.43%	0.68%	12 Months	48 Months
	Port Lavaca	Increase	Definite	2.85%	1.35%	12 Months	48 Months
	Point Comfort	Increase	Probable	2.34%	1.11%	12 Months	48 Months
	Seadrift	Increase	Probable	1.93%	0.87%	12 Months	48 Months

Table A44 (Continued)
General Impact Summary Sheet

Impact Factor	Area	Direction	Probability	Magnitude		Duration	
				Maximum Impact	Average Impact	Maximum Impact	Average Impact
Population (Continued)	Edna	Increase	Possible	1.22%	0.59%	12 Months	48 Months
	Ganado	Increase	Possible	1.16%	0.56%	12 Months	48 Months
	Palacios	Increase	Possible	1.44%	0.68%	12 Months	48 Months
Fiscal Impact	Governments in I/O Region 3			Largest Annual Surplus (+) or Deficit (-)	Average Annual Surplus (+) or Deficit (-)		
	Local	Surplus	Probable	+240,758	+119,797	12 Months	48 Months
	State	Surplus	Probable	+109,807	+28,248	12 Months	48 Months
Housing Units				a. Can be absorbed by existing vacant housing units b. Will require construction of new housing units	a. Can be absorbed by existing vacant housing units b. Will require construction of new housing units		
	Austwell	No Change	Possible	a	a	12 Months	48 Months
	Victoria	Increase	Definite	b	b	12 Months	48 Months
	Port Lavaca	Increase	Definite	b	b	12 Months	48 Months

Table A44 (Continued)
General Impact Summary Sheet

Impact Factor	Area	Direction	Probability	Magnitude		Duration	
				Maximum Impact	Average Impact	Maximum Impact	Average Impact
Housing Units (Continued)	Point Comfort	Increase	Probable	b	b	12 Months	48 Months
	Seadrift	Increase	Probable	a	a	12 Months	48 Months
	Edna	Increase	Probable	a	b	12 Months	48 Months
	Ganado	Increase	Possible	b	a	12 Months	48 Months
	Palacios	Increase	Probable	b	b	12 Months	48 Months
Education	Austwell-Tivoli ISD	No Change	Probable	a. can be absorbed by existing or planned facilities b. will strain existing or planned facilities c. will require construction of new facilities a	a. can be absorbed by existing or planned facilities b. will strain existing or planned facilities c. will require construction of new facilities a	12 Months	48 Months
	Victoria Consolidated ISD	Increase	Definite	a	a	12 Months	48 Months
	Calhoun County ISD	Increase	Definite	a	a	12 Months	48 Months

Table A44 (Continued)
General Impact Summary Sheet

Impact Factor	Area	Direction	Probability	Magnitude		Duration	
				Maximum Impact	Average Impact	Maximum Impact	Average Impact
Education (Continued)	Edna ISD	Increase	Probable	a	a	12 Months	48 Months
	Ganado	Increase	Possible	a	a	12 Months	48 Months
	Palacios	Increase	Probable	a	a	12 Months	48 Months
Law Enforcement				New Law Enforcement Personnel Needed	New Law Enforcement Personnel Needed		
	Austwell	No Change	Possible	0.00	0.00	12 Months	48 Months
	Victoria	No Change	Possible	0.92	0.44	12 Months	48 Months
	Port Lavaca	No Change	Possible	0.51	0.25	12 Months	48 Months
	Point Comfort	No Change	Possible	0.05	0.02	12 Months	48 Months
	Seadrift	No Change	Possible	0.04	0.02	12 Months	48 Months
	Edna	No Change	Possible	0.07	0.03	12 Months	48 Months
	Ganado	No Change	Possible	0.01	0.00	12 Months	48 Months
	Palacios	No Change	Possible	0.07	0.03	12 Months	48 Months

Table A44 (Continued)
General Impact Summary Sheet

Impact Factor	Area	Direction	Probability	Magnitude		Duration	
				Maximum Impact	Average Impact	Maximum Impact	Average Impact
Fire Protection	Austwell	No Change	Possible	New Fire Protection Personnel Needed v = volunteer 1.47v	New Fire Protection Personnel Needed v = volunteer 1.47v	12 Months	48 Months
	Victoria	No Change	Possible	0.83	0.39	12 Months	48 Months
	Port Lavaca	No Change	Possible	0.26	0.12	12 Months	48 Months
	Point Comfort	No Change	Possible	0.71v	0.31v	12 Months	48 Months
	Seadrift	No Change	Possible	0.81v	0.36v	12 Months	48 Months
	Edna	No Change	Possible	0.31v	0.14v	12 Months	48 Months
	Ganado	No Change	Possible	0.37v	0.18v	12 Months	48 Months
	Palacios	No Change	Possible	0.58v	0.27v	12 Months	48 Months
Health Care Facilities (Beds)	Commuting Range	Increase	Possible	New licensed Hospital Beds Needed 8.37	New Licensed Hospitial Beds Needed 3.97	12 Months	48 Months
Health Care Personnel (Physicians)	Commuting Range	Increase	Possible	New Physicians Needed 1.03	New Physicians Needed 0.49	12 Months	48 Months

Table A44 (Continued)
General Impact Summary Sheet

Impact Factor	Area	Direction	Probability	Magnitude		Duration	
				Maximum Impact	Average Impact	Maximum Impact	Average Impact
Water Supply				% of Current Reserve Production Capacity Utilized By New Demand	% of Current Reserve Production Capacity Utilized By New Demand		
	Austwell	Increase	Possible	0.07%	0.03%	12 Months	48 Months
	Victoria	Increase	Definite	1.84%	0.88%	12 Months	48 Months
	Port Lavaca	Increase	Definite	48.45%	23.17%	12 Months	48 Months
	Point Comfort	Increase	Probable	89.08%	44.54%	12 Months	48 Months
	Seadrift	Increase	Probable	114.07%	51.13%	12 Months	48 Months
	Edna	Increase	Definite	1.00%	0.46%	12 Months	48 Months
	Ganado	Increase	Probable	0.47%	0.22%	12 Months	48 Months
	Palacios	Increase	Definite	2.06%	0.95%	12 Months	48 Months

Table A44 (Continued)
General Impact Summary Sheet

Impact Factor	Area	Direction	Probability	Magnitude		Duration	
				Maximum Impact	Average Impact	Maximum Impact	Average Impact
Wastewater Treatment and Disposal				% of Current Reserve Wastewater Daily Flow Utilized by New Demand	% of Current Reserve Wastewater Daily Flow Utilized by New Demand		
	Austwell	Increase	Possible	0.21%	0.11%	12 Months	48 Months
	Victoria	Increase	Definite	No Reserve Capacity Exists	No Reserve Capacity Exists	12 Months	48 Months
	Port Lavaca	Increase	Definite	1.83%	0.88%	12 Months	48 Months
	Point Comfort	Increase	Probable	16.4%	8.20%	12 Months	48 Months
	Seadrift	Increase	Probable	0.41%	0.19%	12 Months	48 Months
	Edna	Increase	Definite	7.28%	3.34%	12 Months	48 Months
	Ganado	Increase	Probable	2.70%	1.28%	12 Months	48 Months
	Palacios	Increase	Definite	1.28%	0.59%	12 Months	48 Months
Solid Waste Disposal				% Increase in Solid Waste Disposal (Tons/Day)	% Increase in Solid Waste Disposal (Tons/Day)		
	Austwell	Increase	Possible	0.73%	0.37%	12 Months	48 Months
	Victoria	Increase	Definite	1.43%	0.68%	12 Months	48 Months

Table A44 (Continued)
General Impact Summary Sheet

Impact Factor	Area	Direction	Probability	Magnitude		Duration	
				Maximum Impact	Average Impact	Maximum Impact	Average Impact
Solid Waste Disposal (Continued)	Port Lavaca	Increase	Definite	2.85%	1.36%	12 Months	48 Months
	Point Comfort	Increase	Probable	2.35%	1.17%	12 Months	48 Months
	Seadrift	Increase	Probable	1.93%	0.87%	12 Months	48 Months
	Edna	Increase	Definite	1.22%	0.56%	12 Months	48 Months
	Ganado	Increase	Probable	1.17%	0.55%	12 Months	48 Months
	Palacios	Increase	Definite	1.44%	0.67%	12 Months	48 Months
Traffic Count (Average Daily Traffic)				% Change in Average Daily Traffic	% Change in Average Daily Traffic		
	SH185	Increase	Definite	7.3%	3.1%	12 Months	48 Months
	FM1289	Increase	Definite	380.8%	221.6%	12 Months	48 Months
	SH238	Increase	Definite	276.0%	161.3%	12 Months	48 Months
Traffic Count (Heavy Truck Mix)				New % Heavy Truck Mix	New % Heavy Truck Mix		
	SH185	Increase	Definite	12.5%	11.8%	12 Months	48 Months
	FM1289	Increase	Definite	51.1%	18.7%	12 Months	48 Months
	SH238	Increase	Definite	48.0%	18.3%	12 Months	48 Months

Table A44 (Concluded)
General Impact Summary Sheet

Impact Factor	Area	Direction	Probability	Magnitude	Duration
Road Damage	SH185	Increased Road Damage	Definite	a. no damage b. some surface damage c. major surface damage d. some subgrade damage e. major subgrade damage e	12 Months
	FM1289	Increased Road Damage	Definite	d	12 Months
	SH238	Increased Road Damage	Definite	d	12 Months
Noise	Immediate Project Site	Increase	Definite	Distance from site needed to reduce noise to pre-project level 1,469 ft.	48 Months
Displacement of Residences	Immediate Project Site	N/A	Definite	Number of residences to be displaced = 1. Condemnation proceeding will not be used.	N/A

N/A = Not Applicable
Sources: Tables 21 - 43

Table A45

Summary of Impacts Which Require
Local Government Expenditures

A Maximum Impacts Which Exceed Capacity of Existing Systems of Require New Personnel	B Duration of Impacts in Column A	C Average Impacts Which Exceed Capacity of Existing Systems or Require New Personnel	D Duration of Impacts in Column C	E Area of Each Impact in Columns A and C	% Bonding Capacity Currently Utilized for Each Area in Column E
Water Supply % of Current Reserve Production Capacity Utilized by New Demand = 114.07%	12 Months	None	N/A	City of Seadrift	30.37% [1]
Wastewater Treatment and Disposal No reserve capacity exists	12 Months	No reserve capacity exists	48 Months	City of Victoria	46.98% [1]

1. From Table A17.