

EXISTING CONDITIONS
SOCIOECONOMIC PORTION
WASTE ISOLATION PILOT PLANT
ENVIRONMENTAL IMPACT REPORT

CHAPTER 2
SECTIONS 2.2, 2.3

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2.2 POPULATION CHARACTERISTICS

2.2.1 GENERAL

In 1912 when New Mexico became a state, Eddy County contained approximately 9,600 people. Growth after 1920 brought the population to 15,842 in 1930. After the start of potash mining in 1931, the population rose further to a total of 24,311 persons in 1940. Between 1940 and 1960, Eddy County continued to grow, principally because of the mining operations in the county; by 1960 the population had reached 50,783 (BBR 1962). After 1960 the potash industry within the area was severely depressed; consequently the population dropped to 41,119 in 1970. Between 1970 and 1976 the economy of the area improved, and the population again increased. The 1976 estimate released by the Bureau of the Census showed that Eddy County had grown to 45,300--an increase of approximately 4,200 people over the 1970 Census figure (USDC-FSCP 1977).

In 1917 Lea County was organized from parts of Chavez and Eddy Counties. By the time of the 1920 Census, the area now known as Lea County had 3,545 residents. Oil exploration, begun in southeastern New Mexico in 1924, brought substantial growth to Lea County. By 1930 the population had increased to 6,144 and by 1940 had tripled to 21,154. Continued growth brought a population of 53,429 in 1960 (BBR 1962). Between 1960 and 1970 Lea County sustained a population decrease of approximately 7.3 percent, mainly attributable to decreased activity in oil and gas exploration (USDC 1970 Census). After 1970 the population increased from 49,554 to 54,400

in mid-1976 (USDC-FSCP 1977). Most of the growth was due to the increased activity in the oil and gas industry after 1973.

Eddy County contains four municipalities: the cities of Artesia and Carlsbad and the villages of Loving and Hope. The village of Hope is more than 50 miles from the WIPP site. The largest municipality is Carlsbad. See Table 2.2-1. The estimates prepared for this study show that the population in mid-1977 had grown to 26,600--only slightly above the population of 25,541 achieved in 1960 (USDC 1977).

Lea County has five municipalities: the cities of Hobbs, Lovington, Eunice, and Jal and the town of Tatum. (The town of Tatum is more than 50 miles from the proposed WIPP site.) See Table 2.2-1.

Some characteristics of the populations of Eddy and Lea Counties appear in Table 2.2-2.

2.2.2 POPULATION DISTRIBUTION

Within a 10-mile radius (16+ kilometers) of the WIPP, there are currently 13 permanent residents. Ten of these residents live on the two ranching operations within the area while three persons reside at and operate a small general store. In addition to these permanent residents, there are three commercial mining operations within the 10-mile radius (Adcock 1978a). Total daytime employment at these three commercial operations approaches 600 persons (Adcock 1977-1978a). Swing shifts and night shifts are considerably smaller than the daytime shifts. Figure 2.2.1 illustrates the location of the permanent residents and the commercial

TABLE 2.2-1
POPULATION: 1960-1976

Location	Distance from Site Miles (km)*	1960 ¹	1970 ¹	1976 ²
EDDY COUNTY	NA	50,783	41,119	45,300
Artesia	47 (75)	12,000	10,315	10,400
Carlsbad	26 (41)	25,541	21,297	25,500
Loving	18 (29)	1,646	1,192	1,100
Hope	62 (100)	108	90	120
LEA COUNTY	NA	53,429	49,554	54,400
Eunice	35 (56)	3,531	2,641	2,500
Hobbs	41 (66)	26,275	26,025	28,000
Jal	37 (60)	4,133	3,241	2,700
Lovington	45 (72)	9,660	8,915	9,450
Tatum	65 (105)	1,168	982	850

* Distance rounded to the nearest mile and kilometer.

NA Not applicable.

1 Census of Population, 1970, PC(1)-A33, New Mexico.

2 Larry Adcock and Associates, 1978.

TABLE 2.2-2
POPULATION CHARACTERISTICS

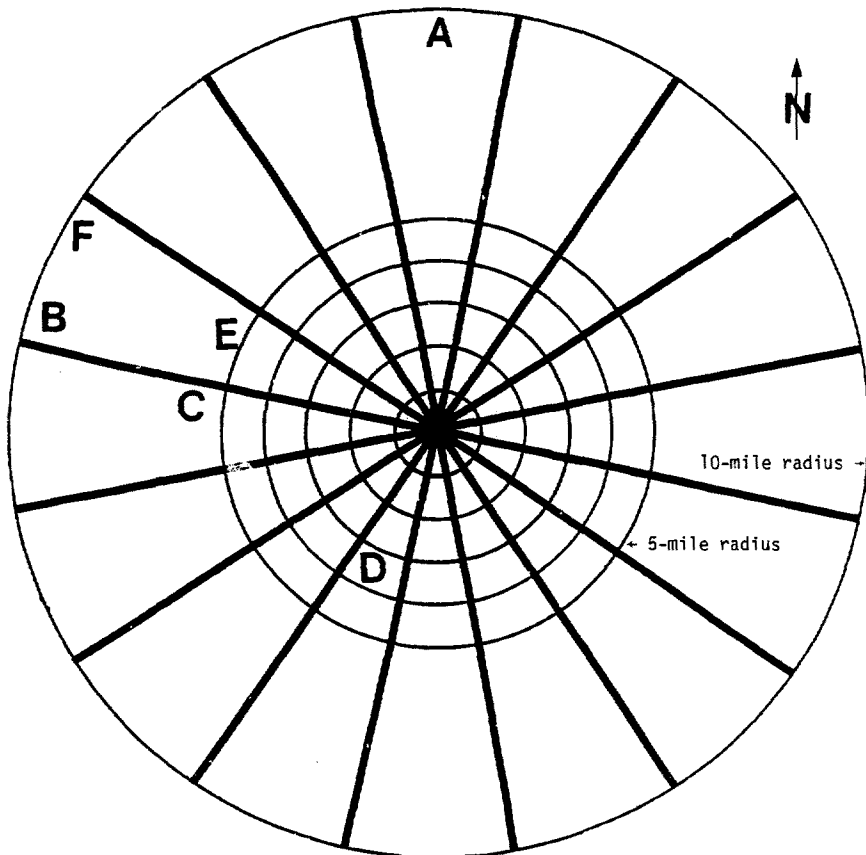
Characteristic	Eddy County	Lea County
RACE: White	97.1%	93.7%
Black	2.2	5.3
Other	0.7	1.1
Spanish Origin or Descent	25.4%	10.9%
RESIDENCE: Urban	76.9%	81.1%
Rural, non-farm	18.1	15.1
Rural, farm	5.0	3.8

Source: 1970 Census of Population, 4th County Computer Tape, disseminated data.

mining operations in relation to the proposed WIPP site.

Figure 2.2-2 illustrates the area covered by a 50-mile radius (80+ kilometers surrounding the proposed WIPP site. Populations for 1976 for the area are listed on Table 2.2-3 and show that just more than 94,000 people live within that 50-mile radius (Adcock 1977-1978b). The major share of the population between 10 and 20 miles from the site is in the small village of Loving in the west-southwest sector. Between 20 and 30 miles from the site in the west sector is the City of Carlsbad. Between 30 and 40 miles in the east and east-southeast sectors are, respectively, the small communities of Eunice and Jal. In the 40 to 50 mile annulus, the City of Lovington is located in both the north-northeast and northeast sectors; Artesia, in Eddy County, also lies in this annulus in a north-westerly direction from the site. Hobbs, the largest population center in the 50-mile radius, is located about 41 miles from the site in the east-northeast sector.

POPULATION WITHIN A TEN-MILE RADIUS OF THE WIPP SITE



- A** Kerr-McGee Plant and Mine: 151 employees (maximum) day shift
- B** International Minerals and Chemical Corporation: 450 employees (maximum) day shift
- C** Duval Corporation (Nash Draw Mine): 46 employees (maximum) day shift
- D** James Ranch: 4 permanent residents (20+ while running cattle)
- E** Smith (Crawford) Ranch: 6 permanent residents (9 seasonal part-time)
- F** Pue's Store: 3 permanent residents

Figure 2.2-2
FIFTY-MILE RADIUS OF WIPP SITE

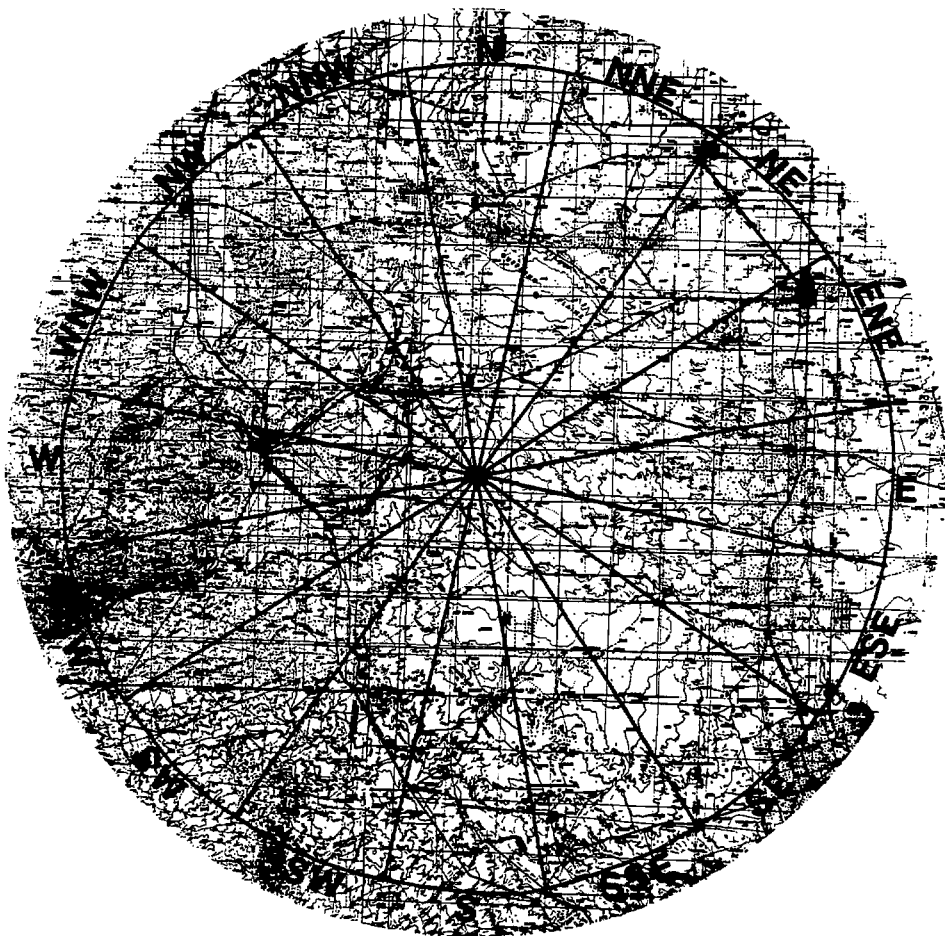


Table 2.2-3
1976 RESIDENT POPULATION WITHIN FIFTY MILES OF WIPP SITE¹

SECTOR	Miles From Site						TOTAL
	0-5	5-10	10-20	20-30	30-40	40-50	
N	0	0	35	25	175	25	260
NNE	0	0	25	5	55	5,585	5,670
NE	0	0	0	25	75	6,735	6,835
ENE	0	0	15	70	185	30,595	30,865
E	0	0	5	15	3,190	155	3,365
ESE	0	0	5	10	3,035	295	3,345
SE	0	0	5	15	25	30	75
SSE	0	0	0	25	10	40	75
S	0	0	5	15	60	15	95
SSW	4	0	5	30	90	15	145
SW	0	0	55	15	10	45	125
WSW	0	0	1,495	185	50	65	1,795
W	0	0	70	29,045	40	35	29,190
WNW	0	9	5	190	55	50	310
NW	0	0	30	20	65	11,505	11,620
NNW	0	0	15	5	250	10	280
Radius Total	4	9	1,770	29,695	7,370	55,200	94,050
Cumulative Total	4	13	1,785	31,480	38,850	94,050	---

¹ Figures for all areas beyond the ten-mile radius have been rounded to the nearest "5."

Source: Larry Adcock and Associates, 1978. See text of full report for detailed sources and procedures.

2.3 ECONOMIC SETTING

2.3.1 GENERAL ECONOMIC CHARACTERISTICS

As defined by standard economic-base theory, there are three basic economic sectors in the two-county area: mining, manufacturing, and agriculture. Although government may be considered a basic industry in many parts of New Mexico because of heavy federal activity (statewide location quotient of 2.1)*, most of the governmental activity in Eddy and Lea Counties is only a supportive function in the area (two-county location quotient of .23) (USDC 1975-1977). The other nonbasic sectors in the two counties include contract construction; transportation, communications, and utilities; trade; finance, insurance, and real estate; and services. Certain activities in the retail and services sector are larger than might be expected because Eddy County experiences heavy tourist traffic attracted to Carlsbad Caverns. Transportation facilities and the transportation sector within the area are well developed because of the heavy industry there.

BASIC INDUSTRIES

Mining, which includes oil and gas extraction, is the major industry in both Eddy and Lea Counties. In Eddy County in 1977, mining employed

* For explanation of "location quotient," see appendix to technical document--An Outline of the Input-Output Model and the Impact Projections Methodology.

about 3,700; in Lea County mining employed approximately 5,800. In both counties, employment in the mining sector was substantially larger than in any of the other industrial sectors (ESCNM 1975-1978).

In Eddy County, potash mining employs more than nine out of ten persons who work in the mining sector. Eddy County supplies a very large portion of the total potash production in the United States. Preliminary figures for 1977 show that New Mexico supplied 93 percent of total potash mined in the United States (NMBM 1977, USDI 1978).

In Lea County most of the mining activity centers in the oil and gas industry, although there is also mining in potash, sand and gravel, rock, salt, and caliche. Total mining employment in those activities other than oil and gas amounted to less than 200 people in 1977. Therefore, it is estimated that nearly 5,500 people are employed in the mining of oil and gas in Lea County (ESCNM 1975-1978). This is an estimated 21 percent increase over the 1973 figure, the year the "energy crisis" began.

Personal income from mining in Eddy County was more than \$52.5 million in 1975, or 24.0 percent of total personal income generated there. In Lea County these figures were just more than \$79.8 million and 29.2 percent. Mining is, by far, the largest industrial sector in the county; moreover, the impact of mining is increasing as indicated by the fact that personal income from mining rose 97.4 percent between 1970 and 1975 (USDC 1975-1977).

At the beginning of 1977, there were 36 manufacturing companies employing approximately 1,050 people in Eddy County, and 48 manufacturing

companies with 1,065 employees in Lea County (ESCNM 1975-1978). According to the latest information available, personal income from manufacturing in 1975 was \$12.1 million in Eddy County and \$12.9 million in Lea County. In 1975 manufacturing accounted for the second highest amount of income generated from basic industry. However, the total personal income from manufacturing represented only 6.2 percent of all personal income generated in the area, or 5.2 percent of total personal income after adjusting for place of residence.

In 1975 income figures prepared by the Bureau of Economic Analysis showed that the principal subsector of the agriculture industry in the two-county area was meat animals and livestock. Total agricultural receipts in Eddy County in 1975 amounted to just more than \$40.0 million, of which 62.3 percent was received from this subsector. In Lea County the corresponding figures were \$25.1 million and 69.8 percent. In the immediate WIPP area (10-mile radius), the only agricultural activity is cattle grazing (USDC 1975-1977). Personal income figures for agriculture in 1975 (latest information available) show a total of \$14.5 million or less than 5 percent of total personal income derived in the two-county area.

TRADE AND SERVICES

The latest available information listing total number of dollars and number of establishments in retail trade in the two-county area appears in the 1972 Census of Business. This document shows a total of 1,068 retail outlets in the two-county area--454 in Eddy County and 614

in Lea County. Within Eddy County the majority, some 281, are in the City of Carlsbad.

Total sales volume for all 1,068 outlets in 1972 was about \$185.9 million, or just over 8 percent of the more than \$2.3 billion in retail sales throughout the State of New Mexico. Although little sales-volume information is available after 1972, retail sales in the area have increased substantially.

Employment in both wholesale and retail trade has increased from an average of 2,500 in 1972 to approximately 3,300 in 1977 in Eddy County. In Lea County during the same period, this employment increased from just less than 3,600 to nearly 4,700 (ESCNM 1975-1978). Thus, the trade sector in the two-county area has shown substantial increases since 1972.

There were 835 service establishments, e.g., hotels, motels, barber shops, advertising, business services, repair shops, at the time of the 1972 Census of Business. In that year these service establishments, representing slightly more than 10 percent of all those in the State, were doing an annual business of just more than \$36.6 million. This amounts to only about 4.3 percent of the total volume of such establishments in New Mexico and indicates that these businesses were somewhat smaller than the state average.

As in the trade sector, activity in the services sector has increased substantially since the 1972 Census of Business. In 1972 service-sector employment in Eddy County was just under 1,900; preliminary estimates for 1977 put that employment at approximately 2,600, a substantial

increase during the five-year period. In Lea County, service-sector employment was slightly under 1,800 in 1972; preliminary estimates for 1977 place it at approximately 2,300, another substantial increase (ESCNM 1975-1978).

This estimated increase in overall economic activity in Eddy County during the last three or four years is also supported by information from the New Mexico Employment Security Commission. These data show 315 reporting establishments for retail trade in Eddy County in the first quarter of 1977; in the first quarter of 1972, the reporting number was 298. The average number of employees per establishment increased from 6.6 to 7.8 in the five-year period. In wholesale trade, the number of establishments reporting employment increased from 60 in 1972 to 75 in 1977, while the average number of employees per establishment increased from 6.1 to 8.0. In the services sector, the number of establishments reporting employment increased only slightly, from 275 to 280. However, the average number of employees per establishment increased from an average of 6.1 to 8.2. During the summer months average employment in both trade and services increased about 10 percent to accommodate tourism in the area (ESCNM 1975-1978).

FINANCIAL RESOURCES

In Lea and Eddy Counties combined, there are a total of eight chartered banks--four holding state charters and four holding national charters. Five of these eight banks (three state and two national) are in Eddy County.

Assets, liabilities and deposits, as of December 31, 1976, are reported in Table 2.3-1.

There are four savings and loan institutions within the two-county area. The three in Eddy County, which are mutual savings and loan institutions, have combined assets of more than \$85.8 million and total savings of more than \$87.1 million. The savings and loan institution in Lea County at Hobbs is a capital-stock institution; it has total assets of more than \$18.8 million and about \$16.7 million in total savings.

There are three credit unions in the two-county area. The two credit unions in Eddy County (one in Carlsbad, and one in Artesia) are for school employees; both are insured by the National Credit Union Administration. They have combined assets of more than \$1.8 million and combined shares and deposits of about \$1.5 million. The credit union in Lea County at Lovington, insured by the New Mexico Credit Union Insurance Corporation, has total assets of slightly more than \$1 million and total shares and deposits of \$0.9 million.

Twenty-one small-loan licensees are doing business in the two-county area. Eleven are in Eddy County (six in Carlsbad, four in Artesia, and one in Loving). Ten are in Lea County (seven in Hobbs, one in Jal, and two in Lovington).

PERSONAL INCOME

Combined total annual personal income in Lea and Eddy Counties was listed by the Bureau of Economic Analysis as \$491.4 million in 1975 (the

Table 2.3-1

BANKING ACTIVITY IN EDDY AND LEA COUNTIES

Location	State Banks	Branches	National Banks	Branches	Total Assets (\$million)	Total Liability (\$million)	Equity Capital (\$million)	Total Deposits (\$million)
NEW MEXICO	44	100	38	106	\$3,698.7	\$3,425.5	\$249.7	\$1,267.9
EDDY COUNTY	3	3	2	1	173.0	160.2	12.8	159.4
Carlsbad	2	3	1	1	104.3	97.3	7.0	96.6
Artesia	1	0	1	0	68.7	62.9	5.8	62.8
LEA COUNTY	1	6	2	7	236.9	221.7	12.5	219.0
Hobbs	1	6	1	4	195.3	182.9	10.4	180.4
Lovington	0	0	1	3	41.6	38.8	2.1	38.6

Source: Sixty-second Annual Report of New Mexico, Department of Banking, issued 1977
(December 31, 1976 data).

latest information available). Of this amount, residents of Eddy County received \$219.0 million, and residents of Lea County received \$272.9 million. The combined two-county area accounts for about 9 percent of total annual personal income of residents of the State of New Mexico. Total annual personal income in Lea County has been showing steady increases in recent years. Eddy County has not been so fortunate because of declines in activity of the potash industry during the middle and late 1960s. Eddy County sustained a decrease in total personal income in 1968 and in 1969 barely achieved the level established in 1967. Since 1968, however, the total annual personal income in the county has been increasing, with a small gain in the 1970-71 period and more rapid gains since 1971. While information after 1975 is not available, trends in the area and the state would indicate that total personal income has been increasing at more than 10 percent per year in the two-county area since 1975 (USDC 1975-1977).

As previously stated, mining is the basic industry generating the most total personal income in both counties. In both counties the second major-sector contribution to total personal income is retail and wholesale trade--generally viewed as a "nonbasic" sector. Other activities which may be identified as basic industries are agriculture and manufacturing, but these contribute a very small amount compared to mining and to retail and wholesale trade.

Per capita income in the two counties is high compared to other areas of the State. For example, Lea County's per capita income in 1975 was \$5,334, or approximately 11.9 percent above the \$4,768 registered

statewide level. In Eddy County the income was \$5,160--8.2 percent above the statewide level. In Lea County per capita income increased 72.4 percent between 1970 and 1975, while in Eddy County the increase was essentially the same at 72.3 percent. The statewide level increased 55.0 percent during the same period; thus, the per capita income for the two-county area is increasing slightly faster than the statewide average. However, it is important to note that per capita income in both counties is still below the national average. In Lea County per capita income is only 90.4 percent of the national average, while the Eddy County level is even lower at 87.4 percent (USDC 1975-1977).

TOURISM

It is important to note that tourism is a substantial portion of the economic activity in Eddy County. While outdoor recreation in the area centers around activities such as hunting, four-wheel-vehicle driving, and camping, the nearby parks (Guadalupe Mountains National Park, Living Desert State Park, the President's Park in the City of Carlsbad, and others) also attract recreationists and tourists. The main tourist attraction in the area is Carlsbad Caverns National Park which is approximately 22 miles (35 kilometers) southwest of Carlsbad and 41 miles (66 kilometers) west southwest of the proposed WIPP site; in 1977 its total number of visitors was 862,790, or nearly 44 percent of the number of visits to all 11 national parks and monuments throughout the state (USDI 1970-1978).

The effects of these visits and the tourism in the area can readily

be seen in the employment statistics. Retail trade and selected services are most affected by tourism. For example, employment in eating and drinking establishments (a part of the retail trade sector) more than triples in the three summer months. In the area of services, summer employment in lodging increases 60 to 70 percent over winter employment (ESCNM 1975-1978). Other secondary and tertiary services impacted by tourism (curio sales, barber shops, cleaners, for example) also show substantial increases.

Therefore, tourism is one of the major economic sectors in Eddy County. It is, however, highly seasonal because of the nature of visits at Carlsbad Caverns; such visits fluctuated in 1977 from a high of 187,970 in July to a low of 25,350 in January (USDI 1970-1978). To support this tourist industry, the City of Carlsbad, which receives the major portion of the impact from the national park, has a total of 18 motels and hotels with more than 900 rooms (Lyon 1977-1978).

2.3.2 LABOR FORCE

Labor force is defined by the Department of Labor as those persons who are employed and those who are unemployed and actively seeking employment. In 1977 the combined total labor force in Eddy and Lea Counties was approximately 44,400--approximately 24,200 in Lea County and 22,200 in Eddy County. Total employment in the two-county area was 42,500.

In the four years between 1973 and 1977, when the economy of both counties was expanding, the total labor force grew approximately 25.9

percent or by roughly 9,100 individuals. Thus, the annual average growth rate in the labor force has been 5.9 percent. The overall growth of employment for the four-year period was 27.5 percent which indicates an annual average growth rate in employment of approximately 6.3 percent. Therefore, the number and the percentage of unemployed persons has decreased during the last four years. Although the combined unemployment rate for the two counties in 1977 was just more than 4.3 percent, the rate varies significantly between the counties (ESCNM 1975-1978).

EMPLOYMENT

Examination of employment by sector in the two counties shows that mining is by far the largest employer. Manufacturing and agriculture appear to have approximately equal employment. Accurate figures on agricultural employment are difficult to obtain and are normally out of date. The latest available credible information shows that just more than 2,000 people were employed in agriculture in the two-county area in 1975 (USDC 1975-1977). Agricultural employment had been decreasing; however, since 1973 the employment level remained relatively constant. In 1977 the manufacturing sector had an employment level of approximately 2,100 individuals --about 1,085 in Lea County and nearly 1,025 in Eddy County (ESCNM 1975-1978).

The 1977 employment distribution is estimated as follows: agriculture, 5 percent; mining, 25 percent; manufacturing, 6 percent; construction, 7 percent; transportation, communications, and utilities, 9 percent; whole-

sale and retail trade, 21 percent; finance, insurance and real estate, 3 percent; services, 13 percent; and government, 12 percent (ESCNM 1975-1978).*

UNEMPLOYMENT

Unemployment in the two-county area is lower than the average throughout the State. In 1977 the average unemployment rates were 5.2 percent in Eddy County and 3.5 percent in Lea County. Unemployment varies significantly from season to season with higher unemployment rates during June each year and lower unemployment rates in late spring and late fall (ESCNM 1975-1978). This phenomenon is brought about partially by variation in agricultural employment, and student and certain non-contract school personnel seeking summer employment.

A review of those individuals applying for work through the New Mexico Employment Security Commission revealed a large number of technical skills available in the area. Many of these skills were directly connected with construction and mining--the two occupational categories needed for construction of the WIPP project. Additionally, this information showed a large number of clerical and secretarial workers available in the area.

UNDEREMPLOYMENT AND DISGUISED EMPLOYMENT

The unemployment rate computed by the state and federal governments is based on those individuals actively seeking employment. An area may

* Total does not add to 100 percent because of rounding.

sometimes experience a low defined unemployment rate and also have significant underemployment. Underemployment refers to occupations or jobs that do not take full advantage of an employed individual's potential. Disguised unemployment may exist when many individuals are not actively seeking employment but would take a job if one were available in the area. These concepts are difficult to measure, particularly at the sub-county level where no information is provided by the various Department of Labor programs.

Areas with significant underemployment can frequently be identified by analyzing wages along with other labor statistics such as employment by sector and average number of hours worked. Quantification of these relationships, however, remains difficult. A review of labor statistics and wages in the two-county area has indicated that some underemployment may exist because of seasonality, but it does not appear to be significant in the labor market.

Although disguised unemployment is also difficult to measure, a review of labor-force participation rates indicates whether or not an area may be experiencing it. In the two-county area the labor-force participation rate for males is higher than the state average while the rate for females is lower than the state average (USDC 1970 Census). These data imply that not all females who are willing to work are actively seeking employment and that the labor-force availability for females may be greater than the current statistics would indicate. This conclusion is confirmed by a survey conducted by the Carlsbad Chamber of Commerce (Lyon 1978).

2.3.3.1 HOUSING AND LAND USE - CARLSBAD

Since 1970 construction of new housing units in Carlsbad has not kept pace with population growth. As a result, vacancy rates have dropped below the 3 percent level, according to Carlsbad building-permit data and the Department of Housing and Urban Development (DHUD 1975; CC 1978). From 1970 through 1976, new housing units were added at a rate of about 150 per year. In 1977, the pace of housing construction increased considerably; Carlsbad building permits show that 350 new units were added to the housing supply.

However, even with the recent increase in construction activity, the housing supply in Carlsbad remains marginal. About 40 more housing units would have been required to bring the 1977 vacancy rate up to the 3 percent level (Table 2.3-2).

In the summer of 1977, Carlsbad annexed 7,200 acres, increasing overall acreage within the city limits to about 12,800 (Patterson 1978). Most of the recently annexed land is vacant, that is, does not have residential or commercial structures on it. When added to vacant land within the old city limits, the total vacant area amounts to about 7,500 acres, or nearly 60 percent of the total municipal land area.

Land use patterns within the Carlsbad city limits are currently undergoing change. Much of the city is being rezoned, with the outcome of the rezoning in doubt. Carlsbad is currently involved in litigation with the federal government over the definition of flood zone boundaries to be applied for the purpose of obtaining federal flood insurance

(Patterson 1978). Until this matter is settled, it is not possible to predict accurately either the location or the total amount of land that will be available for future residential, commercial, and industrial development. However, regardless of the outcome of the current litigation, Carlsbad has a considerable amount of vacant land within the new city limits; and available land for residential use within the present city limits will not be a constraint in the foreseeable future.

TABLE 2.3-2
1977 HOUSING STOCK - CARLSBAD

Housing Type	Actual ¹	Preferred ²	Preferred Less Actual
TOTAL	9,421	9,463 ³	42
Single-Family	7,992	8,033	41
Multi-Family	919	484	(435)
Mobile Homes	510	946	436

¹Based on U.S. Department of Commerce, Bureau of the Census, Housing Profile, 1970, and subsequent Carlsbad annexation, building permit and demolition data.

²Percentage allocations based on Old West Regional Commission, Construction Worker Profile, 1975, housing preferences for long-time residents and newcomers.

³Total includes 3 percent vacancy rate. Vacancy rate estimate based on Department of Housing and Urban Development, Postal Vacancy Survey, Federal Housing Administration Director's Release, March 21, 1975.

2.3.3.2 HOUSING AND LAND USE - HOBBS

From 1970 to 1975, new housing units were added at the rate of about 100 per year. Actual construction averaged about 150 units per year for the period, with about 50 units per year going to replacement of condemned or removed structures. This relatively low rate of addition to the housing stock resulted in a decline in the vacancy rate from nearly 9 percent in 1970 to just over one percent in 1975. In 1976 construction activity increased, with 414 new housing units being added. In 1977 the housing stock increased by 611 units. As a result of this increased rate of construction, vacancy rates have increased to about 2.5 percent. At the end of 1977 the housing stock in Hobbs was estimated at 10,879 units, with 8,483 single family dwellings; 1,223 multi-family units; and 1,173 mobile homes (Gleason 1978).

The total land area within the Hobbs city limits, including the Hobbs Industrial Air Park (HIAP), is about 14,720 acres. Not including HIAP, about 960 acres are vacant and available for residential, commercial, or industrial development (Gleason 1978). Virtually the total area of HIAP is vacant at present, providing an additional 3,500 acres for industrial development. Since Hobbs has no zoning ordinance, there are no figures on the total amount of land available for specific types of use.

2.3.4 COMMUNITY FACILITIES

EDUCATION - CARLSBAD

The Carlsbad school system currently consists of ten elementary schools, two junior high schools, one mid-high school, and one senior high school, with a combined enrollment of about 6,500 full-time equivalent students (6,737 students, with 465 kindergarten students attending half days) (CMS 1977). This enrollment is considerably below school capacity of some 10,000 students. And as indicated in Table 2.3-3, this excess capacity exists at all grade levels.

TABLE 2.3-3
CURRENT CARLSBAD SCHOOL DISTRICT ENROLLMENTS

Year	K - 6 ¹	6 - 8	9 - 10	11 - 12	TOTAL
Enrollment Capacity ²					
	4,600	1,860	1,770	1,870	10,100
Actual Enrollment					
1976-77 ³	3,111	1,315	1,229	1,042	6,697
1977-78 ³	3,178	1,390	1,132	1,037	6,737

¹Includes special education "C" and "D", kindergarten students counted as full time.

²Carlsbad Municipal School System.

³Carlsbad Municipal Schools 40-day report, Enrollment.

EDUCATION - HOBBS

The Hobbs Municipal School System currently consists of 10 elementary schools (K - 6), 3 junior high schools (7 - 9), and one high school (10 - 12). Total enrollment for the 1978-79 school year is expected to be about 7,675 students (Wasson 1978). This enrollment is somewhat below the estimated school capacity of 8,350 students (Table 2.3-4).

TABLE 2.3-4

HOBBS MUNICIPAL SCHOOLS ENROLLMENT

Year	K - 6	7 - 9	10 - 12	TOTAL
	Enrollment Capacity ¹			
	4,530	1,990	1,730	8,350
	Projected Enrollment ²			
1978-79	4,195	1,765	1,715	7,674

1 Estimated. Assumes 24 students per classroom capacity.

2 Ray Wasson, Director of Personnel, Hobbs Municipal Schools, letter, May 22, 1978.

GROUNDWATER AND MUNICIPAL WATER SYSTEMS - CARLSBAD

Carlsbad currently obtains its water from a well field in the Capitan Basin outside the city. There are seven wells presently pumping water and an eighth is being equipped to pump. In addition, there are three wells in the city limits which are not used because the quality of

the water under Carlsbad is lower than that of water outside the city limits (Tabor 1978).

The 8,833 acre feet per year of water rights which the city has in the Capitan Basin system is insufficient to meet the current needs of the city. For the past couple of years the city has overdrawn its rights in this water source and current plans call for a payback of 2,200 acre feet over the next two years (Tabor 1978).

The city has recently purchased the Double Eagle system, which has provided rights to the 7,648 acre feet per year. However, a pipeline must be constructed before the wells in this field can provide water to the municipal system.

In addition to the Capitan Basin and Double Eagle well fields, Carlsbad has rights to 10,640 acre feet per year from the Ogallala formation (Tabor 1978), giving the city total rights to over 27,000 acre feet per year (Table 2.3-5).

WATER RIGHTS AND MUNICIPAL WATER SYSTEMS - HOBBS

Hobbs currently has rights to 18,088 acre feet of water per year from groundwater sources in the Ogallala formation (GHA 1978). In addition, Hobbs has an allocation of 15,340 acre feet per year from the proposed Eastern New Mexico Water Supply System (Table 2.3-6) which would deliver water from Ute Reservoir to ten communities in Eastern New Mexico.

Municipal water is supplied from 23 wells located in and around the city. Current potential yield of the wells is about 14 million gallons per day. Average consumption is currently about 12 million gallons per day (Gleason 1978).

TABLE 2.3-5
WATER SUPPLY - CARLSBAD

WATER RIGHTS (acre feet per year)

8,833	Capitan Basin
7,648	Double Eagle (Ogallala)
<u>10,640</u>	Ogallala
27,121	Total Firm Rights
<u>258</u>	Capitan Basin (negotiating purchase)
27,379	Total Probable Rights

DELIVERY SYSTEM

Capitan Basin - currently supplying city

7 wells currently pumping

1 well being equipped to pump

2 wells not currently pumping

10 wells

22.5 million gallons per day capacity*

Double Eagle - not connected to city system, 22 wells

3,200 acre feet per year pipeline funded and in development

2.9 million gallons per day capacity*

* Capacity exceeds annual rights in order to meet seasonal peak loads.

Source: Information obtained in interview with Claude Tabor, City Manager,
January 17, 1978.

TABLE 2.3-6
WATER SUPPLY - HOBBS

WATER RIGHTS (acre feet per year)

18,088	Ogallala Formation
<u>15,340</u>	Ute Reservoir Allocation
33,428	Total Rights

DELIVERY SYSTEM

Ogallala Formation
23 wells currently pumping
14 million gallons per day capacity

Source: Gordon Herkenhoff and Associates, Inc., Water and Wastewater Master Plan, 1975-1995, Water Supply Study, City of Hobbs, Albuquerque, New Mexico, March 1976; and an interview with Ken Gleason, Assistant City Manager of Hobbs, May 1978.

MUNICIPAL WASTEWATER SYSTEMS AND TREATMENT FACILITIES - CARLSBAD

The Carlsbad municipal sewage treatment plant is currently inadequate to meet the needs of the city (Tabor 1978). As a result, the plant is being expanded and upgraded. The new facility is currently in the design phase with construction expected to begin sometime around the end of 1978 or early 1979.

Upon completion, the facility will have a design capacity of about 50,000 people. Effluent will be used to irrigate the 700-acre farm owned by Carlsbad. Since the effluent will not be discharged to any waterways, potential changes in state or federal standards for the quality of discharge into waterways will not render the plant obsolete.

MUNICIPAL WASTEWATER SYSTEMS AND TREATMENT FACILITIES - HOBBS

Construction of a new municipal sewage treatment plant for Hobbs is underway, with completion expected in early 1980. The new facility will have an initial capacity of 5 million gallons per day, with expansion capabilities up to 6 million gallons per day. Effluent from the new plant will feed into the recently completed Industrial Water Treatment Plant which is providing water for oilfield flooding (Gleason 1978).

There are also plans to expand and upgrade the main sewer lines within the city. Two of the three existing main trunk lines will be affected, with one being rebuilt and one being paralleled by a new by-pass line (Gleason 1978).

ELECTRIC SERVICE - CARLSBAD

The Eddy and Lea County area is provided electricity by the Southwestern Public Service Company. In the Carlsbad area this company currently serves 10,994 residential customers and 1,241 commercial customers in addition to a number of large industrial customers and miscellaneous others (Rotan 1978). Although residential customers are numerically the largest class of electricity user, they account for only about 22 percent of energy demand. Commercial uses provide about 21 percent of demand, industrial uses some 37 percent, and special uses (such as irrigation), about 20 percent (Rotan 1978).

ELECTRIC SERVICE - HOBBS

Electric service for Hobbs is provided by the New Mexico Electric

Service Company. As of March 1978, this company served 10,803 residential and 2,295 commercial, industrial, and other customers in the Hobbs area. Total sales amounted to 12.6 million KWH for March, with 6.4 million KWH going to residential customers (Maddox 1978).

NATURAL GAS SERVICE - CARLSBAD

The Gas Company of New Mexico serves the WIPP impact area, providing natural gas to some 9,124 residential customers, 884 commercial customers, and 149 industrial, public, and other special users (Martin 1978). In recent years they have been expanding service at the rate of 300 to 400 customers per year in the Carlsbad area.

Industrial and other special users account for most of the demand for natural gas in the area. For example, in January of 1978, 907 million cubic feet of gas went to this class of consumer while residential consumption was 124 million cubic feet and commercial use was 54 million cubic feet (Martin 1978).

NATURAL GAS SERVICE - HOBBS

Hobbs Gas Company was serving 10,456 customers in the city at the end of February 1978, an increase of 354 customers over the previous year. Natural gas is provided to some 9,201 residential, 1,208 commercial, and 48 other customers. Annual average residential consumption was 114.7 thousand cubic feet for the year ending in February 1978, a decrease of 12 percent compared to the previous year (Kimbrough 1978).

FIRE PROTECTION AND LAW ENFORCEMENT - CARLSBAD

The Carlsbad fire department currently has 22 full-time employees (Tabor 1978). Budgeted 1977-78 expenditures are \$385,746 (NMDFA 1978). The Carlsbad police department has some 40 full-time employees. Budgeted 1977-78 expenditures are \$632,000(NMDFA 1978).

Eddy County has an all-volunteer fire department. Total budgeted expenditures for the eight fire districts are \$90,095 for the current fiscal year (NMDFA 1978). The sheriff's department employs about 23 people and has a current budget of \$374,016 (NMDFA 1978).

The Insurance Services Organization recommends two firemen per 1,000 population. Carlsbad currently has about 0.7 per 1,000 people. The FBI Guide to Manpower Requirements recommends 2.5 police officers per 1,000 population. Carlsbad currently has about 1.5 per 1,000. Thus, both the fire and police departments are understaffed by national standards. However, city officials believe that current staffing levels are adequate for the particular needs of Carlsbad.

FIRE PROTECTION AND LAW ENFORCEMENT - HOBBS

The Hobbs Fire Department currently has 44 full-time employees, including two dispatchers, or about 1.35 employees per 1,000 population (Gleason 1978). This is somewhat below the level of 2 per 1,000 population recommended by the Insurance Services Organization.

The police department employs 81 people (Gleason 1978), or 2.5 employees per 1,000 population, the level recommended by the FBI Guide

to Manpower Requirements. Moreover, off-duty police officers drive patrol cars and are available for emergencies which makes the effective size of the police department larger than 2.5 per 1,000.

HEALTH CARE - CARLSBAD

There are currently about 35 private physicians in Eddy County, 21 of whom are primary care physicians (Adcock 1978b). There are 25 physicians located in Carlsbad. Using one primary care physician per 1,200 people as a standard (Bennett 1977), Eddy County should have about 38 and Carlsbad about 22 primary care physicians. There is thus a current shortage of primary care physicians in Carlsbad and in Eddy County.

With the opening of the new 134-bed Guadalupe Medical Center in Carlsbad in late 1977, Carlsbad has about 4.8 hospital beds per 1,000 population. This is higher than the national average of 4.0 beds per 1,000 and the New Mexico average of 3.5 per 1,000 (Myers 1978). In Eddy County there are 185 hospital beds (including those in Carlsbad), or 3.9 per 1,000 population.

HEALTH CARE - HOBBS

There were 40 physicians in all of Lea County at the start of 1977, the latest date for which comprehensive information is available. Of the total, 27 were primary care physicians, or 0.53 per 1,000 population (HRR 1977). Using a standard of 0.83 per 1,000 population (Bennett 1977), Lea County has a shortage of primary care physicians.

The new 180-bed hospital in Hobbs is currently being used at about 50 percent capacity (Iobe 1978), indicating that hospital facilities are more than adequate to meet current needs. There are about 5.5 hospital beds per 1,000 population, well above the national average of 4.0 per 1,000 (Myers 1978).

TRAFFIC AND TRANSPORTATION - CARLSBAD

Currently traffic flow levels are well within the existing capacity of the street system. On-site inspection of the street system shows few unpaved streets within the city limits. The condition of the street system appears to be good and shows adequate maintenance. Traffic flows on selected Carlsbad city streets and on highways in the two-county area can be found in Figure 8.4-1 and Table 8.4-4.

Presently the city has commercial air service via Texas International Airlines with two departures a day. There is some question concerning the continuance of this service since Texas International has notified the city that a cutback in service may be requested in the near future (TIA 1978; Gerrels 1978).

Santa Fe Railway provides the area with freight service. Piggyback service is available, and daily switching service is sustained (CDOO 1977).

Intra-state bus transportation is available. Local bus service (intra-city) is not, however. A private carrier presently contracts with the commercial mining operations in the area to provide mass transportation. Currently there are 28 round trips per day to the mining sites in the Carlsbad area (NMHD 1976).

Three inter-state motor freight carriers serve the city. Terminal facilities are available for each carrier within the city (CDOD 1977).

TRAFFIC AND TRANSPORTATION - HOBBS

Traffic flow studies available for Hobbs, and on-site inspection of traffic flows indicate that street capacities appear to be adequate to handle current traffic flows.

Texas International Airlines provides commercial air service for Hobbs. This service was recently cut back from two flights a day to one flight a day, and there is some question about the continuation of this service. However, a new commercial air carrier is in the process of seeking FAA approval to provide service to Hobbs (McNabb 1978).

The Texas-New Mexico Railroad connects Hobbs to Lovington in the north and to Texas to the south, and provides daily freight service (IDCLC 1978).

Eight motor freight lines authorized for both inter-state and intra-state operations serve Hobbs (IDCLC 1978).

COMMUNICATION SERVICES AND FACILITIES - CARLSBAD

Telephone service in the area is provided by General Telephone of the Southwest. At the end of 1977, there were 12,318 main stations (with 22,437 phones) in service in the Carlsbad area, an increase of 566 from the previous year (Mears 1978). About one half of the telephones are for residential use.

COMMUNICATION SERVICES AND FACILITIES - HOBBS

Telephone service in the Hobbs area is provided by General Telephone of the Southwest. At the end of February 1978, there were 12,688 main stations in service, an increase of 671 over a two-month period (Kelloway 1978). About 80 percent of the stations in service are residential.

2.3.5 LOCAL GOVERNMENT

2.3.5.1 LOCAL GOVERNMENT - CARLSBAD

A mayor-council form of city government serves the City of Carlsbad. The mayor is elected for a two-year term while the council members are elected for four-year terms. The Eddy County government is a commissioner-type structure. County commissioners are elected for two-year terms.

Budgeted revenues for Carlsbad were about \$7.3 million in fiscal 1976-77 (NMDFA 1977), an increase of 54 percent (in constant dollars) over 1969-70 (NMDFA 1970). As indicated in Table 2.3-7, on a per capita basis revenues grew 23 percent over the same seven-year period, reaching \$276. Budgeted revenues for the current fiscal year (1977-78) are just over \$8.2 million (NMDFA 1977) (estimated to be \$7.9 million in 1977 dollars), or about \$295 per person (\$284 in 1977 dollars).

Eddy County budgeted revenues were about \$2.1 million in 1969-70 (NMDFA 1970) and are budgeted at about \$4.2 million for 1977-78 (NMDFA 1977) (both in 1977 dollars), representing an increase of 100 percent over the eight-year period. (See Table 2.3-8.) On a per capita basis, revenues grew 75 percent in constant dollars.

Budgeted Carlsbad municipal expenditures increased about 60 percent (in constant 1977 dollars) between fiscal 1969-70 and 1976-77, reaching \$6.4 million (NMDFA 1977). On a per capita basis, the increase was 27.5 percent. Individual components of the budget have shown considerable variation over the past several years, some declining on a per capita basis, and some increasing dramatically (Table 2.3-9).

TABLE 2.3-7
CARLSBAD MUNICIPAL REVENUES
(Constant Dollars 1977 = 100)

Fund	1969-70 ^{1,2}	1976-77 ^{1,2}	1977-78 ^{1,2}
General (\$1,000)	1,561	2,647	2,618
Per capita (\$)	73.31	99.52	93.82
Revenue Sharing	NA	155	143
Per capita		5.83	5.12
Utilities	1,300	2,385	2,088
Per capita	61.04	89.67	74.82
Other	1,830	2,031	2,904
Per capita	85.94	76.35	104.00
Debt Service	82	117	171
Per capita	3.87	4.39	6.14
TOTAL	4,774	7,335	7,921
Per capita	224.14	275.76	283.91

NA Not applicable.

- 1 Totals for each fund based on budgeted municipal revenues (New Mexico Department of Finance and Administration, New Mexico Municipal Governments, [various years] Annual Report.) deflated by the Gross National Product Price Index, adjusted to 1977 base.
- 2 Per capita figures based on population data presented elsewhere in this report.

TABLE 2.3-8
EDDY COUNTY REVENUES
(Constant Dollars, 1977 = 100)

	1969-70 ^{1,2}	1977-78 ^{1,2}
Total (\$1,000)	2,080	4,174
Per capita (\$)	50.59	88.25

- 1 Total based on budgeted county revenues (New Mexico Department of Finance and Administration, New Mexico County Governments, [various years] Annual Report) deflated by the Gross National Product Price Index, adjusted to 1977 base.
- 2 Per capita figures based on population data presented elsewhere in this report.

TABLE 2.3-9
CARLSBAD MUNICIPAL EXPENDITURES
(Constant Dollars 1977 = 100)

Fund	1969-70 ^{1,2}	1976-77 ^{1,2}	1977-78 ^{1,2}
General (\$1,000)	2,158	2,461	2,556
Per capita (\$)	101.35	92.51	91.60
Fire Protection	15.4	16.8	44.0
Per capita	.72	.63	1.58
Revenue Sharing	42	140	179
Per capita	1.98	5.27	6.40
Utilities	525	1,133	1,246
Per capita	24.66	42.59	44.60
Other	668	1,999	3,288
Per capita	31.35	75.13	117.84
Debt Service	609	654	664
Per capita	28.60	24.56	23.80
TOTAL	4,019	6,403	7,976
Per capita	188.69	240.72	285.89

- 1 Totals for each fund based on budgeted municipal expenditures (New Mexico Department of Finance and Administration, New Mexico Municipal Governments, [various years] Annual Report.) deflated by the Gross National Product Price Index, adjusted to 1977 base.
- 2 Per capita figures based on population data presented elsewhere in this report.

Budgeted Eddy County expenditures rose from \$1.7 million in 1969-70 (NMDFA 1970) to \$3.9 million in 1977-78 (NMDFA 1977) (both in 1977 dollars), an increase of 133 percent. On a per capita basis, the change was 103 percent, from \$41 in 1969-70 to \$83 in 1977-78. As with Carlsbad expenditures, there has been a good deal of change in county spending patterns over the past eight years (Table 2.3-10).

TABLE 2.3-10
EDDY COUNTY EXPENDITURES
(Constant Dollars 1977 = 100)

Fund	1969-70 ^{1,2}	1977-78 ^{1,2}
General (\$1,000)	404	1,626
Per capita (\$)	9.83	34.37
Road	656	1,153
Per capita	15.94	24.38
Recreation	2.9	34.7
Per capita	.07	.73
Other ³	618	1,104
Per capita	15.03	23.34
TOTAL	1,681	3,918
Per capita	40.87	82.83

- 1 Totals for each fund based on budgeted county expenditures (New Mexico Department of Finance and Administration, New Mexico County Governments, [various years] Annual Report.) deflated by the Gross National Product Price Index, adjusted to 1977 base.
- 2 Per capita figures based on population data presented elsewhere in this report.
- 3 Other represents Fire Districts Fund, Farm and Range Improvement Fund, etc.

2.3.5.2 LOCAL GOVERNMENT - HOBBS

Hobbs has a Commission-Manager form of government, with a five-member commission. Commission members are elected at-large to four-year overlapping terms. A mayor is elected from the commission for a term of two years. A professional City Manager is hired by the commission (IDCLC 1978).

Hobbs municipal revenues rose from about \$5.1 million (in constant 1977 dollars) in 1969-70 (NMDFA 1970) to \$6.4 million in 1976-77 (NMDFA 1977).

On a per capita basis, this represents a 5 percent increase, from \$195.11 to \$204.36. (See Table 2.3-11.) Budgeted revenues for 1977-78 are expected to rise dramatically to \$11.8 million (1977 dollars), or \$362.69 per capita.

Expenditures for Hobbs were \$5.8 million (1977 dollars) in 1976-77 (NMDFA 1977), up from \$4.4 million in 1969-70 (NMDFA 1970). Budgeted expenditures for the current fiscal year are \$6.9 million. On a per capita basis, expenditures rose from \$170.94 in 1969-70 to \$186.77 in 1976-77, an increase of 9 percent. For the current fiscal year, per capita spending is expected to reach \$212.98.

Lea County revenues were just under \$4 million in 1969-1970 (in 1977 dollars) (NMDFA 1970) and are budgeted at \$4.2 million for 1977-78 (NMDFA 1977). (See Table 2.3-12.) On a per capita basis, revenues fell 6.6 percent over the eight-year period.

Lea County expenditures totaled \$1.7 million (in 1977 dollars) in 1969-70 (NMDFA 1970) and are budgeted at \$4.2 million for the current fiscal year (NMDFA 1977). Per capita expenditures rose 46 percent over the eight-year period. (See Table 2.3-13.)

TABLE 2.3-11
HOBBS MUNICIPAL REVENUES AND EXPENDITURES
(Constant Dollars 1977=100)

Fund	Revenues			Expenditures		
	1969-70	1976-77	1977-78	1969-70	1976-77	1977-78
General (\$1,000)	2,495.1	3,972.1	3,743.2	2,845.8	3,626.4	4,008.3
Per Capita (\$)	95.87	127.01	115.44	109.35	115.98	123.62
Revenue Sharing	0.0	214.5	179.3	0.0	230.8	320.3
Per Capita	0.00	6.86	5.53	0.00	7.38	9.88
Utilities	1,159.6	1,116.3	1,381.6	978.8	854.7	1,103.4
Per Capita	44.56	35.69	42.61	37.96	27.33	34.03
Other	905.4	994.1	6,449.0	137.3	842.8	1,072.2
Per Capita	34.79	31.79	198.89	5.28	22.95	33.07
Debt Service	520.3	94.4	7.4	477.7	285.5	401.8
Per Capita	19.99	3.02	0.23	18.36	9.13	12.39
Total	5,080.4	6,391.4	11,760.5	4,448.6	5,840.2	6,906.0
Per Capita	195.21	204.37	362.70	170.95	182.77	212.99

Notes: Totals for each fund based on budgeted municipal revenues and expenditures (New Mexico Department of Finance and Administration, New Mexico Municipal Governments, [various years], Annual Report deflated by the Gross National Product Price Index, adjusted to 1977 base.

Per capita figures based on population data presented elsewhere in this report.

"Other" represents Fire Fund, Juvenile Recreation, etc.

TABLE 2.3-12
LEA COUNTY REVENUES
(Constant Dollars 1977 = 100)

	1969-70 ^{1,2}	1977-78 ^{1,2}
Total (\$1,000)	3,994	4,246
Per capita (\$)	81.09	75.75

- 1 Total based on budgeted county revenues (New Mexico Department of Finance and Administration, New Mexico County Governments, [various years] Annual Report) deflated by the Gross National Product Price Index, adjusted to 1977 base.
- 2 Per capita figures based on population data presented elsewhere in this report.

TABLE 2.3-13
LEA COUNTY EXPENDITURES
(Constant Dollars 1977 = 100)

	1969-70 ^{1,2}	1977-78 ^{1,2}
Total (\$1,000)	2,527	4,215
Per capita (\$)	51.31	75.20

- 1 Total based on budgeted county expenditures (New Mexico Department of Finance and Administration, New Mexico County Governments, [various years] Annual Report) deflated by Gross National Product Price Index, adjusted to 1977 base.
- 2 Per capita figures based on population data presented elsewhere in this report.

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