

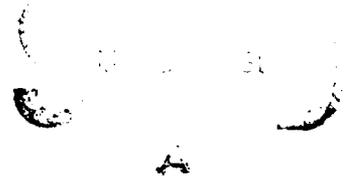
AFSC-TR-31-02

Handwritten scribbles and initials

13
Jr.

AD A 095760

M-X
ENVIRONMENTAL
TECHNICAL REPORT



ETR 2
DDA: NEVADA/UTAH

DRUG FILE COPY

THIS
FOR
DATE

1

81 3 03 102

INSTRUCTIONS FOR PREPARATION OF REPORT DOCUMENTATION PAGE

RESPONSIBILITY. The controlling DoD office will be responsible for completion of the Report Documentation Page, DD Form 1473, in all technical reports prepared by or for DoD organizations.

CLASSIFICATION. Since this Report Documentation Page, DD Form 1473, is used in preparing announcements, bibliographies, and data banks, it should be unclassified if possible. If a classification is required, identify the classified items on the page by the appropriate symbol.

COMPLETION GUIDE

General. Make Blocks 1, 4, 5, 6, 7, 11, 13, 15, and 16 agree with the corresponding information on the report cover. Leave Blocks 2 and 3 blank.

Block 1. Report Number. Enter the unique alphanumeric report number shown on the cover.

Block 2. Government Accession No. Leave Blank. This space is for use by the Defense Documentation Center.

Block 3. Recipient's Catalog Number. Leave blank. This space is for the use of the report recipient to assist in future retrieval of the document.

Block 4. Title and Subtitle. Enter the title in all capital letters exactly as it appears on the publication. Titles should be unclassified whenever possible. Write out the English equivalent for Greek letters and mathematical symbols in the title (see "Abstracting Scientific and Technical Reports of Defense-sponsored RDT/E," AD-667 000). If the report has a subtitle, this subtitle should follow the main title, be separated by a comma or semicolon if appropriate, and be initially capitalized. If a publication has a title in a foreign language, translate the title into English and follow the English translation with the title in the original language. Make every effort to simplify the title before publication.

Block 5. Type of Report and Period Covered. Indicate here whether report is interim, final, etc., and, if applicable, inclusive dates of period covered, such as the life of a contract covered in a final contractor report.

Block 6. Performing Organization Report Number. Only numbers other than the official report number shown in Block 1, such as series numbers for in-house reports or a contractor/grantee number assigned by him, will be placed in this space. If no such numbers are used, leave this space blank.

Block 7. Author(s). Include corresponding information from the report cover. Give the name(s) of the author(s) in conventional order (for example, John R. Doe or, if author prefers, J. Robert Doe). In addition, list the affiliation of an author if it differs from that of the performing organization.

Block 8. Contract or Grant Number(s). For a contractor or grantee report, enter the complete contract or grant number(s) under which the work reported was accomplished. Leave blank in in-house reports.

Block 9. Performing Organization Name and Address. For in-house reports enter the name and address, including office symbol, of the performing activity. For contractor or grantee reports enter the name and address of the contractor or grantee who prepared the report and identify the appropriate corporate division, school, laboratory, etc., of the author. List city, state, and ZIP Code.

Block 10. Program Element, Project, Task Area, and Work Unit Numbers. Enter here the number code from the applicable Department of Defense form, such as the DD Form 1498, "Research and Technology Work Unit Summary" or the DD Form 1634, "Research and Development Planning Summary," which identifies the program element, project, task area, and work unit or equivalent under which the work was authorized.

Block 11. Controlling Office Name and Address. Enter the full, official name and address, including office symbol, of the controlling office. (Equates to funding/sponsoring agency. For definition see DoD Directive 5200.20, "Distribution Statements on Technical Documents.")

Block 12. Report Date. Enter here the day, month, and year or month and year as shown on the cover.

Block 13. Number of Pages. Enter the total number of pages.

Block 14. Monitoring Agency Name and Address (if different from Controlling Office). For use when the controlling or funding office does not directly administer a project, contract, or grant, but delegates the administrative responsibility to another organization.

Blocks 15 & 15a. Security Classification of the Report: Declassification/Downgrading Schedule of the Report. Enter in 15 the highest classification of the report. If appropriate, enter in 15a the declassification/downgrading schedule of the report, using the abbreviations for declassification/downgrading schedules listed in paragraph 4-207 of DoD 5200.1-R.

Block 16. Distribution Statement of the Report. Insert here the applicable distribution statement of the report from DoD Directive 5200.20, "Distribution Statements on Technical Documents."

Block 17. Distribution Statement (of the abstract entered in Block 20, if different from the distribution statement of the report). Insert here the applicable distribution statement of the abstract from DoD Directive 5200.20, "Distribution Statements on Technical Documents."

Block 18. Supplementary Notes. Enter information not included elsewhere but useful, such as: Prepared in cooperation with ... Translation of (or by) ... Presented at conference of ... To be published in ...

Block 19. Key Words. Select terms or short phrases that identify the principal subjects covered in the report, and are sufficiently specific and precise to be used as index entries for cataloging, conforming to standard terminology. The DoD "Thesaurus of Engineering and Scientific Terms" (TEST), AD-672 000, can be helpful.

Block 20. Abstract. The abstract should be a brief (not to exceed 200 words) factual summary of the most significant information contained in the report. If possible, the abstract of a classified report should be unclassified and the abstract to an unclassified report should consist of publicly-releasable information. If the report contains a significant bibliography or literature survey, mention it here. For information on preparing abstracts see "Abstracting Scientific and Technical Reports of Defense-Sponsored RDT&E," AD-667 000.

TABLE OF CONTENTS

	<u>PAGE</u>
1.0 Nevada/Utah Regional Environment	1
1.1 Economic Activity	1
1.2 Population	27
2.0 Potential Impacts on the Nevada/Utah Regional Environment	41
2.1 Economic Activity	41
2.2 Population	124
References	145

LIST OF FIGURES

No.		Page
1-1	Nevada/Utah Region of Influence (ROI)	2
1.2-1	Nevada: population and sex characteristics 1950/1960/1970	33
1.2-2	Net migration into Nevada during 1965-1970 SEA #1	35
1.2-3	Age and sex characteristics of in-out-migrant populations	36
1.2-4	Population age and sex characteristics/Utah counties 1950/1960/1970	38
1.2-5	Net migrations into Utah during 1965-1970 period	39
1.2-6	Age and sex characteristics of in-out-migration population SEA #3	40
2.1-1	DDA facilities, construction camps and OB locations for M-X full deployment, Nevada/Utah	43
2.1-2	Direct and total M-X-related employment, full deployment in Nevada/Utah	54
2.1-3	M-X employment impacts for base counties and rest of ROI, full deployment in Nevada/Utah	69
2.1-4	DDA facilities, construction camps, OB locations for M-X deployment/Alternative 6	79
2.1-5	M-X-related earnings by type, Nevada/Utah ROI: Proposed Action	101
2.1-6	M-X-related earnings/Clark, Beaver, and other ROI counties: Proposed Action	102
2.1-7	M-X-related earnings in Nevada/Utah ROI, full and split deployment	107

LIST OF TABLES

No.		Page
1.1-1	Nevada civilian labor force, by place of residence	4
1.1-2	Civilian labor force, by place of residence for selected Utah counties	5
1.1-3	Selected economic characteristics of Nevada/Utah and the United States	7
1.1-4	Total employment and percent share by major economic sectors for Nevada counties, 1977	8
1.1-5	Nevada employment growth by sectors, study area counties, 1967-1977	9
1.1-6	Total employment and percent share by major economic sectors for selected Utah counties, 1977	11
1.1-7	Employment growth by sector, selected Utah counties, 1967-1977	12
1.1-8	Earnings by economic sector, Nevada counties, 1967-1977	15
1.1-9	Per capita income and earnings shares by economic sector, Nevada counties, 1977	16
1.1-10	Earnings by economic sector in selected Utah counties, 1967-1977	17
1.1-11	Per capita income and earnings shares by economic sector, selected Utah counties, 1977	18
1.1-12	Cumulative employment effects of selected major projects in Nevada ROI counties, 1980-1990	21
1.1-13	Cumulative employment effects of selected major projects in Utah ROI counties, 1980-1990	23
1.1-14	Employment projections by major industry, by place of residence, Baseline 1 and 2, Nevada/Utah ROI, 1980/1985/1990/1995	24
1.1-15	General fund revenues, state of Nevada, 1976-1979	25
1.1-16	General fund appropriations and gaming authorizations, state of Nevada	26
1.1-17	General fund revenues, state of Utah, 1976-1978	28

No.		Page
1.1-18	Transportation fund revenues, state of Utah, 1975-1978	29
1.1-19	Uniform school fund revenues, state of Utah, 1975-1978	30
1.1-20	State of Utah, summary of expenditures, 1975-1978	31
2.1-1	Proposed Action and alternatives	42
2.1-2	Total M-X system personnel requirements, full deployment, Nevada/Utah, 1982-1991	46
2.1-3	Personnel required, construction of DDA facilities and OBs, full deployment, Nevada/Utah, 1982-1989	47
2.1-4	Personnel required for assembly and checkout of DDA facilities and OBs, full deployment, Nevada/Utah, 1983-1990	48
2.1-5	Personnel required for operations, full deployment, Nevada/Utah, 1983-1989	50
2.1-6	M-X-related system employment by place of employment, in deployment region	51
2.1-7	Total civilian M-X-related employment, available labor force, and net civilian labor force impact (Baseline 1)	56
2.1-8	Total civilian M-X-related employment, available labor force, and net civilian impact (Baseline 2)	56
2.1-9	Employment impacts by place of residence including military (Baseline 1)	58
2.1-10	Employment impacts by place of residence including military (Baseline 2)	60
2.1-11	Civilian labor force impacts (Baseline 1)	62
2.1-12	Civilian labor force impacts (Baseline 2)	65
2.1-13	Comparison of M-X employment impact estimates from interindustry and simulation methodologies/Alternative 3	68
2.1-14	Projected employment and estimated M-X-related direct construction labor demand by craft, Nevada/Utah	72
2.1-15	Craft-specific construction labor availability in 1985 by geographic zone, Nevada/Utah	73
2.1-16	Estimates of wage escalation due to M-X-related excess peak labor demand, Nevada/Utah	81

No.		Page
2.1-17	Total M-X system personnel requirements, split deployment, Nevada/Utah, 1982-1990	82
2.1-18	Personnel required for construction of DDA facilities and OB, split deployment, Nevada/Utah, 1982-1990	84
2.1-19	Personnel required for assembly and checkout and operations, split deployment, Nevada/Utah, 1982-1990	85
2.1-20	M-X-related system employment by place of employment	86
2.1-21	Total civilian M-X-related employment, available labor force, and net civilian labor force impact by place of residence (Baseline 1, split deployment)	87
2.1-22	Total civilian M-X-related employment, available labor force, and net civilian labor force impact by place of residence (Baseline 2, split deployment)	87
2.1-23	Employment impacts by place of residence (Baseline 1, split deployment)	89
2.1-24	Employment impacts by place of residence (Baseline 2, split deployment)	91
2.1-25	Civilian labor force impacts (Baseline 1, split deployment)	93
2.1-26	Civilian labor force impacts (Baseline 2, split deployment)	95
2.1-27	Projected employment and estimated M-X-related direct construction labor demand by craft, Nevada/Utah	97
2.1-28	Craft-specific construction labor availability in 1985 by geographic zone, Nevada/Utah, split deployment	98
2.1-29	Estimates of wage escalation due to M-X-related excess peak labor demand, Nevada/Utah, split deployment	99
2.1-30	M-X-related earnings, in millions of FY 1980 dollars, in deployment region	103
2.1-31	M-X-related earnings by county of work in millions of FY 1980 dollars	104
2.1-32	M-X-related earnings in millions of FY 1980 dollars (split deployment)	108

No.		Page
2.1-33	M-X-related earnings by county of work in millions of FY 1980 dollars (split deployment)	109
2.1-34	Local government revenues, expenditures and net impacts (full deployment)	112
2.1-35	Local government revenues, expenditures and net impacts (split deployment)	115
2.1-36	School district revenues, expenditures and net impacts (Baseline 1, Proposed Action)	118
2.1-37	School district revenues, expenditures and net impacts (Baseline 1, split deployment)	122
2.1-38	School district revenues, expenditures and net impacts (Baseline 2, split deployment)	127
2.1-39	Proposed Action/full deployment/Nevada/Utah	131
2.2-1	Projected baseline population, M-X-related population change, and cumulative population change	134
2.2-2	Population impacts/Alternative 8	137
2.2-3	Projected cumulative population in-migration by project-related employment category	139
2.2-4	Projected cumulative population in-migration by place of residence	142
2.2-5	Population impacts/full deployment	144
2.2-6	Comparison of interindustry and simulation model population impacts projections, Alternative 3	146
2.2-7	Population impacts/split deployment	147

1.0 NEVADA/UTAH REGIONAL ENVIRONMENT

On the basis of a number of geotechnical and cultural criteria and military and operational suitability, two areas have been identified as suitable for M-X deployment. These are Nevada/Utah and Texas/New Mexico. This report deals with the Nevada/Utah region which covers a large portion of Central Nevada and Western Utah. The study area for socioeconomic analysis, called the region of influence (ROI), is shown in Figure 1-1. It includes the Nevada counties of Clark, Eureka, Lincoln, Nye, and White Pine and the Utah counties of Beaver, Iron, Juab, Millard, Salt Lake, Utah, and Washington.

1.1 ECONOMIC ACTIVITY

Economic development in Utah began in the mid-19th Century. Early development followed a definite organized pattern based on Mormon religious concepts. Once the Mormons had established Salt Lake City as their base of operations, Brigham Young sent them south to establish many agricultural communities. Water determined the location and size of the settlements, which were established approximately a wagon trip day apart. Prior to Brigham Young's death in 1877, about 350 such settlements were founded. This colonization spread over thousands of square miles from the Rocky Mountains to the Pacific and from Canada to Mexico.

Brigham Young's efforts to establish a "Mormon County" were tempered by federal action and other external events. Federal action in 1861 reduced the Utah Territory to about half its original size, and was undertaken to establish the Nevada Territory and to help make up the Colorado Territory. Additional western portions of Utah Territory were reduced in treaties of 1862 and 1866. The final reduction was in 1886, when a segment was taken from the northwestern corner to form the Wyoming Territory.

Completion of the Transcontinental Railroad in 1869 acted to reduce Mormon isolationism. Non-Mormon merchants and miners began to move in and prosper. Railroads also opened up new markets for agricultural products in the southcentral Utah area. Mining was the next phase in economic development of the area. In the late 19th Century, rich deposits of precious metals were found in the area, creating rapid growth, then decline as the mining boom ran its course.

The central Utah economy had declined for the last fifty years prior to 1970. But since then, increased activity in mining, transportation, and energy development has spurred economic growth in the area.

The Nevada Territory was established in 1861 from a portion of the Utah Territory. Mining and railroad construction were prime movers in the Nevada economy from this time until after World War II. People rushed to mining districts, creating boom towns. Migrants were recruited for railroad construction crews and way stations. Initially mining districts, construction crews, and railroad way stations induced growth in local agricultural production based on appropriated surface water and available groundwater. Mining, construction, and agriculture attracted various services to provide the needs of the population. Subsequent growth in the gaming industry has far outstripped other industries in the state. It is currently the basis for the state's economic growth.

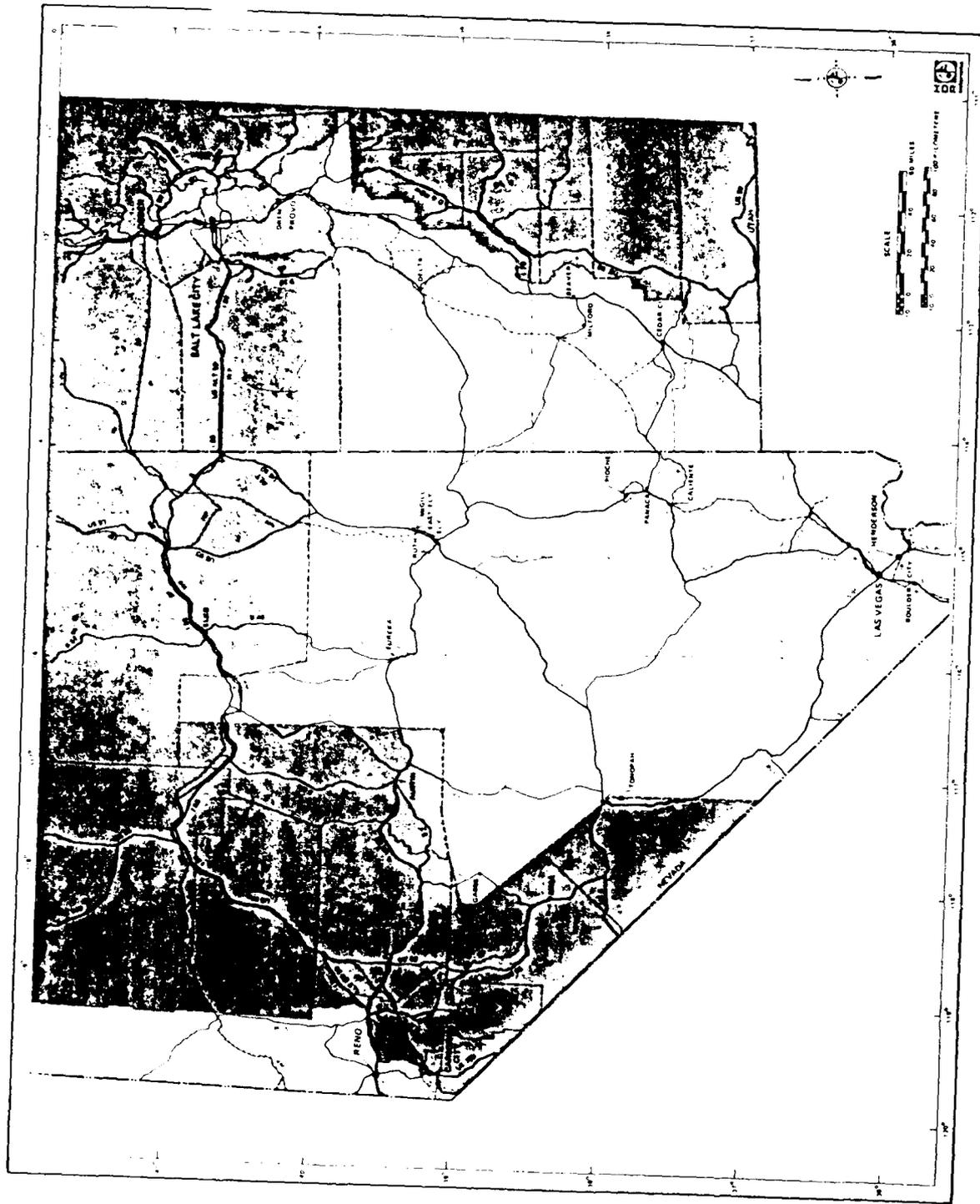


Figure 1-1. The region of influence in the Nevada/Utah study area. 1918

EMPLOYMENT

The size of the employed and the unemployed labor force and the unemployment rate are significant measures of the study area economy, since they reflect the labor supply from which project-generated direct and indirect job demands can be filled. Total unemployment is a significant measure of the affected environment, for it is a measure of the region's unused labor pool. In this respect, it is notable that many of the counties in the Nevada/Utah study area have very small unemployed labor pools.

Of the total unemployed in 1977, nine of the 12 counties had unemployed "pools" of substantially less than 1,000 persons. The other three counties -- Clark, Salt Lake, and Utah counties -- have the bulk of the employed and the unemployed. Substantial construction labor requirements, in the majority, could only be met through large-scale labor importation.

Unemployed-labor pools may understate labor force availability in cases where people are employed part-time but would prefer full employment, and hidden unemployment, where people are not in the civilian labor force (CLF), but might be if suitable jobs became available. However, total unemployment is used as the labor supply variable, since accounting for underemployment and hidden unemployment would be highly speculative. Moreover, for the rural counties, population totals are so modest that no substantial augmentation of supply could meet demand except by labor importation, whether transient or permanent.

As shown in Table 1.1-1, the civilian labor force in Nevada has grown rapidly -- 6.4 percent per annum from 1970 to 1977. Unemployment rates were relatively low in 1977 throughout most of Nevada. The Las Vegas and Reno Standard Metropolitan Statistical Areas (SMSAs) -- Clark and Washoe counties, respectively-- accounted for 82.2 percent of the state's unemployed in 1977 and 82.0 percent of the civilian labor force. The combination of Carson City (the state capital), Clark, Douglas, and Washoe counties (the tourism centers of Las Vegas, Tahoe South Shore, and Reno), accounted for 88.4 percent of Nevada's 1977 civilian labor force and 90.8 percent of the unemployed in 1977.

Within Utah, unemployment increased from about 17,000 to 25,000 in the 1970-1977 period (Table 1.1-2). This growth rate of 5.7 percent was accompanied by a 4.4 percent growth rate in the CLF. The unemployment rates for the Utah portion of the ROI are greater than those for Utah state. Three counties--Salt Lake, Utah, and Weber--account for 83.8 percent of the civilian labor force. In terms of unemployment, these three counties account for a total of 85.6 percent of the study area's unemployed.

In Nevada, the five counties that comprise that state's portion of the ROI accounted for 56.8 percent of the state's CLF in 1978. In Utah, ROI counties of Beaver, Iron, Juab, Millard, Salt Lake, Utah, and Washington represented 76.0 percent of total state CLF in the same year. In all cases except White Pine and Nye counties, ROI counties had CLF growth rates well above that for the United States as a whole over the 1970-1977 period. In contrast, ROI counties had much smaller growth in unemployment than the United States, but greater than comparable rates for Nevada and Utah as a whole.

Table 1.1-1. Nevada civilian labor force, by place of residence.

COUNTY	CIVILIAN LABOR FORCE		UNEMPLOYMENT		UNEMPLOYMENT RATE	
	1977	GROWTH RATE 1970-77	1977	GROWTH RATE 1970-77	1970	1977
Carson City	14,450	12.1	1,530	22.6	5.7	10.6
Churchill	4,830	4.4	360	13.2	7.1	7.5
Clark	174,200	6.3	14,100	13.2	5.2	8.1
Douglas	6,420	9.5	450	7.9	7.7	7.0
Elko	8,620	5.4	400	5.5	4.6	4.6
Esmeralda	200	-1.4	10	-2.6	5.4	5.8
Eureka	560	3.4	20	100.0	0	3.8
Humboldt	3,890	5.2	190	15.1	2.6	4.9
Lander	1,540	5.6	80	22.8	1.8	5.1
Lincoln	1,350	5.5	80	15.6	3.1	5.8
Lyon	3,670	2.3	320	15.6	3.7	8.7
Mineral	2,660	-1.2	160	11.4	2.6	5.9
Nye	1,920	-3.5	100	5.4	2.8	5.1
Pershing	1,360	2.9	80	6.6	4.6	5.9
Storey	680	8.9	50	39.0	1.3	7.6
Washoe	90,500	7.0	4,800	4.6	6.2	5.3
White Pine	3,860	-0.4	300	11.2	3.6	7.8
Total State	323,000	6.4	23,000	10.7	5.4	7.2
U.S.	97,401,000	2.4	6,855,000	7.7	4.9	7.0

572

Sources: U.S. Dept. of Commerce 1978a; Nevada Dept. of Economic Security, 1979.

Table 1.1-2. Civilian labor force, by place of residence for selected counties in Utah.

COUNTY	CIVILIAN LABOR FORCE		UNEMPLOYMENT		UNEMPLOYMENT RATE	
	1977	GROWTH RATE 1970-1977	1977	GROWTH RATE 1970-1977	1970	1977
Beaver	1,870	3.7	130	19.2	2.6	7.0
Davis	43,952	3.7	1,967	4.3	4.3	4.5
Iron	6,780	5.1	420	10.3	4.4	6.2
Juab	2,080	2.8	150	6.3	5.7	7.2
Millard	3,180	2.5	150	-0.7	5.9	4.7
Salt Lake	255,410	5.1	13,350	7.1	4.6	5.2
Tooele	8,490	0.7	430	4.2	4.0	5.1
Utah	70,040	5.4	3,520	1.1	4.7	5.0
Washington	7,320	7.1	370	6.1	5.4	5.1
Weber	57,260	1.7	4,650	6.2	6.0	8.1
Study Area Total	456,382	4.4	25,137	5.7	5.1	5.5
Utah State Total	551,900	4.7	29,500	5.2	5.2	5.3
United States Total	97,401,000	2.4	6,855,000	7.7	4.9	7.0

576-1

By place of Residence.

Source: Utah Department of Employment Security, 1977; U.S. Department of Commerce, 1978a.

Nevada and Utah economic characteristics relative to the national average are shown in Table 1.1-3. In general, sectoral shares in the Utah state economy are more similar to the national average than those of Nevada. Services sector shares in Nevada are primarily responsible for this dissimilarity. Gaming and other tourist-related activities alone account for over 28 percent of total employment in the state of Nevada. Other significant differences between Nevada and national shares are in the agriculture sector, with one-third the national average, and manufacturing, with about one-fourth of the national average.

Although employment shares in mining are well below the national average, mining earnings shares are equal to the national average in Nevada, and over five times the national average in Utah. Utah has two-thirds the national average in manufacturing employment share and about one and one-half the national average in construction shares.

On the whole, the nation's employment rate has grown only half as fast as Utah's, and one-third as fast as that of Nevada. Leading growth sectors in both states are construction and manufacturing. Nevada construction employment has grown 5.7 times as fast as the nation as a whole.

Nevada

Selected characteristics of the Nevada economy are shown in Table 1.1-4, where the share of total employment is shown by county and economic sector. The dominance of Carson City, Clark, Douglas, and Washoe is evident in their accounting for almost 90 percent of total state employment in 1977. The total is only about 0.4 percent of the U.S. total, although, as shown in Table 1.1-5, Nevada employment is growing much faster than in the United States as a whole. This high rate of growth was a function of high growth rates in several of the larger counties--Clark (the Las Vegas SMSA), Carson City, the state capital, Washoe (the Reno SMSA) and Douglas, locale of the Tahoe South Shore entertainment center. Within the ROI, however, Nye County had a large negative growth rate, while Eureka, Lincoln, and White Pine had growth rates lower than Nevada as a whole.

Agriculture has not been important in Nevada, since it provided only 1.4 percent of the jobs in 1977. Within the state, counties with employment shares of at least 10 percent in agriculture included Churchill, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, and Pershing. Growth in agriculture has been modest, with an annual average growth rate of only 1.0 percent over the 1967-1977 period. Four counties (Nye, Carson City, Storey, and Washoe) had negative growth in agricultural employment and six had rates of growth below the state average. The county with the most rapid growth of agricultural employment--White Pine--is under consideration for M-X facilities and is slated for the White Pine Power Plant.

Mining accounted for 1.2 percent of the state's jobs in 1977. Eureka, Lander, Lincoln, Lyon, Nye, and White Pine had employment shares of 10 percent or more. However, data were not available for a number of other counties because of disclosure rules. Mining grew statewide at an annual growth rate of 2.2 percent, below that for the United States. Within the ROI, mining employment was well above the average growth rate in Lincoln and Nye counties.

Construction had a larger share of the state's employed labor force -- 5.7 percent -- and was greater than the national average of 4.0 percent in 1977.

Table 1.1-3. Selected economic characteristics of Nevada, Utah, and the United States.

ECONOMIC CHARACTERISTIC	NEVADA	UTAH	UNITED STATES
Employment			
Total, 1977	348,495	550,214	17,898,574
Employment Growth Rate			
1967-1977	5.7%	3.5%	1.7%
Sectorial Employment Growth Rates, 1967-77			
• Agriculture			
Share	1.4%	3.7%	4.2%
Growth Rate	1.0%	-1.3%	1.2%
• Mining			
Share	1.2%	2.7%	4.2%
Growth Rate	2.2%	3.7%	3.0%
• Construction			
Share	5.7%	5.8%	4.0%
Growth Rate	9.0%	8.8%	1.6%
• Manufacturing			
Share	4.3%	13.5%	20.0%
Growth Rate	8.5%	4.0%	0.1%
• Services			
Share	37.1%	14.7%	17.4%
Growth Rate	5.7%	4.9%	3.0%
• Government			
Share	18.4%	23.2%	18.2%
Growth Rate	5.2%	2.1%	2.5%
Unemployment			
Number unemployed	7,266	20,600	4,368,000
Percent of Labor Force	2.1%	3.7%	4.3%
Number unemployed	23,001	39,200	6,855,000
Percent of Labor Force	6.6%	7.1%	7.1%
Unemployment Growth Rate	13.7%	1.2%	7.7%
Earnings, 1977			
Total earnings (100)	14,148,586	16,017,160	31,104,755,000
Per capita income	3,980	3,943	17,926

By Race of Work.

1950-7

Source: BIP Studies, July 1980, and Bureau of Economic Analysis, April 1979.

Table 1.1-4. Total employment and percent share by major economic sectors, Nevada, 1977.

COUNTY	TOTAL EMPLOYMENT 1977	COUNTY PERCENT OF TOTAL EMPLOYMENT	AGRICULTURE SHARE (%)	MINING SHARE (%)	CONSTRUCTION SHARE (%)	MANUFACTURE SHARE (%)	SERVICES SHARE (%)	GOVERNMENT SHARE (%)
Carson City	14,313	4.1	0.2	0.2	6.7	6.6	17.3	43.3
Churchill	5,131	1.5	13.7	(D)	7.7	2.9	12.4	41.8
Clark	185,198	53.1	1.7	(D)	5.6	3.0	41.4	17.5
Douglas	13,365	3.8	2.1	(D)	4.1	5.5	68.4	5.5
Elko	8,300	3.4	9.9	2.9	4.0	8.7	27.1	21.1
Emeralda	168	0.1	16.0	(D)	(D)	N.L.	N.L.	36.1
Eureka	620	0.2	70.2	93.7	(D)	(D)	(D)	21.8
Humboldt	3,905	1.1	14.2	(D)	3.3	4.7	18.3	18.9
Lander	1,521	0.4	10.0	39.8	(D)	(D)	3.7	19.5
Lincoln	1,213	0.3	13.7	12.4	(D)	(D)	(D)	36.1
Lyon	3,327	1.0	16.2	16.0	2.6	8.6	7.9	21.8
Mineral	2,555	0.7	1.5	0.6	2.3	(L)	16.5	60.2
Nye	5,661	1.6	3.1	10.4	1.2	0.8	59.5	13.1
Pershing	1,303	0.4	21.9	(D)	0.8	3.1	(D)	22.9
Storey	509	0.1	N.L.	(D)	(D)	2.4	7.5	17.7
Washoe	97,254	27.9	0.3	5.7	7.3	7.0	33.7	15.2
White Pine	3,952	1.1	5.1	17.2	(D)	7.5	12.4	24.0
Total State	348,495	100.0	1.4	1.2	5.7	4.3	37.1	18.4
United States	97,848,874		4.2	3.8	4.0	20.1	17.4	18.2

State = study area.

N.L. = Not listed

Source: Dept. of Commerce, April 1979.

059-1

Table 1.1-5. Nevada employment growth by sector, selected counties, 1967-1977.

COUNTY	TOTAL		AGRICULTURE		MINING		CONSTRUCTION		MANUFACTURING		SERVICES		TOTAL	
	1967	1977	1967	1977	1967	1977	1967	1977	1967	1977	1967	1977	1967	1977
		%	A	A	A	A	A	A	A	A	A	A	A	A
Churchill	3,930	5,131	2.7	642	704	0.9	(D) ²	132	141	0.7	66	151	2.6	634
Clark	97,951	185,198	6.6	389	312	0.8	260	3,910	10,280	10.1	3,661	5,593	4.3	76,550
Elko	6,027	8,300	3.3	755	824	0.9	93	200	335	5.3	62	72	1.7	2,246
Esmeralda	318	368	1.5	45	59	2.7	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Eureka	538	600	1.4	120	125	0.4	195	(D)	(L) ³	(D)	9	(D)	(D)	(D)
Humboldt	3,048	3,005	2.5	400	554	3.3	254	81	127	4.6	(D)	184	(D)	485
Lander	1,086	1,521	1.4	123	152	2.1	(D)	(D)	(D)	(D)	0	(D)	(D)	43
Lincoln	862	1,211	1.5	146	166	1.3	94	(D)	(D)	(D)	(D)	(D)	(D)	67
Mineral	2,965	2,555	1.5	36	39	0.8	63	14	59	15.5	(D)	(D)	(D)	30
Nye	8,919	5,661	1.4	233	175	2.8	370	(D)	69	(D)	23	43	(D)	7,256
Perkins	1,154	1,303	1.2	274	286	0.4	98	18	11	-4.8	(D)	40	(D)	90
White Pine	3,514	3,952	1.2	183	302	5.1	(D)	63	(D)	(D)	(D)	205	(D)	460
Region Total	112,870	198,165	5.8	1,094	1,232	1.1	865	3,973	10,349	10.0	3,684	5,031	2.5	47,818
State Total	200,226	348,495	5.7	4,318	4,748	1.0	3,500	8,164	19,837	9.0 ⁴	6,719	15,136	2.0	74,007
U.S. Total (Millions)	82.5	97.8	1.7	4.6	4.2	-1.2	.6	3.3	3.9	1.6	19.5	19.7	0.1	12.7

1977

¹ = Average annual growth rate.

²(D) not shown to avoid disclosure of confidential information

³(L) Less than 10 wage and salary jobs.

⁴Data in doubt because of large number of data points withheld by disclosure rules.

Source: BFA, April, 1979.

Over the 1967-1977 period, though, high rates of growth in construction employment were observed in Clark, Elko, Mineral, Carson City, Douglas, and Washoe counties. In general, high rates were characteristic of the more urban areas with lower increases in the more rural counties.

Manufacturing employment grew at a rapid rate over the 1967-1977 period, but it accounted for only 4.3 percent of the total in 1977 (Table 1.1-5). The nation's percent share of manufacturing--20.1 percent of total employment--indicates that in this respect, Nevada is atypical. While disclosure rules have limited available data, it is clear that wide differences exist in growth of manufacturing across the counties. Over 1967-1977, average annual growth equalled 4.3 for Clark, 26.9 percent for Carson City, 18 percent in Douglas, and 11.8 percent in Washoe counties, for example, while the state figure over this same period was about 9 percent.

Services grew at the same rate as total employment in Nevada, 5.7 percent per annum over the 1967-1977 period, and this sector clearly dominates state employment (37.1 percent in 1977). The chief contributors were the counties of Clark, Douglas, and Washoe, since the hotels, motels, gaming, entertainment, and related services are concentrated there. These three counties had a service industry growth more rapid than the state as a whole, 6.7 percent per annum for Clark (Las Vegas), 6.2 percent for Douglas, and 6.6 percent for Washoe (Reno) over the 1967-1977 period.

In the government sector, Nevada's 18.4 percent share of the total was almost the same as that for the nation. The variation from county to county is quite large, however, for example, 5.5 percent in Douglas as opposed to 60.2 percent in Mineral County. Government was the major job source in Lincoln and White Pine counties. The government sector has exhibited an average annual growth of 5.2 percent over 1967-1977 -- more than twice that of the United States. Above average growth rates were recorded for Clark and Nye counties.

Utah

Of Utah's total employed work force in 1977, 60.2 percent were working in Salt Lake and Utah counties--two of the seven counties in that state comprising the region of influence (see Table 1.1-6). The remaining five counties, however--Juab, Beaver, Millard, Iron, and Washington--were much smaller contributors to total state employment; their 1977 share equalled only 3.7 percent of the Utah total. Utah had an employment growth rate of 3.5 percent from 1967-1977 (Table 1.1-7), double that for the nation as a whole. Of the ROI counties, Salt Lake and Utah grew fastest, except for Washington County. Other rural counties grew slowly, with Juab County exhibiting a 0.2 percent average annual growth rate--the lowest of all seven ROI counties in the state. Within the ROI, only a small number of jobs were in agriculture; this is consistent with the small shares in Utah and the United States as a whole for this industry. County shares in agriculture were highly variable in Utah, however, ranging from 0.5 percent in Salt Lake to 18.1 percent in Beaver County. In addition to Beaver, other rural counties have had relatively high agricultural employment shares.

The state had a negative rate of growth in agricultural employment from 1967-1977 (Table 1.1-7). This was consistent with national trends. Every county

Table 1.1-6. Total employment and percent share by major economic sectors for selected counties in Utah, 1977.

COUNTY	TOTAL EMPLOYMENT 1977	PERCENT OF TOTAL STATE EMPLOYMENT	AGRICULTURE SHARE (%)	MINING SHARE (%)	CONSTRUCTION SHARE (%)	MANUFACTURE SHARE (%)	SERVICES SHARE (%)	GOVERNMENT SHARE (%)
Beaver	1,726	0.3	18.2	1.3	2.6	8.6	(D)	20.4
Davis	50,061	9.1	2.2	0.1	4.6	9.3	9.2	51.1
Iron	6,517	1.2	9.4	3.9	5.0	6.2	9.8	26.7
Juab	2,150	0.4	13.2	(D)	(D)	25.8	7.3	20.7
Millard	3,416	0.6	30.9	1.8	1.2	6.8	6.4	21.4
Salt Lake	272,043	49.4	0.5	2.3	5.9	13.9	16.8	17.3
Tooele	10,959	2.0	3.1	0.6	10.0	9.7	4.5	57.1
Utah	59,393	10.8	4.6	7.0	6.1	20.0	20.6	16.6
Washington	6,365	1.2	6.9	0.4	7.0	7.9	11.9	21.4
Weber	49,011	8.9	2.3	0.1	4.8	11.4	14.5	30.2
Utah State Total	550,214		3.7	2.7	5.8	13.5	14.7	23.2
U.S.	97,898,874		4.2	4.2	4.0	20.1	17.4	18.2

060

(D) Not shown to avoid disclosure of confidential data.

Source: Bureau of Economic Analysis, April 1979.

Table 1.1-7. Employment growth by sector, selected counties in Utah, 1967-1977.

COUNTY	TOTAL		AGRICULTURE		MINING		CONSTRUCTION		MANUFACTURING		SERVICES		GOVERNMENT	
	1967	1977	1967	1977	1967	1977	1967	1977	1967	1977	1967	1977	1967	1977
Beaver	1,625	1,726	0.5	0.5	(0)	23	(0)	45	(0)	145	(0)	129	(0)	291
Box Elder	49,634	59,661	2.3	1,081	1.3	43	14	11.8	716	2,323	12.5	2,662	4.1	26,429
Iron	4,439	6,417	3.8	631	0.2	344	255	0.4	176	327	6.4	405	4.1	1,154
Utah	2,116	2,156	0.2	33	0.2	166	68	(0)	436	554	2.4	97	153	432
Mojave	2,944	3,415	1.5	1,073	0.2	(0)	62	(0)	61	232	14.3	204	17	688
Salt Lake	186,651	222,033	4.2	1,694	1.1	3,318	6,263	1.5	7,148	16,143	8.5	25,832	3.2	21,953
Tooele	11,514	19,059	0.5	317	0.2	136	79	0.4	59	1,066	6.8	335	4.9	9,254
Wasatch	37,893	52,193	4.3	3,172	1.3	225	417	6.3	1,343	11,899	3.4	7,163	12.3	6,576
Washington	3,956	6,365	4.3	573	0.2	(0)	28	(0)	192	503	10.4	469	27.7	961
Webster	41,667	43,611	6.3	1,337	1.2	17	49	11.2	1,523	2,343	4.4	5,536	1.4	13,866
State Total	391,266	569,214	4.5	23,991	2.1	19,436	11,897	3.7	17,636	31,914	8.9	59,216	4.9	104,014
% Total (in million)	62.7	62.8	1.7	4.6	1.2	3.6	3.8	3.9	11.5	19.7	9.1	12.7	11.9	17.8

1. Average annual growth rates.

(0) - Not shown to avoid disclosure of confidential information.

Source: BEA, April, 1978.

recorded a decline in agricultural employment, ranging from a low of 2.7 percent average annual growth over 1967-1977 in Washington County, to a high of 0.9 percent per annum in Beaver and Iron counties.

Mining has had a small role in the state and ROI county economies. It comprised only 2.6 percent of Utah's total employment in 1977. This share was relatively greater than that of Nevada, but well below that of the United States as a whole. Utah County, with 7.0 percent of 1977 employment in mining, had the largest share, while Washington County's 0.1 percent share was lowest. The state as a whole experienced a 3.7 percent average annual growth rate over 1967-1977 in mining. This was slightly above that of the nation as a whole. Rapid growth in mining employment was observed in Utah County, with the balance of the ROI counties growing less rapidly. Disclosure rules, however, have prevented a full accounting of county-specific mining employment.

Construction accounted for 5.8 percent of total state employment in 1977, well above the nation's 4.0 percent. Millard had the lowest share--1.2 percent--and Washington, the largest--10.0 percent. Salt Lake and Utah counties had shares approximating that of Utah as a whole. The most rapidly growing employment division in Utah was construction, with a 9.9 percent average annual growth rate. The U.S. growth rate, on the other hand, was only 1.6 percent per annum. Utah had an above average growth rate and Salt Lake County was very close to the state average. Only one county--Millard--showed a decline rather than growth in construction employment.

The share of manufacturing employment in Utah was 13.5 percent in 1977, well below the 20.1 percent share recorded for the nation. Iron County's share was the smallest--6.2 percent--while Juab had the largest--25.8 percent. Salt Lake County's share was 13.9 percent, nearly the same as that of Utah, and would be expected, given the dominance of the Salt Lake City metropolitan area within the state. Manufacturing employment in the state grew well, averaging 4.0 percent per annum over the 1967-1977 period. This rate of growth was much greater than the nation's growth rate of 0.1 percent for the same period. Iron, Millard, and Washington all exceeded the state's average growth in manufacturing, while the metropolitan counties of Salt Lake and Utah were close, experiencing 3.9 and 3.6 percent per annum, respectively, over 1967-1977.

Jobs in services equalled about 81,000 in 1977, roughly 14.7 percent of total state employment. This percent share was less than one-half that of Nevada, but only slightly below the 17.4 percent of total U.S. employment recorded in the services industry. Of the ROI counties, only Salt Lake and Utah had service industry shares of their total employment above the state average. Other counties were predominantly rural and, as such, had little demand for a large, well-integrated service industry. Across Utah as a whole, the services division grew rapidly, at 4.9 percent per annum, over the 1967-1977 period. This growth was well above the U.S. growth rate of 3.0 percent. Millard grew the slowest at 0.6 percent and Utah County, the most rapidly with an average annual rate of 5.5 percent. Iron, Juab, Washington, and Salt Lake counties all had above average growth rates in the service industry from 1967-1977.

Government had the dominant share of state employment in 1977. This industry's share of 23.2 percent translates into more than 125,000 jobs and was well

above the 18.2 percent national average for government employment. Of the ROI counties in the state, however, only Iron County had a percent share figure above the 23.2 percent given above for the state as a whole. The government sector grew at a modest 2.1 percent average annual growth rate over the 1967-1977 period. Juab experienced negative growth in government employment over this longer period, while other counties came up to Salt Lake County's 4.2 percent per annum growth figure.

INCOME AND EARNINGS

Earnings trends basically follow employment. Since a detailed analysis of employment by industry has been given above, relatively little additional analysis will be given for earnings.

Because of the emphasis on services in Nevada, the state does not conform to the income and earnings characteristics of other states or the nation. In Nevada, income from the services industry was more than double the national average in 1977. In both Nevada and Utah, however, the economic sectors that grew the fastest between 1967 and 1977 were construction and manufacturing. Except for a decline in agriculture, real earnings from all sectors increased during the 10-year period.

Nevada

Total earnings in Nevada equalled \$4,148.6 million in 1977, but were only about 0.4 percent of the U.S. total. Per capita income for Nevada averaged \$7,980 in 1977, about 14 percent more than the U.S. average of \$7,026. Table 1.1-8 details growth in earnings by major economic sector for Nevada as a whole and by county. Table 1.1-9 presents per capita income and earnings shares by county for 1977.

Utah

Per capita income equalled \$5,943 in 1977, well below that for either the nation as a whole or Nevada. The state as a whole had total 1977 earnings of \$6,010.5 million, only 0.6 percent of the U.S. 1977 total, and slightly above the comparable figure for Nevada. Table 1.1-10 details growth in earnings by major industrial sector for Utah and selected counties over the period 1967-1977. Table 1.1-11 presents per capita income estimates and each industrial sector's share of total 1977 earnings for the state and selected counties.

DESCRIPTION OF OTHER PROJECTS

Major anticipated activities in the region of influence are associated primarily with mineral extraction and processing and/or electrical energy production. High prices of fuel oil have encouraged the search for substitute fuels and technologies for energy production. In the study area, coal, and to a lesser extent, geothermal steam are the major anticipated energy production activities. Precious metals prices have also increased dramatically, encouraging additional mining activities.

These circumstances are magnified in the region of influence. For example, in the Nevada counties of Eureka, Lincoln, Nye, and White Pine, mining activities are over 20 times as high as the national average.

Table 1.1-8. Earnings by major economic sector, Nevada counties, 1967-1977 (in 1977 \$millions).

COUNTY	TOTAL EARNINGS			AGRICULTURE			MINING			CONSTRUCTION		
	1967	1977	GROWTH RATE	1967	1977	GROWTH RATE	1967	1977	GROWTH RATE	1967	1977	GROWTH RATE
Carson City	68.15	159.16	8.7	.076	.069	-1.0	.886	.351	-8.6	3.015	15.862	18.1
Churchill	34.7	49.9	3.5	3.1	4.83	3.3	.16	.07	-2.1	2.5	2.9	1.5
Clark	1230.1	2262.1	6.3	3.37	3.71	1.0	4.64	.4	-15.1	76.26	196.57	9.9
Douglas	80.09	133.47	5.1	1.51	2.11	3.4	(D)	-1.627	(D)	3.53	11.4	12.4
Elko	65.22	85.13	2.5	10.9	3.25	-11.5	1.3	3.0	8.7	3.53	6.0	5.4
Esmeralda	2.77	3.62	2.7	-1.0	.386	3.3	(D)	(D)	(D)	(D)	(D)	(D)
Eureka	7.44	7.33	-0.2	1.91	.70	-9.6	3.27	4.58	3.4	(D)	.065	(D)
Humboldt	31.21	37.38	1.8	3.77	4.63	2.1	3.55	.2	-25.0	1.23	2.012	5.0
Lander	12.86	18.38	3.6	1.37	.89	-4.2	(D)	10.118	(D)	(D)	(D)	(D)
Lincoln	6.9	12.35	6.0	.18	.81	16.2	1.35	2.29	5.4	(D)	(D)	(D)
Lyon	30.74	34.65	1.2	3.52	4.65	2.8	(D)	8.49	(D)	3.66	1.67	-7.6
Mineral	32.19	26.93	-1.9	.002	.212	59.4	.99	-1.306	-49.8	.212	1.35	20.3
Nye	168.8	92.67	-5.8	.917	.714	-2.5	5.34	9.83	6.3	(D)	1.23	(D)
Perkins	11.29	13.99	2.2	2.32	4.08	5.8	1.47	(D)	(D)	.36	.325	-1.0
Storey	3.02	5.24	5.7	.067	0	-20.0	(D)	(D)	(D)	(D)	(D)	(D)
Washoe	646.78	1162.9	5.9	-.423	1.975	37.4	3.38	6.13	9.2	57.57	144.21	9.6
White Pine	37.13	44.95	1.9	1.27	.663	-6.3	(D)	13.65	(D)	.696	.7	0.0
State	2469.0	4148.6	5.3	34.14	33.67	-0.1	54.64	65.398	1.8	159.1	386.27	9.3
U.S.	921,344	1,164,755	2.4	31,950.7	26,163	-2.0	9,715.6	18,115	6.4	54,730.6	69,617	2.4

COUNTY	MANUFACTURING			SERVICES			GOVERNMENT		
	1967	1977	GROWTH RATE	1967	1977	GROWTH RATE	1967	1977	GROWTH RATE
Carson City	.937	11.44	28.4	10.08	27.776	10.7	38.56	73.12	6.6
Churchill	.83	2.1	9.7	2.69	6.69	9.5	16.45	22.02	3.0
Clark	59.18	87.16	3.9	542.28	970.14	6.0	227.93	369.8	5.0
Douglas	1.8	10.06	18.8	61.09	87.32	3.6	3.5	6.95	7.1
Elko	.76	.9	1.7	14.95	23.1	4.4	12.84	18.66	3.8
Esmeralda	(D)	(D)	(D)	(D)	0	(D)	.31	.803	10.0
Eureka	(D)	(D)	(D)	(D)	(D)	(D)	.88	1.302	4.0
Humboldt	(D)	1.85	(D)	5.09	6.514	2.5	6.48	7.788	1.9
Lander	(D)	(D)	(D)	.67	.64	-0.5	2.33	3.37	3.8
Lincoln	(D)	(D)	(D)	.25	.6	9.1	2.7	4.44	5.1
Lyon	2.26	4.17	6.2	(D)	2.69	(D)	4.26	6.26	3.9
Mineral	.11	.129	1.6	3.3	3.3	0.0	23.79	18.15	-2.7
Nye	.46	.423	-1.3	141.3	66.4	-7.5	8.99	7.76	-1.4
Perkins	(D)	.4	(D)	.91	(D)	(D)	2.1	2.65	2.4
Storey	(D)	.11	(D)	.36	.458	2.4	.45	.956	7.8
Washoe	31.33	92.13	11.4	224.09	356.36	4.7	48.82	177.77	6.0
White Pine	(D)	5.67	(D)	3.44	4.05	1.6	6.53	9.43	3.7
State	101.45	216.73	7.6	1016.8	1557.6	4.4	456.43	731.26	4.6
U.S.	269,026	305,747	1.3	135,753	193,746	3.6	151,707	199,470	2.8

Source: Bureau of Economic Analysis, 1979.

570

Table 1.1-9. Per capita income and earnings shares by economic sector, Nevada counties, 1977.

COUNTY	1977 PER CAPITA INCOME	TOTAL 1977 EARNINGS (\$000s)	COUNTY % OF TOTAL	AGRI- CUL- TURE SHARE (%)	MIN- ING SHARE (%)	CON- STRUC- TION SHARE (%)	MANU- FACT- URING SHARE (%)	SERV- ICES SHARE (%)	GOVERN- MENT SHARE (%)
Carson City	\$7,234	\$ 159,163	3.8	0.1	0.2	10.0	7.2	17.5	45.9
Churchill	6,066	49,916	1.2	9.7	0.2*	5.9	4.1	13.4	44.1
Clark	7,735	2,262,502	54.5	0.2	0.1*	8.7	3.9	42.9	16.3
Douglas	9,030	133,472	3.2	1.6	0.5	8.5	7.5	65.4	5.2
Elko	7,464	83,132	2.0	3.9	3.6	7.2	1.1	27.8	22.4
Esmeralda	5,543	3,623	0.1	10.7	(D)	(D)	(NL)	0.0	22.2
Eureka	6,149	7,334	0.2	9.5	62.4	0.1	(D)	(D)	17.8
Humboldt	6,168	37,379	0.9	12.4	0.5*	5.4	4.9	17.4	20.8
Lander	6,059	18,378	0.4	4.9	55.1	(D)	0.0	3.5	18.4
Lincoln	5,843	12,348	0.3	6.6	18.5	(D)	1.3*	4.9*	35.9
Lyon	6,017	34,651	0.8	13.4	24.5	4.8	12.0	7.8	18.1
Mineral	6,568	26,929	0.6	0.8	1.1	5.0	0.5	12.3	67.4
Nye	5,801	93,673	2.2	0.8	10.6	1.3	0.5	71.7	8.4
Pershing	6,437	13,985	0.3	29.2	(D)	2.3	2.9	(D)	19.0
Storey	5,585	5,240	0.1	0.0	(D)	1.0*	2.1	8.7	18.2
Washoe	9,368	1,162,907	28.1	0.2	0.7	12.4	7.9	30.6	25.3
White Pine	6,608	44,954	1.1	1.5	30.4	1.8*	12.6	0.0	21.2
State Total	67,080	\$4,148,586	100.0	3.8	1.6	9.3	5.2	27.5	27.1
United States	67,026	\$1,164,755 ¹		2.2	1.0	6.0	26.2	26.0	27.1

*Estimated.

(D) = Data not provided because of disclosure rules.

(NL) = No listing.

(\$millions)

Source: BEA, April 1979

Table 1.1-10. Earnings by economic sector in selected Utah counties, 1967-1977 (in 1977 \$millions).

COUNTY	TOTAL EARNINGS			AGRICULTURE			MINING			GOVERNMENT		
	1967	1977	GROWTH RATE	1967	1977	GROWTH RATE	1967	1977	GROWTH RATE	1967	1977	GROWTH RATE
Beaver	13.26	13.9	0.5	2.5	.95	-9.2	(D)	.48	(D)	1.13	7.0	
Davis	464.5	602.5	2.6	3.85	3.63	-0.6	.72	.38	11.43	34.6	33.2	
Iron	39.94	54.18	3.1	5.8	.96	-16.5	3.6	4.03	2.8	1.72	4.0	
Juab	15.96	14.33	-1.1	1.68	.83	-6.8	2.96	.2	3.6	1.7	3.3	
Millard	18.43	22.3	1.9	5.8	4.65	-2.2	(D)	.97	1.67	.83	1.9	
Salt Lake	1957.3	3108.3	4.7	9.29	7.31	-2.4	83.84	141.69	176.2	331.3	8.5	
Tooele	129.2	142.6	1.0	.65	1.78	10.6	1.95	.43	3.13	31.12	71.0	
Utah	370.3	640.3	5.6	14.49	9.52	-4.1	3.2	6.6	34.33	63.2	9.3	
Washington	28.36	49.96	5.8	3.25	2.35	-3.2	(D)	.39	2.56	5.81	9.0	
Weber	432.1	452.9	1.3	6.74	2.37	-9.9	.1	1.27	29.3	36.8	3.1	
State	6010.5	6010.5	4.2	119.2	82.4	-3.6	155.4	310.15	7.2	226.7	9.1	
U.S.	921,344	1,164,755	2.4	31,950.7	26,163	-2.0	9,715.6	10,115	6.4	54,730.6	2.4	
COUNTY	MANUFACTURING			SERVICES			GOVERNMENT					
	1967	1977	GROWTH RATE	1967	1977	GROWTH RATE	1967	1977	GROWTH RATE			
Beaver	(D)	.96	(D)	.94	.9	0.0	2.29	3.03	3.9			
Davis	13.68	69.88	4.8	20.04	48.38	9.2	343.5	349.67	0.2			
Iron	2.19	3.71	5.4	4.48	6.14	3.2	9.9	15.95	1.2			
Juab	4.53	5.16	1.3	.64	1.13	5.8	2.66	3.08	1.2			
Millard	.52	1.45	10.8	1.44	1.57	0.9	4.67	5.57	1.8			
Salt Lake	313.1	495.5	3.7	297.8	492.3	5.2	301.6	458.4	4.3			
Tooele	7.22	17.93	9.5	3.03	4.06	3.0	104.3	86.14	1.3			
Utah	118.2	202.0	5.5	75.85	145.3	6.7	58.81	87.6	1.1			
Washington	1.44	5.39	14.1	3.83	7.23	6.6	7.47	11.42	1.3			
Weber	57.66	69.22	1.8	55.86	72.96	2.7	149.2	154.7	0.3			
State	657.7	1011.2	4.4	510.	856.5	5.3	1102.8	1339.8	2.2			
U.S.	269,626	305,747	1.1	115,753	193,246	3.6	151,707	199,470	2.9			

Table 1.1-11. Per capita income and earnings shares by economic sector, selected Utah counties, 1977.

COUNTY	1977 PER CAPITA INCOME	TOTAL 1977 EARNINGS (000s of \$)	COUNTY OF PERCENT TOTAL	AGRICULTURE SHARE (PERCENT)	MINING SHARE (PERCENT)	CONSTRUCTION SHARE (PERCENT)	MANUFACTURING SHARE (PERCENT)	SERVICES SHARE (PERCENT)	GOVERNMENT SHARE (PERCENT)
Beaver	5,114	13,900	0.2	6.9	3.4	8.2	6.9	5.8	21.8
Davis	5,860	602,505	10.0	0.6	0.1	6.6	11.6	8.0	58.0
Iron	4,693	54,175	0.9	1.8	7.4	8.4	6.8	11.3	29.4
Juab	3,797	14,328	0.2	5.8	4.9	2.8	36.0	7.9	21.5
Millard	3,978	22,296	0.4	20.8	4.3	3.6	6.5	7.0	25.0
Salt Lake	6,712	3,108,320	51.7	0.2	4.6	8.7	15.9	15.8	14.7
Tooele	5,684	142,636	2.4	1.2	0.3	14.8	12.6	2.8	60.4
Utah	4,854	640,317	10.7	1.5	1.0	9.2	31.5	22.7	13.7
Washington	4,381	49,961	0.8	4.7	0.8	11.0	10.8	14.5	22.9
Weber	6,158	492,894	8.2	0.5	0.3	7.5	14.0	14.8	31.4
State	5,943	6,010,516	100.0	1.4	5.2	9.0	16.8	14.2	22.3
U.S.	7,026	1,164,755,000		2.2	1.6	6.0	26.2	16.6	17.1

575-1

Source: BEA, 1979.

Future projections have been separated into Baseline 1 and Baseline 2. The first set of projections are essentially an extrapolation of 1967-1978 growth trends in the Nevada/Utah region of influence (ROI). As noted below, Baseline 1 includes the following:

Baseline 1

- o Continuation of 1967-1978 growth trends
- o Construction of Anaconda Nevada Molybdenum Project (Nye County)
- o Metal mining in Eureka, White Pine, and Lander counties
- o Expansion of oil and gas activity, minerals exploration
- o Exploration of the Utah portion of the ROI

Baseline 2

- o Baseline 1

White Pine County

- o White Pine Power Project
- o Reopening Kennecott Copper Company mine

Millard County

- o Intermountain Power Project
- o Continental Lines Cement Plant
- o Brush Beryllium expansion
- o Precision-Built Modular Homes
- o Martin-Marietta Cement Plant

Juab County

- o General Battery
- o UFCO Coal Loading Facility

Beaver County

- o Geothermal Power
- o Molybdenum Mining
- o Alunite mining and processing

Baseline 2, a high growth scenario, includes Baseline 1 plus the realization of the additional future events given above. There is a degree of uncertainty regarding each of these projects, though some may be more likely than others. The project list was discussed and coordinated with the Utah State Planning Coordinator's Office and University of Utah's Bureau of Business and Economic Research. This study's Baseline 2 corresponds with their Baseline 3. Other projects currently planned, but not explicitly assessed, include the following:

Allen Warner Valley Complex, 1985-88

- o Alton Mine, south Utah
- o Warner Valley Power Plant, St. George, Utah
- o Allen Power Plant, Clark County, Nevada
- o Coal slurry lines from mine to plants
- o Transmission lines from plants to Southern California

Rocky Mountain Pipeline, proposed: 1985

- o Wyoming to Southern California
- o Cove Fort Geothermal Power Plant, Millard County, Utah, 1984
- o Reid Gardner Power Plant #4, Clark County, Nevada, 1983
- o Mountain Fuel Coal Gasification Plant, 1990
- o Valmy Power Plant, Valmy, Nevada, mid-1980s
- o Mormon Mesa Solar Power Plant, proposed

In general, projects in addition to those considered for Baselines 1 and 2 were not considered because either their effect on employment was expected to be negligible, their probability of realization was deemed relatively low, or their principal effects were expected outside the Nevada/Utah ROI.

In Nevada, major opportunities for development are anticipated in minerals and energy production, particularly in the rural counties. In the Nevada study area, four large projects are anticipated: the White Pine Power Project, reopening of Kennecott Copper Company mine near Ruth, and metal processing in McGill, all located in White Pine County; and the Anaconda Nevada Molybdenum Project in Nye County. Table 1.1-12 presents employment projections of these three projects. Economic growth and changes will be pronounced in White Pine County from cumulative effects of the two projects there; employment growth is projected to equal as much as 5,800 jobs, over one-half of current county employment levels.

Fluctuations in the value of precious minerals can greatly affect the economics of Nevada's rural counties. Nevada mineral output dropped substantially from 1977 to 1978, largely because of the shutdown of Kennecott Copper Company mining operations in White Pine County. Depressed copper prices and increased production costs of meeting clean air regulations were the major factors in contributing toward this closure. In 1978, gold replaced copper as Nevada's leading mineral commodity for the first time in 50 years. Nevada ranked first in the nation in the production of barite, magnesite, and mercury, and second in gold.

Although mining employment in rural counties is a small percent of the total, the mining sector has major effects on other sectors of the economy, particularly construction and manufacturing. In general, employment in the mining sector includes only mineral extraction. Ore concentration is included in the manufacturing sector except in certain cases where the ore concentration process is located on the mineral extraction site. Basic metals refining is normally included in the manufacturing sector.

Mining activities have strong backward linkages with the construction industry. Prior to development of a major mineral deposit, large numbers of construction workers may be required for mine construction and ancillary minerals-processing plants. These workers will require housing and other services, adding to the construction impacts.

Economic activity is highly concentrated in mining in Eureka, Lincoln, Nye, and White Pine counties. This concentration could well increase in the 1980-1990 decade, due to the recent escalation of the prices of gold, silver, and other precious metals. Future development of opportunities would likely stress minerals development.

Current economic activities have centered on mineral production possibilities in Nevada, particularly in the rural counties. Current minerals exploration in

Table 1.1-12. Cumulative employment effects of selected major projects in the Nevada ROI counties, 1980-1990.

NEVADA	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	COMMENTS
Nye County												
Anaconda Nevada Molybdenum Project	990	1,040	970	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	Molybdenum production: mine and mill 20,000 tons of ore per day.
White Pine County												
White Pine Power Project	—	—	—	—	120	620	1,450	2,490	2,150	1,350	920	1,150 MW coal-fired power plant - coal by unit train.
Kennecott Mine Reopening and Metal Processing	1,990	2,500	3,190	3,220	3,260	3,300	3,330	3,370	3,410	3,450	3,490	Copper production
County Total	1,990	2,500	3,190	3,220	3,380	3,920	4,780	5,860	5,560	4,800	4,310	

Sources: ABT Associates, Inc., November 1979; Baker III, A., et al, January, 1973; Barone, R., et al, July, 1979; Bryant, C., February 26, 1980; Office of State Inspector of Mines, Nevada, January, 1979; Tilzey, E., February 26, 1980; Williams, J., February 8, 1980; Willie, J., February 26, 1980; Bureau of Business and Economic Research, College of Business, University of Utah, July 18, 1980.

Nevada is proceeding at an annual rate of over \$100 million, and \$15 million is being spent on geothermal exploration. Although most geothermal exploration activities have occurred outside of the Nevada ROI counties, this may be more an indicator of feasible applications of geothermal energy than an indicator of potential geothermal supplies. Increased economic activities in the ROI counties would tend to operate together with increased exploration and development of geothermal resources.

In Utah, projected employment impacts of selected projects included in Baselines 1 and 2 are presented in Table 1.1-13. It indicates that Intermountain Power Project (IPP) is expected to have the largest effects, with a peak employment of 3,200 jobs in 1986. However, the Pine Grove Molybdenum Project, with a sustained employment level of 1,000 persons during operations, would also produce significant employment growth in a comparably rural setting.

Table 1.1-14 presents Nevada/Utah employment projections for Baselines 1 and 2 for selected years through 1995. Growth diverges significantly only during the first 5-year forecast period where under Baseline 2 total ROI employment reaches 802,700 in 1985, compared to 786,900 for Baseline 1. In either case, however, annual employment growth forecasts are well below Nevada state's 5.7 percent average rate over the 1967-1977 period, but above Utah's 3.5 average rate over the same period (see Table 1.1-14). Subsequently, over the 1985-1990 period, employment growth under Baseline 2 dips below that of Baseline 1. In this period under Baseline 2, the economies of the Nevada/Utah ROI would be readjusting from rapid project growth, particularly the build-up of White Pine Power and IPP during the earlier forecast period. Over the 1990-1995 period, both employment growth scenarios are projected to yield average annual growth rates of 2.0 percent.

Table 1.1-14 indicates that only slight changes are forecast in sectoral employment shares over the forecast period. Only the percent of total ROI employment in government is forecast to decline by more than one percent over the entire 1980-1995 period, while only services' percent share is projected to increase by more than one percent.

Public Finance

Nevada

The major sources of revenue for Nevada are taxes from sales, use, and gaming, which, together, account for over three-quarters of the state's general fund revenues. In Utah, sales and income taxes account for nearly three-fourths of the total revenues. For both states, the largest expenditure is for education, followed by social services.

General fund revenues and expenditures of the state of Nevada are presented in Tables 1.1-15 and 1.1-16. Revenues accruing to the general fund grew at an annual average rate of 24.3 percent between 1976/77 and 1978/79. This increase was paced by increases in the fund's principal revenue sources, sales and use tax collections, and state gaming revenues. While the state can expect continued growth in their overall revenue levels, recent legislation abolishing the state property tax and sales tax levies on food purchases (effective July 1, 1979) will effectively lower the rate of growth of the state's general fund revenues and result in increased dependence on the tourist and gaming related revenue sources.

On the expenditure side, general fund expenditures grew at an annual average rate of 9.3 percent between 1976/77 and 1978/79. Much of this increase is accounted

Table 1.1-13. Cumulative employment effects of selected major projects in Utah ROI counties, 1980-1990.

UTAH	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	COMMENTS
Beaver County												
Alunite Mining and Processing	—	—	—	—	—	—	130	1,170	1,800	1,140	1,350	Alunite production; mine, mill and process 12,000 tons of ore/day.
Roosevelt Hot Springs Geothermal Energy Exploration and Power Plant	—	90	110	80	90	100	100	100	100	100	100	4-year energy exploration; 20 MW geothermal power plant
Pine Grove Molybdenum Project	—	950	1,000	950	1,000	1,000	1,000	1,000	1,000	1,000	1,000	Molybdenum production; mine and mill 10,000 - 30,000 tons of ore/day (estimate from Anaconda Moly).
County Total	—	1,040	1,110	1,030	1,090	1,100	1,230	2,270	2,900	2,240	2,450	
Millard County												
Intermountain Power Project	—	—	170	330	1,200	2,400	3,200	3,100	2,600	1,900	900	3,000 MW coal-fired power plant
Continental Lime Cement Plant	50	40	80	80	80	80	80	80	80	80	80	Cement production.
Martin Marietta Cement Plant	550	640	620	160	160	160	170	170	170	170	170	Cement production.
Precision Build Modular Home Manufacturing	140	130	120	120	120	130	130	130	130	130	130	Modular Home Manufacturing
County Total	740	810	990	690	1,560	2,770	3,580	3,480	2,900	2,280	1,100	

Sources: HDR Sciences, July, 1980 and Bureau of Economic and Business Research, University of Utah, July 16, 1980.

Table 1.1-14. Employment projections by major industry, by place of residence, baseline 1 and 2, Nevada/Utah ROI, 1980, 1985, 1990, and 1995 (as a percent of total employment).

INDUSTRY	1980		1985		1990		1995	
	BASELINE	BASELINE	BASELINE	BASELINE	BASELINE	BASELINE	BASELINE	BASELINE
Agriculture	1.4	1.4	1.2	1.2	1.1	1.1	1.0	1.0
Mining	1.7	1.7	1.6	1.6	1.6	1.9	1.6	1.9
Construction	6.3	6.3	6.4	6.9	6.5	6.4	6.6	6.5
Manufacturing	10.1	10.1	9.9	9.9	9.9	9.8	9.8	9.8
Transportation	6.0	6.0	6.0	6.0	6.1	6.1	6.1	6.2
Trade	22.0	22.0	21.9	21.7	21.9	21.8	21.9	21.6
Finance, Insurance and Real Estate	4.5	4.5	4.7	4.7	4.7	4.7	4.8	4.6
Services	27.3	27.2	27.9	27.6	28.4	28.3	29.0	28.5
Government	15.3	15.3	14.9	14.8	14.4	14.4	13.9	13.6
Non-Farm Proprietors	5.4	5.4	5.5	5.4	5.5	5.4	5.4	5.4
Total Employment	650,400	651,700	786,900	802,700	876,700	886,500	967,700	978,200
Average Annual Growth (percent) of Total Employment	1980-1985		1985-1990		1990-1995			
Baseline 1	3.9		2.2		2.0			
Baseline 2	4.3		2.0		2.0			

Source: Bureau of Business and Economic Research, University of Utah, October 1980.

3591

Table 1.1-15. General fund revenues, state of Nevada, 1976-1979 (\$000).

REVENUE SOURCE	1976-1977	1977-1978	1978-1979
Taxes			
Property Tax ¹	9,137	10,287	11,022
Sales and Use Tax ²	77,020	95,198	116,459
Gaming - State	74,937	90,873	112,056
Other	31,916	36,498	41,406
Subtotal Taxes	193,010	232,856	280,943
Licenses	2,670	4,010	4,051
Fines and Fees	607	584	600
Charges for Services	654	442	623
Interest on Bank Deposits	4,947	7,301	13,646
Other ³	896	1,991	1,342
TOTAL	202,784	247,184	301,205

1491

¹State property tax abolished effective July 1, 1979.

²Food purchases exempt effective July 1, 1979.

³Petroleum Products Inspection, Federal Power Receipts, Hoover Dam.

Source: Summary of General Fund Revenue and Expenditures, Selected Years, Nevada State Office of the Budget.

Table 1.1-16. General fund appropriations and gaming authorizations, state of Nevada (\$000).

	1976-1977	1977-1978	1978-1979
General Government			
Executive	7,381.1	8,706.0	9,761.1
Legislative and Judicial	3,849.2	4,530.1	7,990.6
Sub-Total	11,230.3	13,236.1	17,751.7
Education			
University System	43,925.2	46,929.2	51,992.2
Department of Education	66,543.2	75,449.7	84,218.9
Other	1,199.1	1,372.8	1,546.0
Sub-Total	111,667.5	123,751.7	137,757.1
Human Resources			
Health Division	4,097.4	4,759.0	5,415.4
Mental Hygiene and Mental Retardation Administration	10,473.6	13,175.7	13,558.8
Welfare	15,868.7	22,117.1	23,790.3
Rehabilitation	1,675.7	2,288.4	2,609.6
Youth Services	5,774.2	6,488.3	6,778.5
Other	246.5	289.7	296.6
Sub-Total	38,136.1	49,118.2	52,449.2
Public Safety			
Regulatory	5,042.3	6,710.5	7,210.9
Conservation and Agriculture	4,460.5	6,608.9	8,197.9
Miscellaneous	44,799.2	8,550.2	27,410.1
Total General Fund Appropriations¹	224,589.9	220,961.0	266,232.6

1492

¹Less capital improvements.

Source: Summary of General Fund Revenue and Expenditures, Selected Years, Nevada State Office of the Budget.

for by the 9.0 percent annual average growth in education expenditures, which additionally accounts for over fifty percent of the general fund total expenditures. Human resource outlays account for the other major expenditure category, 19.7 percent of total expenditures in 1978/79, increasing its share of total expenditures from the 1976-77 level of 17.0 percent.

Utah

Utah general fund, transportation fund, and uniform school fund revenues are presented in Tables 1.1-17, 1.1-18, and 1.1-19. These three funds accounted for approximately \$615.7 million in 1977/78 for an average annual rate of growth of 2.3 percent between 1975/76 and 1977/78. Principal revenue sources accruing to each fund are the sales and use tax (general fund), approximately 80.4 percent of the total in 1977/78, motor fuel taxes (transportation fund), 65.3 percent of the total in 1977-78 and income tax revenue (Uniform School Fund), 82.9 percent of the total in 1977-78. For all funds, sales tax and income tax revenues account for almost three-quarters of total revenues, increasing their share of total revenues from the 1975/76 level of 69.1 percent.

State of Utah expenditures totaled approximately \$1.1 billion in 1977/78 representing an annual average rate of growth of 16.8 percent between 1976/77 and 1978/79 (Table 1.1-20). Much of this increase was due to increased expenditures on public education (30.6 percent average annual rate of growth) and social services (23.0 percent average annual rate of growth), which together comprised over 58 percent of total expenditures in 1978.

1.2 POPULATION

Because of a low baseline figure, population growth totals such as those being experienced in Nevada, produce extremely high growth rates. Rapid growth has been due primarily to in-migrants from other states and has been concentrated mainly in Clark and Washoe counties. Rural areas have attracted few new settlers. Utah has been experiencing population increases as well, but primarily from natural increase rather than from in-migration.

Projections indicate that Nevada's high growth rate will continue with the population exceeding one million people by 1990. Growth in number of households should exceed growth in population since it is expected that the average size of households will continue to diminish. Both natural growth and in-migration are expected to continue to add to the total population and households.

NEVADA

During both the 1950s and 1960s, Nevada's population grew by more than 70 percent, though it remains only 47th in size among the 50 states. In spite of a birthrate slightly above, and a death rate slightly below, the national averages, this growth was largely the result of a steady influx of people from other states. The impact of this in-migration has been felt most strongly in Reno and surrounding Washoe County and in Las Vegas, in Clark County, which more than doubled in population in each decade after 1940. In 1970, about 80 percent of the Nevadans were urban, 73 percent of them engaged in the economies of those two metropolitan areas.

Table 1.1-17. General fund revenues, state of Utah, 1976-1978 (\$000).

REVENUES SOURCE	1975-1976	1976-1977	1977-1978
Sales and Use Taxes	197,588 ³	227,805	260,200
Credits and Exemptions ¹	2,789	2,011	9,100
Net Sales Tax Revenue	194,799	225,894	251,100
Liquor Profit	10,456	10,580	11,200
Cigarette and Tobacco Taxes	7,471	7,679	7,900
Insurance Premium Tax	8,384	10,098	11,400
Mine Occupation Taxes	8,486 ⁴	8,489	9,000
Interests on Investments	9,500	5,596	7,500
Inheritance Taxes	3,461	5,564	5,000
Beer Taxes	1,693	1,905	2,200
Other ²	4,572	5,171	11,500
TOTAL	248,832	286,876	312,300

1493

¹Food tax and utility credits.

²Fines, fees, licenses, permits.

³"Medicine" exempt from sales tax effective April 1, 1976 (est. \$2.7 million).

⁴

Source: Summary of General Fund Revenues, Utah Department of Finance.

Table 1.1-18. Transportation fund revenues, state of Utah, 1975-1978 (\$000).

REVENUE SOURCE	1975-1975	1976-1977	1977-1978
Motor Fuel Taxes	43,515	45,694	48,500
Special Fuel Taxes	6,241	6,865	7,656
Motor Vehicle Registration ¹	8,758	10,570 ³	9,600
Other ²	5,573	7,631	8,444
TOTAL	64,087	70,760	74,200

1494

¹Subject to B & C Road Allocation.

²Temporary and special permits; drivers license fees; interest on Treasurers investments (since 1975).

³Reflects prior years of collections of \$1.3 million.

Source: Summary of Transportation Fund Revenues, Utah Department of Finance.

Table 1.1-19. Uniform school fund revenues, state of Utah, 1975-1978 (\$000).

REVENUE SOURCE	1975-76	1976-77	1977-78
Net Income Tax Revenue	\$140,562 ¹	\$158,268 ²	\$190,000
Corporate Franchise Tax	21,502	24,867	26,500
Other	10,318	14,579	12,652
Total	\$172,382	\$197,714	\$229,152

1495

¹Reflects increase in general one-half of one percent in each taxable bracket for 1975 tax year.

²Tax rates reduced by one-quarter of one percent in each taxable bracket for 1976 tax year.

Source: Summary of Uniform School Fund Revenues, Utah Department of Finance.

Table 1.1-20. State of Utah, summary of expenditures, 1975-1978 (\$000).

EXPENDITURE FUNCTION	1975-1976	1976-1977	1977-1978
Legislative	1,789	2,580	2,365
Executive and Judicial	8,975	9,238	13,242
Government Operations	49,489	47,910	71,927
Public Safety	16,105	21,917	22,052
Social Services	155,276	187,319	226,648
Public Education	262,346	285,139	423,126 ³
Higher Education	146,865	141,086	158,689
Natural Resources	25,677	26,100	33,949
Business Labor and Agriculture	10,362	12,831	14,347
Development Services	3,918	4,412	5,390
Transportation	133,947	135,500	126,549
Debt Service	9,607	9,422	9,278
Other	12,595 ¹	9,404 ²	9,974 ⁴
Total	836,951	892,858	1,117,536

1496

¹Appropriations out of surplus.

²Includes Building Board outlays (\$790,000) and Building Board projects (\$8,612,800).

³Includes local property tax participation in minimum school program and Critical School Building Program outlays (\$12,400,000).

⁴Reflects other building outlays.

Source: Summary of Expenditures, State of Utah, Department of Finance.

Nevada had a 1975 population of 593,000 persons, ranking it 47th in the nation; however, it ranked 7th in terms of land area. The state population density was five persons/mi², with only the states of Alaska, Wyoming, and Montana having lower values. Over 80 percent of the total population is classed as urban, much of which is concentrated in two metropolitan areas: Las Vegas (with 56 percent of the state's 1976 estimated population), and Reno (with 24 percent of the 1976 state population). Of the 21.1 percent total population increase that took place in the state between 1960 and 1970, 15.7 percent was accounted for by net migration and only 5.3 percent by natural increase.

The proportion of people of Spanish heritage in Nevada stands at 5.6 percent, 1 percent above the national average but well below the values of such surrounding states as California (15.5 percent) and Arizona (18.8 percent). The population pyramid illustrated in Figure 1.2-1 describes the age/sex breakdown for the state of Nevada for the years 1950, 1960, and 1970. This population pyramid displays a number of significant changes which have occurred in the structure of the population. The median age of the population has systematically declined over the years, more rapidly for males than females. In 1950, there was a significant underrepresentation of both sexes in the age category 10-25 years and an overrepresentation of both sexes in the age category 25-39 years. This excess is more pronounced for females than males. These two anomalies are also present in 1960 but are much less pronounced. There is a significant increase in the young population ages 0-15 years and equally noticeable reductions in the age group 20-44 years. By 1970, the structure of the population is much more normal, with a further reduction in the age group 30-44 and increase in the category 5-24 years. In addition, there had been a dramatic reduction in the proportion of infants aged 0-4 years from over 10 percent and 11 percent in the 1950 and 1960 periods respectively, to 9 percent in the 1970s.

The fact that some counties experienced high migration rates tells nothing about the origins of the in-migrants and destinations of the out-migrants. Such information is available for the period 1965 - 1970 for groups of counties called State Economic Areas (SEA). Nevada is divided into two SEAs, one constitutes all the counties except Clark and the other consists of Clark County alone.

Between 1965 and 1970, 110,078 persons migrated into the state of Nevada from other states. Of this total, 64,081 settled in SEA 'A' (Clark County) and 45,997 in the balance of the state (SEA No. 1). Some states are more important migrant sources than others. Twenty widely dispersed states contributed between 1 percent and 5 percent of the total number of in-migrants. They include the nation's industrial heartland (Illinois, Michigan, Ohio, Pennsylvania, New York, and New Jersey), Kansas and Missouri in the Midwest, Florida in the Southeast, all of the states of the west census region with the exception of Wyoming and all but Arkansas in the west southcentral census division. Utah contributes over 5 percent of Nevada's in-migrants but California is the single most important source contributing over 39 percent of total in-migration to Nevada.

Clark County (Nevada SEA 'A') attracts in-migrants in essentially the same manner as the state as a whole although Arizona and Utah contribute in excess of 5 percent of the in-migrants. California contributes 30 percent of all in-migrants to SEA 'A'. The rest of Nevada exhibits a somewhat different pattern of attraction. Some of the more distant migrant sources have disappeared (Massachusetts,

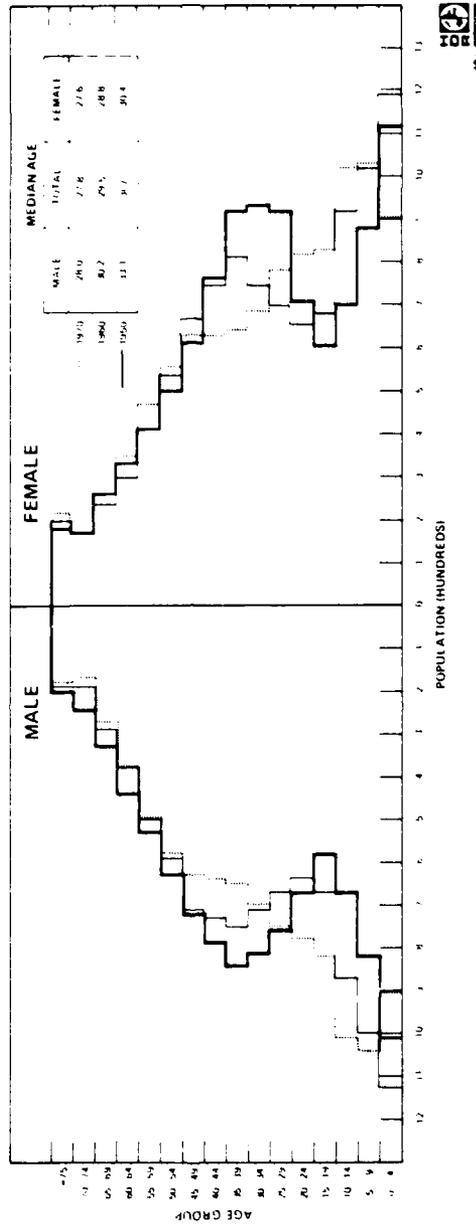


Figure 1.2-1. Nevada: population age and sex characteristics, 1950, 1960, 1970.

Pennsylvania, New Jersey, Missouri, and Florida), and California contributes 52 percent of all in-migrants to this area.

The pattern of out-migrants from Nevada is similar to that for in-migrants although there is heavy out-migration to Texas, Arizona, Washington and Utah. Migrants leaving Clark County exhibit a pattern virtually identical to that for the state as a whole. Emigrants from the rest of Nevada (excluding Clark County) share a less spatially extensive distribution and have a heavy concentration in Washington, Oregon, and Utah.

In summary, for the state as a whole, all but nine states have negative net migration with regard to Nevada, i.e., they supply more migrants to Nevada than they return. Those states that receive more migrants from Nevada than the number they supply are, in order of their importance: Washington, Texas, Idaho, Oregon, Oklahoma, Indiana, Florida, Tennessee, and Missouri.

Nevada SEA No. 1 had negative net migration with respect to 25 states, although in total it experienced a net in-migration of about 5,300 people including an equal number of males and females over the five-year period 1965 - 1970. The states to which the area lost population have been concentrated in the west (California is an exception) and the south (see Figure 1.2-2).

It is important to consider the composition of the in- and out-migrant populations since this has bearing on future labor supply, demands on educational systems, and a host of other characteristics that may interact with M-X impacts. This information is displayed with the age/sex pyramid in Figure 1.2-3. Net in-migration occurs in 10 of the 14 age categories for the female population and 11 of the male categories. The largest in-migration figures occur in the categories 10-19 years and 45 years and over. In-migration is well above out-migration in the first three age categories and the last four but is about in balance in the age groups 20 to 34 years. The largest imbalance is for people 45 years of age and over.

It is projected that the state's population will more than double from 1975's 593,000 persons to 1,193,000 persons by 1990 (Nevada State Planning Coordinator's Office, 1978). The household size is expected to decrease, however, causing the number of households to increase more rapidly than the population.

UTAH

The 1970 census statistics for Utah were similar to those for the country as a whole. The number of preschool children declined during the 1960s, while the number of persons over 65 increased. Birth rates and death rates declined, though the former remained well above, the latter well below, national averages. For the most part, those counties with the highest growth rates over the 1960-1970 period also had the highest ratio of young to old persons, suggesting that young people, unmarried or married, were migrating elsewhere and leaving older persons in the rural counties, mainly in the central and southern portions of the state. Although Salt Lake City lost population, its surrounding county grew by 20 percent. About 70 percent of the Utah population lived in communities of 2,500 or more, with more than three-quarters of the population centered in the Wasatch Front counties of Davis, Morgan, Tooele, Salt Lake, and Utah.

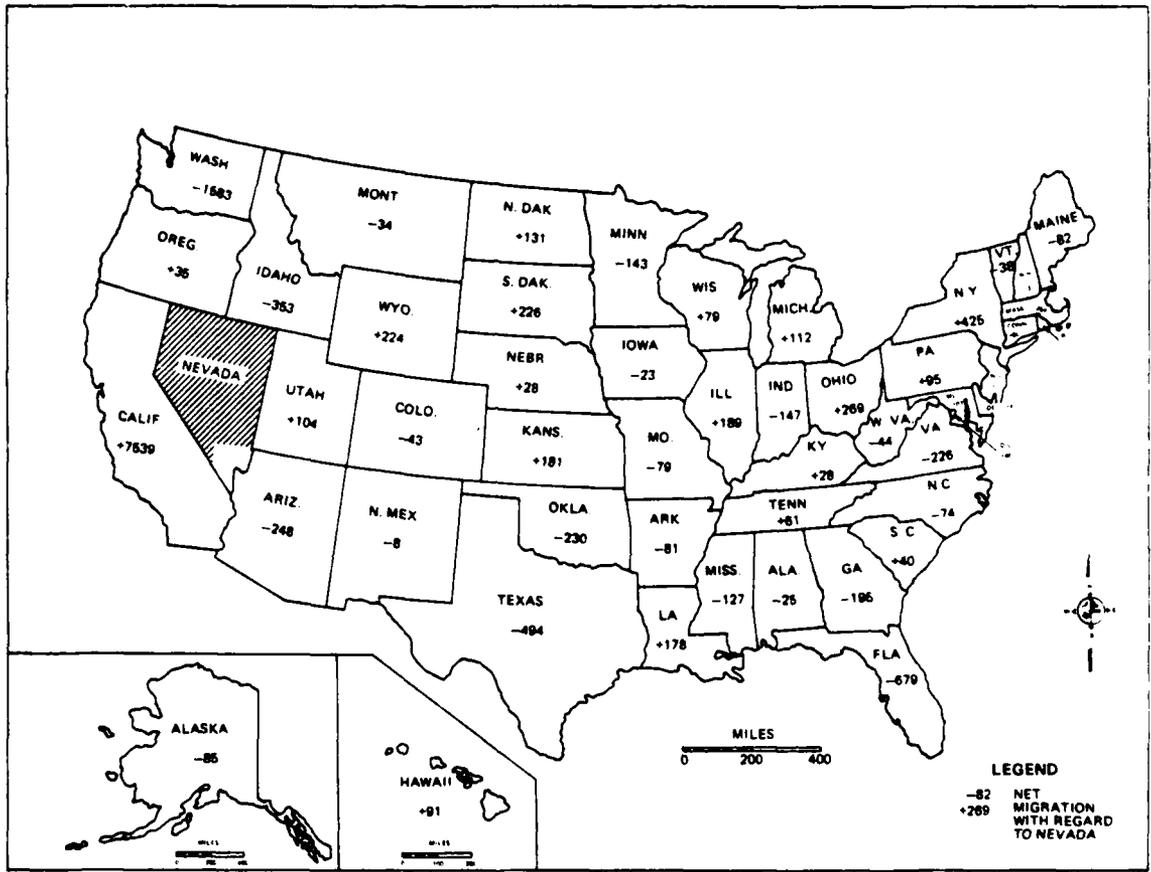


Figure 1.2-2. Net migration into Nevada SEA No. 1 during the 1965-1970 period.

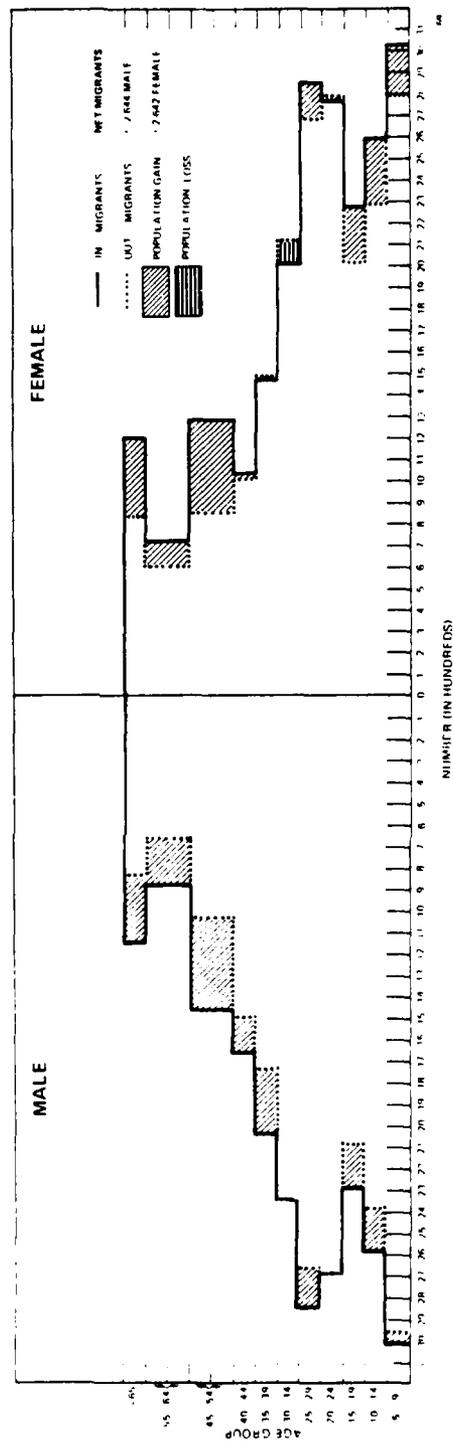


Figure 1.2-3. Age and sex characteristics of in/out-migrant populations.

Utah's population equaled 1,270,000 persons in 1977 (Utah Industrial Development Information System, 1978). Although Utah registered a 2.6 percent annual rate of growth over the 1970-1977 period, well above the U.S. average, it ranked behind the growth experienced in the adjacent mountain states of Nevada, Arizona, Wyoming, and Idaho. Over 1960-1970, Utah experienced a population growth rate of 1.7 percent per year. This growth was principally derived from natural increase. Population growth resulting from the excess of births over deaths, as opposed to net migration, took place in 9 of the 10 counties, just the reverse of that in Nevada. In addition, although net migration was small in most counties, it was negative only in Tooele and Weber.

The median age of Utah's population has fluctuated from 25.1 years in 1950 to 22.9 years in 1960, and 23.1 years in 1970 (Figure 1.2-4). In addition, the proportion of both male and female population 45 years of age and over has increased between successive time periods, the proportion of persons aged 25 to 45 has generally decreased, and the population between ages 10 and 25 years has systematically increased. Finally, the dramatic reduction of the age category 0-10 years is evident in Utah as in other areas.

Large-scale out-migration from Utah is concentrated in neighboring states of Colorado, Arizona, California, Nevada, Idaho, and Washington, each of which receive 5 percent of Utah's total out-migrants. The South Atlantic, East South Central, and West North Central divisions receive very few migrants, whereas several states in the Middle Atlantic and East North Central receive over 1 percent of Utah's out-migrants. The pattern of states sending migrants to Utah is very similar to that of out-migration but the absolute numbers vary dramatically in some cases, e.g., 3,863 in-migrants from Washington state versus 8,650 out-migrants from Utah to Washington, 4,875 in-migrants from Arizona vs. 7,262 out-migrants from Utah to Arizona and 12,948 in-migrants from Idaho to 9,560 out-migrants from Utah.

To determine the origin and destination of in-migrants, Figure 1.2-5 details the Utah SEA, which contains five of the ROI counties: Beaver, Iron, Juab, Millard, and Washington. The geographical pattern of in-migrants and out-migrants for SEA 3 is not significantly different than that for the state as a whole. Figure 1.2-5 shows the distribution of net migration. States contributing substantially to this net out-migration are Washington (-3,634), Texas (-250), Wyoming (-248), and Arizona (-238). The age/sex composition of in- and out-migrant population for SEA 3 is shown in Figure 1.2-6.

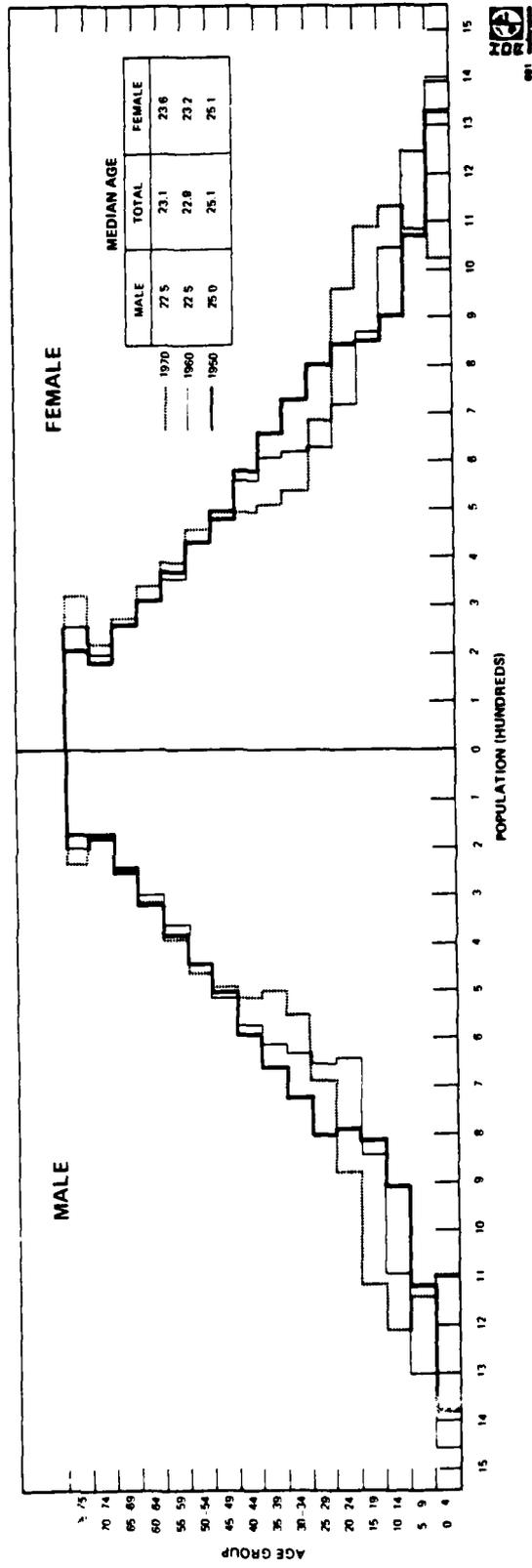


Figure 1.2-4. Population age and sex characteristics, Utah counties, 1950, 1960, 1970.

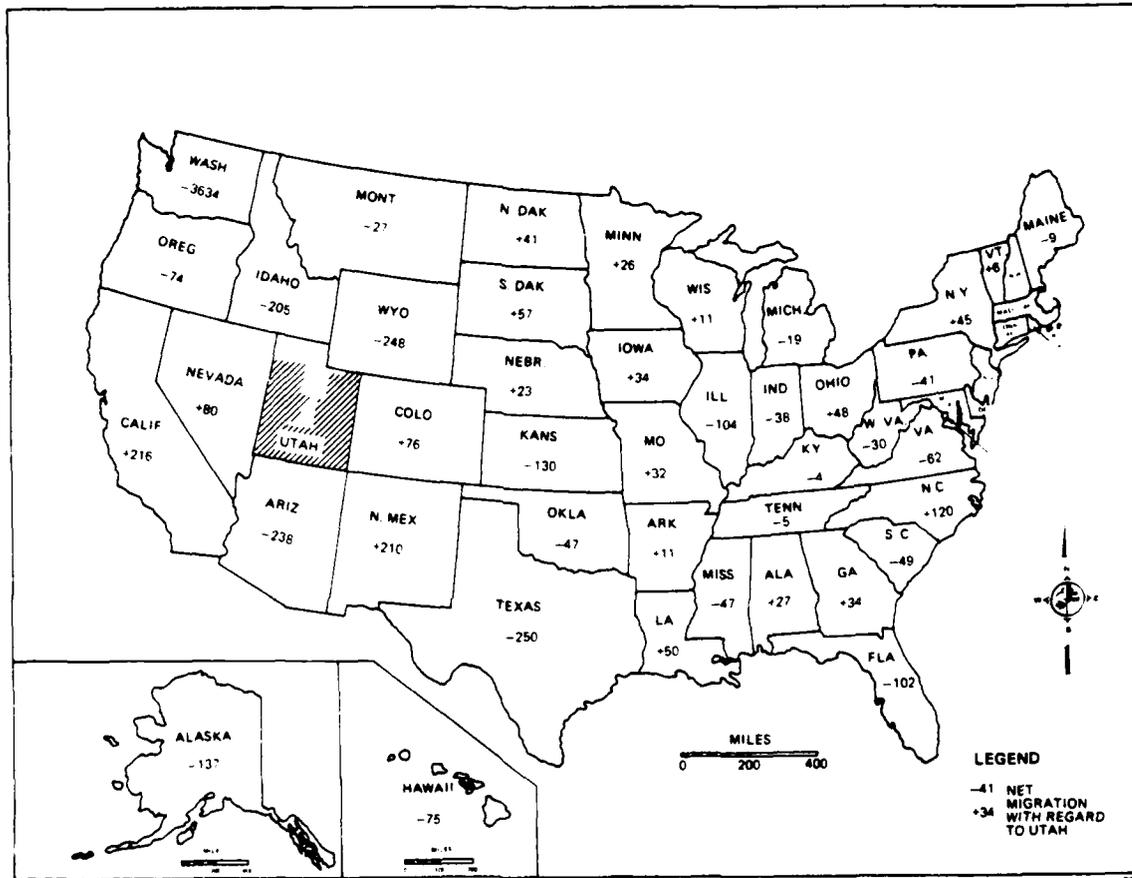


Figure 1.2-5. Net migrations into Utah during the 1965-1970 period.

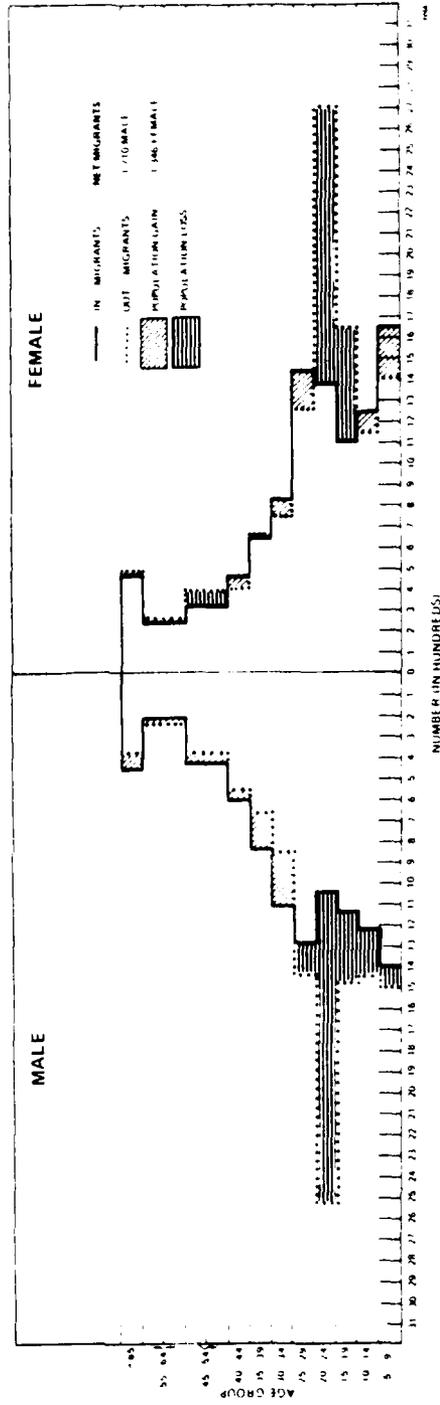


Figure 1.2-6. Age and sex characteristics of in/out-migrant population: SEA No. 3.

2.0 POTENTIAL IMPACTS ON THE NEVADA/UTAH REGIONAL ENVIRONMENT

Deployment of the M-X system in sparsely populated areas of the southwestern United States would produce rapid, large-scale changes in the character of the human environment of these deployment regions. Effective operation of the M-X system requires a deployment region containing relatively few human inhabitants. Yet construction and operation of the system would result in the introduction of large numbers of people into the rural, thinly settled deployment region. This rapid growth in population resulting from the large labor and materials demands of the project will cause significant changes in the economic and social structures of the rural deployment areas.

In some cases, M-X deployment would transform deployment-region communities from slow-growing communities of a few thousand population or smaller into active regional population centers of 20,000 persons or more. This would be the case for the communities adjacent to the M-X operating bases. Other areas would undergo "boom-bust" growth similar to that caused by energy developments throughout the western United States.

The economic, social, and local government impacts of M-X deployment have been estimated quantitatively using a series of inter-related models and computational algorithms. Given a set of M-X project characteristics such as direct employment and material requirements, the direct economic effects on the regions are identified. The indirect economic effects of M-X then are estimated using county-level interindustry-type models and the best available baseline projections for the localities studied. Estimates of labor in-migration induced by the project imply an appropriate level of population in-migration. Increases in population and economic activity in the deployment regions then are used to estimate changes in the demand for community services and needs for local infrastructure. Finally, the service and investment estimates are used to calculate impacts on local government units. This analysis was conducted for the Proposed Action and each of the eight alternatives considered.

2.1 IMPACTS ON ECONOMIC ACTIVITY

EMPLOYMENT AND LABOR FORCE

Deployment of the M-X missile would provide direct employment for almost 30,000 persons during the peak of project activity. It also would generate demands for construction materials and other goods and services to support the construction and operation work forces. Project demands for labor, goods, and services will stimulate a great deal of economic activity in the deployment region. Much of the income of persons employed on the M-X project would be spent and respent in the deployment region. Firms in the region would supply many of the goods and services demanded by the project.

The direct economic effects of the M-X project originate at specific geographic locations. Construction camps and operating bases represent points of employment and earnings for construction, assembly and checkout, and operations personnel. The bases also serve as points of procurement demand for goods and services. Base locations for the Proposed Action and the eight alternatives are given in Table 2.1-1. Figure 2.1-1 presents locations of DDA facilities, construction camps and operating base locations in Nevada/Utah.

Table 2.1-1. Proposed Action and alternatives.

PROPOSED ACTION AND ALTERNATIVES	DEPLOYMENT AREAS ¹				OPERATING BASE VICINITIES	
	NEVADA	UTAH	TEXAS	NEW MEXICO	FIRST	SECOND
Proposed Action Nevada/Utah, Full Deployment	200		0	0	Coyote Spring Valley, NV	Milford, UT
Full Deployment Alternatives						
1. Nevada/Utah	200		0	0	Coyote Spring Valley, NV	Beryl, UT
2. Nevada/Utah	200		0	0	Coyote Spring Valley, NV	Delta, UT
3. Nevada/Utah	200		0	0	Beryl, UT	Ely, NV
4. Nevada/Utah	200		0	0	Beryl, UT	Coyote Spring Valley, NV
5. Nevada/Utah	200		0	0	Milford, UT	Ely, NV
6. Nevada/Utah	200		0	0	Milford, UT	Coyote Spring Valley, NV
7. Texas/New Mexico	0	0		200	Clovis, NM	Dalhart, TX
Split Basing Alternative						
8. Nevada/Utah-Texas/New Mexico	100			100	Coyote Spring Valley, NV	Clovis, NM
No Action Alternative	NA			NA	NA	NA

3623-3

¹The numbers represent missiles deployed (approximate for split basing).

THIS PAGE INTENTIONALLY
LEFT BLANK

The consequences of direct project-related economic activity are, however, distributed over a broad region. This analysis makes specific assumptions about the regional distribution of project expenditures originating at particular points. These expenditures constitute changes in final demand for county-level models which then estimate direct and indirect earnings, employment, labor force, and population effects in each study-region county.

Six of the eight project alternatives are sited completely in Nevada/Utah, while the split deployment option sites a first operating base in Coyote Spring Valley and one-half of the missile deployment force in Nevada/Utah. For comparison, effects on the region forecast under the Proposed Action and those under split deployment are detailed below. County-level analyses will focus on other project alternatives as they affect different operating base locations.

Full Deployment

Full deployment of the M-X system in Nevada/Utah would create large demands for labor, goods, and services throughout the deployment region. These resource demands would begin in the deployment region with the commencement of project construction activity in 1982, and would build rapidly to a peak during the years 1986-88. Project demands would reach a long-run level after 1990 which would be sustained for the operating life of the system.

The project would exert economic impacts over many parts of the southwestern United States as people and materials flow to points of project activity in Nevada/Utah. The most important of these effects, however, would occur within a twelve-county bistate region in Nevada/Utah containing the deployment area itself and the Las Vegas and Salt Lake City - Provo metropolitan centers. This area has been defined as the region of influence (ROI) for this analysis (see Figure 1-1). It contains the counties of Clark, Eureka, Lincoln, Nye, and White Pine in Nevada, as well as the Utah counties of Beaver, Iron, Juab, Millard, Salt Lake, Utah, and Washington.

Direct Employment

The most important of the economic effects of the M-X system is its demand for labor. Table 2.1-2 presents direct labor requirements for full deployment in Nevada/Utah, and indicates that M-X employment would start in 1982, with most employment initially concentrated in construction trades. M-X construction employment is projected to peak at more than 17,000 workers in 1986. Direct project employment in all categories - construction, assembly and checkout, and operations - is expected to surpass 28,000 jobs from 1986 through 1988. Direct M-X employment would diminish rapidly thereafter, reaching a long-term level of 13,200 in 1991 which would continue as long as the system remains in operation.

Construction camps dispersed throughout the ROI would represent points of employment for personnel engaged in construction and assembly and checkout of the Designated Deployment Area (DDA) facilities (Figure 2.1-1). Table 2.1-3 presents construction personnel estimates by camp location, while Table 2.1-4 details requirements for assembly and checkout workers. The regional distribution of employment as shown in these tables is critical since these construction camps would be employment centers for more than 17,600 persons at the peak of DDA

Table 2.1-2. Total M-X system personnel requirements, full deployment, Nevada/Utah, 1982-1991.

DESCRIPTION	PERSONNEL									
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Construction										
Technical Facilities (DDA) ¹		100	2,100	8,300	14,500	13,250	11,550	4,050		
First OB Complex ²	1,150	1,900	2,300	2,000	1,200					
Second OB Complex ³				400	1,350	2,050	1,450	750		
Subtotal	1,150	2,000	4,400	10,700	17,050	15,300	13,000	4,800		
A & CO										
Technical Facilities (DDA) ¹		50	100	1,750	3,150	3,150	3,100	3,100	50	
First OB Complex ²		350	900	1,800	2,850	2,850	2,800	2,650	50	
Second OB Complex ³		—	—	—	—	—	—	—	—	
Subtotal		400	1,000	3,550	6,000	6,000	5,900	5,750	100	
Operations										
First OB Complex ²			1,250	2,500	3,750	5,000	6,250	7,500	7,500	7,500
Second OB Complex ³					1,400	2,800	4,250	5,700	5,700	5,700
Subtotal			1,250	2,000	5,150	7,800	10,500	13,200	13,200	13,200
TOTAL	1,150	2,400	6,650	16,750	28,200	29,100	29,400	23,750	13,300	13,200

2165-2

¹ Designated deployment area (DDA) includes protective shelters (PS), area support centers (ASC), designated transportation network (DTN), cluster maintenance facilities (CMF), remote surveillance sites (RSS), and cluster roads (CR).

² First OB complex includes operating base (OB), designated assembly area (DAA), operational base post site (OBTS), and airfield.

³ Second OB complex includes OB and airfield.

Table 2.1-3. Personnel required for construction of DDA facilities and operating bases, full deployment, Nevada/Utah, 1982-1989.

CAMP NUMBERS	CONSTRUCTION PERSONNEL							
	1982	1983	1984	1985	1986	1987	1988	1989
01		100	950	1,600	250			
02				50	1,700	1,700	150	
03			200	1,350	1,650	350		
04					150	1,350	1,400	
05						150	1,300	1,050
06			550	1,800	1,200			
07					600	1,450	700	
08				150	1,150	1,350	50	
09			350	1,200	2,400	600		
10					100	1,000	2,000	700
11			50	750	1,250	50		
12						1,200	1,000	50
13					100	1,250	2,300	1,300
14				650	1,100			
15			50	750	1,450	250		
16				100	1,150	400		
17					250	1,550	950	
18						750	1,750	950
Subtotal		100	2,150	8,400	14,500	13,400	11,600	4,050
Base I	1,150	1,900	2,300	2,000	1,200			
Base II				400	1,350	2,050	1,450	750
Total	1,150	2,000	4,450	10,800	17,050	15,450	13,050	4,800

2330

¹See Figure 2.1-1.

Source: HDR Sciences, with approval of U.S. Air Force Ballistic Missile Office.

Table 2.1-4. Personnel required for assembly and checkout of DDA facilities and OBS, full deployment, Nevada/Utah, 1983-1990.

CAMF NUMBER ¹	A & CO PERSONNEL							
	1983	1984	1985	1986	1987	1988	1989	1990
01	50	40	330	60				
02			10	360	400	30		
03		10	280	360	80			
04				30	320	380		
05					30	350	800	
06		20	370	260				
07				130	340	180		
08			30	250	320	20		
09		10	250	520	140			
10				20	230	540	550	
11		10	160	270	10			
12					280	260	30	50
13				30	300	620	1,000	
14			140	230				
15		10	160	320	60			
16			20	250	100			
17				60	360	250		
18					180	470	720	
Subtotal	50	100	1,750	3,150	3,150	3,100	3,100	50
Base I	350	900	1,800	2,850	2,850	2,800	2,650	50
Base II								
Total	400	1,000	3,550	6,000	6,000	5,900	5,750	100

¹See Figure 2.1-1.

Source: HDR Sciences, with approval of U.S. Air Force, Ballistic Missile Office.

2331

construction and assembly and checkout activity (1986). A total of 18 camps would be distributed over the region, with activity at each camp for a three-to-four-year period between 1983 and 1990. As many as 3,000 workers could be based in a camp in the peak year of its activity, as occurs with camp 9 in 1986. These tables indicate that just as employment growth is projected to be very rapid, decline of construction jobs particularly, would also occur rapidly, leaving little time for regional adjustment.

Locating the larger of the two operating bases at Coyote Spring, Nevada, would directly create jobs for up to 4,700 construction and assembly and checkout workers (see Table 2.1-3 and 2.1-4) and 7,500 operations personnel (including military) in Clark and Lincoln counties (see Table 2.1-5). Construction of the base would begin in 1982, employing 1,500 construction and assembly and checkout workers. Operations would begin at this site with 1,250 persons in 1984, with a gradual build-up of operating staff until the full complement of 7,500 workers is reached in 1989. Table 2.1-5 indicates that of this long-run total, 85 percent would be military personnel.

The second operating base at Milford, Utah, would employ up to 2,000 construction workers and 5,700 operations personnel (again including military) in Beaver and Iron counties. Construction of this second base would start in 1985. The Milford base would begin operations in 1986, with 1,400 employees, and, like the larger base, reach its full complement of personnel by 1989. The combined base staffing level is expected to equal 13,200 persons. Activity would continue at these bases throughout the operating life of the system.

Indirect and Total M-X Related Employment

Large numbers of jobs indirectly related to M-X deployment also would be created within the ROI. The most important source of indirect employment is the spending of project payrolls earned by construction, assembly and checkout, and operations personnel. In addition, base procurement from local suppliers would further increase employment in the region's metropolitan areas and in the communities nearest the operating bases. Regional purchases of construction materials would constitute an additional--though minor--source of regional economic stimulus. The third major source of indirect employment is project-related investment. Some investments will be spread broadly over the deployment region, as would be the case for highway improvements near DDA facilities. For the most part, however, these expenditures would be concentrated in the communities nearest the two operating base locations. Some of this investment would be public, while the rest would be at the discretion of the private sector, and has been assumed to include off-base housing, street facilities, school facilities, other public buildings, public and private utilities, retail buildings, commercial buildings, and industrial buildings.

Table 2.1-6 presents estimates of total project-related employment. This table indicates how rapidly indirect employment increases, peaking at 30,600 jobs in 1987. Over the 3 year period, 1986-1988, indirect employment never falls below 27,500 jobs. Table 2.1-6 indicates, though, that as direct construction labor declines from high levels, as project-related investments by private firms and governments to accommodate population growth are completed, and as non-labor military construction outlays cease, indirect employment would decline. This trend would be partially counterbalanced by economic growth and structural change within the

Table 2.1-5. Personnel required for operations, full deployment, Nevada/Utah, 1983-1989.

EMPLOYMENT TYPE	OPERATIONS PERSONNEL					
	1984	1985	1986	1987	1988	1989
First Operating Base						
Officer	100	200	300	400	500	600
Enlisted	950	1,925	2,900	3,850	4,800	5,750
Civilian	200	375	550	750	950	1,150
Subtotal	1,250	2,500	3,750	5,000	6,250	7,500
Second Operating Base						
Officer			100	200	350	450
Enlisted			1,100	2,200	3,250	4,400
Civilian			200	400	650	850
Subtotal			1,400	2,800	4,250	5,700
Total	1,250	2,500	5,150	7,800	10,500	13,200

2168-1

NOTE: Operations employment would continue at 1989 levels throughout the operating life of the project.

Table 2.I-6.

M-I RELATED SYSTEM EMPLOYMENT BY PLACE OF EMPLOYMENT, IN DEPLOYMENT REGION

PROPOSED ACTION: FULL DEPLOYMENT - NEVADA/UTAH
 BASE I AT CONYIC SPRINGS, NV (CLARK CO.)
 BASE II AT MILFORD, UT (BEAVER CO.)

TYPE OF EMPLOYMENT	NUMBER OF JOBS												
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
TECHNICAL FACILITIES													
CONSTRUCTION	0	100	2150	8400	14500	13400	11600	4030	0	0	0	0	0
ASSEMBLY + CONSTRUCT	0	30	100	1750	3150	3150	3100	3100	50	0	0	0	0
BASE													
CONSTRUCTION	1150	1900	2300	2200	2530	2050	1450	750	0	0	0	0	0
ASSEMBLY AND CHECKOUT	0	350	900	1800	2850	2850	2800	2650	50	0	0	0	0
OPERATIONS													
OFFICERS	0	0	100	200	400	600	850	1050	1050	1050	1050	1050	1050
ENLISTED PERSONNEL	0	0	950	1925	4000	6050	8050	10150	10150	10150	10150	10150	10150
CIVILIANS	0	0	200	375	750	1150	1600	2000	2000	2000	2000	2000	2000
TOTAL DIRECT	1150	2400	6700	16650	28200	29250	29450	23750	13500	13200	13200	13200	13200
INDIRECT	1754	4169	8821	18651	29671	30627	27513	18510	8992	9402	9056	9047	9047
TOTAL	2904	6569	15521	35301	57871	59877	56963	42260	21892	18602	18256	18247	18247

SOURCE: MDR SCIENCES, 31-OCT-80

region, which would tend to raise the multiplier effects of Air Force expenditures over time. In the long run, 1992 and beyond, indirect employment stabilizes at about 5,000 jobs.

Total project-related employment--direct and indirect combined--is projected to peak at 59,800 jobs in 1987 in the Nevada/Utah ROI as a whole. While large in absolute figures, such growth in employment would represent 7 to 8 percent of projected regional employment under trend growth assumptions.

These impacts can be compared to two alternative projections of future regional employment without M-X: a trend-growth projection (Baseline 1), and a high-growth projection (Baseline 2). The first set of projections are essentially an extrapolation of 1967-1978 growth trends in the Nevada/Utah region of influence. Baseline 1 includes the following:

- o Continuation of 1967-1978 growth trends;
- o Construction of Anaconda Nevada Molybdenum Project (Nye County);
- o Metal mining in Eureka, White Pine and Lander counties;
- o Expansion of oil and gas activity;
- o Minerals exploration in the Utah portion of the ROI.

Baseline 2 includes in addition to these activities, the following projects:

- o White Pine County - White Pine Power Project and reopening Kennecott Copper Company mine;
- o Millard County - Intermountain Power Project, Continental Lime cement plant, Brush Beryllium expansion, Precision-Built Modular Homes, and Martin-Marietta cement plant;
- o Juab County - General Battery, and SUFCO coal loading facility; and
- o Beaver County - geothermal power activity, molybdenum mining, and alunite mining and processing.

There is a degree of uncertainty regarding each of these projects, though some may be more likely than others. These assumptions were developed by the University of Utah's Bureau of Economic, and Business Research, and reviewed by the State Planning Coordinators Offices of Nevada and Utah. Other projects currently planned, but not explicitly assessed in this analysis, include the following:

- o Allen Warner Valley Complex (1985-88);
- o Alton Mine, south Utah;
- o Warner Valley Power Plant, St George, Utah;
- o Allen Power Plant, Clark County, Nevada;
- o Coal Slurry lines from mine to plants;
- o Transmission lines from plants to southern California;
- o Proposed Rocky Mountain Gas Pipeline (1985), Wyoming to southern California;

- o Cove Fort Geothermal Power Plant, Millard County, Utah (1984);
- o Reid Gardner Power Plant #4, Clark County, Nevada (1983);
- o Mountain Fuel coal gasification plant (1990);
- o Valmy Power Plant, Valmy, Nevada (mid 1980s);
- o Proposed Mormon Mesa Solar Power Plant.

These projects were not considered for Baselines 1 and 2 either because their effect on employment was expected to be negligible, their probability of realization was deemed relatively low, or their principal effects were expected outside the Nevada/Utah ROI.

Employment in the region without M-X or these other large projects is projected to grow at about 3 percent annually throughout the 1980s (University of Utah, Bureau of Economic and Business Research, September 1980). Compared to historical U.S. employment growth from 1970-79 of 2.4 percent annually (Council of Economic Advisors, Economic Report of the President, Washington, D.C., January 1980, p. 236) and projected growth for the nation as a whole of 1.9 percent per annum through 1990 (Chase Econometrics standard-trend long-term forecast, October 1980), this projected growth in employment is quite strong. At the same time, growth of 3.0 percent yearly is representative of historical and projected growth for the western United States (Nevada National Bank, Western Economic Overview, 1970-77, and Chase Econometrics regional forecast, April 1980). Employment generated by M-X would produce a sizable intermediate-term "bubble" in this generally strong regional growth pattern, but would not significantly alter the long-term picture at the ROI level.

The long-run employment impacts of M-X deployment would be about 18,200 jobs, approximately 2 percent of projected baseline employment beyond 1990. The other large projects which may be built within the ROI would add another 10,000 jobs to regional employment in the long run. M-X and these other projects thus would cumulatively raise regional employment by about 3 percent above its projected trend-growth level during 1990-95.

The indirect and total employment impacts of M-X deployment also have been analyzed using a dynamic economic-base simulation model developed at the Bureau of Economic and Business Research of the University of Utah. These independent estimates provide a useful basis of comparison for the interindustry models utilized throughout this analysis. Figure 2.1-2 displays direct employment projections for full deployment in Nevada/Utah, as well as total employment estimates using both models. The interindustry estimates are higher at the peak of activity, though long-run differences between the two approaches are negligible. The difference at peak is largely attributable to the relatively greater sensitivity of the interindustry models to the high wages paid to construction workers. The results shown in the figure are for Alternative 3, since this is the only alternative for which comparable results are available. At the regional level, however, the differences between Alternative 3 and the Proposed Action are minor.

Regional Labor Force Impacts

The change in employment due to M-X would be large enough to tighten labor markets in the region, especially in the context of strong nonproject employment growth. Regional average unemployment rates could decline by as much as 1-2

FULL DEPLOYMENT IN NEVADA/UTAH: INTERINDUSTRY AND SIMULATION RESULTS

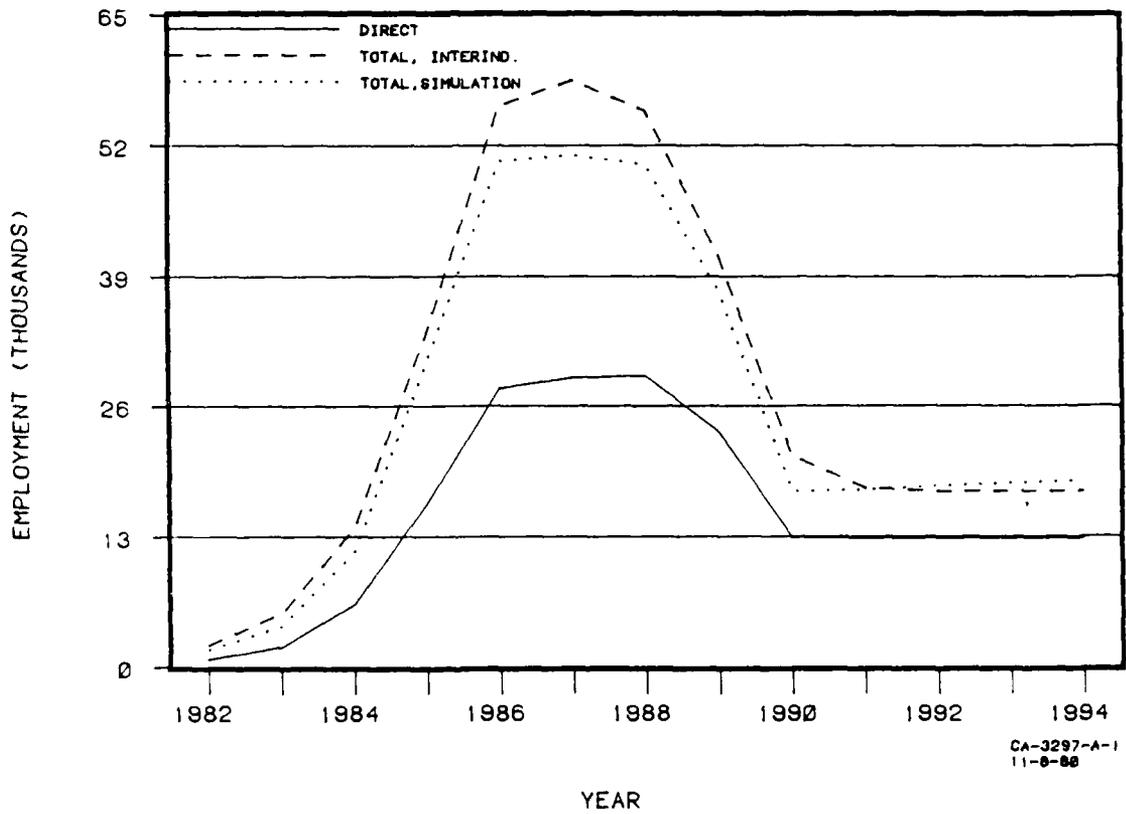


Figure 2.1-2. Direct and total M-X-related employment.

percentage points during peak years, though they would rise again in the long run. Markets for certain types of skilled labor would be very tight during the peak of construction activity. In particular, excess regional demands for iron-workers and operating engineers could be acute, leading to temporary but significant escalation of wages for these construction crafts. These labor shortages also would extend to other occupational groups as more mobile workers seek relatively high-paying employment on the M-X project. Labor would migrate both intraregionally and into Nevada/Utah from other areas to fill jobs indirectly related to the project, for assembly and checkout at the base, and to provide the military and civilian personnel needed to operate the base.

Table 2.1-7 indicates that cumulative labor force in-migration of 39,800 workers is projected at the peak of activity in 1987 in Nevada/Utah. This represents about 5 percent of the ROI's total civilian labor force in that year. This in-migration estimate is a comparison of civilian M-X-related employment demand (the top line in Table 2.1-7) with the available resident labor force on a county-by-county basis (summed together in Table 2.1-7) in Nevada/Utah.

The available resident labor force is defined as the projected unemployed labor force less an estimate of that portion of the labor force which probably would remain unemployed even under extremely tight labor market conditions. Such frictional and structural unemployment is assumed to imply a minimum achievable regional unemployment rate of 3 percent. Actual baseline unemployment rates are projected at their 1975-78 average values for each county. This assumption implies a weighted average baseline regional unemployment rate of slightly more than 6 percent of the labor force. The excess of baseline unemployment above 3 percent is defined to be the resident labor force available for direct and indirect employment as a result of M-X deployment. Baseline population growth provides a gradual increase in the available resident labor force.

Because of the probable occupational characteristics of these unemployed persons, 30 percent of the available resident labor force is assumed to be employable in project construction, 20 percent is assumed employable in project operations, and the remaining 50 percent is assumed indirectly employable as a result of M-X. These estimates are somewhat uncertain because data on the occupational characteristics of the unemployed are difficult to interpret. In the case of construction, the assumption that 30 percent of the available resident labor force is employable on the project is consistent with the large share of less skilled labor in total project construction personnel requirements. It also is consistent with the 20 percent share of more manual occupations---farming/fishing/forestry, machine trades, bench work, and structural work---in total insured unemployment in the second quarter of 1978 in a major study region SMSA (Las Vegas, Nevada).

Cumulative net labor in-migration into the region as a result of the project is estimated to be positive even when the available labor is greater than project-related employment, for three reasons:

- o The occupational composition of project labor demands implies in-migration of technical specialists (particularly for assembly and checkout).
- o Intraregional labor force migration--particularly from metropolitan areas to deployment areas--would tighten labor markets in these larger cities, prompting migration into the population centers themselves from outside the region.

Table 2.1-7.

TOTAL CIVILIAN M-F RELATED EMPLOYMENT, AVAILABLE TO SUPPORT LABOR FORCE
AND NET CIVILIAN LABOR FORCE IMPACT BY PLACE OF RESIDENCE
FOR DEPLOYMENT REGION

	1982	1981	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
TOTAL CIVILIAN M-F RELATED EMPLOYMENT	2704	6569	14471	33174	53226	48043	31059	10693	7402	7037	7048	7048	7048
AVAILABLE RESIDENT LABOR FORCE	21203	21977	22018	23716	24229	24923	29306	26100	26699	27267	27844	28389	28909
NET CIVILIAN LABOR FORCE IMPACT	59	610	4953	19920	37460	34901	34323	17710	5713	4191	4169	4162	4155

SOURCE: MDR SCIENCES, 31-OCT-80

Table 2.1-8.

TOTAL CIVILIAN M-F RELATED EMPLOYMENT, AVAILABLE RESIDENT LABOR FORCE,
AND NET CIVILIAN LABOR FORCE IMPACT BY PLACE OF RESIDENCE
FOR DEPLOYMENT REGION

	1982	1981	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
TOTAL CIVILIAN M-F RELATED EMPLOYMENT	2904	6569	14471	33174	53226	48043	31059	10693	7402	7037	7048	7048	7048
AVAILABLE RESIDENT LABOR FORCE	21276	22106	23023	24157	24853	25472	26024	26512	27035	27613	28200	28753	29283
NET CIVILIAN LABOR FORCE IMPACT	59	610	4870	19721	39164	39376	34128	17336	3335	4160	4137	4130	4124

SOURCE: MDR SCIENCES, 31-OCT-80

- o Some of the persons migrating into an area would be at least temporarily unemployed, since expectations of finding a job may not always be fulfilled.

Table 2.1-7 indicates that cumulative civilian labor in-migration ("net civilian labor force impact") declines rapidly, then stabilizes at about 4,200 workers, only about 0.5 percent of the Baseline 1 total civilian labor force. Including other projects, Baseline 2 available resident labor force increases by roughly 200-500 persons over the forecast period. Hence, with a larger pool of available labor, M-X related in-migration is less than for Baseline 1. For example, in 1987, it is 39,400 persons under Baseline 2 compared to the Baseline 1 figure of 39,800 persons given above. Table 2.1-8 presents cumulative civilian labor force in-migration under high growth conditions in Nevada/Utah.

County Level Effects

M-X-related employment effects would be much larger at the level of individual counties than at the regional level. Employment generated by the project would create boom-growth episodes in most of the rural counties within the ROI. In many cases, moreover, this growth would be temporary, and would be followed by a period of rapid employment decline as the project moves from construction and assembly and checkout phases into the operations phase. Table 2.1-9 presents county-level employment impacts by place of residence, and compares them to Baseline 1 forecasts. Table 2.1-10 presents the same impact estimates but compares them to the region's high growth scenario, Baseline 2.

Both tables indicate that Clark County, Nevada, site of the larger operating base at Coyote Spring, is projected to receive more of the project's employment impacts than any other county in the region. After adjustment for cross-county commuting, a peak of 24,600 jobs is projected for Clark County in 1986 as a result of M-X deployment. This would represent almost 10 percent of projected county baseline employment, and 14 percent of 1978 county employment (labor force concept) of 169,500 persons. In the long run, M-X would generate 10,700 jobs (including military) in Clark County, about 4 percent of projected baseline employment.

The direct M-X jobs and some of the indirect jobs would be created at the base site itself, while many additional indirect jobs would be created in Las Vegas. Labor force in-migration into the county is likely to occur to fill jobs indirectly related to the project, for assembly and checkout at the base, and to provide the military and civilian personnel needed to operate the base. Table 2.1-11 presents cumulative civilian labor force in-migration for Nevada/Utah counties for each baseline. It indicates that in Clark County, over 11,500 workers are projected to in-migrate at the peak of activity in 1986.

Beaver County, Utah, would experience large, sustained increases in employment as a result of siting an operating base at Milford. M-X employment would begin in 1984, and peak 5 years later at 8,800 jobs. Tables 2.1-9 and 2.1-10 indicate that the number of jobs generated by M-X would decline to 5,800 in the long run. (These estimates have been adjusted for cross-county commuting, and a number of the workers on the base are assumed to reside in nearby Iron County, Utah.) Peak M-X employment is almost 400 percent of projected Baseline 1 employment in 1989,

Table 2.1.9. (Page 1 of 2)

EMPLOYMENT TRENDS BY PLACE OF RESIDENCE, INCLUDING MILITARY

PROPOSED ACTION: FULL DEPLOYMENT NEVADA/UTAH (1)
 BASE I AT COOTE SPRINGS, NEVADA (1)
 BASE II AT HILFORD, UT (BEAR CO.)

COUNTY	1987	1988	1989	1990	1991	1992	1993	1994
CLARK								
BASELINE	215720	232710	232470	241692	248943	255695	262840	269247
WITH M.I.	210544	232002	244450	260654	271666	278772	285161	288823
DIFFERENCE	2816	6708	11972	10962	24623	23117	22321	18876
PERCENT INCREASE OVER BASELINE	1.3	2.9	5.1	7.8	9.9	9.0	8.5	7.0
ELMEKA								
BASELINE	570	580	600	613	624	635	647	658
WITH M.I.	570	580	603	664	1111	3543	4115	2379
DIFFERENCE	0	0	3	51	487	2908	3468	1721
PERCENT INCREASE OVER BASELINE	0.0	0.0	0.5	8.3	78.0	458.0	536.0	261.6
LINCOLN								
BASELINE	1667	1703	1746	1720	1823	1897	1891	1925
WITH M.I.	1755	1950	2779	3901	4410	4086	2668	2372
DIFFERENCE	888	247	1033	2111	2585	2059	777	447
PERCENT INCREASE OVER BASELINE	5.3	16.7	59.2	117.9	143.6	120.0	41.1	23.2
NYE								
BASELINE	3071	3167	3250	3308	3411	3480	3554	3700
WITH M.I.	3071	3167	3372	3840	4092	4127	3987	3847
DIFFERENCE	0	0	322	532	681	647	433	147
PERCENT INCREASE OVER BASELINE	0.0	0.0	9.9	25.8	19.5	13.5	17.9	10.7
WHITE PINE								
BASELINE	2665	2892	2925	2967	3024	3095	3141	3208
WITH M.I.	2865	2892	3074	4473	7312	4878	3965	3318
DIFFERENCE	200	0	109	1511	4315	1793	824	466
PERCENT INCREASE OVER BASELINE	0.0	0.0	7.7	51.0	142.7	58.1	26.2	11.4
BEAVER								
BASELINE	2012	2044	2121	2162	2209	2249	2270	2288
WITH M.I.	2012	2044	2171	3103	4082	10264	10959	11076
DIFFERENCE	0	0	67	941	1893	8015	8186	7986
PERCENT INCREASE OVER BASELINE	0.0	0.0	3.1	43.5	85.7	358.2	358.2	348.6
IRON								
BASELINE	7708	7752	8127	8520	8734	8977	9189	9366
WITH M.I.	7708	7752	8077	8829	9672	10148	10405	10557
DIFFERENCE	0	0	350	309	938	1771	2186	1991
PERCENT INCREASE OVER BASELINE	0.0	0.0	4.3	3.6	10.7	19.7	23.7	21.2

Table 1-9. (Page 2 of 2)

MIAMI	2146	2342	2349	2465	2551	2573	2639	2683	2738	2772	2819	2857	2891
BASELINE													
WITH M-X	2146	2342	2349	2465	2551	2573	2639	2683	2738	2772	2819	2857	2891
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	1.5	10.5	17.4	17.4	35.5	35.5	0.2	0.0	0.0	0.0	0.0
OVER BASELINE													
MILLARD	3727	3981	4056	4243	4341	4414	4531	4628	4724	4765	4801	4834	4859
BASELINE													
WITH M-X	3727	3981	4056	4243	4341	4414	4531	4628	4724	4765	4801	4834	4859
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	13.0	50.0	44.3	47.9	72.2	39.6	1.5	0.9	0.9	0.9	0.9
OVER BASELINE													
SALT LAKE/UTAH	383492	397673	412986	429524	438784	447112	455923	464364	472634	480344	487544	494972	501345
BASELINE													
WITH M-X	383492	397673	412986	429524	438784	447112	455923	464364	472634	480344	487544	494972	501345
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	7.80	44.24	13.25	18.65	19.78	19.01	1.87	1.64	1.50	1.48	1.43
OVER BASELINE													
WASHINGTON	8776	9145	9528	9927	10200	10481	10767	11045	11369	11604	11843	12088	12337
BASELINE													
WITH M-X	8776	9145	9528	9927	10200	10481	10767	11045	11369	11604	11843	12088	12337
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	21	102	116	120	124	126	128	130	132	134	136
OVER BASELINE													
NEVADA 5-COUNTY TOTAL	223929	232070	240799	250395	257727	264712	272073	279364	286823	294068	301469	308566	315480
BASELINE													
WITH M-X	223929	232070	240799	250395	257727	264712	272073	279364	286823	294068	301469	308566	315480
DIFFERENCE	2904	6269	13439	23165	34904	34694	33774	25320	12230	10929	10873	10873	10873
PERCENT INCREASE	1.3	2.8	5.6	10.1	14.3	13.1	12.4	9.1	4.3	3.7	3.6	3.5	3.4
OVER BASELINE													
UTAH 7-COUNTY TOTAL	408061	432960	439267	456861	466789	475766	485250	494376	503339	511587	519650	527531	534096
BASELINE													
WITH M-X	408061	432960	439267	456861	466789	475766	485250	494376	503339	511587	519650	527531	534096
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	20.82	101.34	20.967	25.102	23.189	16.939	4.663	7.673	7.384	7.375	7.375
OVER BASELINE													
DEPLOYMENT REGION TOTAL	621990	655020	680266	707256	724316	740478	757323	773740	790162	805655	821159	835797	849376
BASELINE													
WITH M-X	621990	655020	680266	707256	724316	740478	757323	773740	790162	805655	821159	835797	849376
DIFFERENCE	634894	661599	693787	742555	782387	800394	814286	813799	812055	824257	839416	854045	867824
PERCENT INCREASE	2904	6369	13321	35299	57871	59876	56863	42259	21893	18602	18257	18248	18248
OVER BASELINE													
SOURCE	0.5	1.0	2.3	5.0	8.0	8.1	7.5	5.9	2.8	2.3	2.2	2.2	2.1

SOURCE: HDR SCIENCES, 31-OCT-80

Table 3.1-10. (Cont. of 2)

EMPLOYMENT IMPACTS (BY PLACE OF RESIDENCE, INCLUDING MILITARY)

PROPOSED ACTION FULL DEPLOYMENT - NEVADA/UTAH
BASE I AT COVOTE SPRINGS, NV (CLARK CO.)
BASE II AT HILFORD, UT (BEAVER CO.)

COUNTY	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	
CLARK	BASELINE	219819	230876	232220	242125	249347	256165	263308	270331	277548	284630	291864	298803	303566
	WITH M-X	218635	230160	244692	261087	273970	279282	285629	289209	295307	302521	309460	316223	
	DIFFERENCE	2816	6284	11972	18962	24653	23117	22321	18876	11661	10677	10657	10657	10637
	PERCENT INCREASE OVER BASELINE	1.3	2.8	5.1	7.8	9.9	9.0	8.5	7.0	4.2	3.8	3.7	3.6	3.5
EUREKA	BASELINE	578	589	600	613	625	636	647	658	671	683	695	707	718
	WITH M-X	578	589	603	664	1112	3544	4115	2379	691	685	695	707	718
	DIFFERENCE	0	0	3	51	487	2708	3468	1721	20	2	0	0	0
	PERCENT INCREASE OVER BASELINE	0.0	0.0	0.5	8.3	77.9	457.2	536.0	261.6	3.0	0.3	0.0	0.0	0.0
LINCOLN	BASELINE	1667	1705	1747	1793	1827	1860	1894	1927	1961	1994	2028	2060	2090
	WITH M-X	1755	1970	2780	3904	4412	4089	2671	2374	2507	2212	2244	2276	2306
	DIFFERENCE	88	265	1033	2111	2585	2229	777	447	246	218	216	216	216
	PERCENT INCREASE OVER BASELINE	5.3	15.7	59.1	117.7	141.5	117.8	41.0	23.2	12.5	10.9	10.7	10.5	10.3
NYE	BASELINE	3031	3168	3290	3360	3413	3482	3526	3628	3701	3776	3849	3921	3990
	WITH M-X	3021	3168	3272	3370	3407	3479	3538	3628	3642	3805	3849	3921	3990
	DIFFERENCE	0	0	118	90	66	103	88	0	15	171	29	0	0
	PERCENT INCREASE OVER BASELINE	0.0	0.0	3.6	2.7	1.9	3.0	2.5	0.0	0.4	4.5	0.8	0.0	0.0
WHITE PINE	BASELINE	2864	2824	2662	2474	2032	1724	1558	1402	1272	1173	1092	1070	1066
	WITH M-X	2864	2824	2662	2474	2032	1724	1558	1402	1272	1173	1092	1070	1066
	DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
	PERCENT INCREASE OVER BASELINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PIPER	BASELINE	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800
	WITH M-X	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800
	DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
	PERCENT INCREASE OVER BASELINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEAVER	BASELINE	124	124	124	124	124	124	124	124	124	124	124	124	124
	WITH M-X	124	124	124	124	124	124	124	124	124	124	124	124	124
	DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
	PERCENT INCREASE OVER BASELINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 1 (continued)

NEVADA													
MILLARD													
BASELINE	2339	2755	3055	3319	3320	3375	3339	3205	2923	3040	3086	3130	3167
WITH M-X	2339	2755	3070	3577	5034	6116	4237	3294	2928	3040	3066	3130	3167
DIFFERENCE	0	0	35	258	1714	2741	89	89	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	1.1	7.8	51.6	81.2	27.9	2.8	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													
MILLARD													
BASELINE	4615	4915	6145	7271	7321	7116	6260	5787	5844	5702	5965	6014	6014
WITH M-X	4615	4915	6471	7392	9446	10349	8093	5857	5808	4952	6008	6037	6037
DIFFERENCE	0	0	326	1121	1925	3273	1833	70	44	43	43	43	43
PERCENT INCREASE	0.0	0.0	5.3	15.4	26.4	46.1	29.3	1.2	0.8	0.7	0.7	0.7	0.7
OVER BASELINE													
SALT LAKE/UTAH													
BASELINE	384314	398768	414717	432336	441899	450269	458886	466842	474479	482305	489872	497067	503541
WITH M-X	384314	398768	415407	436762	451544	460927	471347	478628	485746	490410	497505	503979	509779
DIFFERENCE	0	0	780	4424	9645	10658	8706	4705	441	438	438	438	438
PERCENT INCREASE	0.0	0.0	0.2	1.0	2.2	2.4	1.9	1.0	0.2	0.1	0.1	0.1	0.1
OVER BASELINE													
WASHINGTON													
BASELINE	8776	9145	9638	9927	10260	10491	10742	11065	11369	11604	11843	12008	12337
WITH M-X	8776	9145	9542	10022	10519	10903	11186	11420	11630	11842	12080	12375	12574
DIFFERENCE	0	0	21	102	310	422	411	355	261	238	237	237	237
PERCENT INCREASE	0.0	0.0	0.2	1.0	3.0	4.0	3.8	3.2	2.3	2.1	2.0	2.0	1.9
OVER BASELINE													
NEVADA 5-COUNTY TOTAL													
BASELINE	224020	232232	241319	252385	262871	274899	274963	281616	288653	295956	303418	310561	317530
WITH M-X	224924	238891	254758	277470	297175	302593	308737	306936	300883	306885	314391	321434	328403
DIFFERENCE	2904	6559	13439	25145	34904	34694	31774	25320	12230	10929	10873	10873	10873
PERCENT INCREASE	1.3	2.8	5.6	10.0	14.2	13.0	12.3	9.0	4.2	3.7	3.4	3.5	3.4
OVER BASELINE													
UTAH 7-COUNTY TOTAL													
BASELINE	410594	427398	445963	466185	476572	484777	473433	500822	508564	516978	525247	532932	539958
WITH M-X	410594	427398	448945	474319	497539	508959	516522	517268	518227	528651	532631	540307	547339
DIFFERENCE	0	0	2082	10134	20967	25182	23189	16939	9663	7673	7384	7375	7375
PERCENT INCREASE	0.0	0.0	0.5	2.2	4.4	5.2	4.7	3.4	1.9	1.5	1.4	1.4	1.4
OVER BASELINE													
DEPLOYMENT REGION TOTAL													
BASELINE	634616	659540	687282	718510	736843	752676	748376	782447	792517	812934	828665	843493	857485
WITH M-X	637520	666102	702893	738809	794714	812352	823349	844704	819110	811536	846322	861741	875733
DIFFERENCE	2904	6562	15551	35299	57871	59676	54967	42239	21893	18602	18237	18248	18248
PERCENT INCREASE	0.5	1.0	2.3	4.9	7.9	8.0	7.4	5.4	2.7	2.3	2.2	2.2	2.1
OVER BASELINE													

SOURCE: HDR SCIENCES, 31-OCT-80

Table 2.1-11. (Page 1 of 2)

CIVILIAN LABOR FORCE IMPACTS

PROPOSED ACTION, FULL DEPLOYMENT - NEVADA/UTAH (L)
 BASE I AT COVOTE SPRINGS, NV (CLARK CO.)
 BASE II AT MILFORD, UT (BEAVER CO.)

COUNTY	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
CLARK	BASELINE	233979	242644	232146	262139	269894	277264	285076	292784	308331	316161	322670	330989
	WITH M-X				269355	281428	287289	293173	296877	302162	309774	317604	325113
	DIFFERENCE	0	350	2135	7216	11534	10065	8099	4093	1493	1443	1443	1443
	PERCENT INCREASE OVER BASELINE	0.0	0.1	0.8	2.8	4.3	3.6	2.8	1.4	0.5	0.5	0.5	0.4
EUREKA	BASELINE	597	608	620	634	645	656	669	680	705	718	730	741
	WITH M-X	597	608	623	693	1222	4321	5004	2672	712	706	718	741
	DIFFERENCE	0	0	3	59	577	3663	4335	1992	19	1	0	0
	PERCENT INCREASE OVER BASELINE	0.0	0.0	0.5	9.3	89.5	558.7	648.0	292.9	2.7	0.1	0.0	0.0
LINCOLN	BASELINE	1773	1819	1897	1904	1941	1973	2015	2047	2120	2135	2189	2221
	WITH M-X	1832	2073	3013	4279	4846	4382	2759	2441	2288	2296	2360	2392
	DIFFERENCE	59	260	1196	2375	2895	2407	747	394	176	172	171	171
	PERCENT INCREASE OVER BASELINE	3.3	14.3	62.4	124.7	149.1	121.9	37.1	19.2	9.8	8.3	8.0	7.8
NYE	BASELINE	3220	3299	3385	3477	3553	3623	3702	3777	3853	4007	4082	4154
	WITH M-X	3220	3299	3783	4578	5492	6415	10369	7777	4097	3940	4082	4154
	DIFFERENCE	0	0	400	3101	5939	4990	6667	4000	242	9	0	0
	PERCENT INCREASE OVER BASELINE	0.0	0.0	11.8	89.2	167.2	137.7	180.1	103.9	6.3	0.2	0.0	0.0
WHITE PINE	BASELINE	3297	3328	3364	3409	3480	3550	3615	3692	3841	3912	3980	4044
	WITH M-X	3297	3328	3376	4765	7750	5127	4172	3763	3841	3912	3980	4044
	DIFFERENCE	0	0	10	1356	4270	1577	557	71	0	0	0	0
	PERCENT INCREASE OVER BASELINE	0.0	0.0	0.3	39.8	122.7	44.4	15.4	1.9	0.0	0.0	0.0	0.0
BEAVER	BASELINE	2147	2203	2264	2329	2398	2379	2400	2422	2442	2487	2522	2543
	WITH M-X	2147	2203	2887	5590	7882	8365	7891	4876	5352	4659	4686	4731
	DIFFERENCE	0	0	623	2561	5524	5986	5431	4454	2910	2189	2189	2188
	PERCENT INCREASE OVER BASELINE	0.0	0.0	27.5	127.1	239.3	251.4	227.1	183.9	119.2	88.6	87.7	86.8
IRON	BASELINE	8174	8433	8724	9035	9365	9478	9702	9932	10163	10344	10729	10903
	WITH M-X	8174	8433	8724	9131	9849	10230	10366	10393	10440	10580	10768	10951
	DIFFERENCE	0	0	0	116	587	732	644	461	275	224	224	219
	PERCENT INCREASE OVER BASELINE	0.0	0.0	0.0	1.3	6.3	7.9	6.8	4.6	2.7	2.2	2.1	2.0

and almost 450 percent of actual employment (labor force concept) in Beaver County in 1979. The project would induce average employment growth in the county of more than 30 percent annually from 1983 through 1989. By comparison, Sweetwater County, Wyoming, experienced average employment growth of 27 percent per year from 1971-74 due to rapid energy development in the area.

This rapid growth would transform the economy of Beaver County. One third of the county's labor force presently is employed in agriculture, with local government and retail trade the only other major employment sectors. This slow-growing, agriculture-dependent local economy would be converted in a few years into a predominantly service and trade economy serving the newly established M-X operating base.

Baseline 2 forecasts suggest boom-growth problems would be exacerbated by the possibility of significant amounts of molybdenum mining, alunite mining and processing, and geothermal power development in Beaver County during this same time period. Table 2.1-10 presents M-X and Baseline 2 employment projections. Compared to Baseline 1, if these developments are included in the projections along with M-X deployment, employment in 1989 is projected to be 10,800 jobs above trend-growth conditions. However, because the available resident labor force would be greater under Baseline 2, cumulative labor in-migration under M-X would be less, as Table 2.1-12, compared to Table 2.1-11, indicates.

Rapid growth in employment creates particular problems in rural areas with little or no developed economic base for accommodating rapid growth. Economic dislocation and localized inflation of wages, prices, and land values, would necessarily accompany this rapid growth and economic structure change. The extent of this dislocation will depend in part on the degree of planning and growth management which occurs to assist in the most rapid adjustment possible.

Other counties also would experience sharply defined boom-growth episodes. More than Beaver County, however, these counties would undergo periods of rapid "bust" as well. Table 2.1-9 indicates that in Eureka County, Nevada, DDA construction would create peak employment of 3,500 in 1988, more than five times the county's projected baseline employment in that year. Within two years, project-related employment would be reduced to zero with cumulative civilian labor in-migration equalling zero by 1992. Total employment in the county would decline to its baseline level of less than 700 persons. Localized wage-price escalation and shortages of labor and material could be significant during the period from 1986-89. Very little concurrent growth is expected in the county from other large projects.

Nye County would experience similar stresses from rapid employment growth, with M-X-related employment and cumulative labor in-migration peaking in 1988 at 6,400 jobs and 6,700 jobs, respectively. Employment growth would represent almost a tripling of county employment from trend-growth projections for that year while civilian labor in-migration would be over 180 percent of the county total civilian labor force in 1988. No other large projects are expected to affect Nye County.

It is likely that spillover impacts from the operating base at Coyote Spring would augment DDA construction effects on employment in Lincoln County, Nevada. M-X employment of persons permanently or temporarily residing in Lincoln County would reach almost 2,600 jobs in 1986, then decline to about 200 jobs after

Table 2.1-11. (Page 1 of 2)

CIVILIAN LABOR FORCE IMPACTS

PROPOSED ACTION: FUEL DEPLOYMENT - NEVADA/UTAH
 BASE I AT COVING SPRINGS, NV (CLARK CO.)
 BASE II AT HILFORD, UT (BEAVER CO.)

COUNTY	1981	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	
CLARK													
BASELINE	234077	242016	252409	265608	276441	278076	285583	292301	301028	308709	316555	324081	331416
WITH M-X	234077	243168	254337	267012	281762	278820	293670	297284	302321	310152	317998	325324	332833
DIFFERENCE	0	330	2129	7204	11721	9792	8097	4093	1443	1443	1443	1443	1443
PERCENT INCREASE	0.0	0.1	0.8	2.7	4.3	3.6	2.8	1.4	0.5	0.5	0.5	0.4	0.4
OVER BASELINE													
EUREKA													
BASELINE	597	608	630	634	646	657	669	680	693	705	718	730	741
WITH M-X	597	608	623	623	627	632	637	642	647	652	657	662	667
DIFFERENCE	0	0	3	59	57	3665	4335	1982	19	1	0	0	0
PERCENT INCREASE	0.0	0.0	0.5	9.3	89.3	557.8	648.0	292.9	2.7	0.1	0.0	0.0	0.0
OVER BASELINE													
LINCOLN													
BASELINE	1773	1814	1858	1707	1944	1978	2015	2050	2086	2121	2157	2191	2223
WITH M-X	1837	2074	3016	4282	4838	4385	2762	2444	2290	2296	2329	2362	2393
DIFFERENCE	59	240	1158	2375	2894	2407	747	394	204	175	172	171	170
PERCENT INCREASE	3.3	14.3	62.3	124.5	148.9	121.7	37.1	19.2	9.8	8.1	8.0	7.8	7.6
OVER BASELINE													
NYE													
BASELINE	3220	3300	3386	3479	3555	3627	3704	3779	3856	3933	4009	4084	4156
WITH M-X	3220	3300	3386	3479	3555	3617	3671	3725	3779	3833	3887	3941	3995
DIFFERENCE	0	0	0	0	0	610	533	554	557	566	572	577	581
PERCENT INCREASE	0.0	0.0	0.0	0.0	0.0	17.5	15.5	14.8	14.6	14.4	14.2	14.1	14.0
OVER BASELINE													
WHITE PINE													
BASELINE	3277	3330	3455	5125	5022	6623	6395	5837	5491	5607	5733	5835	5943
WITH M-X	3277	3330	3465	4408	9992	7944	6720	5837	5491	5607	5733	5835	5943
DIFFERENCE	0	0	10	1283	4170	1321	325	0	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	0.3	25.0	71.6	19.9	5.1	0.0	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													
BEAVER													
BASELINE	3019	3994	4534	5068	5524	4621	4479	4524	4594	4670	4744	4820	4871
WITH M-X	3019	3994	5096	7955	10330	9859	8907	8907	7453	6836	6909	6984	7035
DIFFERENCE	0	0	562	2887	5416	5909	5380	4383	2859	2166	2165	2164	2164
PERCENT INCREASE	0.0	0.0	12.4	57.0	98.0	127.9	120.1	96.9	62.2	46.4	45.6	44.9	44.4
OVER BASELINE													
IRON													
BASELINE	8191	8443	8770	9102	9339	9545	9764	9987	10215	10400	10596	10781	10957
WITH M-X	8191	8443	8770	9216	9224	10266	10427	10447	10489	10630	10819	11002	11176
DIFFERENCE	0	0	0	114	585	751	663	460	274	228	223	221	219
PERCENT INCREASE	0.0	0.0	0.0	1.1	6.3	7.9	6.8	4.6	2.7	2.1	2.1	2.0	2.0
OVER BASELINE													

Table 2.1-12. (page 2 of 2)

JUAB														
BASILINE	2510	2956	3277	3561	3562	3621	3583	3438	3212	3262	3211	3358	3398	
WITH M-X	2510	2956	3277	3798	3583	4894	4603	3457	3212	3262	3311	3798	3398	
DIFFERENCE	0	0	0	237	2021	3273	1000	19	0	0	0	0	0	
PERCENT INCREASE	0.0	0.0	0.0	6.7	56.7	90.4	78.5	0.6	0.0	0.0	0.0	0.0	0.0	
OVER BASELINE														
MILLARD														
BASILINE	4843	5157	5448	7630	7525	7482	7447	6369	6072	6132	6200	6239	6310	
WITH M-X	4843	5157	7038	10071	9646	10088	11205	8538	6107	6167	6334	6293	6344	
DIFFERENCE	0	0	608	2461	2121	2406	3878	1969	35	35	34	34	34	
PERCENT INCREASE	0.0	0.0	9.4	32.3	28.2	31.3	51.4	30.0	0.6	0.6	0.5	0.5	0.5	
OVER BASELINE														
SALT LAKE/UTAH														
BASILINE	405394	420642	437465	456051	466139	474967	482973	492238	500503	500760	516848	524332	531161	
WITH M-X	405394	420642	437465	456051	466139	474967	482973	492238	500503	500760	516848	524332	531161	
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0	
PERCENT INCREASE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
OVER BASELINE														
WASHINGTON														
BASILINE	9238	9646	10030	10472	10760	11036	11359	11672	11993	12240	12493	12731	13014	
WITH M-X	9238	9646	10030	10472	10760	11036	11359	11672	11993	12240	12493	12731	13014	
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0	
PERCENT INCREASE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
OVER BASELINE														
NEVADA 5-COUNTY TOTAL														
BASILINE	242964	251868	261727	273753	282408	270721	298366	305347	313134	321075	329172	336921	344481	
WITH M-X	243023	252478	265427	287775	307509	313076	318527	316026	315112	322703	330787	338333	346094	
DIFFERENCE	59	610	3700	14022	25101	23375	20161	10479	1958	1628	1615	1614	1613	
PERCENT INCREASE	0.0	0.2	1.4	5.1	8.9	7.7	6.8	3.4	0.6	0.5	0.5	0.5	0.5	
OVER BASELINE														
UTAH 7-COUNTY TOTAL														
BASILINE	433215	450860	470544	491884	502649	511492	520625	528428	536591	545466	554192	562301	569711	
WITH M-X	433215	450860	471714	497583	516912	528493	534392	535485	539888	547998	556714	564817	572322	
DIFFERENCE	0	0	1170	5699	14063	17001	13967	7057	3297	2532	2522	2316	2511	
PERCENT INCREASE	0.0	0.0	0.2	1.2	2.8	3.3	2.7	1.3	0.6	0.5	0.5	0.4	0.4	
OVER BASELINE														
DEPLOYMENT REGION TOTAL														
BASILINE	676179	702728	732271	765637	789257	802213	818991	833975	849745	866541	883364	899232	914192	
WITH M-X	676238	703338	737141	785338	824421	853119	851511	855000	870701	887501	903342	918316	932322	
DIFFERENCE	59	610	4870	19721	39164	39376	34128	17336	4160	4160	4137	4130	4124	
PERCENT INCREASE	0.0	0.1	0.7	2.6	5.0	4.9	4.2	2.1	0.6	0.5	0.5	0.5	0.5	
OVER BASELINE														

SOURCE HDR SCIENCES. 31-OCT-80

1990. These impacts would represent 140 percent of baseline employment at the peak and 10 percent of projected employment in the long run. No other large projects are expected to affect this county.

Iron, Millard, and, to a lesser extent, Juab counties, Utah, also would experience DDA and operating base spillover employment impacts. In all three cases, long-run growth is expected to be small enough that it would not significantly alter the local economies involved. Short-run boom-type employment conditions are, however, projected for both Millard and Juab counties. Cumulative employment impacts from other projects could exacerbate the negative aspects of this growth in Millard County, where the Intermountain Power Project would be located. M-X would produce a peak of 3,400 jobs in 1988 in Millard County, while M-X combined with other projects would generate 6,000 jobs over the trend-growth baseline as comparison Tables 2.1-9 and 2.1-10 indicates. Cumulative impacts of M-X deployment and other projects in the county would amount to almost 140 percent of projected trend-growth employment in 1988.

A total of 10,700 M-X-related jobs would be created in Salt Lake and Utah counties, Utah, in the peak year of 1987, though this would represent only about 2 percent of baseline employment in that year. Long-run employment impacts in the Salt Lake City - Provo metropolitan areas would amount to only a few hundred jobs, less than 1 percent of long-term projected employment. The cumulative effects of M-X and other projects would not significantly alter these results.

Table 2.1-13 presents estimates of county-level employment impacts using the simulation model as well as the interindustry models. In general, county-level impact estimates are more sensitive to the methodology used than are the results at the regional level. The estimates presented in the table are for Alternative 3, since this is the only alternative for which comparable model runs are available. Iron and White Pine counties would experience large employment changes in each case because the operating bases would be located in these counties under Alternative 3. Peak interindustry employment estimates for these counties are 28-35 percent higher than the simulation estimates. Base-county long-term estimates are much more similar. In most DDA counties--Eureka, Lincoln, Nye, Juab, and Millard--the simulation results tend to be generally higher than the interindustry estimates.

These variations in results are at least partially attributable to general methodological differences, particularly:

- o The sensitivity of the interindustry results to assumptions about wage rates and the regional distribution of direct expenditures; and
- o The relationship between employment and population which underlies the simulation approach.

These variations are, however, indicative of the general level of uncertainty regarding the spatial distribution of project impacts. Because the interindustry analysis has been consistently applied to all the deployment options considered here, the results of this analysis form the basis for all socioeconomic impacts discussed in this report.

The results of the two analyses, disaggregated to the level of base and non-base counties, are presented graphically in Figure 2.1-3.

Table 2.1-13. Comparison of M-X employment impact estimates from interindustry and simulation methodologies, Alternative 3.

REGION	TREND-GROWTH EMPLOYMENT LABOR FORCE CONCEPT	INTER-INDUSTRY MODEL IMPACT ESTIMATES	IMPACT AS PERCENT OF BASELINE	TREND-GROWTH EMPLOYMENT ESTABLISHMENT CONCEPT	SIMULATION MODEL IMPACT ESTIMATES	IMPACT AS PERCENT OF BASELINE
Regional Total						
Peak Year (1987)	740,480	58,600	8	822,160	51,440	6
Long Term	849,580	17,850	2	949,240	18,980	2
Clark County, NV						
Peak Year 1986	248,840	8,590	4	271,170	3,410	1
Long Term	305,170	660	-	329,080	1,060	-
Eureka County, NV						
Peak Year (1988)	650	3,470	536	570	5,080	891
Long Term	720	0	0	630	0	0
Lincoln County, NV						
Peak Year (1986)	1,830	2,630	144	1,470	7,800	531
Long Term	2,090	230	11	1,690	10	1
Nye County, NV						
Peak Year (1988)	3,550	6,400	180	7,070	10,950	155
Long Term	3,990	20	1	7,650	10	0
White Pine County, UT						
Peak Year 1987	1,090	11,220	364	2,670	8,270	310
Long Term	3,510	7,140	203	3,140	5,930	189
Beaver County, UT						
Peak Year (1986)	2,210	2,570	116	1,740	30	2
Long Term	2,380	680	29	1,980	10	1
Iron County, UT						
Peak Year 1986	8,730	12,170	139	8,690	9,490	109
Long Term	10,280	7,560	74	10,170	7,830	77
Uno County, UT						
Peak Year 1987	2,570	2,740	107	2,800	4,280	153
Long Term	2,890	0	0	3,150	10	-
Wasatch County, UT						
Peak Year (1988)	1,830	3,240	72	1,760	4,830	129
Long Term	1,860	0	0	1,020	10	-
Utah County, UT						
Peak Year 1987	47,110	10,950	2	507,860	11,960	2
Long Term	111,750	770	-	379,270	1,080	1
Summit County, UT						
Peak Year 1980	1,230	1,080	11	N.A.	N.A.	N.A.
Long Term	12,140	800	6	N.A.	N.A.	N.A.

0939

1. The 1986 peak in 1986 of 1,170, 155 percent of baseline of 2,385.
 2. The 1986 peak is less than 10 percent, but not zero. N.A. indicates not available.

FULL DEPLOYMENT IN NEVADA/UTAH, INTERINDUSTRY AND SIMULATION RESULTS

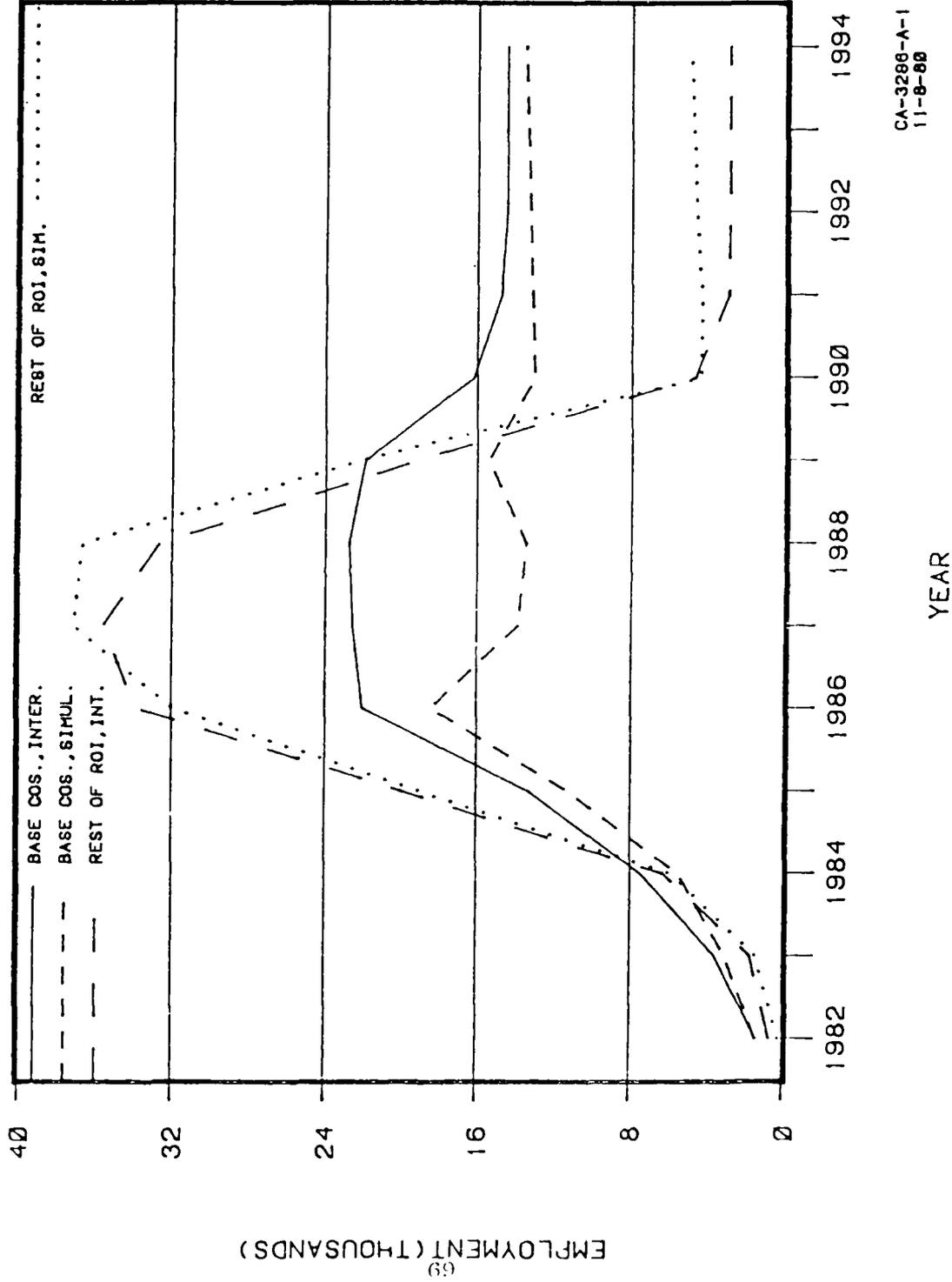


Figure 2.1-3. M-X employment impacts for base counties and rest of ROI (these projections are for Alternative 3).

CA-3286-A-1
11-8-80

Mitigations

The extent and severity of economic dislocation resulting from these episodes of rapid, large-scale growth depend on the strategies adopted to mitigate the adverse effects of this growth. Mitigative strategies could center on project design changes, economic development planning, and implementation and planning assistance funds. With respect to project design changes, personnel required for the three area support centers (ASCs) could be based at locations other than operating bases as this study assumes. Roughly 300 persons per ASC would be required, as would local procurement for food and other supplies. Geographic dispersal of personnel would tend to redistribute the workers, their families, and their expenditures away from operating base communities, reducing stress on local labor markets and generating smaller-scale growth in other communities.

Introduction or increased usage of labor saving technologies for both construction and operations also could decrease labor demands. Long distance commuting programs rather than inducing workers to live in rural communities could serve much the same purpose, and could be particularly important during DDA construction. Alternatively, programs with direct incentives for construction workers to locate their families in the metropolitan areas of Las Vegas or Salt Lake City - Provo also would minimize short-run boom growth in rural counties experiencing DDA construction.

Economic development planning activities could include extensive federal, state, and local preplanning and impact aid assistance. Any local industrial expansion could be time-phased so as to "smooth-out" growth peaks, lessening chances of labor or materials shortages or rapid escalation of their prices. This could be particularly important where competition for resources arises between M-X and other projects, e.g., IPP in Millard County. To meet initial demands, extensive importation of labor, and other resource inputs, as well as final goods, would reduce local market stress. Planning investments in industrial capacity consistent with long-run area needs, such as small scale business parks, or restaurants and motels, would lessen declines in project activity in the area. This is less appropriate in those rural areas where only technical facilities are planned where short-run adjustments such as importing goods and services may be a more appropriate way to cope with project needs. In these areas, no expansion of the local industrial base could reasonably be expected to supply the demands of the project, while overexpansion would lead to "bust-type" recession problems.

Local residents and businesses should also be made an integral part of community growth management planning. Job skill improvement seminars, information dissemination, worker relocation assistance, and contract negotiation classes, for example, coordinated by federal, state, and local manpower economic development specialists, would be required.

Demand, Supply, and Wage Escalation for Construction Crafts

At the time of peak construction (1986) some 17,000 people will be in the construction work force. This is a major construction effort particularly in view of the limited labor supplies likely to be available in the ROI. Examination of craft-specific labor demand and supply is important in order to anticipate specific

problems and devise policies to mitigate them. The potential for labor shortages may exist for certain skills and in varying degrees. Concomitant with any important labor shortages will be pressure for local wage inflation which could linger in its impact for years. Detailed examination of craft-specific supply and demand also indicates the extent and nature of anticipated labor in-migration.

The analysis and data presented here are directed to the maximum impact case. That is, the focus is on supply and demand for the peak and near-peak construction labor demand years. Craft-specific labor supply is derived from estimates of occupational employment in 1985 which are independently produced by each state's Employment Security Agency in cooperation with and coordinated by the U.S. Department of Labor. From these, state and metropolitan area factors for employment by occupation were derived to extend the analysis appropriate to the M-X deployment plan. In some cases state projections were used directly (Utah Occupational Employment Projection 1985-1985, Utah Department of Employment Security, Salt Lake City, 1985, and Occupational Projections Program, Nevada Employment Security Department, Carson City). Occupation projections developed by the states are indicative of trends in occupational growth and are used in the same spirit in the analysis below. No allowance is made for cyclical fluctuations in the economy, though the coincidence of cyclical events with the M-X construction program could significantly alter the conclusions presented.

Table 2.1-14 presents projections of craft-specific employment and M-X demand for labor in 1985 and 1986. Craft employment projections in column (1) reflect the totals for the entire states of Nevada and Utah while column (2) is restricted to the 13 counties of the impact region. These are the two labor availability zones. Labor availability is defined as the total number of persons projected to be employed in 1985 in the respective crafts under non-M-X conditions. Columns (3) and (6) show the currently planned demand for labor by the M-X system. Columns (4), (5) and (7), (8) show the proportion of available labor that would be required by M-X construction.

Attention is directed to columns (7) and (8) which show the maximum demand (1986) compared with the expected employment (supply) for the two states combined (col. 7) and for the smaller region (col. 8). It is evident that in the impact region M-X requirements are large with the exception of restaurant workers, miscellaneous crafts, and laborers.

Table 2.1-15 focuses on (i) workers likely to be available for M-X employment by geographic zone, (ii) specific crafts likely to be in short supply, (iii) the magnitude of the shortage, and (iv) where the short-fall is likely to appear. In columns (1) to (4) are the estimated number and percent of workers expected to be obtainable by M-X in the impact counties and the 2-state area. These estimates are derived by assuming 10 percent of the total craft employment can be hired for M-X, a proportion that is used as a proxy for the degree of flexibility in the labor supply.

Other reasonable proportions could be applied but would not change the major results in any substantial way. The use of this fraction means that M-X construction could employ around 10 percent of the estimated craftsmen without significant

Table 2.1-14. Projected employment and estimated M-X-related direct construction labor demand by craft, Nevada/Utah, full deployment, peak demand years, 1985-1986.

CRAFT	NO. OF THE TW-STATE EMPLOYMENT 1985 ¹	PROJECTED REGIONAL EMPLOYMENT 1985 ²	M-X CONSTRUCTION LABOR DEMAND 1985 ³	M-X LABOR UTILIZATION 1985 ⁴		M-X PEAK CONSTRUCTION LABOR DEMAND 1986 ⁵	M-X LABOR UTILIZATION 7 1986 ⁶	
				STATES ⁷	REGION ⁸		STATES ⁷	REGION ⁸
Electrician	20,000	3,300	1,380	10.1	124.0	3,750	16.0	37.9
Electrician (High Voltage)	100	4,500	1,100	21.9	48.8	3,140	35.8	71.3
Electrician (Low Voltage)	19,900	17,700	1,400	4.2	7.9	1,220	6.6	11.5
Electrician (Substation)	100	70	60	32.5	191.4	1,020	51.8	140.0
Electrician (Transmission)	100	8,000	800	4.1	110.8	1,360	7.2	17.0
Electrician (Distribution)	19,900	800	60	0.7	114.2	850	7.9	23.4
Electrician (Maintenance)	100	1,000	60	0.6	20.8	850	15.2	32.7
Electrician (Construction)	11,100	18,100	700	1.8	4.1	1,190	2.9	6.4
Electrician (Construction - High Voltage)	100	10,000	60	0.5	1.1	850	0.9	1.7

3047

1. Data from Bureau of Economic Analysis, Bureau of Economic Research, "Regional Economic Accounts, 1985-1986".

2. Data from Bureau of Economic Analysis, Bureau of Economic Research, "Regional Economic Accounts, 1985-1986".

3. Data from Bureau of Economic Analysis, Bureau of Economic Research, "Regional Economic Accounts, 1985-1986".

4. Data from Bureau of Economic Analysis, Bureau of Economic Research, "Regional Economic Accounts, 1985-1986".

5. Data from Bureau of Economic Analysis, Bureau of Economic Research, "Regional Economic Accounts, 1985-1986".

6. Data from Bureau of Economic Analysis, Bureau of Economic Research, "Regional Economic Accounts, 1985-1986".

7. Data from Bureau of Economic Analysis, Bureau of Economic Research, "Regional Economic Accounts, 1985-1986".

8. Data from Bureau of Economic Analysis, Bureau of Economic Research, "Regional Economic Accounts, 1985-1986".

Table 2.1-15. Craft-specific construction labor availability in 1985 by geographic zone, Nevada/Utah, full deployment, peak M-X construction labor requirements, 1986.

LABOR CATEGORY	CRAFT LABOR AVAILABLE ¹ IN IMPACT COUNTIES ²		CRAFT LABOR AVAILABLE ¹ IN TWO-STATE ³ AREA		NET EXCESS OF LABOR OVER IMPACT COUNTY AND STATE AVAILABILITY ⁴		TOTAL REQUIRED ⁵ BY M-X
	NUMBER	% OF REQUIRED ⁶	NUMBER	% OF REQUIRED ⁶	NUMBER	% OF REQUIRED ⁶	NUMBER
Teamsters	990	26.4	1,360	36.3	1,400	37.3	3,750
Operating Engineers	440	13.3	530	16.4	2,280	70.4	3,240
Laborers	2,220	100.0	—	—	0	0	2,220
Iron Workers	70	6.7	127	12.5	823	80.6	1,020
Carpenters	800	58.9	1,900	80.9	0	0	1,360
Electricians	380	44.7	400	47.1	80	9.4	850
Plumbers/Pipefitters	260	30.6	300	35.3	290	34.1	850
Misc. Crafts	1,190	100.0	—	—	0	0	1,190
Restaurant Workers	850	100.0	—	—	0	0	850
Total	7,190	47.0			4,793	31.2	15,300 ⁷

3941

¹Assumes 10 percent of craft supply is available for employment on project.

²Outside impact counties (i.e., balance of state) in Nevada and Utah.

³13-county region in Nevada/Utah.

⁴Col. 1 + Col. 7.

⁵Col. 3 + Col. 7.

⁶Col. 5 + Col. 7.

⁷Exclusive of contractor's staff.

Source: HDR Sciences.

labor market repercussions such as wage inflation or substantial in-migration of labor. This flexibility of supply can come from a variety of local sources, including:

- o Re-employment of unemployed craftsmen;
- o Interindustry mobility of labor (e.g., unskilled labor upgraded and trained for truck driving);
- o Labor force re-entry (e.g., some persons with relevant skills recently retired or not currently looking for work may be induced to accept M-X employment or replace those who do in other occupations);
- o Time gap in supply estimate versus peak demand. The supply estimates are for 1985 while peak demand is not anticipated until 1986 or later. In the mean time, ordinary increase in the supply of labor will take place;
- o Displacement of competing labor demand. Non-M-X projects that may demand some of the same types of craftsmen may be delayed or cancelled in view of a "tight" labor market, thus representing a net freeing up of labor. This can take place even without actual wage inflation as plans are reevaluated and/or delayed if the alternative is a necessary bidding up of the wage rate.

Columns (1) and (2) of Table 2.1-15 contain the estimated number of impact county craft workers expected to be employed by M-X construction. Almost one-half of the 15,300 workers demanded may well be available in the 13-county region. It is likely that virtually all of the project needs for laborers, miscellaneous crafts, and restaurant workers can be filled locally. Significant numbers of carpenters (59 percent) and electricians (45 percent) could be local. The most difficult local supply situation will exist for iron workers (7 percent of requirements) and operating engineers (13 percent of requirements).

As far as the entire states of Nevada and Utah are concerned, columns (3) and (4), virtually all the required carpenters and electricians should be obtainable in the two-state area. To avoid double counting, the percent of requirements listed in column (4) is in addition to those in column (1). Thus, it appears that about 69 percent (10,500 workers) of all required craft labor should be obtainable in the two-state area. This supply includes virtually all laborers, carpenters, electricians, miscellaneous crafts, and restaurant workers.

Crafts where demand-supply imbalances exist in the two-state area are evident in columns (5) and (6). It appears that significant shortages of labor would occur in both the impact region and the two-state area for teamsters, operating engineers, iron workers, and plumbers/pipefitters.

Most critical will be iron workers where some 81 percent (820) will have to be recruited outside Nevada/Utah. Large absolute numbers of experienced teamsters (1,400) and operating engineers (2,280) will likely be unobtainable in Nevada/Utah. Finally, a small number of plumbers/pipefitters (290) will be needed from the

outside, and perhaps a few electricians. In total, almost 4,800 workers (31 percent of project needs) will not likely be readily available in Nevada/Utah. These estimates represent the maximum problem situation of peak project demands (1986). Preceding and subsequent project construction years should provide substantially less difficulty and allow transition time to achieve employment targets.

Several qualitative conclusions can be drawn from this analysis.

- o The majority of required labor is likely to be obtainable in the bistate region.
- o Most unskilled and many semi-skilled craft jobs can be filled within the region.
- o In-migration of construction workers will likely be dominated by teamsters and operating engineers unless there is an effort made to upgrade and train local people for these jobs. With appropriate training, much of this potential in-migration probably could be avoided.
- o Large numbers of iron workers and plumbers/pipefitters are unavailable in the construction area. This situation is not unusual on large projects of almost any type and location. These craftsmen traditionally travel and/or move to jobs.
- o The bulk of construction migration appears to be limited to within and between the two state Nevada/Utah area. Combining this with the use of construction camps for housing workers is likely to result in a large number of in-migrants without dependents who can be described as "travelers," workers who temporarily live at the work site but who travel home weekly or less often.

The impacts of this excess demand for labor on construction wages depend on the degree of labor mobility. In the extreme case of no labor mobility, a rise in labor demand, such as for M-X construction, will result in virtually no additional labor supply and rapidly rising wage rates. The other extreme case is total or perfect mobility, where any increase in the demand for labor is instantly matched with an adequate increase in supply and no wage escalation. Reality lies between these extremes.

Conditions necessary to achieve total mobility are (i) full information available to workers regarding job wages, hours, and working conditions and (ii) costless entry into the expanding labor market. In reality, neither of these conditions is ever fully met and consequently a rise in labor demand is commonly associated with both rising employment and rising wage rates. Ignorance of job opportunities is common, and changing employers is anything but costless for the worker. Labor mobility can be geographic, between industries, between occupations, between employers, and between labor force participation and nonparticipation. Each and every type of mobility has cost associated with it under the best of circumstances and the higher these costs, the higher wages must rise to overcome them and bring forth additional

supplies of labor. Moreover, there are institutional barriers to mobility of labor such as those exemplified by union hiring hall practices and employer discrimination.

Construction craft unions with jurisdiction over a job site are pledged to provide the "needed" number of craft journeymen desired by the contractor. This obligation is part of the quid-pro-quo of the collective bargaining agreement. On large construction projects, the union often exhausts the local supply of craft journeymen before satisfying the manning requirements of the job. It is common practice, under these circumstances, for local union officers to contact other union locals in nearby areas to recruit additional labor. Journeymen obtained in this manner frequently are required to spend considerable time and money commuting to the job site, and consequently the recruiting effort may not be successful unless there is considerable slack in employment. Thus, on some large construction projects, the call for journeymen from nearby union locals is still insufficient to meet demand. At this point, the contractor is faced with a variety of options. He can, under typical construction labor contracts, hire nonunion labor to meet his requirements and thereby invoke the displeasure of the union. Another alternative is to offer added monetary inducements to make long distance commuting desirable.

Some large contractors/owners will attempt to avoid this result by placing pressure on the union at the national level to fulfill the local unions' labor supply obligations. While this may be helpful for some employers, it is used reluctantly by contractors who must maintain a continuing working relationship with the union and/or locals affected. Moreover, in practice, the results are quite mixed. Effective cooperation has been experienced with national officials of the United Association (plumbers/pipefitters), whereas similar efforts with some other construction craft unions have not been very successful. More often, the contractor will elect to increase the monetary inducement to make travel more attractive (Dennehy, 1980).

There are a wide variety of devices employed to attract traveling journeymen. Since wage rates are stipulated by the collective bargaining agreement, direct wage increases are typically not used, and other means become necessary. The most obvious method is to pay workers a mileage or per diem rate in addition to their wages. Another frequently used technique is to offer scheduled overtime employment. By adjusting the mileage rate or the level of overtime, the employer usually can attract sufficient skilled labor to meet his demands. Additional problems can be created, however, since extensive use of travelers or overtime work frequently results in increased labor turnover rates and absenteeism. Moreover, scheduled overtime is often found to become self-defeating after a short period of time as labor productivity declines and costs rise (The Business Roundtable, 1974).

Large construction projects on remote sites where the union is unable to supply sufficient labor and the contractor is unwilling to go outside the union or apply pressure to the national union face almost predictable labor cost escalations, at least for some critical crafts. That is not to say they will experience delays in construction due to labor shortages, but most likely their labor costs will rise.

Another alternative course of action in the face of an anticipated shortage of labor in a particular craft is to undertake to train or upgrade local workers. This is

a primary strategy used by many nonunion employers. Unionized employers would find it useful to secure the cooperation of the local unions for an effective training program to be implemented. It is not usually in the union's interest to encourage training programs to expand the supply of locally available trained union labor, especially if the construction project is of short duration and is large relative to the local supply of labor. The project completion in that case will likely saturate the local area with trained but unemployed craftsmen to compete with existing union members for declining job opportunities.

Construction project delays due to the unavailability of sufficient skilled labor are not frequently cited as very prominent reasons for significant construction delays. This suggests that contractors are able to overcome specific local labor shortages through one of several of the above devices. The question is one of costs. Indeed, as one looks at the availability of craft labor there is a sufficient supply for a given project depending on how far journeymen are willing to travel and how willing the contractor is to induce them to travel.

The assessment of construction labor supply and demand in this report leads to the conclusion that for a number of craft groups there is likely to be an excess demand at peak and at near-peak construction activity. This raises the probability of labor market pressure to escalate wages in the construction industry and elsewhere. The purpose of this section is to arrive at some preliminary estimates of the range of construction wage increases that may be anticipated. No account is made of the absolute or relative bargaining strength of the craft unions likely to be involved in M-X construction, or for normal fluctuations in general business activity. All values are in 1980 dollars.

The excess demand by craft and its proportion of the two-state area supply of relevant craftsmen is taken from the preceding analysis (Table 2.1-15). Second, current (first-half of 1980) union wage rates in the area were determined. Third, a range of labor supply elasticity coefficients was selected and the M-X-induced increase in the current wage was calculated. Consequently, the resulting estimates reflect only a guide to a range of wage increases that are assumed to respond primarily to the degree of labor market excess demand. It is in this spirit and with these limitations that these estimates should be viewed.

The following definitions were used:

Excess Demand - The number of workers demanded at peak construction employment in excess of the two-state estimate of craft employment in 1985 plus an added 10 percent flexibility due to unemployment, labor mobility, and competitive project displacement.

Elasticity Coefficient - Ratio of the proportionate change in labor supplied, divided by the proportionate change in the wage rate necessary to achieve the changed labor supply.

Wage Rate - The total of money hourly wages, per diem, travel allowance, subsistence allowance, scheduled overtime, and the value of all fringe benefits.

Wage Escalation - A rise in the wage rate due to an increase in labor demand relative to supply. It is a rise in construction wages relative to other wages and prices.

The relationship between excess labor demand, labor response, and changing wage rates is determined by the wage elasticity of labor supply. For example, an excess labor demand of, say, 5 percent would require a 5 percent increase in the quantity of labor supplied to satisfy it. The elasticity coefficient indicates the percent increase in wage necessary to bring forth more labor. If the elasticity coefficient is 1.5, then to achieve a 5 percent increase in labor supply wages must rise 3.3 percent. Actually trying to estimate labor supply elasticities is very complex, and generally results in estimates that are not transferable (i.e., unique to the data used for estimating them). Consequently, this analysis provides a menu of plausible coefficients to give some idea of the range of wage increase possibilities. Each elasticity assumption is not equally probable. For example, teamsters are highly interchangeable between industries, and the skills are not difficult to learn compared to many other construction crafts (e.g., pipefitters). Consequently, teamsters would display a higher elasticity of supply than pipefitters.

Table 2.1-16 sets forth the estimated excess demand for various crafts, their current wage rates, and estimates of a range of possible escalated wage rates under several possible supply elasticity conditions. It is clear that the pressure on wages will be heavy for iron workers and operating engineers but considerably smaller pressure will exist for teamsters and pipefitters. Wage increases in one craft cannot be considered in isolation from wages in other crafts, since considerable efforts are made by the craft unions to maintain traditional wage relationships. No such interaction is built into the present estimates. Also, it should again be emphasized that the potential wage escalations in Columns (4) to (6) may appear in a variety of forms and not just as increases in the workers' hourly wage rate.

Split Deployment

This split deployment alternative would locate an operating base at Coyote Spring in Clark County, Nevada, and 100 missiles in the Nevada/Utah ROI. The second operating base would be located near Clovis, in Curry County, New Mexico, and 100 missiles would be deployed in Texas/New Mexico. Compared to full deployment in Nevada/Utah, this alternative would result in minimal employment impacts in some ROI counties, and effects at the ROI level would be nearly halved in magnitude. Figure 2.1-4 presents locations of DDA facilities, construction camps, and the first operating base in Coyote Spring Valley.

Direct Employment

Direct labor requirements in the region peak at 17,400 jobs in 1986 with most employment concentrated in the construction trades. Table 2.1-17 presents direct labor requirements for split basing in Nevada/Utah. Compared to full deployment labor requirements (Table 2.1-2), Table 2.1-17 indicates that substantially fewer construction workers would be required, as would fewer operations personnel. The

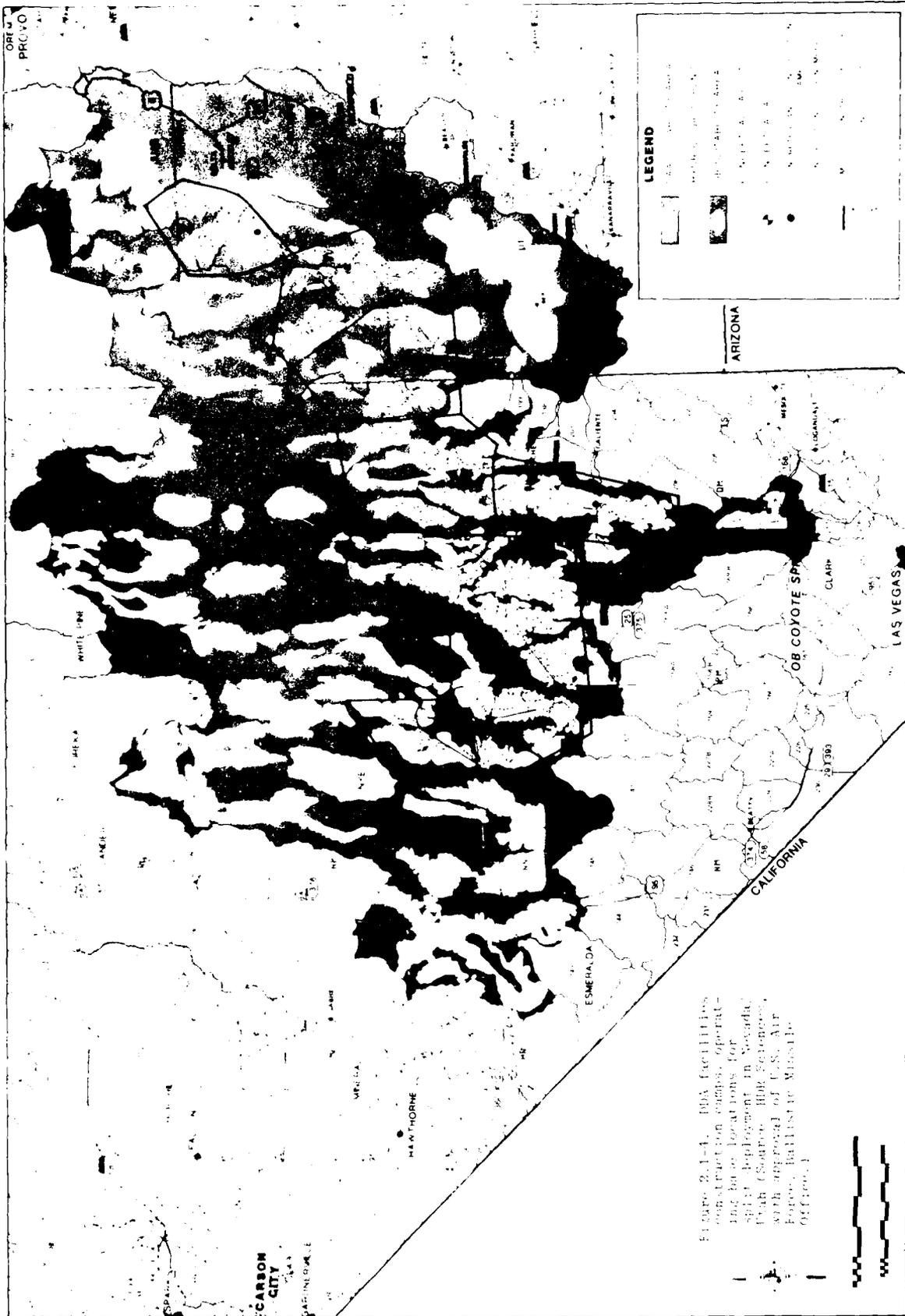


Table 2.1-16. Estimates of wage escalation¹ due to M-X-related excess peak labor demand² selected construction crafts, Nevada/Utah, full deployment.

CRAFTS	1986 EXCESS DEMAND		MEAN WAGE RATE ³ (DOLLARS/HR.)	ESTIMATED DEMAND ESCALATED WAGE RATES (DOLLARS/HR.)		
	NUMBER	PERCENT		SELECTED LABOR SUPPLY ELASTICITY COEFFICIENTS ⁴		
			0.5	1.0	1.5	
	(1)	(2)	(3)	(4)	(5)	(6)
Teamsters	1,400	6.0	\$12.52	\$14.02	\$13.27	\$13.02
Operating Engineers	2,280	23.8	16.16	23.75	20.00	18.73
Iron Workers	823	41.8	14.10	25.88	19.99	18.03
Pipelitters/plumbers	290	5.2	16.68	18.41	17.54	17.26
Laborers	0	--	--	--	--	--
Electricians	0	--	--	--	--	--

3942

¹1980 dollars. No adjustment is made for the background rate of inflation nor cyclical fluctuations in general business conditions.

²Excess demand is the amount by which M-X-direct construction employment exceeds 110 percent of the 1985 projected occupational employment in the 2-state area.

³Wage rate is the mean union money wage plus estimated fringe benefits of several two-state metropolitan areas in effect in first half of 1980. Wage may also take the form of per diem, travel subsistence allowances and scheduled overtime work.

⁴Elasticity is the proportionate rate of change of wages relative to a given proportionate rate of change in labor demand/supply. Elasticity coefficient equals percent change in labor supply ÷ percent change in wages.

Source: HDE Services, September 5, 1980.

Table 2.1-17. Total M-X system personnel requirements, split deployment, Nevada/Utah, 1982-1990.

EMPLOYMENT TYPE	PERSONNEL								
	1982	1983	1984	1985	1986	1987	1988	1989	1990
<u>Construction</u>									
DDA		100	1,900	6,200	6,750	6,350	4,500	1,200	
Base	1,100	1,850	2,400	2,050	1,250				
Subtotal	1,100	1,950	4,300	8,250	8,000	6,350	4,500	1,200	
<u>A&CC</u>									
DDA		50	100	1,350	2,300	1,650	900	950	
Base		250	700	1,350	2,150	2,150	2,100	2,000	50
Subtotal		300	800	2,700	4,450	3,800	3,000	2,950	50
<u>Operations</u>									
Base			1,250	2,450	3,700	4,950	6,250	7,400	7,400
Total	1,100	2,250	6,350	13,400	16,150	15,100	13,750	11,550	7,450

Source: HDP Sciences, with approval of U.S. Air Force, Ballistic Missile Office.

2250-1

timing of the project would remain essentially the same, however, with construction employment beginning in 1982 and terminating seven years later. Assembly and checkout personnel requirements would be less than for full deployment. Operations personnel would be required starting in 1984, with full operational capability reached in 1989.

Table 2.1-18 presents construction personnel estimates by camp location, and Table 2.1-19 details requirements for assembly and checkout and operations employees. Compared to peak construction camp employment of 17,600 in 1986 at 18 camp locations across the Nevada/Utah ROI under full deployment, these tables indicate that under split deployment, only eight camps would be utilized and camp employment would peak in the same year at about 9,000 employees.

Locating the first operating base at Coyote Spring Valley will directly create jobs for about 1,100 construction workers in 1982, rapidly build to 7,100 workers by 1986, peak at 9,400 workers in 1989, then decline and stabilize at 7,400 base employees. Table 2.1-19 indicates that base operations begin in 1984; employment builds rapidly, and stabilizes at 7,400 employees, of which 85 percent would be military personnel. This long-run figure is virtually the same as that forecast for the Coyote Spring location under full deployment, but only 56 percent of total operational requirements for the ROI under full deployment.

Indirect and Total M-X Related Employment

Table 2.1-20 presents estimates of total project-related employment. It indicates the rapid build-up of indirect employment, to a peak of 17,500 jobs in 1986, a figure which is about 60 percent of the comparable figure under full deployment. In the long run (1992 and beyond), indirect employment stabilizes at about 2,900 jobs, 60 percent of long run indirect employment under the Proposed Action. Total project-related employment peaks at 33,600 jobs in 1986, roughly 5 percent of the projected Baseline 1 employment level. This peak employment is about 56 percent of that created in the ROI under the Proposed Action. Over the long run, 10,300 jobs would be created. This is just over 1 percent of the region's 1992 Baseline 1 employment of 836,000 jobs, and compares with 18,400 long-run jobs created under the full deployment option analyzed earlier.

Regional Labor Force Impacts

Table 2.1-21 indicates that cumulative labor force in-migration could reach 18,100 in 1986, 45 percent of civilian in-migration projected under the Proposed Action. In-migration of this magnitude would be only 2 percent of the region's projected Baseline 1 civilian labor force of 770,000 persons in 1986. Cumulative civilian labor in-migration stabilizes at about 1,500 persons, 2,700 less than under the Proposed Action. The effect of including other projects on cumulative civilian labor in-migration is presented in Table 2.1-22 and is negligible.

County Level Effects

With fewer DDA facilities and only one operating base in Nevada/Utah, Eureka, White Pine, Juab, and Washington counties are forecast to receive negligible

Table 2.1-18. Personnel required for construction of DDA facilities and OB, split deployment, Nevada/Utah, 1982-1990.

CAMF NUMBER	CONSTRUCTION PERSONNEL								
	1982	1983	1984	1985	1986	1987	1988	1989	1990
1		100	1,000	1,500	150				
2					200	950	1,600	500	
3				50	750	1,900	800		
4			50	700	2,150	1,200			
5			350	1,700	650				
6			500	2,000	1,750	300			
7				250	1,100	1,900	500		
8						100	1,600	700	
Subtotal		100	1,900	6,200	6,750	6,350	4,500	1,200	
OB/DAA	1,100	1,850	2,400	2,050	1,250				
Total	1,100	1,950	4,300	8,250	8,000	6,350	4,500	1,200	

2551

¹See Figure 2.1-5.

Source: HDF Sciences, with approval of U.S. Air Force, Ballistic Missile Office.

Table 2.1-19. Personnel required for assembly and checkout and operations, split deployment, Nevada/Utah, 1982-1990.

CAMP NUMBER AND EMPLOYMENT TYPE	A & CO AND OPERATIONS PERSONNEL								
	1982	1983	1984	1985	1986	1987	1988	1989	1990
1		50	50	400	200	50			
2						100	350	450	
3					300	450	200	50	
4				200	600	350			
5				400	250	100			
6			50	250	600	200			
7				100	350	400	150		
8							200	450	
Subtotal		50	100	1,350	2,300	1,650	900	950	
OB/DAA		250	700	1,350	2,150	2,150	2,100	2,000	50
Total		300	800	2,700	4,450	3,800	3,000	2,950	50
Operations									
Officer			100	200	300	400	500	600	600
Enlisted			950	1,900	2,850	3,800	4,800	5,700	5,700
Civilian			200	350	550	750	950	1,100	1,100
Total			1,250	2,450	3,700	4,950	6,250	7,400	7,400

2552

See Figure 2.1-5.

Source: HDE Sciences; U.S. Air Force, Ballistic Missile Office; and Strategic Air Command.

Table 11-1-70

KEY RELATED SYSTEM EMPLOYMENT BY PLACE OF EMPLOYMENT IN DEPLOYMENT REGION
 ALTERNATIVE BA CRUIT DEPLOYMENT (7-710) NEVADA/UTAH
 (NOT TOTAL SERVICE EMPLOYED IN COLARNS 1)

TYPE OF EMPLOYMENT	NUMBER OF JOBS													
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	
TECHNICAL FACILITIES														
CONSTRUCTION	0	100	1200	6200	6750	6350	4500	1200	0	0	0	0	0	
ASSEMBLY & CONSTRUCT	0	0	100	1100	2100	1600	500	250	0	0	0	0	0	
BASE														
CONSTRUCTION	1100	1800	2400	2650	1450	0	0	0	0	0	0	0	0	
ASSEMBLY AND CHECKOUT	0	250	200	1350	2150	2100	2100	2000	50	0	0	0	0	
OPERATIONS	0	0	100	200	100	400	500	600	400	600	600	600	600	
OFFICERS	0	0	900	1900	2450	1600	4800	5700	5700	5700	5700	5700	5700	
EMPLOYED PERSONNEL	0	0	200	3100	500	750	750	1100	1100	1100	1100	1100	1100	
CIVILIANS														
TOTAL DIRECT	1100	2050	6300	13400	16150	12100	13750	11550	7450	7400	7400	7400	7400	
INDIRECT	1713	4562	9119	14045	17437	15203	13133	8072	3850	2945	2943	2943	2943	
TOTAL	2813	6712	15419	27445	33587	27303	26883	19622	11300	10345	10343	10343	10343	

SOURCE: MOR SCIENCES, 31-OCT-89

Table 2.1-21.

TOTAL CIVILIAN M & X RELATED EMPLOYMENT, AVAILABLE RESIDENT LABOR FORCE,
AND NET CIVILIAN LABOR FORCE IMPACT BY PLACE OF RESIDENCE
FOR DEPLOYMENT REGION
ALTERNATIVE BA SPLIT DEPLOYMENT (70/30) - NEVADA/UTAH (1)
BASE 1 AT COVOTE SPRINGS, NV (CLARK CO.)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
TOTAL CIVILIAN M & X RELATED EMPLOYMENT	2813	6311	13419	26176	30477	26483	21584	13329	3000	4065	4043	4043	4043
AVAILABLE RESIDENT LABOR FORCE	21203	21973	22819	23716	24329	24903	25506	26100	26699	27267	27844	28389	28709
NET CIVILIAN LABOR FORCE IMPACT	55	506	4104	14599	18103	15148	10484	5658	1607	1534	1532	1531	1530

SOURCE: HDR SCIENCES, 31 OCT 80

Table 2.1-22.

TOTAL CIVILIAN M & X RELATED EMPLOYMENT, AVAILABLE RESIDENT LABOR FORCE,
AND NET CIVILIAN LABOR FORCE IMPACT BY PLACE OF RESIDENCE
FOR DEPLOYMENT REGION
ALTERNATIVE BA SPLIT DEPLOYMENT (70/30) - NEVADA/UTAH
BASE 1 AT COVOTE SPRINGS, NV (CLARK CO.)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
TOTAL CIVILIAN M & X RELATED EMPLOYMENT	2813	6311	13419	26176	30477	26483	21584	13329	3000	4065	4043	4043	4043
AVAILABLE RESIDENT LABOR FORCE	21276	22106	23023	24157	24853	25472	26024	26512	27035	27613	28200	28753	29283
NET CIVILIAN LABOR FORCE IMPACT	55	506	4082	14677	17957	15057	10404	5658	1607	1534	1532	1531	1530

SOURCE: HDR SCIENCES, 31 OCT 80

employment impacts under this alternative. Lincoln, Nye, Beaver, and Millard counties would experience short-run "boom-bust" impacts from construction and assembly and checkout of the DDA. The operating base located at Coyote Spring would have its greatest direct and induced employment effects in Clark County, although significant long-run spillover employment is likely in Lincoln County. As local suppliers attempt to meet project requirements and demands created by construction employees, employment would also be created in the Salt Lake City - Provo metropolitan area (Salt Lake and Utah counties).

Table 2.1-23 presents county level employment impacts by place of residence and compares them to Baseline 1 employment forecasts. Table 2.1-24 presents the same impact estimates, but compares them to Baseline 2 employment forecasts.

Well over half of peak-year jobs and most long-run M-X-related employment would be generated in Clark County. At the peak, M-X employment impacts on Clark County would equal about 19,000 jobs, and represent an increase of 8 percent above either Baseline 1 employment of 248,800 jobs or Baseline 2 employment of 249,300 jobs in 1986. Peak employment would be roughly 80 percent of that forecast for the county under the Proposed Action, the result of less indirect employment associated with DDA construction and base procurement. Over the long run, the net increase in employment would be about 10,200 jobs, virtually the same as that forecast for the Proposed Action, and 99 percent of all long-run jobs in Nevada/Utah required under split deployment. Over the forecast period, 1982-1994, annual Baseline 1 employment growth is projected to equal slightly less than 3 percent; M-X-induced employment would increase this average annual figure slightly.

Labor force in-migration estimates on a county-by-county basis are presented in Tables 2.1-25 and 2.1-26 for Baselines 1 and 2, respectively. They indicate significant short-run effects in Lincoln, Nye, Beaver, and Millard counties. However, no permanent civilian labor in-migration is forecast. In Clark County, on the other hand, cumulative civilian labor in-migration would stabilize at 1,400 persons by 1991, as Table 2.1-25 indicates, virtually the same impact as under the Proposed Action.

Demand, Supply, and Wage Escalation for Construction Crafts

Tables 2.1-27 through 2.1-29 present estimates of demand, supply, and wage escalation impacts of M-X deployment on construction craft labor. These impacts are substantially less than for full deployment in Nevada/Utah.

INCOME AND EARNINGS

Direct project construction and operations employment as well as induced secondary employment growth will generate large increases in deployment area incomes. Peak earnings, attributable to M-X in Nevada/Utah could reach as high as \$1,180 million, and even in a relatively large, well-developed regional economy, earnings growth of this magnitude could trigger some wage-price inflation. Boom growth is likely in towns adjacent to operating bases, and at least over a short run period of time, in communities throughout the designated deployment area.

Earnings impacts are closely related to employment effects, detailed in ETR-27.

Table 2.1-23. (Page 1 of 2)

EMPLOYMENT IMPACTS (BY PLACE OF RESIDENCE, INCLUDING MILITARY)

ALTERNATIVE BA SPLIT DEPLOYMENT (70/30) - NEVADA/UTAH (L)
 BASE 1 AT COYOTE SPRINGS, NV (CLARK CO.)

COUNTY	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
CLARK													
BASELINE	213728	223718	232478	241692	248843	255655	262840	269947	277217	284281	291501	298424	305172
WITH M-X	218437	229750	244372	259501	268671	274240	281534	289514	298067	294462	301647	308590	315338
DIFFERENCE	4669	6032	11894	17809	19828	18585	18714	15967	10850	10181	10166	10166	10166
PERCENT INCREASE	2.2	2.7	5.1	7.4	8.0	7.3	7.1	5.9	3.9	3.6	3.5	3.4	3.3
OVER BASELINE													
EUREKA													
BASELINE	578	588	600	613	624	635	647	658	671	683	695	707	718
WITH M-X	578	588	600	613	625	636	649	660	671	683	695	707	718
DIFFERENCE	0	0	0	0	1	1	2	2	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.3	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													
LINCOLN													
BASELINE	1667	1705	1746	1790	1825	1857	1891	1925	1959	1992	2026	2057	2088
WITH M-X	1731	1984	2624	3745	2779	3142	3790	3005	2123	2136	2170	2201	2232
DIFFERENCE	64	279	1078	1955	954	1285	1899	1080	166	146	144	144	144
PERCENT INCREASE	3.8	16.3	61.7	109.2	52.3	69.2	100.4	56.1	8.5	7.3	7.1	7.0	6.9
OVER BASELINE													
NYE													
BASELINE	3091	3167	3250	3338	3411	3480	3554	3626	3700	3774	3847	3919	3988
WITH M-X	3091	3167	3676	5385	6541	5865	5561	4670	3721	3776	3847	3919	3988
DIFFERENCE	0	0	426	2047	3130	2385	2007	1044	21	2	0	0	0
PERCENT INCREASE	0.0	0.0	13.1	61.3	91.8	68.5	56.5	28.8	0.6	0.1	0.0	0.0	0.0
OVER BASELINE													
WHITE PINE													
BASELINE	2865	2892	2925	2962	3024	3085	3141	3208	3276	3338	3400	3459	3514
WITH M-X	2865	2892	2963	3139	3288	3348	3366	3300	3287	3339	3400	3459	3514
DIFFERENCE	0	0	38	177	264	263	225	92	11	1	0	0	0
PERCENT INCREASE	0.0	0.0	1.3	6.0	8.7	8.5	7.2	2.9	0.3	0.0	0.0	0.0	0.0
OVER BASELINE													
BEAVER													
BASELINE	2012	2064	2121	2182	2209	2229	2249	2270	2288	2314	2340	2363	2383
WITH M-X	2012	2064	2148	2382	3342	4364	3162	2346	2291	2314	2340	2363	2383
DIFFERENCE	0	0	27	200	1133	2135	913	76	3	0	0	0	0
PERCENT INCREASE	0.0	0.0	1.3	9.2	51.3	95.8	40.6	3.3	0.1	0.0	0.0	0.0	0.0
OVER BASELINE													
IRON													
BASELINE	7708	7952	8227	8520	8734	8937	9149	9366	9586	9761	9943	10117	10281
WITH M-X	7708	7952	8256	8639	7004	9331	9376	9595	9761	9761	9943	10117	10281
DIFFERENCE	0	0	29	119	270	394	227	63	9	0	0	0	0
PERCENT INCREASE	0.0	0.0	0.4	1.4	3.1	4.4	2.5	0.7	0.1	0.0	0.0	0.0	0.0
OVER BASELINE													

Table 2.1-23. (page 2 of 2)

JUAB	2146	2242	2349	2463	2521	2573	2629	2683	2739	2779	2819	2857	2891
BASELINE	2146	2242	2349	2463	2521	2573	2629	2683	2739	2779	2819	2857	2891
WITH M-X	0	0	24	146	173	87	117	8	1	0	0	0	0
DIFFERENCE													
PERCENT INCREASE	0.0	0.0	1.0	5.9	6.9	3.4	0.6	0.3	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													
HILLARD	3727	3884	4056	4243	4341	4434	4531	4628	4724	4765	4801	4834	4859
BASELINE	3727	3884	4056	4243	4341	4434	4531	4628	4724	4765	4801	4834	4859
WITH M-X	0	0	358	2760	3419	1686	105	21	3	0	0	0	0
DIFFERENCE													
PERCENT INCREASE	0.0	0.0	8.8	65.0	78.8	38.0	2.3	0.5	0.1	0.0	0.0	0.0	0.0
OVER BASELINE													
SALT LAKE/UTAH	383692	397673	412986	429324	438784	447112	453923	464364	472634	480364	487944	494972	501345
BASELINE	383692	397673	412986	429324	438784	447112	453923	464364	472634	480364	487944	494972	501345
WITH M-X	0	0	376	3989	4334	3936	2652	1196	195	1	0	0	0
DIFFERENCE													
PERCENT INCREASE	0.0	0.0	0.1	0.7	1.0	0.9	0.6	0.3	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													
WASHINGTON	8776	9143	9338	9927	10200	10481	10769	11065	11269	11604	11843	12088	12377
BASELINE	8776	9143	9338	9927	10200	10481	10769	11065	11269	11604	11843	12088	12377
WITH M-X	0	0	19	64	101	126	133	80	41	34	33	33	33
DIFFERENCE													
PERCENT INCREASE	0.0	0.0	0.2	0.6	1.0	1.2	1.1	0.7	0.4	0.3	0.3	0.3	0.3
OVER BASELINE													
NEVADA 5-COUNTY TOTAL	223929	232070	240999	250395	25727	264712	272073	279284	286823	294048	301469	308566	315480
BASELINE	223929	232070	240999	250395	25727	264712	272073	279284	286823	294048	301469	308566	315480
WITH M-X	226742	238381	254435	272383	281904	287231	294920	297389	297871	304328	311779	318876	323790
DIFFERENCE	2813	6311	13436	21988	24177	22519	22847	18185	11048	10330	10310	10310	10310
PERCENT INCREASE	1.3	2.7	5.6	8.8	9.4	8.5	8.4	6.5	3.9	3.5	3.4	3.3	3.3
OVER BASELINE													
UTAH 7-COUNTY TOTAL	408061	422960	439267	456861	466789	475766	483250	494374	503339	511587	519690	527231	534096
BASELINE	408061	422960	439267	456861	466789	475766	483250	494374	503339	511587	519690	527231	534096
WITH M-X	408061	422960	440300	463139	484130	492287	498300	503391	511632	519723	527264	534129	539119
DIFFERENCE	0	0	1033	6278	73341	5464	5027	1444	232	35	33	33	33
PERCENT INCREASE	0.0	0.0	0.2	1.4	2.0	1.8	0.8	0.3	0.1	0.0	0.0	0.0	0.0
OVER BASELINE													
DEPLOYMENT REGION TOTAL	631890	659030	680266	707256	724516	740478	757323	773740	790162	803635	821159	835797	849576
BASELINE	631890	659030	680266	707256	724516	740478	757323	773740	790162	803635	821159	835797	849576
WITH M-X	631890	661341	694225	735322	738143	771361	784207	801462	816020	831502	846140	859919	874443
DIFFERENCE	2813	6311	14449	28266	33627	30883	26884	19659	11300	10365	10343	10343	10343
PERCENT INCREASE	0.4	1.0	2.1	4.0	4.6	4.2	3.5	2.5	1.4	1.3	1.3	1.2	1.2
OVER BASELINE													

SOURCE: MOR SCIENCES, 31-OCT-80

Table 2.1-24. (Page 1 of 2)

EMPLOYMENT IMPACTS (BY PLACE OF RESIDENCE, INCLUDING MILITARY)
 ALTERNATIVE 8A, SPLIT DEPLOYMENT (70/30) - NEVADA/UTAH
 BASE I AT COYOTE SPRINGS, NV (CLARK CO.)

COUNTY	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
CLARK													
BASLINE	213819	223876	232720	242125	249347	256165	263308	270331	277548	284630	291864	298803	305566
WITH M-X	218348	229908	244614	259934	269175	274750	282022	286298	288398	294811	302030	308959	315732
DIFFERENCE	2729	6032	11894	17809	19828	18585	18714	15967	10850	10181	10166	10166	10166
PERCENT INCREASE OVER BASELINE	1.3	2.7	5.1	7.4	8.0	7.3	7.1	5.9	3.9	3.6	3.5	3.4	3.3
EUREKA													
BASLINE	378	389	600	613	625	636	647	658	671	683	695	707	718
WITH M-X	378	389	600	613	626	637	649	660	671	683	695	707	718
DIFFERENCE	0	0	0	0	1	1	2	2	0	0	0	0	0
PERCENT INCREASE OVER BASELINE	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.3	0.0	0.0	0.0	0.0	0.0
LINCOLN													
BASLINE	1667	1705	1747	1793	1827	1860	1894	1927	1961	1994	2028	2060	2090
WITH M-X	1751	1984	2823	3748	4781	5793	6793	7793	8793	9793	10793	11793	12793
DIFFERENCE	84	279	1076	1955	2954	3954	4954	5954	6954	7954	8954	9954	10954
PERCENT INCREASE OVER BASELINE	5.0	16.4	61.7	109.0	161.3	213.6	265.9	318.2	370.5	422.8	475.1	527.4	579.7
MYE													
BASLINE	3091	3168	3250	3340	3433	3482	3554	3628	3701	3776	3849	3921	3990
WITH M-X	3091	3168	3676	5287	6443	7857	9463	11272	13282	15492	17702	19912	22122
DIFFERENCE	0	0	426	1947	2010	2375	2909	3644	4581	5716	6843	7970	9097
PERCENT INCREASE OVER BASELINE	0.0	0.0	13.1	61.3	61.7	68.5	83.4	100.3	117.2	134.1	151.0	167.9	184.8
WHITE PINE													
BASLINE	2865	2894	3002	4434	5059	5756	5358	3072	4772	4873	4982	5070	5166
WITH M-X	2865	2894	3040	4631	5323	6019	5783	3164	4783	4874	4982	5070	5166
DIFFERENCE	0	0	38	177	264	263	225	92	11	1	0	0	0
PERCENT INCREASE OVER BASELINE	0.0	0.0	1.3	4.0	5.2	4.6	4.0	1.8	0.2	0.0	0.0	0.0	0.0
BEAVER													
BASLINE	2828	3742	4248	4749	5176	4330	4196	4239	4304	4376	4445	4516	4584
WITH M-X	2828	3742	4275	4949	6309	6465	5109	4315	4307	4376	4445	4516	4584
DIFFERENCE	0	0	27	200	1133	2135	913	76	3	0	0	0	0
PERCENT INCREASE OVER BASELINE	0.0	0.0	0.6	4.2	21.9	49.3	21.8	1.8	0.1	0.0	0.0	0.0	0.0
IRON													
BASLINE	7724	7983	8270	8583	8806	9001	9207	9418	9632	9809	9992	10166	10322
WITH M-X	7724	7983	8299	8702	9076	9434	9481	9641	9641	9809	9992	10166	10322
DIFFERENCE	0	0	29	119	270	394	257	63	0	0	0	0	0
PERCENT INCREASE OVER BASELINE	0.0	0.0	0.4	1.4	3.1	4.4	2.5	0.7	0.1	0.0	0.0	0.0	0.0

Table 2.1-24. (Page 2 of 2)

JLAB													
BASLINE	2339	2755	3055	3319	3320	3375	3339	3205	2993	3040	3084	3130	3167
WITH M-X	2339	2755	3079	3463	3493	3462	3354	3213	2994	3040	3084	3130	3167
DIFFERENCE	0	0	24	146	173	87	17	8	1	0	0	0	0
PERCENT INCREASE	0.0	0.0	0.8	4.4	5.2	2.6	0.5	0.2	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													
MILLARD													
BASLINE	4615	4915	6145	7271	7171	7321	7116	6260	5787	5844	5709	5965	6014
WITH M-X	4615	4915	6503	10031	10590	9007	7221	6281	5790	5844	5909	5965	6014
DIFFERENCE	0	0	358	2760	3419	1686	105	21	3	0	0	0	0
PERCENT INCREASE	0.0	0.0	5.8	38.0	47.7	23.0	1.5	0.3	0.1	0.0	0.0	0.0	0.0
OVER BASELINE													
BALT LAKE/UTAH													
BASLINE	384314	398768	418717	432336	441899	450269	458806	466842	474479	482303	489972	497067	503341
WITH M-X	384314	398768	415293	435325	446233	454205	461458	467838	474674	482306	489972	497067	503341
DIFFERENCE	0	0	576	2989	4354	3936	2652	1196	195	1	0	0	0
PERCENT INCREASE	0.0	0.0	0.1	0.7	1.0	0.9	0.6	0.3	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													
WASHINGTON													
BASLINE	8776	9145	9528	9927	10200	10481	10769	11065	11369	11604	11843	12088	12337
WITH M-X	8776	9145	9547	9991	10301	10607	10892	11145	11410	11638	11876	12121	12370
DIFFERENCE	0	0	19	64	101	126	123	80	41	34	33	33	33
PERCENT INCREASE	0.0	0.0	0.2	0.6	1.0	1.2	1.1	0.7	0.4	0.3	0.3	0.3	0.3
OVER BASELINE													
NEVADA 3-COUNTY TOTAL													
BASLINE	224020	232232	241319	252325	260271	267899	274963	281616	288653	295956	303418	310561	317530
WITH M-X	224020	232232	241319	252325	260271	267899	274963	281616	288653	295956	303418	310561	317530
DIFFERENCE	2813	6311	13436	21988	24177	22519	22847	18185	11048	10330	10310	10310	10310
PERCENT INCREASE	1.3	2.7	5.6	8.7	9.3	8.4	8.3	6.5	3.8	3.5	3.4	3.3	3.2
OVER BASELINE													
UTAH 7-COUNTY TOTAL													
BASLINE	410596	427308	445963	466185	476572	484777	493433	500629	508564	516978	525247	532937	539953
WITH M-X	410596	427308	446996	472463	486022	493141	497470	502273	508816	517013	525280	532965	539988
DIFFERENCE	0	0	1033	6278	9450	8364	4037	1444	252	35	33	33	33
PERCENT INCREASE	0.0	0.0	0.2	1.3	2.0	1.7	0.8	0.3	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													
DEPLOYMENT REGION TOTAL													
BASLINE	634616	659540	687282	718510	736843	752676	768396	782445	797217	812934	828665	843493	857485
WITH M-X	634616	659540	701751	746776	770470	783359	795280	806517	823299	837008	853836	867828	881828
DIFFERENCE	2813	6311	14469	26266	33627	30883	26884	19629	11300	10365	10343	10343	10343
PERCENT INCREASE	0.4	1.0	2.1	3.9	4.6	4.1	3.5	2.5	1.4	1.3	1.2	1.2	1.2
OVER BASELINE													

SOURCE: MOR SCIENCFS. 31-OCT-80

Table 2.1-25. (page 1 of 2)

CIVILIAN LABOR FORCE IMPACTS
 ALTERNATIVE BA: SPLIT DEPLOYMENT (70/30) - NEVADA/UTAH (L)
 BASE 1 AT COYOTE SPRINGS, NV (CLARK CO.)

COUNTY	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
CLARK													
BASELINE	232979	242644	252144	262139	269894	277284	285074	292784	300449	308331	316141	323470	330989
WITH M-X	232979	242894	254083	268403	277713	283519	289878	296515	302150	309742	317392	325101	332420
DIFFERENCE	0	250	1937	6264	7821	6233	4802	3431	1481	1431	1431	1431	1431
PERCENT INCREASE OVER BASELINE	0.0	0.1	0.8	2.4	2.9	2.2	1.7	1.2	0.5	0.5	0.5	0.4	0.4
EUREKA													
BASELINE	597	608	620	634	645	656	669	680	692	705	718	730	741
WITH M-X	597	608	620	634	645	657	671	681	692	705	718	730	741
DIFFERENCE	0	0	0	0	0	1	2	1	0	0	0	0	0
PERCENT INCREASE OVER BASELINE	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0
LINCOLN													
BASELINE	1773	1813	1857	1904	1941	1975	2012	2047	2084	2120	2155	2189	2221
WITH M-X	1828	2057	2075	4076	2077	3374	4176	5098	2228	2223	2234	2289	2320
DIFFERENCE	55	236	1218	2172	936	1399	2164	1051	124	103	101	100	99
PERCENT INCREASE OVER BASELINE	3.1	14.1	65.6	114.1	48.2	70.8	107.6	51.3	6.0	4.9	4.7	4.6	4.5
NYE													
BASELINE	3220	3299	3385	3477	3553	3625	3702	3777	3855	3931	4007	4082	4154
WITH M-X	3220	3299	3314	6032	7300	6479	6108	4902	3857	3931	4007	4082	4154
DIFFERENCE	0	0	529	2555	3747	2854	2406	1125	2	0	0	0	0
PERCENT INCREASE OVER BASELINE	0.0	0.0	15.6	73.5	105.5	78.7	63.0	29.8	0.1	0.0	0.0	0.0	0.0
WHITE PINE													
BASELINE	3297	3328	3366	3409	3480	3550	3615	3682	3770	3841	3912	3980	4044
WITH M-X	3297	3328	3366	3422	3532	3560	3615	3692	3770	3841	3912	3980	4044
DIFFERENCE	0	0	0	13	52	10	0	0	0	0	0	0	0
PERCENT INCREASE OVER BASELINE	0.0	0.0	0.0	0.4	1.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEAVER													
BASELINE	2147	2203	2264	2329	2398	2479	2400	2422	2442	2470	2497	2522	2543
WITH M-X	2147	2203	2264	2319	2363	4869	3412	2472	2442	2470	2497	2522	2543
DIFFERENCE	0	0	0	190	1257	2510	1012	50	0	0	0	0	0
PERCENT INCREASE OVER BASELINE	0.0	0.0	0.0	8.2	53.3	105.5	42.2	2.1	0.0	0.0	0.0	0.0	0.0
IRON													
BASELINE	8174	8433	8724	9035	9262	9478	9702	9932	10165	10351	10544	10729	10903
WITH M-X	8174	8433	8724	9035	9370	9659	9798	9932	10165	10351	10544	10729	10903
DIFFERENCE	0	0	0	0	108	191	56	0	0	0	0	0	0
PERCENT INCREASE OVER BASELINE	0.0	0.0	0.0	0.0	1.2	2.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0

Table 2.1-25. (Page 2 of 2)

JULAS														
BASLINE	2302	2406	2520	2645	2705	2761	2820	2878	2938	2991	3053	3065	3102	3102
WITH M-X	0	0	0	127	154	140	0	0	0	0	0	0	0	0
DIFFERENCE														
PERCENT INCREASE	0.0	0.0	0.0	4.8	5.7	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER BASELINE														
MILLARD														
BASLINE	3910	4075	4256	4453	4595	4633	4733	4856	4957	5000	5038	5072	5099	5099
WITH M-X	0	0	420	3278	4028	1904	42	0	0	0	0	0	0	0
DIFFERENCE														
PERCENT INCREASE	0.0	0.0	9.9	73.6	88.4	40.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER BASELINE														
SALT LAKE/UTAH														
BASLINE	404738	419487	435639	453084	462852	471637	480731	489835	498359	506713	514709	522122	528845	528845
WITH M-X	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DIFFERENCE														
PERCENT INCREASE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER BASELINE														
WASHINGTON														
BASLINE	9258	9646	10050	10472	10760	11056	11359	11672	11993	12240	12493	12751	13014	13014
WITH M-X	0	0	0	0	0	4	0	0	0	0	0	0	0	0
DIFFERENCE														
PERCENT INCREASE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER BASELINE														
NEVADA 5-COUNTY TOTAL														
BASLINE	242866	251692	261374	271543	279813	287080	295074	302980	311071	318928	326933	334651	342149	342149
WITH M-X	55	506	3684	11004	12356	10499	9374	5408	1607	1534	1532	1531	1530	1530
DIFFERENCE														
PERCENT INCREASE	0.0	0.2	1.4	4.1	4.5	3.7	3.2	1.9	0.5	0.5	0.5	0.5	0.4	0.4
OVER BASELINE														
UTAH 7-COUNTY TOTAL														
BASLINE	430359	446250	463453	482018	492492	501944	511967	521393	531034	539755	548306	556261	563506	563506
WITH M-X	0	0	420	3593	49639	506413	513077	521643	531034	539755	548306	556261	563506	563506
DIFFERENCE														
PERCENT INCREASE	0.0	0.0	0.1	0.7	1.1	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER BASELINE														
DEPLOYMENT REGION TOTAL														
BASLINE	673095	697942	724827	752381	772005	789054	807041	824575	842125	858683	875239	890912	905435	905435
WITH M-X	673450	698448	726731	748180	760108	804202	817525	830233	843732	8460217	876791	892443	907185	907185
DIFFERENCE	55	506	4104	14899	18103	13148	10484	3458	1607	1534	1532	1531	1530	1530
PERCENT INCREASE	0.0	0.1	0.6	1.9	2.3	1.9	1.3	0.7	0.2	0.2	0.2	0.2	0.2	0.2
OVER BASELINE														

SOURCE: NBR SCIENCES, 31-OCT-80

Table 2.1-26. (Page 1 of 2)

CIVILIAN LABOR FORCE IMPACTS

ALTERNATIVE BA: SPLIT DEPLOYMENT (70/30) - NEVADA/UTAH
 BASE 1 AT COVOTE SPRINGS, NV (CLARK CO)

COUNTY	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
CLARK													
BASLINE	234077	242816	252408	262608	270441	277836	285583	293201	301028	308709	316555	324081	331416
WITH M-X	234077	243066	254338	268860	278249	284058	290373	296532	302509	310140	317986	325512	332847
DIFFERENCE	0	250	1930	6252	7808	6222	4790	3431	1481	1431	1431	1431	1431
PERCENT INCREASE OVER BASELINE	0.0	0.1	0.8	2.4	2.9	2.2	1.7	1.2	0.5	0.5	0.5	0.4	0.4
EUREKA													
BASLINE	597	608	620	634	646	657	669	680	693	705	718	730	741
WITH M-X	597	608	620	634	646	658	671	681	693	705	718	730	741
DIFFERENCE	0	0	0	0	0	1	2	1	0	0	0	0	0
PERCENT INCREASE OVER BASELINE	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0
LINCOLN													
BASLINE	1773	1814	1898	1907	1944	1978	2015	2050	2086	2121	2157	2191	2223
WITH M-X	1828	2070	3076	4079	2880	3377	4179	3101	2210	2224	2258	2291	2322
DIFFERENCE	55	256	1218	2172	936	1399	2164	1051	124	103	101	100	47
PERCENT INCREASE OVER BASELINE	3.1	14.1	65.6	113.9	48.1	70.7	107.4	51.3	5.9	4.9	4.7	4.6	4.3
NVE													
BASLINE	3220	3200	3286	3479	3555	3627	3704	3779	3856	3933	4009	4084	4156
WITH M-X	3220	3200	3286	3479	3555	3627	3704	3779	3856	3933	4009	4084	4156
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PERCENT INCREASE OVER BASELINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WHITE PINE													
BASLINE	3297	3230	3433	5125	5822	6623	6395	5837	5491	5607	5733	5835	5943
WITH M-X	3297	3230	3433	5125	5822	6623	6395	5837	5491	5607	5733	5835	5943
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PERCENT INCREASE OVER BASELINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEAVER													
BASLINE	3019	3094	4334	5060	5324	4621	4479	4324	4394	4670	4744	4820	4871
WITH M-X	3019	3094	4334	5060	5324	4621	4479	4324	4394	4670	4744	4820	4871
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PERCENT INCREASE OVER BASELINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRON													
BASLINE	8191	8463	8770	9102	9339	9543	9764	9987	10215	10402	10596	10781	10937
WITH M-X	8191	8463	8770	9102	9339	9543	9764	9987	10215	10402	10596	10781	10937
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PERCENT INCREASE OVER BASELINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 2.1-26. (Page 2 of 2)

JUN												
BASELINE	2510	2956	3277	3561	3562	3621	3583	3438	3212	3262	3311	3398
WITH M-X	2910	2956	3277	3673	3702	3647	3583	3438	3212	3262	3311	3398
DIFFERENCE	0	0	0	112	140	26	0	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	0.0	3.1	3.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0
OVER BASELINE												
MILLARD												
BASELINE	4843	5157	6448	7630	7325	7682	7467	6569	6072	6132	6200	6310
WITH M-X	4843	5157	6453	10883	11531	9564	7471	6569	6072	6132	6200	6310
DIFFERENCE	0	0	405	3255	4006	1882	4	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	6.3	42.7	53.2	24.5	0.1	0.0	0.0	0.0	0.0	0.0
OVER BASELINE												
SALT LAKE/UTAH												
BASELINE	403394	420642	437465	456051	466139	474967	483973	492238	500305	508760	516848	524332
WITH M-X	403394	420642	437465	456051	466139	474967	483973	492238	500305	508760	516848	524332
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER BASELINE												
WASHINGTON												
BASELINE	9238	9646	10050	10472	10760	11056	11359	11672	11993	12340	12731	13014
WITH M-X	9238	9646	10050	10472	10760	11060	11359	11672	11993	12340	12731	13014
DIFFERENCE	0	0	0	0	0	4	0	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER BASELINE												
NEVADA 9-COUNTY TOTAL												
BASELINE	242964	231868	261727	273753	282408	290721	298266	305367	312154	321075	329172	336921
WITH M-X	243019	252374	265404	284732	294899	301197	307728	311153	314761	322609	330704	338452
DIFFERENCE	55	506	3677	10979	12491	10476	9362	3608	1607	1534	1532	1531
PERCENT INCREASE	0.0	0.2	1.4	4.0	4.4	3.6	3.1	1.8	0.5	0.5	0.5	0.4
OVER BASELINE												
UTAH 7-COUNTY TOTAL												
BASELINE	433215	430860	470344	491884	508849	511492	520429	528428	536491	545466	554192	562301
WITH M-X	433215	430860	470949	495402	508313	516073	521667	528428	536491	545466	554192	562301
DIFFERENCE	0	0	405	3518	3466	4361	1042	50	0	0	0	0
PERCENT INCREASE	0.0	0.0	0.1	0.7	1.1	0.9	0.2	0.0	0.0	0.0	0.0	0.0
OVER BASELINE												
DEPLOYMENT REGION TOTAL												
BASELINE	676179	702728	732271	765637	785287	802213	818991	833975	849745	866541	883364	899222
WITH M-X	676234	703234	736333	780134	803214	817270	832393	839633	851352	868075	884896	900753
DIFFERENCE	55	506	4062	14497	17987	15057	10404	3638	1607	1534	1532	1531
PERCENT INCREASE	0.0	0.1	0.6	1.9	2.3	1.9	1.3	0.7	0.2	0.2	0.2	0.2
OVER BASELINE												

SOURCE: HDR SCIENCES, 31-OCT-80

Table 2.1-27. Projected employment and estimated M-X-related direct construction labor demand by craft, Nevada/Utah, split deployment, peak demand years 1985-1986.

LABOR CATEGORY	PROJECTED TWO-STATE EMPLOYMENT 1985	PROJECTED REGIONAL EMPLOYMENT 1985	M-X CONSTRUCTION LABOR DEMAND 1985	M-X LABOR UTILIZATION PERCENT 1985		PEAK M-X CONSTRUCTION LABOR DEMAND 1986	M-X LABOR UTILIZATION PERCENT 1987	
				STATES ^{1,8}	REGION ^{2,9}		STATES ^{1,10}	REGION ^{2,11}
Teamsters	23.400	9.900	1.992	8.5	20.1	2,714	11.6	27.4
Operating Engineers	9.600	4.300	1,740	18.1	40.5	2,370	24.7	55.1
Laborers	33.400	17.700	1,140	3.4	6.4	1,552	4.6	8.8
Iron Workers	2.000	700	548	27.4	78.3	747	37.4	106.7
Carpenters	19.000	8.000	635	3.3	7.9	865	4.6	10.8
Electricians	7.800	3.800	400	5.1	10.5	546	7.0	14.4
Pipefitters/Plumbers	5.700	2.600	461	8.0	17.7	628	11.0	24.2
Misc. Crafts	41.100	18.100	479	1.2	2.6	652	1.6	3.6
Restaurant Workers	99.200	49.300	435	0.4	0.9	593	0.6	1.2

3943

¹Statewide for Nevada, Utah.

²13 total counties in two-state area impact region.

³All truck drivers.

⁴Bulldozer, grader and excavating equipment operators.

⁵Journeymen and helpers.

⁶Craftsmen H.E.C.

⁷All food service workers.

⁸Col. 3 = Col. 1.

⁹Col. 3 = Col. 2.

¹⁰Col. 6 = Col. 1.

¹¹Col. 6 = Col. 2.

Source: HDR Sciences.

Table 2.1-28. Craft-specific construction labor availability in 1985 by geographic zone, Nevada/Utah, split deployment peak M-X construction labor requirements in 1986.

LABOR CATEGORY	CRAFT LABOR AVAILABLE ^a IN IMPACT COUNTIES ^c		CRAFT LABOR AVAILABLE ^a IN 2-STATE ^b AREA		NET EXCESS OF REQUIRED LABOR OVER IMPACT COUNTY & STATE AVAILABILITY ^a		TOTAL REQUIRED BY M-X 1986
	NUMBER	PERCENT OF REQUIRED ^d	NUMBER	PERCENT OF REQUIRED ^e	NUMBER	PERCENT OF REQUIRED ^f	NUMBER
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Teamsters	990	36.5	1,350	49.7	374	13.8	2,714
Operating Engineers	430	18.1	530	22.4	1,410	59.5	2,370
Laborers	1,770	100.0	1,570	100.0	0	—	1,552
Iron Workers	70	9.4	130	17.4	547	73.2	747
Carpenters	800	92.5	300	100.0	0	—	865
Electricians	380	69.6	400	100.0	0	—	546
Pipefitters/plumbers	260	41.4	310	49.4	58	9.2	626
Miscellaneous crafts	1,810	100.0	2,300	—	0	—	652
Restaurant workers	4,930	100.0	4,990	—	0	—	593
Total	5,727	53.7			2,389	22.4	10,673 ^g

3944

^aAssumes 10 percent of craft supply is available for employment on project.

^bOutside impact counties (i.e., Balance of State) in Nevada and Utah.

^c13 county region in Nevada/Utah.

^dColumn (1) + Column (7).

^eColumn (3) + Column (7).

^fColumn (5) + Column (7).

^gExclusive of contractor's staff.

Source: HDR Sciences

Table 2.1-29. Estimates of wage escalations¹ due to M-X-related excess peak labor demand², selected construction crafts, Nevada/Utah, split deployment.

CRAFTS	1986 EXCESS DEMAND		MEAN WAGES RATE ³ (DOLLARS/HR.)	ESTIMATED DEMAND ESCALATED WAGE RATES (DOLLARS/HR.)		
	NUMBER ³	PERCENT ⁴		SELECTED LABOR SUPPLY ELASTICITY COEFFICIENTS ⁴		
			0.5	1.0	1.5	
	(1)	(2)	(3)	(4)	(5)	(6)
Teamsters	374	1.6	\$12.52	\$12.92	\$23.72	\$12.65
Operating Engineers	1,410	14.7	16.16	20.91	18.54	17.74
Iron Workers	547	27.8	14.10	21.94	18.02	16.71
Pipefitters/plumbers	58	1.0	16.69	17.01	16.85	16.79
Laborers	0	--	--	--	--	--
Electricians	0	--	--	--	--	--

3945

¹1980 dollars, no adjustment is made for the background rate of inflation nor cyclical fluctuations in general business conditions.

²Excess demand is the amount by which M-X-direct construction employment exceeds 110 percent of the 1985 projected occupational employment in the two-state area.

³Wage rate is the mean union money wage plus estimated fringe benefits of several two-state metropolitan areas in effect in first half of 1980. Wage may also take the form of per diem, travel subsistence allowances, and scheduled overtime work.

⁴Elasticity is the proportionate rate of change of wages relative to a given proportionate rate of change in labor demand/supply. Elasticity coefficient equals percent change in labor supply ÷ percent change in wages.

Source: HDR Sciences.

Full Deployment

The earnings impacts of full deployment in Nevada/Utah under the Proposed Action are presented in Table 2.1-30 and Figure 2.1-5. It indicates that M-X-related earnings for Nevada/Utah are forecast to equal \$1,180 million (fiscal year 1980 dollars) in 1986, then decline and level off to \$250 million by 1993. By comparison, these figures are about 7 percent and 1 percent of 1978 total earnings of \$17.7 billion (1980 dollars) for the ROI. Historically, both states have exhibited rapid real earnings growth, 5.3 percent per year in Nevada and 4.2 percent per year in Utah over the 1967-1977 period. But gains have been concentrated in the metropolitan areas of Las Vegas and Salt Lake City - Provo, while in the balance of the ROI counties total earnings have grown very slowly. This is important because a large infusion of additional income in non-growing areas is likely to trigger localized wage and price inflation. In addition, project employees--some construction trades, in particular--are expected to have higher gross incomes than the average for this area, tending to pull up earnings across other occupations. In the short run, roughly one half of earnings growth results from DDA construction, while in the long run, all earnings increases are the result of base operations.

On a county basis, earnings growth in Clark County would comprise almost one-third of ROI peak earnings under the Proposed Action (Figure 2.1-6 and Table 2.1-31). Peak M-X-related earnings in the county would equal about 11 percent of 1978 earnings of \$3.37 billion (1980 dollars) but only 4 percent of this figure over the long run. Earnings attributable to base operations in the county would be about twice those related to indirect employment. The county has been characterized by very rapid growth in earnings, but most growth has centered in the services industry. Adjustment to earnings growth of the magnitude projected under the Proposed Action would not produce significant stress, but would generate some wage and price inflation, particularly in the short run and in key occupations.

M-X-related earnings in Beaver County, the site of the second operating base as well as DDA facilities, would peak at \$170 million in 1987, then stabilize at \$85 million by 1992 (Table 2.1-31). Compared to 1978 earnings of \$21 million (1980 dollars), earnings growth in the county would be extremely large. Further, these impacts would occur in a county characterized by very slow historic earnings growth in real earnings. Very significant growth problems in the county are likely with such a large infusion of additional incomes over a short period of time. Significant increases in local land values and earnings in non-M-X sectors are likely, as are temporary shortages of some goods, services, and skilled construction labor.

Salt Lake and Utah counties would experience a large absolute increase in earnings. In the short run, M-X-induced earnings would peak at \$125 million, but this represents only about 2 percent of total 1978 earnings of \$5.4 billion (1980 dollars). However, negligible long-run growth in earnings is forecast. These counties are the center of economic activity in Utah and have led earnings growth in the state. Salt Lake and Utah counties are the only areas in the state which could absorb M-X-related growth without significant stress.

Other counties in the ROI receive earnings growth principally from DDA construction, and consequently experience short-run impacts. Some effects, however, would be very large. Table 2.1-31 indicates that Nye County's M-X-related earnings would peak at \$230 million in 1988, about 165 percent above

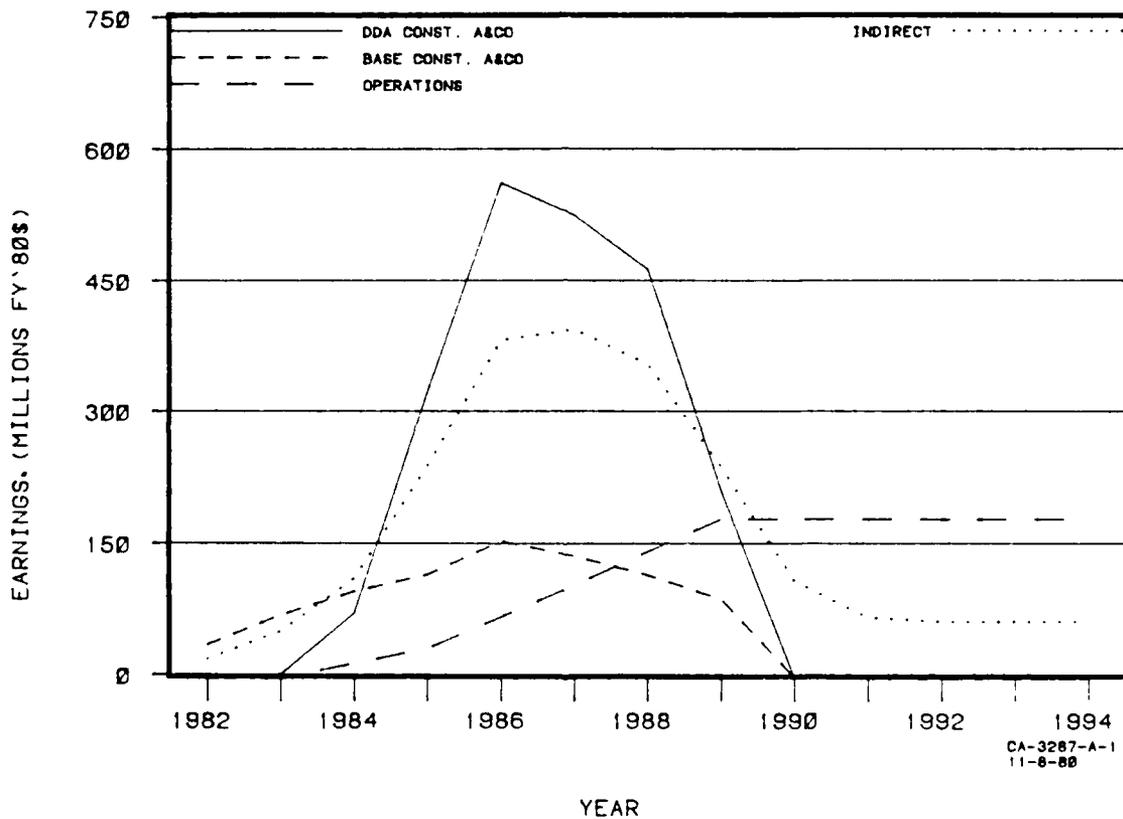


Figure 2.1-5. M-X related earnings by type, Nevada/Utah ROI: Proposed Action.

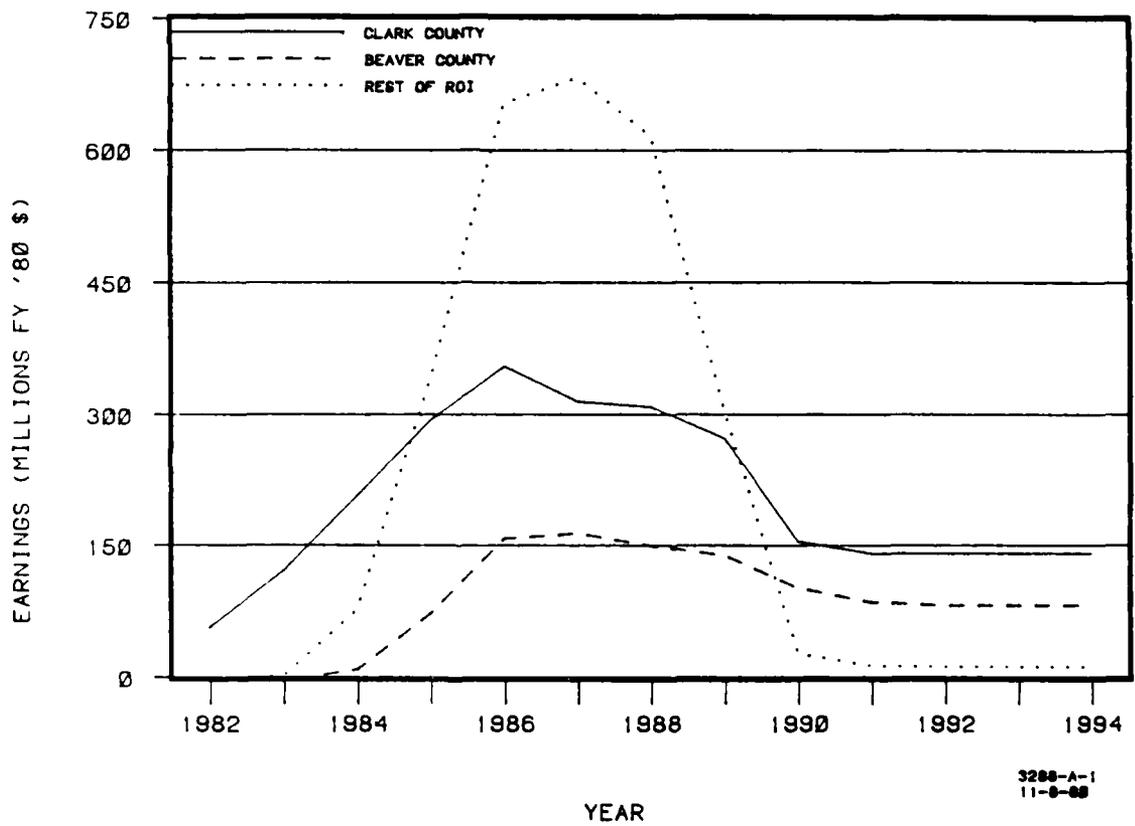


Figure 2.1-6. M-X-related earnings--Clark, Beaver, and other ROI counties: Proposed Action.

Table 2.1-30.

M-I RELATED EARNINGS, IN MILLIONS OF FY 1980 DOLLARS, IN DEPLOYMENT REGION

PROPOSED ACTION, FULL DEPLOYMENT - NEVADA/UTAH
 BASE I AT COYOTE SPRINGS, NV (CLARK CO)
 BASE II AT MILFORD, UT (BEAVER CO)

SOURCE OF EARNINGS	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
CLUSTER FACILITIES CONSTRUCTION, ASSEMBLY, AND CHECKOUT	0.0	4.6	74.7	326.0	566.0	529.0	467.3	213.6	1.3	0.0	0.0	0.0	0.0
BASE CONSTRUCTION, ASSEMBLY, AND CHECKOUT	38.6	72.6	99.8	118.9	156.9	140.1	118.7	91.4	1.3	0.0	0.0	0.0	0.0
OPERATIONS	0.0	0.0	17.4	34.5	70.7	107.1	145.2	182.2	182.2	182.2	182.2	182.2	182.2
INDIRECT	22.8	54.2	114.7	242.5	385.7	398.1	337.7	240.6	111.7	70.2	65.7	65.6	65.6
TOTAL	61.4	131.4	306.5	721.9	1179.3	1174.4	1088.9	727.8	296.4	252.4	247.9	247.8	247.8

SOURCE: HDR SCIENCES, 31-OCT-80

Table 2.1-31.

M-1 RELATED EARNINGS BY COUNTY OF WORK, IN MILLIONS OF FY 1980 DOLLARS
 PROPOSED ACTION - FULL DEPLOYMENT - NEVADA/UTAH
 BASE I AT COYOTE SPRINGS, NV (CLARK CO.)
 BASE II AT MILFORD, UT (BEAVER CO.)

COUNTY	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
CLARK													
DIRECT	38	72	117	146	163	140	156	169	164	103	103	103	103
INDIRECT	22	53	94	131	156	178	156	107	54	42	41	41	41
TOTAL	61	125	211	298	359	319	313	277	159	145	145	145	145
EUREKA													
DIRECT	0	0	0	0	9	90	108	49	0	0	0	0	0
INDIRECT	0	0	0	0	1	1	2	1	0	0	0	0	0
TOTAL	0	0	0	0	10	92	111	51	0	0	0	0	0
LINCOLN													
DIRECT	0	4	32	63	76	67	5	0	0	0	0	0	0
INDIRECT	0	0	2	3	4	4	4	3	2	2	2	2	2
TOTAL	0	5	35	67	80	72	10	3	2	2	2	2	2
NVE													
DIRECT	0	0	13	101	193	161	213	108	1	0	0	0	0
INDIRECT	0	0	0	2	4	10	16	11	2	0	0	0	0
TOTAL	0	0	14	103	197	172	229	120	3	0	0	0	0
WHITE PINE													
DIRECT	0	0	1	33	101	25	0	0	0	0	0	0	0
INDIRECT	0	0	0	5	13	9	5	2	0	0	0	0	0
TOTAL	0	0	2	38	114	34	5	2	0	0	0	0	0
BEAVER													
DIRECT	0	0	6	59	128	120	107	103	78	78	78	78	78
INDIRECT	0	0	6	18	33	47	47	39	27	12	8	8	8
TOTAL	0	0	13	77	162	168	154	143	106	90	86	86	86
IRON													
DIRECT	0	0	0	0	0	0	0	0	0	0	0	0	0
INDIRECT	0	0	0	2	7	9	9	7	3	4	4	4	4
TOTAL	0	0	0	2	7	9	9	7	3	4	4	4	4
JUAB													
DIRECT	0	0	0	3	68	110	30	0	0	0	0	0	0
INDIRECT	0	0	0	0	1	2	1	0	0	0	0	0	0
TOTAL	0	0	0	3	69	112	31	0	0	0	0	0	0

1978 earnings of \$140 million (1980 dollars) in the county. White Pine County would be similar: 1986 peak earnings of \$115 million represent more than 200 percent of 1978 earnings of \$55 million (1980 dollars).

Peak earnings in Eureka County are forecast to reach \$111 million in 1988, almost 10 times 1978 earnings of \$12 million (1980 dollars). In these counties, earnings of this magnitude could not be accommodated without boom-type wage and price inflation. The earnings impact table indicates that effects in other counties would be similar, but lower in magnitude. The extent of this demand-pull stimulus would be somewhat mitigated by workers' tendencies to spend a significant fraction of their incomes in Salt Lake City and Las Vegas. It also would be reduced by expanding local availability of goods and services on a temporary basis by transporting them into the affected communities.

Other mitigation strategies would be similar to those proposed for reducing employment impacts, discussed above under "Employment and Labor Force."

Split Deployment

Table 2.1-32 presents earnings by place of work for Alternative 8, split basing deployment in Nevada/Utah. It indicates that for the region as a whole, M-X-related earnings peak in 1987 at \$660 million, about 4 percent of 1978 total earnings for the region. Compared to full deployment, these peak earnings figures are about halved under split deployment (see Figure 2.1-7 and Table 2.1-30). Table 2.1-32 indicates that earnings growth is about equally divided between employment on DDA facility construction and the operating base. Upon completion of DDA and base construction, the table indicates that earnings would decline rapidly, then stabilize at \$140 million in 1992. This long-run figure also is about one-half that forecast under full deployment. In both the short and long run, the M-X-induced increase should be accommodated without significant growth stress.

Under this option, the first operating base is at Coyote Spring Valley, and will induce much of the earnings growth in the ROI. Peak earnings in Clark County are forecast to equal \$281.6 million, about 78 percent of peak earnings forecast for the county under the Proposed Action, full deployment alternative. Table 2.1-33 presents a summary of county level earnings growth attributable to M-X. It shows that over the long run, the net growth in earnings in Clark County is forecast to equal \$138.8 million, only \$7 million less than under the Proposed Action. The table indicates that short-run growth in earnings would occur in Lincoln, Nye, Beaver, Iron, and Millard counties from DDA construction employment. In all cases, the increase in expected earnings would induce short-run boom growth in these counties, significantly stressing all county economies and resident populations, but in general, impacts would be less than under full deployment.

PUBLIC FINANCE

This section presents the aggregate revenue and expenditure estimates for all local governments (county, cities, school districts, special districts) within the Nevada/Utah deployment region for the Proposed Action and the split deployment alternative. Educational related effects are presented separately as these constitute the major portion of the effects presented in the aggregate local government analysis. Peak year and long-term capital expenditure requirements

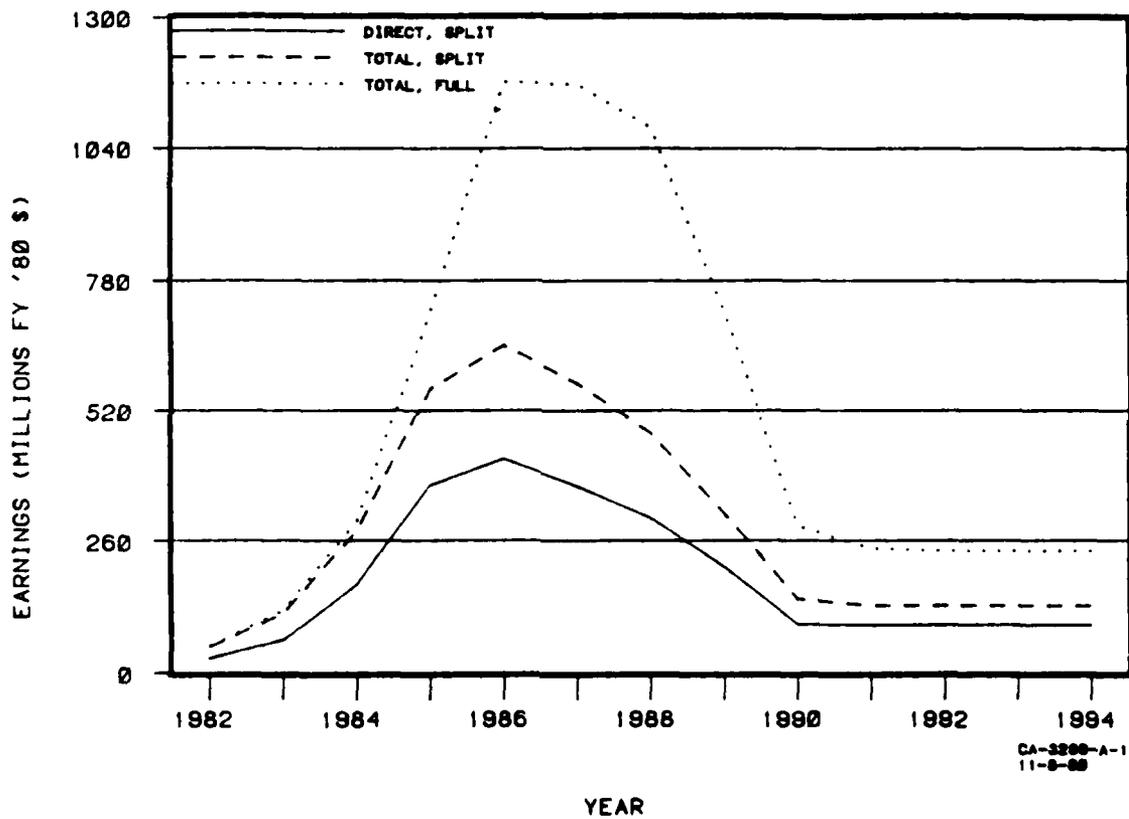


Figure 2.1-7. M-X-related earnings in Nevada/Utah ROI, full and split deployment.

TABLE 1-1-1

M-1 RELATED EARNINGS, IN MILLIONS OF FY 1980 DOLLARS, IN DEPLOYMENT REGION
 ALTERNATIVE BA SPLIT DEPLOYMENT (70/30) - NEVADA/UTAH
 BASE 1 AT COYOTE SPRINGS, NV (CLARK CD)

SOURCE OF EARNINGS	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
CLUSTER FACILITIES CONSTRUCTION, ASSEMBLY, AND CHECKOUT	0 0	4 6	66 3	242 1	284 3	234 6	173 7	64 1	0 0	0 0	0 0	0 0	0 0
BASE CONSTRUCTION, ASSEMBLY, AND CHECKOUT	37 0	68 4	98 1	102 6	95 8	53 8	52 5	50 0	1 3	0 0	0 0	0 0	0 0
OPERATIONS	0 0	0 0	17 4	33 7	51 1	68 4	86 3	102 1	102 1	102 1	102 1	102 1	102 1
INDIRECT	22 3	52 8	105 6	193 3	227 2	205 2	170 8	105 0	50 1	38 6	38 3	38 3	38 3
TOTAL	59 2	125 8	287 4	571 7	658 3	582 0	483 3	321 2	153 4	140 7	140 4	140 4	140 4

SOURCE: MDR SCIENCES, 31-OCT-80

Table 2.1-33.

M-1 RELATED EARNINGS BY COUNTY OF WORK, IN MILLIONS OF FY 1980 DOLLARS
 ALTERNATIVE BA SPLIT DEPLOYMENT (70/30) - NEVADA/UTAH
 BASE I AT COYOTE SPRINGS, NV (CLARK CO.)

COUNTY	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
CLARK													
DIRECT	26	48	115	126	146	122	138	152	103	102	102	102	102
INDIRECT	21	51	94	145	157	138	123	82	44	36	36	36	36
TOTAL	58	120	210	281	304	261	261	234	148	139	138	138	138
EUREKA													
DIRECT	0	0	0	0	0	0	0	0	0	0	0	0	0
INDIRECT	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
LINCOLN													
DIRECT	0	4	34	60	16	35	62	28	0	0	0	0	0
INDIRECT	0	0	2	3	3	2	3	2	1	1	1	1	1
TOTAL	0	5	37	63	19	38	65	30	1	1	1	1	1
NYE													
DIRECT	0	0	18	84	119	92	79	34	0	0	0	0	0
INDIRECT	0	0	0	1	2	2	2	1	0	0	0	0	0
TOTAL	0	0	18	85	121	94	81	36	0	0	0	0	0
WHITE PINE													
DIRECT	0	0	0	0	0	0	0	0	0	0	0	0	0
INDIRECT	0	0	0	0	1	1	1	0	0	0	0	0	0
TOTAL	0	0	0	0	1	1	1	0	0	0	0	0	0
HEAVER													
DIRECT	0	0	0	1	32	75	31	1	0	0	0	0	0
INDIRECT	0	0	0	0	1	2	1	0	0	0	0	0	0
TOTAL	0	0	0	2	34	77	33	1	0	0	0	0	0
IRON													
DIRECT	0	0	0	0	0	0	0	0	0	0	0	0	0
INDIRECT	0	0	0	1	3	3	2	0	0	0	0	0	0
TOTAL	0	0	0	1	3	3	2	0	0	0	0	0	0
JARR													
DIRECT	0	0	0	0	0	0	0	0	0	0	0	0	0
INDIRECT	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0

are also presented. Estimates are presented for both low and high baseline scenarios except for capital expenditure requirements. The low baseline scenario, however, is the only one discussed, as the net effects of other project-induced growth is uncertain at this time.

Local governments in the deployment region are anticipated to experience varying levels of deficits through the early phases of the project. However, as the tax base expands and the temporary construction work force leaves the area, local government budget levels in the long-term will begin to stabilize near balanced levels.

Under the Proposed Action, approximately 50 percent of the deployment region peak year expenditures attributable to M-X (trend growth baseline) can be accounted for by the county areas where operating bases are located. Other county areas are anticipated to experience little or no long-term growth due to M-X but those associated with DDA facility construction will experience rapid short-term growth. Estimated peak-year increases in expenditures for these county areas range from approximately a 50 percent increase in the Millard County area to over 500 percent for the Eureka County area (Table 2.1-34). Revenues accruing to jurisdictions within these county areas follow similar patterns. However, during the initial phase of the project these revenues fall behind the anticipated growth in expenditures with the resultant effect being short-term operation deficits.

Under the split deployment alternative (trend growth baseline) significant peak year impacts are anticipated for only the Clark, Lincoln, Nye, Beaver, and Millard county areas. The net peak year effects in these areas are deficits which range from 0.5 percent of total expenditures in the Clark County area (1985) to 9.4 percent of total expenditures in the Beaver County area (1987). The potential for service level degradation in these areas is quite high. Substantial outside aid would be required to prevent service levels from deteriorating to unacceptable levels. No significant adverse effects are anticipated in the long-term for any of the potentially affected county areas. However, expenditure levels in the Clark and Lincoln County areas in the long-term would be approximately 1.6 percent and 3.9 percent greater, respectively, than expenditure levels that would be experienced under baseline conditions (Table 2.1-35).

The effects on the potentially affected school districts follow similar patterns. Under the Proposed Action in-migration of new pupils in the deployment region as a whole in the early phases of the project will increase local education expenditures by approximately \$42.2 million by the peak year 1987 (Table 2.1-36). This represents a 4.5 percent increase over baseline expenditure levels in the region as a whole. Local effects, however, are more serious when compared to baseline levels. In Eureka County under the Proposed Action peak-year expenditures are estimated to increase by \$3.8 million if staffing levels remain at acceptable levels. With the possibility of local districts not being able to recruit the necessary staff to maintain acceptable student-teacher ratios these peak-year expenditure estimates would be reduced. Similar effects are felt across all county areas under the Proposed Action.

Under the split deployment alternative peak year (1985) educational related expenditures are reduced to approximately \$14.9 million in the deployment area as a whole (Table 2.1-37). Significant local effects in the peak year also are limited to the county areas of Clark, Lincoln, Nye, Beaver, and Millard. Long-term expenditure effects are also limited to the Clark County and Lincoln County areas.

Table 2.1-34. (Page 1 of 3)

LOCAL GOVERNMENT REVENUES, EXPENDITURES, AND NET IMPACTS (THOUSANDS FY 1980 & (1) BASELINE, LOW PROPOSED ACTION		1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
CLARK														
REVENUES														
WITHOUT MI	592277	614212	638244	663540	683191	701895	721620	741132	761071	780486	800308	819316	837842	
WITH MI	592277	614313	642292	672179	701128	729147	757440	785994	814804	843871	873194	902772	932606	
DIFFERENCE	0	101	4028	13619	20936	27222	33300	37894	44119	44804	4404	14604	14404	
PCT. DIFF.	0.00	0.02	0.63	2.05	3.30	3.66	3.26	2.42	1.87	1.89	1.80	1.76	1.72	
EXPENDITURES														
WITHOUT MI	594890	616880	641036	666442	684159	704944	724754	744331	764397	784876	803784	822875	841481	
WITH MI	594890	616987	646072	682820	713688	730412	747332	764971	778323	797786	817694	836785	853371	
DIFFERENCE	0	107	5036	17368	27529	25468	22578	14720	13723	13710	13910	13910	13910	
PCT. DIFF.	0.00	0.02	0.79	2.61	4.01	3.61	3.12	1.98	1.82	1.77	1.73	1.69	1.65	
NET IMPACT	0	-6	-1008	-3768	-3373	294	792	3214	493	494	494	494	494	
EUREKA														
REVENUES														
WITHOUT MI	1157	1178	1203	1229	1251	1273	1297	1319	1343	1368	1392	1416	1438	
WITH MI	1157	1178	1206	1209	1251	1273	1297	1319	1343	1368	1392	1416	1438	
DIFFERENCE	0	0	3	80	747	4683	6542	3487	382	16	1	0	0	
PCT. DIFF.	0.00	0.00	0.28	6.54	59.72	36.78	504.29	264.32	43.32	1.13	0.07	0.00	0.00	
EXPENDITURES														
WITHOUT MI	1157	1178	1203	1229	1251	1273	1297	1319	1343	1368	1392	1416	1438	
WITH MI	1157	1178	1203	1229	1251	1273	1297	1319	1343	1368	1392	1416	1438	
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0	
PCT. DIFF.	0.00	0.00	0.38	8.96	80.01	485.46	533.13	200.00	3.12	0.29	0.00	0.00	0.00	
NET IMPACT	0	0	-1	-30	-294	-1497	-634	848	940	12	1	0	0	
LINCOLN														
REVENUES														
WITHOUT MI	3958	4047	4145	4250	4322	4409	4491	4570	4651	4720	4810	4883	4956	
WITH MI	4036	4248	4513	4813	5092	5357	5619	5877	6137	6397	6657	6917	7177	
DIFFERENCE	78	320	368	563	770	948	1128	1307	1486	1667	1847	2024	2221	
PCT. DIFF.	1.99	7.92	40.24	79.99	102.21	90.13	41.38	19.32	10.89	7.73	7.11	6.94	6.82	
EXPENDITURES														
WITHOUT MI	3958	4047	4145	4250	4322	4409	4491	4570	4651	4720	4810	4883	4956	
WITH MI	4067	4456	4532	4286	4236	4114	3873	3673	3572	3490	3411	3323	3233	
DIFFERENCE	110	409	2187	4036	4904	4006	1404	798	421	359	351	350	349	
PCT. DIFF.	2.77	10.10	32.76	94.96	113.21	90.86	31.27	17.43	9.06	7.60	7.29	7.17	7.04	
NET IMPACT	-31	-88	-319	-636	-477	-31	434	93	85	7	-9	-11	-11	
MYE														
REVENUES														
WITHOUT MI	10312	10771	11031	11322	11598	11834	12066	12321	12584	12823	13062	13264	13542	
WITH MI	10312	10771	11593	12440	13242	13982	14722	15462	16202	16942	17682	18422	19162	
DIFFERENCE	0	0	562	1118	1644	2148	2656	3164	3672	4180	4688	5196	5704	
PCT. DIFF.	0.00	0.00	4.92	34.29	70.92	67.83	78.37	48.76	11.40	1.12	0.05	0.00	0.00	
EXPENDITURES														
WITHOUT MI	10312	10771	11031	11322	11598	11834	12066	12321	12584	12823	13062	13264	13542	
WITH MI	10312	10771	11031	11322	11598	11834	12066	12321	12584	12823	13062	13264	13542	
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0	
PCT. DIFF.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NET IMPACT	0	0	562	1118	1644	2148	2656	3164	3672	4180	4688	5196	5704	

Table 2.1-34. (Page 2 of 3)

WHITE PINE													
REVENUES													
WITHOUT MX	7144	7213	7275	7387	7541	7693	7834	8000	8171	8323	8479	8626	8764
WITH MX	7144	7213	7276	8765	10444	12339	14444	16731	19273	22104	25186	28476	31944
DIFFERENCE	0	0	1	1378	4699	2791	1077	274	29	0	0	0	0
PCT DIFF	0.00	0.00	0.01	18.63	62.31	35.76	14.01	3.43	0.30	0.00	0.00	0.00	0.00
EXPENDITURES													
WITHOUT MX	7166	7235	7317	7410	7563	7716	7858	8024	8193	8350	8504	8652	8790
WITH MX	7166	7235	7320	9411	12703	16144	19782	23445	27189	31013	34916	38896	42944
DIFFERENCE	0	0	3	2008	5378	2428	924	118	0	0	0	0	0
PCT DIFF	0.00	0.00	0.04	27.10	61.80	31.47	11.76	1.48	0.00	0.00	0.00	0.00	0.00
NET IMPACT													
	0	0	2	630	1640	323	173	156	23	0	0	0	0
BEAVER													
REVENUES													
WITHOUT MX	4012	4113	4220	4350	4496	4645	4805	4975	5154	5342	5539	5744	5957
WITH MX	4012	4113	4220	4350	4496	4645	4805	4975	5154	5342	5539	5744	5957
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EXPENDITURES													
WITHOUT MX	4012	4113	4237	4350	4406	4443	4485	4529	4562	4594	4626	4658	4691
WITH MX	4012	4113	5191	8501	12871	18638	24882	31697	39092	47077	55744	65184	75409
DIFFERENCE	0	0	96	4150	9485	12193	17097	26168	33530	41483	49478	58526	68418
PCT DIFF	0.00	0.00	22.32	95.40	213.30	274.30	389.80	580.97	733.15	903.43	1063.78	1261.14	1494.44
MX INDUCED													
	0	0	-407	-1273	-1866	-1332	-374	-71	431	208	-227	-227	-227
IRON													
REVENUES													
WITHOUT MX	16705	17234	17830	18464	18927	19369	19828	20298	20773	21153	21549	21926	22282
WITH MX	16705	17234	17830	18464	18927	19369	19828	20298	20773	21153	21549	21926	22282
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EXPENDITURES													
WITHOUT MX	17428	17990	18613	19274	19740	20219	20697	21189	21684	22183	22687	23196	23709
WITH MX	17428	17990	18613	19274	19740	20219	20697	21189	21684	22183	22687	23196	23709
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MX INDUCED													
	0	0	0	-82	-407	-303	-179	-91	21	53	77	77	-77
JUAB													
REVENUES													
WITHOUT MX	5163	5376	5633	5923	6067	6193	6326	6456	6589	6724	6861	6997	7137
WITH MX	5163	5376	5633	6444	8116	9477	10492	11263	11999	12703	13384	14044	14694
DIFFERENCE	0	0	0	316	1749	3284	1842	342	680	1111	1523	2047	2657
PCT DIFF	0.00	0.00	0.00	3.64	28.83	53.03	27.12	3.37	0.14	0.00	0.00	0.00	0.00
EXPENDITURES													
WITHOUT MX	5163	5376	5633	5923	6067	6193	6326	6456	6589	6724	6861	6997	7137
WITH MX	5163	5376	5633	6262	8606	10231	11753	13274	14794	16314	17834	19354	20874
DIFFERENCE	0	0	0	339	2539	4038	4227	4018	4005	4090	4070	4070	4070
PCT DIFF	0.00	0.00	0.00	5.56	41.84	65.21	50.03	6.21	6.08	6.08	6.08	6.08	6.08
MX INDUCED													
	0	0	0	-113	-780	-735	-373	-307	11	0	0	0	0
MILLARD													
REVENUES													
WITHOUT MX	8275	8624	9007	9423	9640	9846	10062	10276	10490	10701	10911	11124	11340
WITH MX	8275	8624	9379	11751	13278	14613	15767	16844	17846	18774	19628	20508	21414
DIFFERENCE	0	0	352	2328	2638	2767	2705	2768	2856	2973	3017	3184	3374
PCT DIFF	0.00	0.00	4.27	24.72	27.37	28.07	27.11	27.78	27.78	27.78	27.78	27.78	27.78
EXPENDITURES													

Table 2.1-34. (Page 3 of 3)

WITHOUT MI	8273	8624	9007	9423	9640	9946	10062	10276	10480	10591	10661	10724	10790
WITH MI	8273	8624	9007	9423	9640	9946	10062	10276	10480	10591	10661	10724	10790
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI INDUCED	0	0	0	0	0	0	0	0	0	0	0	0	0
NET IMPACT	0	0	0	0	0	0	0	0	0	0	0	0	0
SALT LAKE/UTAH													
REVENUES	724498	750899	779812	811040	828326	844231	860637	876826	892441	907038	921351	934622	946634
WITHOUT MI	724498	750899	779812	811040	828326	844231	860637	876826	892441	907038	921351	934622	946634
WITH MI	724498	750899	779812	811040	828326	844231	860637	876826	892441	907038	921351	934622	946634
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI INDUCED	0	0	0	0	0	0	0	0	0	0	0	0	0
NET IMPACT	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPENDITURES													
WITHOUT MI	736042	762885	792233	823785	841730	857272	874628	890821	906486	921313	936037	949539	961764
WITH MI	736042	762885	792233	823785	841730	857272	874628	890821	906486	921313	936037	949539	961764
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI INDUCED	0	0	0	0	0	0	0	0	0	0	0	0	0
NET IMPACT	0	0	0	0	0	0	0	0	0	0	0	0	0
WASHINGTON													
REVENUES	20711	21580	22484	23427	24072	24733	25413	26112	26829	27383	27948	28323	29114
WITHOUT MI	20711	21580	22484	23427	24072	24733	25413	26112	26829	27383	27948	28323	29114
WITH MI	20711	21580	22484	23427	24072	24733	25413	26112	26829	27383	27948	28323	29114
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI INDUCED	0	0	0	0	0	0	0	0	0	0	0	0	0
NET IMPACT	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPENDITURES													
WITHOUT MI	20711	21580	22484	23427	24072	24733	25413	26112	26829	27383	27948	28323	29114
WITH MI	20711	21580	22484	23427	24072	24733	25413	26112	26829	27383	27948	28323	29114
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI INDUCED	0	0	0	0	0	0	0	0	0	0	0	0	0
NET IMPACT	0	0	0	0	0	0	0	0	0	0	0	0	0
REGIONAL TOTAL													
REVENUES	1394614	1462370	1500973	1560615	1599332	1629645	1674328	1718844	1749326	1789300	1821029	1856764	1897110
WITHOUT MI	1394614	1462370	1500973	1560615	1599332	1629645	1674328	1718844	1749326	1789300	1821029	1856764	1897110
WITH MI	1394614	1462370	1500973	1560615	1599332	1629645	1674328	1718844	1749326	1789300	1821029	1856764	1897110
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI INDUCED	0	0	0	0	0	0	0	0	0	0	0	0	0
NET IMPACT	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPENDITURES													
WITHOUT MI	1409205	1460701	1516977	1577073	1616597	1652040	1672097	1729974	1748013	1804021	1840182	1874429	1906863
WITH MI	1409205	1460701	1516977	1577073	1616597	1652040	1672097	1729974	1748013	1804021	1840182	1874429	1906863
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI INDUCED	0	0	0	0	0	0	0	0	0	0	0	0	0
NET IMPACT	0	0	0	0	0	0	0	0	0	0	0	0	0

SOURCE: FOR SCIENCES
 (1) ESTIMATES REFLECT AGGREGATE REVENUES AND EXPENDITURES FOR ALL LOCAL GOVERNMENTAL UNITS (COUNTIES, CITIES, SCHOOLS, DISTRICTS, SPECIAL DISTRICTS) WITHIN THE COUNTY.

30-OCT-86

Table 2.1-35. (Page 1 of 3)

LOCAL GOVERNMENT REVENUES, EXPENDITURES AND NET IMPACTS (THOUSANDS FY 1980 \$) (1) BASELINE LOW ALTERNATIVE BA		1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
CLARK														
REVENUES														
WITHOUT MI	852277	614212	678244	647840	681171	701876	721420	741132	761081	780486	800308	814378	827842	841481
WITH MI	392277	614284	642277	612318	701748	720743	738663	756597	774537	792477	810416	828356	846296	864236
DIFFERENCE	0	72	3973	12498	18326	18447	17043	13775	14305	14291	14291	14291	14291	14291
PCT DIFF	0.00	0.01	0.62	1.71	2.72	2.67	2.76	2.13	1.88	1.83	1.74	1.74	1.74	1.71
EXPENDITURES														
WITHOUT MI	394850	616880	641036	666442	686137	704944	724734	744351	764377	783876	803784	822875	841481	860086
WITH MI	394850	616926	640116	682410	709953	722526	740705	758763	778213	797677	817585	836675	855282	873890
DIFFERENCE	0	76	4980	13948	19784	17391	13978	14412	13816	13801	13801	13801	13801	13801
PCT DIFF	0.00	0.01	0.78	2.40	2.88	2.50	1.94	1.81	1.72	1.76	1.72	1.68	1.68	1.64
NET IMPACT	0	-4	1097	-3210	-1238	856	1693	1367	489	490	490	490	490	490
EUREKA														
REVENUES														
WITHOUT MI	1157	1178	1203	1229	1251	1273	1277	1319	1343	1368	1392	1416	1438	1438
WITH MI	1157	1178	1203	1229	1251	1274	1300	1321	1344	1368	1392	1416	1438	1438
DIFFERENCE	0	0	0	0	0	1	3	2	1	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.00	0.08	0.24	0.13	0.05	0.00	0.00	0.00	0.00	0.00
EXPENDITURES														
WITHOUT MI	1157	1178	1203	1229	1251	1273	1307	1319	1343	1368	1392	1416	1438	1438
WITH MI	1157	1178	1203	1229	1252	1274	1301	1320	1343	1368	1392	1416	1438	1438
DIFFERENCE	0	0	0	0	1	4	1	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.05	0.09	0.31	0.09	0.00	0.00	0.00	0.00	0.00	0.00
NET IMPACT	0	0	0	0	0	1	1	1	1	0	0	0	0	0
LINCOLN														
REVENUES														
WITHOUT MI	3958	4047	4145	4250	4332	4409	4471	4570	4631	4730	4810	4865	4956	5056
WITH MI	4031	4362	5683	7321	6153	6314	7657	6293	5091	4943	5005	5078	5147	5217
DIFFERENCE	73	315	1738	3071	1821	2106	3146	1723	440	213	195	193	190	190
PCT DIFF	1.85	7.78	41.93	72.27	42.03	47.76	70.30	37.71	9.44	4.50	4.06	3.93	3.84	3.84
EXPENDITURES														
WITHOUT MI	3958	4047	4145	4250	4322	4407	4471	4570	4631	4730	4810	4865	4956	5056
WITH MI	4060	4481	5431	7779	5473	5853	5116	3931	4271	4211	5066	5197	5192	5192
DIFFERENCE	102	434	1286	3529	1151	1446	745	1361	640	481	876	1332	1336	1336
PCT DIFF	2.58	9.77	35.15	83.02	33.78	33.08	16.73	28.04	13.81	10.16	18.21	27.47	27.47	27.47
NET IMPACT	-29	-97	-348	-478	-377	-349	-477	-442	-193	-12	-2	-2	-1	-1
MYE														
REVENUES														
WITHOUT MI	10312	10771	11051	11332	11598	11894	12086	12331	12584	12823	13082	13266	13542	13842
WITH MI	10312	10771	11051	11332	11598	11894	12086	12331	12584	12823	13082	13266	13542	13842
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EXPENDITURES														
WITHOUT MI	10312	10771	11051	11332	11598	11894	12086	12331	12584	12823	13082	13266	13542	13842
WITH MI	10312	10771	11051	11332	11598	11894	12086	12331	12584	12823	13082	13266	13542	13842
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NET IMPACT	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 2.1-35. (page 2 of 3)

WHITE PINE													
REVENUES													
WITHOUT MI	7144	7213	7295	7387	7341	7693	7834	8000	8171	8323	8479	8626	8764
WITH MI	7144	7213	7295	7402	7603	7721	7837	8000	8171	8323	8479	8626	8764
DIFFERENCE	0	0	0	15	63	28	3	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.20	0.83	0.36	0.04	0.00	0.00	0.00	0.00	0.00	0.00
EXPENDITURES													
WITHOUT MI	7165	7235	7317	7410	7563	7716	7898	8034	8193	8350	8504	8632	8790
WITH MI	7164	7235	7317	7430	7645	7733	7858	8034	8193	8350	8504	8632	8790
DIFFERENCE	0	0	0	21	32	17	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.28	1.08	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI INDUCED	0	0	0	-6	-19	11	3	0	0	0	0	0	0
NET IMPACT	0	0	0	-6	-19	11	3	0	0	0	0	0	0
BEAVER													
REVENUES													
WITHOUT MI	4012	4113	4230	4306	4406	4445	4485	4525	4562	4616	4665	4712	4731
WITH MI	4012	4113	4230	4330	4436	4471	4503	4542	4562	4616	4665	4712	4731
DIFFERENCE	0	0	0	0	179	1031	1609	317	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	4.12	27.40	34.58	35.87	7.01	0.00	0.00	0.00	0.00	0.00
EXPENDITURES													
WITHOUT MI	4012	4115	4230	4300	4406	4445	4485	4533	4562	4616	4665	4712	4731
WITH MI	4012	4115	4230	4624	4867	4984	5083	4532	4562	4616	4665	4712	4731
DIFFERENCE	0	0	0	274	1461	1394	1243	7	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	6.28	33.17	31.35	27.72	0.13	0.00	0.00	0.00	0.00	0.00
MI INDUCED	0	0	0	94	471	-713	363	310	0	0	0	0	0
NET IMPACT	0	0	0	94	471	-713	363	310	0	0	0	0	0
IRON													
REVENUES													
WITHOUT MI	16705	17234	17830	18464	19229	19369	19828	20298	20775	21133	21548	21926	22282
WITH MI	16705	17234	17830	18464	19026	19607	19985	20321	20775	21133	21548	21926	22282
DIFFERENCE	0	0	0	0	-643	762	443	377	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	-3.43	4.25	2.23	1.86	0.00	0.00	0.00	0.00	0.00
EXPENDITURES													
WITHOUT MI	17438	17990	18612	19274	19760	20219	20697	21188	21686	22083	22493	22888	23239
WITH MI	17438	17990	18612	19274	19938	20332	20791	21188	21686	22083	22493	22888	23239
DIFFERENCE	0	0	0	0	179	313	93	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.90	1.53	0.45	0.00	0.00	0.00	0.00	0.00	0.00
MI INDUCED	0	0	0	0	82	73	44	33	0	0	0	0	0
NET IMPACT	0	0	0	0	82	73	44	33	0	0	0	0	0
JAGS													
REVENUES													
WITHOUT MI	5163	5376	5633	6067	6193	6326	6326	6436	6589	6687	6784	6876	6957
WITH MI	5163	5376	5633	6031	6260	6342	6342	6436	6589	6687	6784	6876	6957
DIFFERENCE	0	0	0	119	193	16	16	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	2.30	3.18	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00
EXPENDITURES													
WITHOUT MI	5163	5376	5633	5923	6067	6193	6326	6436	6589	6687	6784	6876	6957
WITH MI	5163	5376	5633	6112	6260	6342	6342	6436	6589	6687	6784	6876	6957
DIFFERENCE	0	0	0	189	193	25	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	3.66	3.22	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI INDUCED	0	0	0	-62	27	39	16	0	0	0	0	0	0
NET IMPACT	0	0	0	-62	27	39	16	0	0	0	0	0	0
MILLARD													
REVENUES													
WITHOUT MI	8275	8624	9007	9423	9640	9816	10042	10374	10490	10581	10641	10734	10790
WITH MI	8275	8624	9007	9423	9640	9816	10042	10374	10490	10581	10641	10734	10790
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EXPENDITURES													
WITHOUT MI	8275	8624	9007	9423	9640	9816	10042	10374	10490	10581	10641	10734	10790
WITH MI	8275	8624	9007	9423	9640	9816	10042	10374	10490	10581	10641	10734	10790
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EXPENDITURES													

Table 2.1-35. (Page 3 of 3)

WITHOUT MI	8275	8624	9007	9423	7640	7846	10042	10276	10490	10381	10661	10734	10790
WITH MI	8275	8624	9635	13499	14493	12068	10125	10276	10490	10381	10661	10734	10790
DIFFERENCE	0	0	627	4077	4853	44	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	6.76	43.27	50.34	22.36	0.63	0.00	0.00	0.00	0.00	0.00	0.00
MI INDUCED	0	0	-216	-1243	-640	439	534	20	0	0	0	0	0
NET IMPACT	0	0	-216	-1243	-640	439	534	20	0	0	0	0	0
BALT LAKE/JUMI													
REVENUES	724498	730879	779812	811040	828326	844251	860987	874824	892441	907038	921331	934622	946634
WITH MI	724498	730879	779812	811040	828326	844251	860987	874824	892441	907038	921331	934622	946634
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EXPENDITURES	736062	762883	792259	823983	841750	87727	874628	890821	906686	921515	936037	949329	961764
WITH MI	736062	762883	792259	823983	841750	87727	874628	890821	906686	921515	936037	949329	961764
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI INDUCED	0	0	0	0	0	0	0	0	0	0	0	0	0
NET IMPACT	0	0	0	0	0	0	0	0	0	0	0	0	0
WASHINGTON													
REVENUES	20711	21980	22484	23427	24072	24733	25413	26112	26829	27383	27948	28523	29114
WITH MI	20711	21980	22484	23427	24072	24733	25413	26112	26829	27383	27948	28523	29114
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EXPENDITURES	20711	21980	22484	23427	24072	24733	25413	26112	26829	27383	27948	28523	29114
WITH MI	20711	21980	22484	23427	24072	24733	25413	26112	26829	27383	27948	28523	29114
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI INDUCED	0	0	0	0	0	0	0	0	0	0	0	0	0
NET IMPACT	0	0	0	0	0	0	0	0	0	0	0	0	0
REGIONAL TOTAL													
REVENUES	1394414	1443270	1500973	1560415	1599782	1637943	1674328	1711846	1749226	1785200	1821027	1854944	1891110
WITH MI	1394414	1443270	1500973	1560415	1599782	1637943	1674328	1711846	1749226	1785200	1821027	1854944	1891110
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PCT DIFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EXPENDITURES	1409303	1460701	1516977	1577073	1616977	1653340	1692077	1729974	1768013	1804021	1840182	1874429	1906863
WITH MI	1409407	1461181	1525987	1603372	1650370	1687326	1717212	1747114	1782080	1818023	1854179	1888424	1920833
DIFFERENCE	102	480	6850	28498	35793	30387	35116	17141	14067	14002	13996	13993	13992
PCT DIFF	0.01	0.03	0.03	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
MI INDUCED	-29	-93	-2037	-6216	-2709	173	1431	2670	977	303	490	489	487
NET IMPACT	-29	-93	-2037	-6216	-2709	173	1431	2670	977	303	490	489	487

SOURCE: HR SCIENCES
 (1) ESTIMATES REFLECT AGGREGATE REVENUES AND EXPENDITURES FOR ALL LOCAL GOVERNMENTAL UNITS (COUNTIES, CITIES, SCHOOLS, DISTRICTS, SPECIAL DISTRICTS) WITHIN THE COUNTY

30-OCT-80

Table 2.1-36 (page 1 of 4).

SCHOOL DISTRICT REVENUES, EXPENDITURES, AND NET IMPACTS (THOUSANDS FY 1983 \$) (1) BASELINE: LOW PROPOSED ACTION

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
CLARK													
REVENUES													
WITHOUT MX	274820.	284998.	296154.	307896.	317005.	325684.	334836.	343890.	353151.	362150.	371348.	380161.	388764.
WITH MX	274820.	284998.	298320.	314278.	328910.	340378.	349340.	357191.	364181.	373160.	382377.	391119.	399793.
P.L. RTA	0.	0.	625.	1265.	1904.	2529.	3154.	3779.	3779.	3779.	3779.	3779.	3779.
STATE	0.	0.	1087.	2780.	6184.	9031.	9090.	8957.	8574.	6574.	6574.	6574.	6574.
LOCAL	0.	0.	449.	2337.	3816.	3133.	2300.	565.	677.	677.	677.	677.	677.
DIFFERENCE	0.	0.	2161.	6382.	11904.	14694.	14544.	13301.	11030.	11030.	11030.	11030.	11030.
PCT. DIFF.	0.00	0.00	0.73	2.07	3.76	4.51	4.34	3.87	3.12	3.05	2.97	2.91	2.84
EXPENDITURES													
WITHOUT MX	282475.	292937.	304408.	316472.	325835.	334756.	344163.	353468.	362988.	372238.	381691.	391571.	399592.
WITH MX	282475.	292937.	307147.	324809.	338889.	347906.	357094.	364269.	373788.	383038.	392492.	401557.	410393.
DIFFERENCE	0.	0.	2734.	8334.	13054.	13150.	12931.	10801.	10801.	10801.	10801.	10801.	10801.
PCT. DIFF.	0.00	0.00	0.90	2.63	4.01	3.93	3.75	3.06	2.98	2.90	2.83	2.76	2.70
MX INDUCED	0.	0.	-578.	-1952.	-1150.	1543.	1613.	2500.	229.	229.	229.	229.	229.
NET IMPACT	0.	0.	-578.	-1952.	-1150.	1543.	1613.	2500.	229.	229.	229.	229.	229.
KIMBER													
REVENUES													
WITHOUT MX	623.	635.	648.	662.	674.	686.	699.	710.	724.	737.	750.	763.	774.
WITH MX	623.	635.	650.	710.	1106.	3342.	4544.	2831.	1121.	748.	751.	763.	774.
P.L. RTA	0.	0.	1.	11.	92.	558.	646.	227.	0.	0.	0.	0.	0.
STATE	0.	0.	2.	37.	322.	1950.	2899.	853.	23.	11.	1.	0.	0.
LOCAL	0.	0.	0.	0.	17.	149.	900.	1041.	375.	1.	0.	0.	0.
DIFFERENCE	0.	0.	2.	49.	432.	2651.	3845.	2121.	398.	12.	1.	0.	0.
PCT. DIFF.	0.00	0.00	0.36	7.33	64.11	387.53	550.38	298.50	54.95	1.57	0.18	0.00	0.00
EXPENDITURES													
WITHOUT MX	641.	652.	666.	680.	692.	705.	718.	730.	744.	757.	770.	784.	796.
WITH MX	641.	652.	668.	743.	1236.	3983.	4509.	2064.	762.	759.	770.	784.	796.
DIFFERENCE	0.	0.	2.	63.	544.	3278.	3791.	1334.	18.	2.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.34	9.21	78.54	465.27	527.97	182.65	2.41	0.30	0.00	0.00	0.00
MX INDUCED	0.	0.	0.	-14.	-112.	-622.	54.	787.	380.	9.	1.	0.	0.
NET IMPACT	0.	0.	0.	-14.	-112.	-622.	54.	787.	380.	9.	1.	0.	0.
LINCOLN													
REVENUES													
WITHOUT MX	2131.	2180.	2232.	2282.	2333.	2374.	2419.	2461.	2505.	2548.	2591.	2631.	2669.
WITH MX	2179.	2366.	3190.	4255.	4929.	4730.	3541.	2962.	2791.	2744.	2769.	2806.	2844.
P.L. RTA	11.	37.	200.	363.	491.	37.	37.	32.	11.	11.	11.	11.	11.
STATE	37.	132.	691.	1281.	1547.	1284.	370.	213.	155.	111.	95.	92.	93.
LOCAL	0.	17.	60.	322.	587.	715.	656.	255.	120.	74.	72.	72.	71.
DIFFERENCE	47.	186.	957.	1966.	2596.	2156.	1123.	501.	286.	196.	178.	175.	175.
PCT. DIFF.	2.21	8.54	42.89	85.90	111.27	90.22	46.41	20.36	11.44	7.69	6.88	6.65	6.54
EXPENDITURES													
WITHOUT MX	2191.	2240.	2294.	2353.	2398.	2441.	2486.	2530.	2574.	2619.	2663.	2704.	2744.
WITH MX	2254.	2450.	3467.	4481.	4987.	4535.	3709.	2306.	2759.	2755.	2815.	2856.	2896.
DIFFERENCE	63.	210.	1173.	2131.	2589.	2075.	1733.	176.	184.	157.	152.	152.	152.
PCT. DIFF.	2.96	9.79	51.11	90.56	107.98	85.43	29.08	14.86	7.13	5.98	5.72	5.63	5.55
MX INDUCED	-16.	-33.	-215.	-165.	7.	261.	400.	125.	103.	19.	26.	23.	23.
NET IMPACT	-16.	-33.	-215.	-165.	7.	261.	400.	125.	103.	19.	26.	23.	23.
NIF													
REVENUES													
WITHOUT MX	5651.	5801.	5952.	6111.	6246.	6374.	6509.	6641.	6777.	6911.	7046.	7177.	7304.

Table 2.1-36 (page 2 of 4)

WITH MX	5661.	5801.	6256.	8268.	10017.	11081.	11923.	10045.	7718.	7027.	7051.	7177.	7304.
P.L. #71	0.	0.	68.	456.	870.	720.	931.	358.	0.	0.	0.	0.	0.
STATE	0.	0.	236.	1589.	3077.	2587.	3307.	1357.	276.	112.	5.	0.	0.
LOCAL	0.	0.	0.	110.	735.	1802.	1176.	1588.	664.	4.	0.	0.	0.
DIFFERENCE	0.	0.	304.	2194.	4671.	4710.	5414.	3040.	116.	116.	5.	0.	0.
PCT. DIFF.	0.00	0.00	5.11	35.24	74.78	73.89	43.19	51.26	13.88	1.67	0.08	0.00	0.00
EXPENDITURES													
WITHOUT MX	5819.	5962.	6118.	6284.	6420.	6551.	6690.	6826.	6966.	7104.	7242.	7377.	7507.
WITH MX	5819.	5962.	6516.	8938.	11527.	10779.	12197.	9326.	7189.	7113.	7242.	7377.	7507.
DIFFERENCE	0.	0.	394.	2654.	5107.	4228.	5501.	2500.	184.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	6.51	42.56	79.55	64.53	92.23	35.62	2.63	0.13	0.00	0.00	0.00
MX INDUCED													
NET IMPACT	0.	0.	-94.	-520.	-436.	482.	-87.	904.	757.	107.	5.	0.	0.
WHITE PINE													
REVENUES													
WITHOUT MX	4725.	4770.	4825.	4886.	4977.	5088.	5181.	5291.	5404.	5506.	5608.	5705.	5796.
WITH MX	4725.	4770.	4825.	4886.	4977.	5088.	5181.	5291.	5404.	5506.	5608.	5705.	5796.
P.L. #74	0.	0.	0.	210.	661.	209.	73.	10.	0.	0.	0.	0.	0.
STATE	0.	0.	0.	730.	2317.	792.	419.	127.	12.	0.	0.	0.	0.
LOCAL	0.	0.	0.	0.	339.	1177.	403.	126.	15.	0.	0.	0.	0.
DIFFERENCE	0.	0.	0.	940.	3316.	2178.	895.	262.	27.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.00	14.23	66.50	42.80	17.28	4.95	0.50	0.00	0.00	0.00	0.00
EXPENDITURES													
WITHOUT MX	4857.	4933.	4959.	5022.	5126.	5230.	5326.	5438.	5554.	5659.	5764.	5864.	5958.
WITH MX	4857.	4903.	4959.	6255.	9007.	6593.	5896.	5512.	5554.	5659.	5764.	5864.	5958.
DIFFERENCE	0.	0.	0.	1233.	3481.	1864.	571.	74.	0.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.00	24.56	75.71	23.99	10.72	1.36	0.00	0.00	0.00	0.00	0.00
MX INDUCED													
NET IMPACT	0.	0.	0.	-294.	-564.	714.	325.	188.	27.	0.	0.	0.	0.
BEAVER													
REVENUES													
WITHOUT MX	2477.	2541.	2612.	2686.	2720.	2744.	2769.	2794.	2817.	2849.	2881.	2909.	2933.
WITH MX	2477.	2541.	2963.	4611.	8354.	11093.	12580.	13313.	12089.	11066.	10766.	10795.	10918.
P.L. #74	0.	0.	39.	307.	1244.	1810.	2781.	3220.	2781.	2781.	2781.	2781.	2781.
STATE	0.	0.	107.	1027.	2488.	3925.	4910.	5477.	4354.	4023.	4023.	4023.	4023.
LOCAL	0.	0.	212.	581.	1402.	2614.	2549.	2152.	1735.	1082.	1081.	1081.	1081.
DIFFERENCE	0.	0.	358.	1925.	5638.	8349.	3811.	17519.	9233.	8217.	7885.	7885.	7885.
PCT. DIFF.	0.00	0.00	13.71	71.67	207.13	304.71	354.31	376.51	327.77	288.45	273.74	-71.04	288.82
EXPENDITURES													
WITHOUT MX	2497.	2562.	2633.	2708.	2742.	2767.	2792.	2817.	2840.	2872.	2904.	2933.	2957.
WITH MX	2497.	2562.	3192.	5218.	8096.	11088.	12017.	12589.	11185.	10582.	10614.	10667.	10667.
DIFFERENCE	0.	0.	559.	2509.	6754.	8281.	7227.	9772.	8385.	7710.	7710.	7710.	7710.
PCT. DIFF.	0.00	0.00	21.22	92.67	228.05	299.27	330.45	345.90	293.84	268.44	265.46	-62.86	260.70
MX INDUCED													
NET IMPACT	0.	0.	-201.	-584.	-620.	68.	585.	748.	888.	507.	176.	176.	175.
EROT													
REVENUES													
WITHOUT MX	9730.	10100.	10449.	10820.	11173.	11351.	11620.	11895.	12175.	12398.	12620.	12850.	13058.
WITH MX	9790.	10100.	10449.	10895.	11609.	12141.	12439.	13126.	13299.	13401.	13608.	13826.	14032.
P.L. #74	0.	0.	0.	4.	75.	116.	130.	160.	160.	160.	160.	160.	160.
STATE	0.	0.	0.	10.	240.	465.	579.	623.	534.	472.	451.	448.	448.
LOCAL	0.	0.	0.	51.	199.	409.	488.	448.	366.	371.	368.	367.	366.
DIFFERENCE	0.	0.	0.	64.	515.	320.	1120.	1231.	1115.	1001.	980.	976.	976.
PCT. DIFF.	0.00	0.00	0.00	0.60	4.64	8.72	10.24	17.35	9.15	8.09	7.76	7.60	7.46
EXPENDITURES													
WITHOUT MX	9870.	10183.	10535.	10909.	11184.	11444.	11715.	11941.	12275.	12500.	12742.	12955.	13165.
WITH MX	9870.	10183.	10535.	11013.	11843.	12453.	12820.	13063.	13170.	13361.	13592.	13813.	14021.
DIFFERENCE	0.	0.	0.	101.	659.	1009.	1045.	1070.	905.	864.	860.	855.	856.

Table 2.1-36 (page 3 of 4).

PCT. DIFF.	0.00	0.00	0.00	0.05	6.25	8.81	9.25	9.92	7.37	6.91	6.75	6.62	6.59
MX INDUCED	0.	0.	0.	-39.	-184.	-19.	105.	161.	209.	132.	120.	118.	118.
NET IMPACT													
JUAN													
REVENUES													
WITHOUT MX	3184.	3332.	3490.	3663.	3746.	3823.	3906.	3986.	4068.	4129.	4189.	4245.	4295.
WITH MX	3184.	3332.	3490.	3811.	4932.	6179.	5328.	4101.	3078.	4129.	4189.	4245.	4295.
P.L. #74	0.	0.	0.	40.	296.	460.	149.	5.	0.	0.	0.	0.	0.
STATE	0.	0.	0.	109.	815.	1311.	445.	26.	0.	0.	0.	0.	0.
LOCAL	0.	0.	0.	0.	76.	566.	899.	285.	10.	0.	0.	0.	0.
DIFFERENCE	0.	0.	0.	149.	1186.	2347.	1422.	315.	10.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.00	4.05	31.66	61.38	38.21	7.91	0.24	0.00	0.00	0.00	0.00
EXPENDITURES													
WITHOUT MX	3214.	3350.	3514.	3693.	3777.	3855.	3938.	4019.	4101.	4163.	4223.	4280.	4330.
WITH MX	3214.	3350.	3514.	3907.	5377.	6393.	4742.	4046.	4101.	4163.	4223.	4280.	4330.
DIFFERENCE	0.	0.	0.	214.	1600.	2538.	804.	27.	0.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.00	5.81	42.37	65.85	20.42	0.67	0.00	0.00	0.00	0.00	0.00
MX INDUCED	0.	0.	0.	-86.	-414.	-191.	688.	288.	10.	0.	0.	0.	0.
NET IMPACT													
MILITARY													
REVENUES													
WITHOUT MX	5199.	5325.	5551.	5818.	5952.	6079.	6212.	6385.	6476.	6533.	6582.	6627.	6662.
WITH MX	5199.	5325.	5965.	7147.	7944.	8132.	7054.	8258.	6926.	6573.	6622.	6667.	6701.
P.L. #74	0.	0.	108.	378.	331.	372.	561.	212.	6.	6.	6.	6.	6.
STATE	0.	0.	226.	1045.	938.	1047.	1567.	523.	31.	15.	15.	15.	15.
LOCAL	0.	0.	0.	207.	124.	634.	714.	1078.	412.	18.	18.	18.	18.
DIFFERENCE	0.	0.	404.	1622.	1993.	2053.	2842.	3113.	449.	40.	39.	39.	39.
PCT. DIFF.	0.00	0.00	7.26	28.01	33.48	33.77	45.74	30.15	6.94	0.61	0.60	0.60	0.59
EXPENDITURES													
WITHOUT MX	5151.	5368.	5607.	5865.	6000.	6129.	6263.	6397.	6530.	6586.	6636.	6682.	6717.
WITH MX	5151.	5368.	6191.	7009.	7790.	8142.	9294.	7577.	5559.	6615.	6665.	6711.	6746.
DIFFERENCE	0.	0.	584.	2043.	1790.	2013.	1031.	1140.	29.	79.	29.	29.	29.
PCT. DIFF.	0.00	0.00	10.41	34.84	29.83	32.83	48.43	17.83	0.44	0.44	0.43	0.43	0.41
MX INDUCED	0.	0.	-180.	-414.	203.	41.	-190.	773.	421.	11.	11.	11.	10.
NET IMPACT													
SALT LAKE/UTAH													
REVENUES													
WITHOUT MX	465851.	482839.	501429.	521509.	532752.	542884.	553561.	563410.	573851.	583237.	592440.	600973.	608711.
WITH MX	465851.	482839.	501429.	521509.	534771.	546953.	557092.	565103.	573851.	583237.	592440.	600973.	608711.
P.L. #74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
STATE	0.	0.	0.	0.	0.	1731.	2023.	1293.	0.	0.	0.	0.	0.
LOCAL	0.	0.	0.	0.	2018.	2358.	1528.	0.	0.	0.	0.	0.	0.
DIFFERENCE	0.	0.	0.	0.	2018.	4289.	3531.	1293.	0.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.00	0.00	0.38	0.75	0.64	0.23	0.00	0.00	0.00	0.00	0.00
EXPENDITURES													
WITHOUT MX	466620.	484006.	505550.	525798.	537131.	547325.	558110.	568443.	578567.	588300.	597329.	605912.	613713.
WITH MX	466620.	484006.	505550.	525798.	540448.	551702.	563549.	568443.	574567.	580300.	590309.	605912.	613713.
DIFFERENCE	0.	0.	0.	0.	3318.	1877.	2479.	0.	0.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.00	0.00	6.62	0.71	0.44	0.00	0.00	0.00	0.00	0.00	0.00
MX INDUCED	0.	0.	0.	0.	-1209.	212.	1053.	1293.	0.	0.	0.	0.	0.
NET IMPACT													
WASHINGTON													
REVENUES													
WITHOUT MX	12787.	13324.	13882.	14464.	14662.	15270.	15630.	16122.	16565.	16907.	17255.	17612.	17975.
WITH MX	12787.	13324.	13882.	14464.	14662.	15270.	15982.	16174.	16718.	17021.	17356.	17710.	18060.
P.L. #74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
STATE	0.	0.	0.	0.	0.	88.	139.	131.	104.	59.	47.	46.	46.

Table 2.1-36 (page 4 of 4)

LOCAL	0.	0.	0.	103.	161.	153.	121.	69.	55.	53.	52.	50.
DIFFERENCE	0.	0.	0.	103.	250.	292.	253.	173.	114.	101.	98.	95.
PCT. DIFF.	0.00	0.00	0.00	0.69	1.63	1.86	1.57	1.05	0.68	0.58	0.56	0.53
EXPENDITURES												
WITHOUT MX	12892.	13433.	13996.	14583.	15306.	15819.	16254.	16701.	17046.	17397.	17756.	18123.
WITH MX	12892.	13433.	13996.	14583.	15362.	15070.	16454.	16814.	17136.	17486.	17841.	18205.
DIFFERENCE	0.	0.	0.	169.	266.	252.	200.	113.	91.	89.	85.	82.
PCT. DIFF.	0.00	0.00	0.00	1.13	1.73	1.59	1.23	0.68	0.53	0.51	0.48	0.46
MX INDUCED												
NET IMPACT	0.	0.	0.	-66.	-16.	40.	53.	60.	24.	12.	14.	17.
REGIONAL TOTAL												
REVENUES												
WITHOUT MX	787174.	815841.	847237.	880806.	922338.	943401.	963945.	984512.	1003903.	1023316.	1041660.	1058041.
WITH MX	787221.	816028.	851424.	890063.	967009.	988380.	999058.	1008173.	1024630.	1043536.	1061863.	1079138.
P.-L. H74	11.	37.	1040.	3032.	7141.	8097.	7704.	6738.	6738.	6738.	6737.	6737.
STATE	37.	132.	2425.	8608.	24212.	25138.	18650.	12450.	11709.	11212.	11199.	11199.
LOCAL	0.	17.	722.	3618.	13319.	11744.	7760.	4473.	2281.	2270.	2267.	2263.
DIFFERENCE	47.	186.	4187.	15258.	44671.	44979.	35114.	23661.	20727.	20220.	20704.	20197.
PCT. DIFF.	0.01	0.02	0.49	1.73	4.84	4.77	3.64	2.40	2.06	1.98	1.94	1.91
EXPENDITURES												
WITHOUT MX	799297.	828405.	860283.	894364.	936598.	959020.	978916.	999840.	1019572.	1039332.	1057005.	1075603.
WITH MX	799360.	828624.	865738.	913670.	978796.	998412.	1006209.	1020418.	1039234.	1058972.	107738.	1095237.
DIFFERENCE	63.	219.	5455.	19306.	42198.	40392.	27293.	20578.	19662.	19640.	19634.	19630.
PCT. DIFF.	0.01	0.03	0.63	2.16	4.51	4.22	2.79	2.06	1.93	1.89	1.86	1.83
MX INDUCED												
NET IMPACT	-16.	-33.	-1268.	-4048.	-4636.	4587.	7820.	3083.	1066.	580.	570.	567.

SOURCE: HOK SCIENCES

(1) ESTIMATES REFLECT AGGREGATE REVENUES AND EXPENDITURES BY ALL SCHOOL DISTRICTS WITHIN THE COUNTY.

30-OCT-80

Table 2.1-37. (page 1 of 4)

SCHOOL DISTRICT REVENUES, EXPENDITURES, AND NET IMPACTS (THOUSANDS FY 1980 \$) (1) BASELINE LOW ALTERNATIVE BA

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
CLARK													
REVENUES													
WITHOUT MI	274820	284978	296128	307876	317003	325684	334834	343890	352151	362130	371348	380168	388764
WITH MI	274820	284978	296128	314014	327182	337164	346423	355397	364094	373023	382146	391110	399706
P.L. 874	0	0	623	1290	1875	2300	2749	3194	3749	4347	4943	5543	6143
STATE	0	0	1007	2733	5843	7272	7310	7393	6322	6322	6322	6322	6322
LOCAL	0	0	490	2112	2839	1748	1123	363	672	672	672	672	672
DIFFERENCE	0.00	0.00	2162	6118	10177	11480	11367	11707	10943	10943	10943	10943	10943
PCT DIFF			0.73	1.79	3.21	3.42	3.46	3.40	3.10	3.02	2.93	2.88	2.81
EXPENDITURES													
WITHOUT MI	282473	292937	304400	316472	325835	334756	344163	353458	362985	372228	381691	390757	399372
WITH MI	282473	292937	307149	324287	335930	344896	354610	364184	373705	382707	392107	401872	410308
DIFFERENCE	0.00	0.00	2742	7815	10098	10140	10447	10716	10716	10716	10716	10716	10716
PCT DIFF			0.70	2.47	3.10	3.03	3.04	3.03	2.95	2.88	2.81	2.74	2.68
NET IMPACT	0	0	-580	-1697	79	1340	1140	992	227	227	227	227	227
FIRENA													
REVENUES													
WITHOUT MI	623	635	640	642	674	684	699	710	724	737	750	763	774
WITH MI	623	635	648	642	674	684	699	712	724	737	750	763	774
P.L. 874	0	0	0	0	0	0	0	0	0	0	0	0	0
STATE	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCAL	0	0	0	0	0	0	0	0	0	0	0	0	0
DIFFERENCE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PCT DIFF													
EXPENDITURES													
WITHOUT MI	641	652	666	680	692	705	718	730	744	757	770	784	796
WITH MI	641	652	666	680	692	705	718	730	744	757	770	784	796
DIFFERENCE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PCT DIFF													
NET IMPACT	0	0	0	0	0	0	0	0	0	0	0	0	0
LINCOLN													
REVENUES													
WITHOUT MI	2131	2100	2232	2209	2333	2374	2419	2461	2503	2548	2591	2631	2669
WITH MI	2176	2361	3222	4041	3443	3506	4244	3483	2743	2646	2616	2732	2771
P.L. 874	10	37	207	316	127	372	323	103	10	10	10	10	10
STATE	34	129	729	1119	453	807	1140	303	31	63	53	51	50
LOCAL	0	16	59	336	573	200	363	534	199	41	40	39	39
DIFFERENCE	0	102	977	1772	1110	1211	1026	1022	261	117	103	102	101
PCT DIFF		4.84	45.63	77.40	47.58	51.86	47.49	41.93	10.41	4.58	4.00	3.86	3.80
EXPENDITURES													
WITHOUT MI	2191	2240	2274	2303	2398	2441	2486	2520	2574	2619	2663	2704	2744
WITH MI	2249	2417	3319	4210	3197	3741	4325	3141	2682	2189	2189	2026	2026
DIFFERENCE	78	217	1045	1907	761	1300	1007	611	107	107	107	107	107
PCT DIFF		9.69	31.73	78.74	31.73	53.28	73.78	4.17	3.73	3.19	3.14	3.14	3.10
NET IMPACT	-14	-31	258	89	349	69	63	411	193	39	10	17	19
WY													
REVENUES													
WITHOUT MI	5461	5801	5930	6114	6286	6374	6502	6641	6777	6911	7046	7177	7304
WITH MI	5461	5801	6310	6613	6916	7080	7244	7382	7524	7671	7814	7961	8104

Table 2.1-37. (Page 4 of 4)

WITHOUT MK	12692	13433	13796	14583	14984	13796	15619	16294	16701	17046	17377	17736	18123
WITH MK	12892	13433	13994	14583	14984	13400	15619	16294	16701	17046	17377	17736	18123
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
STATE	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCAL	0	0	0	0	0	0	0	0	0	0	0	0	0
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PCT DIFF	0	0	0	0	0	0	0	0	0	0	0	0	0
NET IMPACT	0	0	0	0	0	0	0	0	0	0	0	0	0
REGIONAL TOTAL													
WITHOUT MK	787174	815841	847237	880606	902370	922338	941401	962945	984912	1007903	1027316	1041660	1058941
WITH MK	787218	816023	851060	892748	920607	941793	961103	978177	995922	1014963	1034362	1052990	1069792
DIFFERENCE	44	182	3823	11423	18237	19355	1702	1482	1170	1160	1106	1104	1044
STATE	10	37	974	2437	3272	3766	3973	3973	3760	3760	3760	3759	3759
LOCAL	34	145	2119	5734	10231	11361	10303	6282	6504	6588	6373	6373	6273
DIFFERENCE	44	182	3823	11423	18237	19355	1702	1482	1170	1160	1106	1104	1044
PCT DIFF	0.01	0.02	0.45	1.26	2.02	2.11	1.88	1.48	1.16	1.10	1.08	1.04	1.04
EXPENDITURES													
WITHOUT MK	799297	828405	860283	894344	916290	936598	958020	978916	997840	1019372	1039329	1058905	1078403
WITH MK	799336	828422	860257	894276	916276	936528	957889	978949	1010665	1030375	1050132	1069801	1089498
DIFFERENCE	39	17	56	68	14	70	131	60	176	162	153	104	95
STATE	36	217	4876	14893	18066	17826	13370	12034	10823	10803	10801	10801	10798
LOCAL	0.01	0.02	0.57	1.67	1.97	1.86	1.60	1.23	1.08	1.06	1.04	1.02	1.00
PCT DIFF													
NET IMPACT	-14	-35	-1053	-2931	131	2030	2332	2199	365	798	245	244	246

SOURCE: FOR SCIENCES
 (1) ESTIMATES REFLECT AGGREGATE REVENUES AND EXPENDITURES BY ALL SCHOOL DISTRICTS WITHIN THE COUNTY

4-MW-R0

Capital investment requirements in the Nevada/Utah deployment region under the Proposed Action and the split deployment alternative are presented in Tables 2.1-38 and 2.1-39. Information is provided for long-term demands, peak year requirements and annual investment required to satisfy long-term needs. Total investment requirements are differentiated by type of indebtedness required--general obligation bond items, revenue bond items, and school bond items.

Long-term capital expenditure requirements under the Proposed Action for the Nevada/Utah region total \$58.5 million. Over 68 percent of the total expenditures are for school requirements. Similar patterns hold for peak-year expenditures. School expenditure requirements represent the majority of expenditures, approximately 48 percent of the \$218.3 million of total capital expenditures.

Within the Nevada/Utah region, the operating base county locations are expected to constitute the majority of long-term capital expenditures. Under the Proposed Action, the operating base counties of Clark and Beaver represent over 89 percent of total capital outlays. In the peak year, however, the counties where DDA facilities are expected represent the majority of the \$218.3 million of total capital expenditures (55 percent). These peak year demands, however, could be maintained as temporary facilities with concurrent reduction in the peak year capital requirements. Regional capital expenditures requirements for Alternative 1-6 do not differ significantly from the Proposed Action. Capital expenditures under the split deployment alternative, however, are reduced substantially.

Total capital expenditures in the region under the split deployment alternative are \$27.5 million in the long term, approximately 47 percent of total outlays under the Proposed Action. Peak-year expenditure are expected to be \$85.8 million for the split deployment alternative, approximately 39 percent of total peak-year Proposed Action capital expenditures.

The capital expenditure requirements necessary to support growth due to M-X will be significant for all counties in the Nevada/Utah deployment region. However, the question is not the level of requirements but the ability of the individual counties to finance the long-term and peak year capital expenditure requirements.

Due to the low tax base and/or property tax limitations in the county areas in the Nevada/Utah region, local jurisdiction will be unable to finance the bonds necessary to support either long-term or peak-year capital expenditure requirements.

2.2 POTENTIAL IMPACTS ON POPULATION

Population changes in the Nevada/Utah region of influence would be generated as a result of procurement expenditures and direct employment during both the construction and operations phases of the M-X project. The size, composition, timing, and spatial distribution of M-X related in-migrant population would vary from county to county in the region depending on the project activities occurring within or near a county and the spatial pattern of personal consumption expenditures of direct workers. Population change, which also is a function of the size of the locally available labor force and expected socio-demographic characteristics of the in-migrants, is forecast at the county level and aggregated to state and regional totals. Data are presented for two baseline projections without the M-X project, one assuming trend change and the other adding anticipated population growth associated with large energy and/or mineral development projects in several

Table 2.1-38 (page 1 of 4)

SCHOOL DISTRICT REVENUES, EXPENDITURES, AND NET IMPACTS (THOUSANDS FY 1980 \$) (1) BASELINE: HIGH

ALTERNATIVE BA	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
CLARK													
REVENUES													
WITHOUT MK	274936.	285200.	296466.	308447.	317647.	326333.	335432.	344380.	353573.	362595.	371810.	380650.	389265.
WITH MK	274936.	285200.	298625.	314556.	327813.	337801.	347006.	356381.	364515.	373537.	382753.	391593.	400208.
P.L. #74	0.	0.	625.	1250.	1875.	2500.	3158.	3749.	4349.	4949.	5549.	6149.	6749.
STATE	0.	0.	1087.	2751.	5938.	7225.	7301.	7386.	6522.	6522.	6522.	6522.	6522.
LOCAL	0.	0.	447.	2108.	2451.	1742.	1118.	565.	672.	672.	672.	672.	672.
DIFFERENCE	0.	0.	2159.	6109.	19166.	11467.	11573.	11701.	10943.	10943.	10943.	10943.	10943.
PCT. DIFF.	0.00	0.00	0.73	1.98	3.20	3.51	3.45	3.40	3.09	3.02	2.98	2.87	2.81
EXPENDITURES													
WITHOUT MK	282594.	293144.	304724.	317038.	326495.	335823.	344775.	353372.	361821.	372695.	382167.	391253.	400109.
WITH MK	282594.	293144.	307450.	324845.	336582.	345500.	352211.	364688.	374137.	383410.	392882.	401968.	410824.
DIFFERENCE	0.	0.	2735.	7806.	10887.	10127.	10436.	10716.	10716.	10716.	10716.	10716.	10716.
PCT. DIFF.	0.00	0.00	0.90	2.46	3.09	3.02	3.03	3.03	2.95	2.88	2.80	2.74	2.68
MK INDUCED	0.	0.	-576.	-1697.	79.	1340.	1137.	985.	227.	227.	227.	227.	227.
NET IMPACT													
REVENUES	623.	635.	648.	662.	674.	686.	699.	710.	724.	737.	750.	763.	774.
WITHOUT MK	623.	635.	648.	662.	674.	686.	699.	710.	724.	737.	750.	763.	774.
P.L. #74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
STATE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
LOCAL	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
DIFFERENCE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.00	0.00	0.03	0.06	0.09	0.25	0.00	0.00	0.00	0.00	0.00
EXPENDITURES	641.	653.	666.	680.	693.	705.	719.	730.	744.	757.	771.	784.	796.
WITHOUT MK	641.	653.	666.	680.	693.	705.	719.	730.	744.	757.	771.	784.	796.
DIFFERENCE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00
MK INDUCED	0.	0.	0.	0.	0.	0.	-2.	2.	0.	0.	0.	0.	0.
NET IMPACT													
REVENUES	2131.	2163.	2233.	2292.	2336.	2378.	2422.	2464.	2507.	2549.	2593.	2634.	2672.
WITHOUT MK	2131.	2163.	2233.	2292.	2336.	2378.	2422.	2464.	2507.	2549.	2593.	2634.	2672.
P.L. #74	0.	0.	209.	408.	607.	806.	1005.	1204.	1403.	1602.	1801.	2000.	2200.
STATE	0.	0.	729.	1119.	1509.	1899.	2289.	2679.	3069.	3459.	3849.	4239.	4629.
LOCAL	0.	0.	54.	336.	533.	730.	927.	1124.	1321.	1518.	1715.	1912.	2109.
DIFFERENCE	44.	182.	997.	1772.	1110.	1211.	1429.	1022.	261.	458.	399.	386.	380.
PCT. DIFF.	2.07	4.33	44.62	77.29	47.51	51.79	58.98	41.48	10.41	18.01	15.86	14.66	14.21
EXPENDITURES													
WITHOUT MK	2131.	2241.	2320.	2356.	2402.	2444.	2489.	2532.	2577.	2620.	2665.	2707.	2747.
WITH MK	2131.	2241.	2320.	2356.	2402.	2444.	2489.	2532.	2577.	2620.	2665.	2707.	2747.
DIFFERENCE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MK INDUCED	-13.	-35.	-228.	-88.	349.	-69.	-61.	411.	153.	79.	18.	17.	19.
NET IMPACT													
REVENUES	5651.	5801.	5953.	6117.	6251.	6378.	6512.	6644.	6779.	6915.	7049.	7180.	7307.
WITHOUT MK	5651.	5801.	5953.	6117.	6251.	6378.	6512.	6644.	6779.	6915.	7049.	7180.	7307.

Table 2.1-38 (page 2 of 4)

WITH MX	5651.	5801.	6336.	8026.	9161.	9034.	9845.	7817.	6986.	6916.	7049.	7190.	7307.
P.L. RT1	0.	0.	46.	394.	500.	403.	357.	121.	0.	0.	0.	0.	0.
STATE	0.	0.	297.	1378.	1776.	1448.	1315.	455.	11.	1.	0.	0.	0.
LOCAL	0.	0.	0.	138.	635.	806.	649.	592.	175.	0.	0.	0.	0.
DIFFERENCE	0.	0.	383.	1910.	2910.	2657.	2332.	1154.	207.	1.	0.	0.	0.
PCT. DIFF.	0.00	0.00	6.43	31.22	46.56	41.66	35.81	17.59	3.05	0.02	0.00	0.00	0.00
EXPENDITURES													
WITHOUT MX	5819.	5963.	6119.	6287.	6425.	6555.	6634.	6829.	6968.	7107.	7245.	7380.	7510.
WITH MX	5819.	5963.	6222.	8601.	9359.	8918.	8931.	7536.	6970.	7107.	7245.	7380.	7510.
DIFFERENCE	0.	0.	504.	2314.	2934.	2363.	2157.	707.	2.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	8.23	36.81	45.67	36.05	32.23	10.36	0.03	0.00	0.00	0.00	0.00
MX INDUCED													
NET IMPACT	0.	0.	-121.	-404.	-24.	293.	175.	461.	704.	1.	0.	0.	0.
WHITE PINE													
REVENUES													
WITHOUT MX	4726.	4773.	4951.	7346.	8344.	9493.	9166.	8366.	7870.	8037.	8217.	8362.	8520.
WITH MX	4726.	4773.	4951.	7346.	8344.	9493.	9166.	8366.	7870.	8037.	8217.	8362.	8520.
P.L. RT1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
STATE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
LOCAL	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
DIFFERENCE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EXPENDITURES													
WITHOUT MX	4858.	4906.	5089.	7550.	8576.	9757.	9422.	8599.	8090.	8261.	8446.	8595.	8758.
WITH MX	4858.	4906.	5089.	7550.	8576.	9757.	9422.	8599.	8090.	8261.	8446.	8595.	8758.
DIFFERENCE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MX INDUCED													
NET IMPACT	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
WEAVER													
REVENUES													
WITHOUT MX	3482.	4607.	5230.	5846.	6372.	5330.	5165.	5219.	5290.	5387.	5472.	5560.	5619.
WITH MX	3482.	4607.	5230.	5947.	7037.	7017.	5413.	5498.	5294.	5387.	5472.	5560.	5619.
P.L. RT1	0.	0.	0.	27.	163.	162.	140.	0.	0.	0.	0.	0.	0.
STATE	0.	0.	0.	74.	450.	1008.	413.	11.	0.	0.	0.	0.	0.
LOCAL	0.	0.	0.	0.	52.	317.	695.	268.	0.	0.	0.	0.	0.
DIFFERENCE	0.	0.	0.	101.	665.	1683.	1247.	279.	0.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.00	1.74	10.43	31.57	24.14	5.45	0.00	0.00	0.00	0.00	0.00
EXPENDITURES													
WITHOUT MX	3511.	4645.	5273.	5894.	6425.	5374.	5209.	5262.	5343.	5431.	5517.	5605.	5665.
WITH MX	3511.	4645.	5273.	6040.	7307.	7335.	5945.	5262.	5343.	5431.	5517.	5605.	5665.
DIFFERENCE	0.	0.	0.	146.	883.	1461.	737.	0.	0.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.00	2.48	13.74	36.49	14.53	0.00	0.00	0.00	0.00	0.00	0.00
MX INDUCED													
NET IMPACT	0.	0.	0.	-45.	-218.	-278.	490.	279.	0.	0.	0.	0.	0.
TRIM													
REVENUES													
WITHOUT MX	9810.	10139.	10504.	10901.	11185.	11431.	11634.	11961.	12314.	12458.	12600.	12812.	13123.
WITH MX	9810.	10139.	10504.	10901.	11242.	11546.	11918.	11387.	12314.	12458.	12600.	12812.	13123.
P.L. RT1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
STATE	0.	0.	0.	0.	0.	62.	36.	26.	0.	0.	0.	0.	0.
LOCAL	0.	0.	0.	0.	57.	84.	49.	0.	0.	0.	0.	0.	0.
DIFFERENCE	0.	0.	0.	0.	57.	154.	113.	26.	0.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.00	0.00	0.51	1.45	0.94	3.22	0.00	0.00	0.00	0.00	0.00
EXPENDITURES													
WITHOUT MX	9831.	10222.	10520.	10941.	11177.	11525.	11733.	12059.	12314.	12560.	12794.	13018.	13210.
WITH MX	9831.	10222.	10520.	10941.	11177.	11525.	11733.	12059.	12314.	12560.	12794.	13018.	13210.
DIFFERENCE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

Table 2.1-38 (page 3 of 4)

	3,00	1,00	0,00	0,00	0,00	0,24	1,47	0,47	3,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
NET IMPACT	0.	0.	0.	0.	0.	-18.	-15.	65.	76.	0.	0.	0.	0.	0.	0.	0.	0.	
JULIA																		
REVENUES																		
WITHHOLD MX	3476.	4094.	4539.	4937.	4933.	4933.	5056.	5007.	4801.	4484.	4448.	4517.	4585.	4651.	4706.	4744.	4784.	4825.
WITH MX	3476.	4094.	4539.	5096.	5066.	5081.	5081.	5002.	4901.	4484.	4484.	4517.	4623.	4689.	4744.	4784.	4825.	4865.
P.L. RTA	0.	0.	0.	20.	25.	5.	15.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
STATE	0.	0.	0.	55.	70.	48.	48.	9.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
LOCAL	0.	0.	0.	0.	38.	68.	68.	9.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
DIFFERENCE	0.	0.	0.	75.	133.	9.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.00	1.52	2.70	1.36	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EXPENDITURES																		
WITHHOLD MX	3504.	4128.	4574.	4972.	4973.	4973.	5056.	5007.	4801.	4484.	4484.	4517.	4623.	4689.	4744.	4784.	4825.	4865.
WITH MX	3504.	4128.	4574.	5079.	5109.	5081.	5081.	5002.	4901.	4484.	4484.	4517.	4623.	4689.	4744.	4784.	4825.	4865.
DIFFERENCE	0.	0.	0.	107.	136.	25.	25.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.00	2.16	2.74	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MX INDUCED	0.	0.	0.	-32.	-3.	43.	9.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NET IMPACT	0.	0.	0.	-32.	-3.	43.	9.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MILLARD																		
REVENUES																		
WITHHOLD MX	5328.	6738.	8424.	9969.	9832.	9832.	10037.	9756.	8583.	7934.	7934.	8012.	8101.	8178.	8245.	8285.	8325.	8365.
WITH MX	6328.	6738.	8695.	11889.	12889.	12889.	17119.	17259.	8583.	7934.	7934.	8012.	8101.	8178.	8245.	8285.	8325.	8365.
P.L. RTA	0.	0.	0.	174.	564.	564.	256.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
STATE	0.	0.	0.	1308.	1584.	1584.	746.	21.	3.	0.	0.	0.	0.	0.	0.	0.	0.	0.
LOCAL	0.	0.	0.	139.	909.	909.	1081.	491.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.
DIFFERENCE	0.	0.	0.	1021.	3057.	3057.	2082.	513.	7.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.00	19.27	31.09	31.09	20.74	5.25	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EXPENDITURES																		
WITHHOLD MX	5380.	6793.	8494.	10051.	9913.	9913.	10120.	9837.	8653.	7999.	7999.	8078.	8168.	8245.	8312.	8352.	8392.	8432.
WITH MX	6380.	6793.	8895.	12616.	12962.	12962.	11503.	9841.	8653.	7999.	7999.	8078.	8168.	8245.	8312.	8352.	8392.	8432.
DIFFERENCE	0.	0.	392.	2565.	3050.	3050.	1384.	4.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	4.61	25.52	30.77	30.77	13.67	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MX INDUCED	0.	0.	-121.	-645.	7.	699.	509.	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NET IMPACT	0.	0.	-121.	-645.	7.	699.	509.	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
SALT LAKE/UTAH																		
REVENUES																		
WITHHOLD MX	466617.	494167.	503531.	524924.	536535.	536535.	546697.	557062.	566576.	576091.	585593.	594903.	603517.	611377.	619237.	627097.	634957.	642817.
WITH MX	466617.	494167.	503531.	524924.	536535.	536535.	546697.	557062.	566576.	576091.	585593.	594903.	603517.	611377.	619237.	627097.	634957.	642817.
P.L. RTA	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
STATE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
LOCAL	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
DIFFERENCE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EXPENDITURES																		
WITHHOLD MX	470452.	488146.	507669.	529238.	540944.	540944.	551190.	561640.	571232.	580826.	590406.	599792.	608477.	616401.	624325.	632249.	640173.	648097.
WITH MX	470452.	488146.	507669.	529238.	540944.	540944.	551190.	561640.	571232.	580826.	590406.	599792.	608477.	616401.	624325.	632249.	640173.	648097.
DIFFERENCE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MX INDUCED	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NET IMPACT	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
WASHINGTON																		
REVENUES																		
WITHHOLD MX	12787.	13324.	13887.	14444.	14862.	14862.	15270.	15630.	16122.	16565.	16907.	17255.	17612.	17975.	18338.	18701.	19064.	19427.
WITH MX	12787.	13324.	13887.	14444.	14862.	14862.	15270.	15630.	16122.	16565.	16907.	17255.	17612.	17975.	18338.	18701.	19064.	19427.
P.L. RTA	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
STATE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
DIFFERENCE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PCT. DIFF.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MX INDUCED	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NET IMPACT	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

Table 2.1-39. (page 1 of 2).

PROPOSED ACTION: FULL DEPLOYMENT - NEVADA/UTAH (L)
 BASE I AT COYOTE SPRINGS, NV (CLARK CO.)
 BASE II AT MILFORD, UT (BEAVER CO.)

N-X RELATED CAPITAL INVESTMENTS REQUIREMENTS

(THOUSANDS FY 1987 \$)

SERVICE	LONG TERM (1994)	ANNUAL INVESTMENT REQUIRED(1)/(2)	PEAK YEAR
CLARK			
GENERAL OBLIGATION BOND ITEMS (3)	3358.0	3358.0	20823.8
REVENUE BOND ITEMS (4)	2480.6	2480.5	13043.9
SCHOOLS	21282.7	10641.3	25913.2
TOTAL	27121.2	16479.9	59780.8
EUREKA			
GENERAL OBLIGATION BOND ITEMS (3)	0.0	0.0	4735.6
REVENUE BOND ITEMS (4)	0.0	0.0	2697.9
SCHOOLS	0.0	0.0	7470.5
TOTAL	0.0	0.0	14904.0
LINCOLN			
GENERAL OBLIGATION BOND ITEMS (3)	402.4	187.3	3259.5
REVENUE BOND ITEMS (4)	310.4	103.5	1869.8
SCHOOLS	299.9	299.3	5107.4
TOTAL	1012.7	590.5	10231.7
NYE			
GENERAL OBLIGATION BOND ITEMS (3)	0.0	0.0	6910.1
REVENUE BOND ITEMS (4)	0.0	0.0	3939.2
SCHOOLS	0.0	0.0	10839.8
TOTAL	0.0	0.0	21589.0
WHITE PINE			
GENERAL OBLIGATION BOND ITEMS (3)	0.0	0.0	4846.5
REVENUE BOND ITEMS (4)	0.0	0.0	2761.1
SCHOOLS	0.0	0.0	7646.9
TOTAL	0.0	0.0	15254.5
BEAVER			
GENERAL OBLIGATION BOND ITEMS (3)	4813.0	2936.0	11297.6
REVENUE BOND ITEMS (4)	3624.3	1812.2	7220.2
SCHOOLS	16489.0	5496.3	20899.0
TOTAL	24926.3	10244.5	19415.8
IRON			

Table 2.1-39 (page 2 of 2).

GENERAL OBLIGATION BOND ITEMS (3)	1562.8	781.4	2232.2
REVENUE BOND ITEMS (4)	1169.4	584.7	1446.1
SCHOOLS	1830.2	915.1	2319.7
TOTAL	4562.3	2281.2	5998.0
JUAH			
GENERAL OBLIGATION BOND ITEMS (3)	0.0	0.0	3440.6
REVENUE BOND ITEMS (4)	0.0	0.0	1960.1
SCHOOLS	0.0	0.0	5429.7
TOTAL	0.0	0.0	10829.4
MILLARD			
GENERAL OBLIGATION BOND ITEMS (3)	83.9	83.9	4135.0
REVENUE BOND ITEMS (4)	65.0	65.0	2361.9
SCHOOLS	61.7	61.7	6482.7
TOTAL	210.7	210.7	12979.4
SALT LAKE/UTAH			
GENERAL OBLIGATION BOND ITEMS (3)	0.0	0.0	10700.0
REVENUE BOND ITEMS (4)	0.0	0.0	6424.8
SCHOOLS	0.0	0.0	8290.8
TOTAL	0.0	0.0	25415.6
WASHINGTON			
GENERAL OBLIGATION BOND ITEMS (3)	242.0	242.0	731.3
REVENUE BOND ITEMS (4)	194.1	194.1	468.8
SCHOOLS	176.4	176.4	568.9
TOTAL	612.5	612.5	1769.0
NEVADA			
GENERAL OBLIGATION BOND ITEMS (3)	3760.4	3545.2	40575.4
REVENUE BOND ITEMS (4)	2790.9	2584.0	24311.8
SCHOOLS	21582.5	10941.2	56972.9
TOTAL	28133.8	17070.4	121860.0
UTAH			
GENERAL OBLIGATION BOND ITEMS (3)	6701.8	4041.4	32536.6
REVENUE BOND ITEMS (4)	5052.8	2656.0	19881.8
SCHOOLS	14557.3	6619.5	43089.8
TOTAL	30311.9	13368.9	96408.1
REGIONAL TOTAL			
GENERAL OBLIGATION BOND ITEMS (3)	10462.7	7588.5	73112.0
REVENUE BOND ITEMS (4)	7843.8	5240.0	44193.6
SCHOOLS	40139.8	17590.8	100962.5
TOTAL	58445.7	30419.3	218268.1

(1) INVESTMENT REQUIREMENTS PRESENT THE AVERAGE ANNUAL LEVEL OF EXPENDITURES NEEDED TO PROVIDE THE LONG-TERM SERVICE REQUIREMENTS BY THE FIRST YEAR IN WHICH THIS LEVEL OF INVESTMENT SHOULD BE DEMANDED.

(2) MAXIMUM ANNUAL INVESTMENT REQUIRED.

(3) GENERAL OBLIGATION BOND ITEMS INCLUDE POLICE, FIRE, GOVERNMENT, HEALTH SERVICE, LIBRARY, AND STREET EXPENDITURES.

(4) REVENUE BOND ITEMS INCLUDE WATER AND WASTEWATER FACILITY EXPENDITURES.

counties. Cumulative effects of M-X and other projects are analyzed as the sum of the net M-X effect (assuming the high growth baseline) and the growth generated by those projects expressed as a percent change over the trend baseline.

The general pattern of population change induced by the project is likely to be rapid, large-scale growth during the construction "boom" period followed by almost equally rapid population losses, especially in counties affected only by DDA facilities, as construction activities are completed and full-scale operations are begun. The most important features of M-X related population change to examine are the peak year, including the rapidity with which in-migrant population reaches its maximum level and the size and composition of the population present during the peak construction period, and the permanent or long-term population change, if any. The rate of population loss during the "bust" phase of the cycle may be important in some counties due to difficulties which are likely to be encountered in establishing an orderly adjustment of housing and services to a rapidly declining population. The size, composition, and residential location of the long-term population change is especially significant since these characteristics would determine the extent of more-or-less permanent changes in the housing, land use, services, and general living environment of the affected communities.

TOTAL M-X-RELATED POPULATION CHANGE AT THE REGIONAL SCALE

Table 2.2-1 shows baseline population, net M-X-related population in-migration, and cumulative change due to M-X and other projects for the Proposed Action and each of the alternatives affecting the Nevada/Utah region. The percent differences represented by net M-X population change and by cumulative growth are presented for the appropriate baselines year by year from 1982 through 1994.

Full Deployment

The M-X related in-migrant population present in the Nevada/Utah region would reach maximum levels in 1987 ranging from 85,200 for the Proposed Action to 82,300 for Alternative 4, about five percent above the region's trend growth baseline population in that year. The cumulative population in-migration induced by M-X and other large projects in several counties would be about 115,000 persons in that year for the Proposed Action, about 6.8 percent above the trend growth baseline. The region's annual growth rate during the five year M-X construction "boom" period from 1983 through 1987 would increase to 4.2 percent, assuming no other large projects, and to 4.5 percent with those projects occurring simultaneously. These growth rates compare to a trend projection of growth at 3.2 percent annually during the same period.

Long-term population effects are projected to be substantially lower than in the peak year as out-migration of construction-related population reduces the total from around 85,000 to about 30,500 to 34,000, depending upon the alternative. Population bases associated with completion of M-X construction for the proposed action would reduce the annual growth rate in the region during the four year "bust" period to 1.3 percent from the trend projection of 2.1 percent. Expected concurrent population losses related to the completion of other projects further reduces the growth rate during this period to 1.1 percent annually. In the long term, the growth induced by full deployment would increase the region's population by 1.6 to 1.8 percent over the trend baseline and effects of other projects combined with M-X would result in a 2.6 to 2.8 percent increase, depending upon the alternative.

Table 2.2-1. (Page 1 of 2)

PROJECTED BASELINE POPULATION, M-X RELATED POPULATION CHANGE, AND CUMULATIVE POPULATION CHANGE RELATED TO M-X AND OTHER PROJECTS, BY ALTERNATIVE, IN DEPLOYMENT REGION

ALTERNATIVE	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
BASELINE POPULATION													
WITH TREND GROWTH (10)	1447418	1500138	1557873	1619626	1689105	1764164	1771729	1808214	1844718	1880142	1913598	1945085	
WITH OTHER PROJTS (10)	1453805	1511053	1574982	1647863	1726478	1762150	1793369	1828871	1862813	1898803	1932718	1964726	
X % ABOVE TO	0.4	0.7	1.1	1.7	1.9	1.6	1.2	1.0	1.0	1.0	1.0	1.0	1.0
PROPOSED ACTION													
M-X INITIO WITH TO	80	777	10773	37293	79698	83229	79156	31641	33443	31148	31123	31110	31096
Z ABOVE TO BASELINE	0.0	0.0	0.7	2.5	4.6	4.6	4.6	2.9	1.8	1.7	1.7	1.6	1.6
M-X INITIO WITH NO	80	727	10613	38524	79140	84415	78445	31348	33333	31116	31068	31040	31040
M-X + OTHER PROJECTS	6467	11642	27722	66981	109720	115262	106431	73228	30890	49211	49229	50173	50681
Z ABOVE TO BASELINE	0.4	0.8	1.8	4.1	6.6	6.1	4.1	2.8	2.7	2.7	2.6	2.6	2.6
ALTERNATIVE 1													
M-X INITIO WITH TO	80	777	10795	39872	79993	85235	79153	31730	33561	31245	31201	31190	31179
Z ABOVE TO BASELINE	0.0	0.0	0.7	2.5	4.6	4.6	4.6	2.9	1.9	1.7	1.7	1.6	1.6
M-X INITIO WITH NO	80	727	10497	39588	79576	84449	78478	31462	33462	31145	31098	31072	31072
M-X + OTHER PROJECTS	6467	11642	27806	67423	110336	115295	106464	73322	31019	49240	49759	50204	50713
Z ABOVE TO BASELINE	0.4	0.8	1.8	4.2	6.7	6.1	4.1	2.8	2.7	2.7	2.6	2.6	2.6
ALTERNATIVE 2													
M-X INITIO WITH TO	80	727	10622	37091	79586	84341	77677	31324	33754	30644	30580	30577	30574
Z ABOVE TO BASELINE	0.0	0.0	0.7	2.4	4.6	3.0	4.5	2.9	1.9	1.7	1.6	1.6	1.6
M-X INITIO WITH NO	80	727	10494	38762	79112	83350	76931	31041	33682	30572	30521	30516	30512
M-X + OTHER PROJECTS	6467	11442	27403	64799	109872	114396	104917	72901	31239	48667	49182	49636	50153
Z ABOVE TO BASELINE	0.4	0.8	1.8	4.1	6.6	6.7	6.1	4.1	2.8	2.6	2.6	2.6	2.6
ALTERNATIVE 3													
M-X INITIO WITH TO	3411	8574	20112	42451	78804	81998	80343	37447	37914	34433	34214	34176	34180
Z ABOVE TO BASELINE	0.2	0.6	1.3	2.7	4.7	5.0	4.6	3.2	2.1	1.9	1.8	1.8	1.8
M-X INITIO WITH NO	3369	8467	19934	43960	78002	83125	79781	36878	37575	34116	34008	33985	33964
M-X + OTHER PROJECTS	9736	19382	37063	70997	108762	113971	107767	78738	55132	52211	52669	53105	53603
Z ABOVE TO BASELINE	0.7	1.3	2.4	4.4	6.6	6.7	6.2	4.4	3.0	2.8	2.8	2.8	2.8
ALTERNATIVE 4													
M-X INITIO WITH TO	3411	8554	19457	40397	78046	82733	78000	31196	33178	32313	32258	32245	32232
Z ABOVE TO BASELINE	0.2	0.6	1.2	2.5	4.7	4.9	4.5	2.9	1.8	1.8	1.7	1.7	1.7
M-X INITIO WITH NO	3369	8467	19309	40035	77321	81952	77324	30907	33079	32212	32155	32139	32125
M-X + OTHER PROJECTS	9736	19382	36418	68092	108281	112798	105310	72767	50636	50307	50816	51259	51766
Z ABOVE TO BASELINE	0.7	1.3	2.3	4.2	6.5	6.7	6.1	4.1	2.8	2.7	2.7	2.7	2.7

Table 2.2-1. (Page 2 of 2)

ALTERNATIVE 5													
N-X IMPRO WITH TO	3472	8431	19796	43279	78700	84103	80609	57474	37888	34394	34172	34154	34136
Z ABOVE TO BASELINE	0.2	0.6	1.3	2.7	4.8	5.0	4.4	3.2	2.1	1.9	1.8	1.0	1.8
M-X IMPRO WITH HO	3426	8336	19814	45734	78034	83203	79002	56933	37593	34123	34015	33771	33771
M-X + OTHER PROJECTS	9813	19231	36923	70791	108814	114049	107788	78793	59152	52218	52674	51111	50612
Z ABOVE TO BASELINE	0.7	1.3	2.4	4.4	6.6	6.7	6.2	4.4	3.0	2.8	2.8	2.0	2.8
ALTERNATIVE 6													
N-X IMPRO WITH TO	3472	8431	19741	40225	78113	82774	77988	51125	33132	32252	32195	32181	32167
Z ABOVE TO BASELINE	0.2	0.6	1.2	2.5	4.7	4.9	4.3	2.9	1.6	1.7	1.7	1.7	1.7
M-X IMPRO WITH HO	3426	8336	19169	39847	77347	81943	77238	50864	33079	32197	32141	32124	32111
M-X + OTHER PROJECTS	9813	19231	36278	67886	108307	112791	105244	72724	50836	50274	50802	51314	51152
Z ABOVE TO BASELINE	0.7	1.3	2.3	4.2	6.3	6.7	6.1	4.1	2.8	2.7	2.7	2.7	2.7
ALTERNATIVE 8A													
N-X IMPRO WITH TO	75	622	9298	20977	37235	34175	28316	21150	16133	16035	16030	16028	16027
Z ABOVE TO BASELINE	0.0	0.0	0.6	1.9	2.2	2.0	1.6	1.2	0.9	0.9	0.9	0.8	0.8
M-X IMPRO WITH HO	75	622	9238	27810	36991	34019	28172	21150	16133	16035	16030	16028	16027
M-X + OTHER PROJECTS	6462	11537	26367	57847	67751	64863	56138	43010	33690	34130	34691	35148	35668
Z ABOVE TO BASELINE	0.4	0.8	1.7	3.6	4.1	3.8	3.2	2.4	1.9	1.9	1.8	1.8	1.8

SOURCE: HDR SCIENCES, 1-NOV-80

Split Deployment

The M-X-related in-migrant population present in the Nevada/Utah region would reach a maximum of 37,200 in 1986, about 56 percent less than with full deployment, before declining to a long-term level of about 16,000 persons (see Table 2.2-2). In the peak year the in-migrant population represents a 2.2 percent increase above the trend growth projection while other projects raise the increase to 4.1 percent.

COMPOSITION OF THE M-X-RELATED IN-MIGRANT POPULATION

The composition of the project-related population in terms of employment category for the Proposed Action and each alternative affecting the Nevada/Utah region is shown in Table 2.2-3 for the trend growth baseline. Households and population are categorized by the employment of the worker holding a direct job in households where there is more than one person employed. The categories which appear in counties affected only by DDA facilities include cluster construction, assembly and checkout, and indirect, while additional categories of base construction, military operations, and civilian operations would be present in counties affected by the bases. The categories present in an area are important since each has different socio-demographic characteristics. For example, the two construction categories, a large share of whom are workers present without families, have higher incomes, a slightly larger family household size, and younger age distribution than the general population (Mountain West Research, Inc., 1975), while the military-related population would contain a large share of single persons and would have a younger age structure and lower incomes (at least for enlisted personnel) than the general population. The indirect population generated by project-related expansion of local economic activity would likely approximate the characteristics of the state and western United States populations. The two construction categories and assembly and checkout workers represent populations that would be temporarily present during the construction phase, as would a major share of the indirect population.

Full Deployment

For the Proposed Action, the population related to construction workers (37,615) would constitute about one-third (37 percent) of the in-migrants in the peak year and about as many persons associated with indirect employment would be temporarily present in the region. Over 90 percent of the permanent in-migrants (28,163 persons) would be military personnel and their dependents, with the remaining share composed of civilian operations and indirect workers and their families. The comparable data for the alternatives, shown in Table 2.2-3, are virtually identical. About 23 percent (19,500 persons) of the in-migrants present in the peak year would be school-age population and another 47 percent (39,800) would be civilian labor force participants. In the long-term these proportions would be 29 and 13 percent, respectively.

Split Deployment

For the split deployment alternative only the size of the population in the constituent categories changes while their relative proportion remain about the same as for the full deployment alternatives in the peak year. In the long term,

Table 2.2-2. (page 1 of 2)

POPULATION IMPACTS
 ALTERNATIVE BA SPLIT DEPLOYMENT (70/30) - NEVADA/UTAH (1)
 BASE 1 AT COVITE SPRINGS, NV (CLARK CO.)

COUNTY	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
CLARK													
BASLINE	485433	503411	523124	540837	559947	575277	591443	607433	623794	637670	653924	671315	686499
WITH M X	485433	503661	528008	559927	580561	594650	610056	625927	639885	653931	671777	687236	702340
DIFFERENCE	0	250	5684	16070	20614	19373	18613	17841	13891	15841	15841	15841	15841
PERCENT INCREASE	0.0	0.0	1.0	3.0	3.7	3.4	3.1	2.9	2.5	2.5	2.4	2.4	2.3
OVER BASELINE													
FINNEKA													
BASLINE	1101	1121	1144	1169	1190	1211	1234	1253	1278	1301	1324	1347	1368
WITH M X	1101	1121	1144	1169	1191	1213	1237	1257	1278	1301	1324	1347	1368
DIFFERENCE	0	0	0	0	1	2	3	2	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													
LINCOLN													
BASLINE	3765	3850	3943	4043	4121	4194	4272	4347	4424	4500	4576	4647	4713
WITH M X	3840	4222	6071	7396	8524	9523	10500	11462	12402	13324	14238	15144	16041
DIFFERENCE	75	372	2128	3553	4013	2329	3628	1516	4662	4624	4762	4834	4701
PERCENT INCREASE	2.0	9.7	54.0	87.9	34.3	55.5	84.9	35.6	5.4	4.3	4.1	4.0	3.9
OVER BASELINE													
MYR													
BASLINE	10000	10246	10513	10799	11073	11258	11497	11730	11971	12208	12443	12677	12901
WITH M X	10000	10246	11489	12645	13801	15045	16285	17441	18775	19975	21208	22477	23901
DIFFERENCE	0	0	976	4466	6169	4807	4188	1711	4	0	0	0	0
PERCENT INCREASE	0.0	0.0	9.0	41.4	55.9	42.7	36.4	14.6	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													
WHITE PINE													
BASLINE	8346	8426	8522	8630	8802	8987	9132	9346	9545	9725	9903	10077	10238
WITH M X	8346	8426	8522	8648	8880	9001	9132	9346	9545	9725	9903	10077	10238
DIFFERENCE	0	0	0	11	71	14	0	0	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	0.0	0.2	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													
WYOMING													
BASLINE	4630	4770	4911	5051	5113	5161	5207	5234	5297	5357	5417	5471	5516
WITH M X	4630	4770	4911	5222	7079	9348	4899	5304	5297	5357	5417	5471	5516
DIFFERENCE	0	0	0	271	1764	4187	1622	30	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	0.0	5.4	38.4	81.1	3.9	1.0	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													
UTAH													
BASLINE	18410	18723	19649	20340	20064	21346	21851	22369	22895	23314	23747	24164	24554
WITH M X	18410	18723	19649	20340	21090	21733	21971	22369	22895	23314	23747	24164	24554
DIFFERENCE	0	0	0	0	726	387	120	0	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	0.0	0.0	3.6	1.8	0.5	0.0	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													

Table 2.2-2. (Page 2 of 2)

RAW													
BASLINE	5993	6263	6363	6888	7044	7190	7345	7496	7600	7764	7877	7983	8077
WITH M-X													
DIFFERENCE	0	665	663	1188	1240	1298	1353	1407	1450	1504	1557	1610	1663
PERCENT INCREASE	0	11.1	10.3	17.3	17.5	18.3	18.6	18.8	19.1	19.4	19.7	20.0	20.3
OVER BASELINE	0	0	0	2	3	3	4	4	4	5	5	6	6
HILLARD													
BASLINE	9608	10013	10458	10940	11432	11931	12437	12947	13462	13981	14505	15033	15566
WITH M-X													
DIFFERENCE	0	405	845	1320	1798	2281	2760	3245	3735	4230	4730	5235	5745
PERCENT INCREASE	0	4.2	8.1	13.7	19.6	25.7	31.8	37.9	44.0	50.1	56.2	62.3	68.4
OVER BASELINE	0	0	0	1	2	3	4	5	6	7	8	9	10
RAI T LAKE/UTAH													
BASLINE	876036	907980	942741	980701	1001845	1020860	1040976	1060249	1079131	1096781	1114088	1130135	1144683
WITH M-X													
DIFFERENCE	0	31444	65273	101044	148600	198115	248681	299296	350061	400876	451741	502656	553621
PERCENT INCREASE	0	3.6	7.5	11.5	16.9	22.5	28.2	34.0	39.8	45.6	51.4	57.2	63.0
OVER BASELINE	0	0	0	1	2	3	4	5	6	7	8	9	10
WASHINGTON													
BASLINE	24046	25055	26103	27200	27948	28716	29503	30317	31150	31793	32449	33119	33802
WITH M-X													
DIFFERENCE	0	1009	2050	3052	3958	4869	5785	6706	7632	8563	9499	10440	11387
PERCENT INCREASE	0	4.2	8.1	11.0	14.1	17.1	20.1	23.1	26.1	29.1	32.1	35.1	38.1
OVER BASELINE	0	0	0	0	0	0	0	0	0	0	0	0	0
NEVADA 5-COUNTY TOTAL													
BASLINE	508645	527054	547246	568498	595100	609927	617598	634113	651012	667424	684186	700263	715921
WITH M-X													
DIFFERENCE	0	18409	39192	63552	94400	120827	148281	176746	206221	236706	268201	299706	331221
PERCENT INCREASE	0	3.6	7.1	10.6	15.7	20.0	24.4	28.9	33.4	37.9	42.4	46.9	51.4
OVER BASELINE	0	0	0	0	0	0	0	0	0	0	0	0	0
UTAH 7-COUNTY TOTAL													
BASLINE	938773	973084	1010627	1051128	1074005	1094705	1116366	1137616	1158302	1177294	1193936	1213325	1229164
WITH M-X													
DIFFERENCE	0	34311	72754	110500	147877	185254	222631	260008	297385	334762	372139	409516	446893
PERCENT INCREASE	0	3.7	7.0	10.3	13.6	16.8	20.1	23.4	26.7	30.0	33.3	36.6	40.0
OVER BASELINE	0	0	0	0	0	0	0	0	0	0	0	0	0
DEPLOYMENT REGION TOTAL													
BASLINE	1447418	1500138	1557873	1619626	1659103	1694633	1731144	1771729	1807314	1844718	1880142	1913598	1943083
WITH M-X													
DIFFERENCE	0	52720	110705	177453	259077	345734	437488	534252	636026	742800	854574	971348	1093122
PERCENT INCREASE	0	3.6	7.4	11.0	15.6	20.4	25.2	30.0	34.8	39.6	44.4	49.2	54.0
OVER BASELINE	0	0	0	0	0	0	0	0	0	0	0	0	0
SOURCE: MDR SCHEMES, 1-NOV-80													

Table 2.2-3. (Page 1 of 2)

PROJECTED CUMULATIVE POPULATION IN MIGRATION BY PROJECT RELATED EMPLOYMENT CATEGORY, BY ALTERNATIVE, IN DEPLOYMENT REGION
 ASSUMING TREND BASELINE

ALTERNATIVE / CATEGORIES	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
PROPOSED ACTION													
BASE CONSTRUCTION	80	164	216	337	2744	3983	2744	1327	0	0	0	0	0
CLUSTER CONSTRUCTION	0	163	3926	17068	30048	27632	24597	8390	0	0	0	0	0
ASSEMBLY & CHECKOUT	0	400	1000	3350	6000	6000	3900	3750	100	0	0	0	0
MILITARY OPERATIONS	0	0	2640	5343	11064	16721	22379	28163	28163	28163	28163	28163	28163
CIVILIAN OPERATIONS	0	0	0	21	504	1048	1739	2297	2297	2297	2297	2297	2297
INDIRECT	0	0	2960	12747	29238	29843	21997	3738	714	658	656	654	654
TOTAL	80	727	10773	37285	76678	83229	79136	31661	33943	31168	31123	31110	31096
ALTERNATIVE 1													
BASE CONSTRUCTION	80	164	216	431	2530	3830	2591	1157	0	0	0	0	0
CLUSTER CONSTRUCTION	0	163	3926	17120	30687	27607	24378	8377	0	0	0	0	0
ASSEMBLY & CHECKOUT	0	400	1000	3350	6000	6000	3900	3750	100	0	0	0	0
MILITARY OPERATIONS	0	0	2640	5343	11064	16722	22380	28163	28163	28163	28163	28163	28163
CIVILIAN OPERATIONS	0	0	0	21	408	747	1637	2193	2189	2189	2176	2176	2172
INDIRECT	0	0	2902	13407	29702	30126	22088	6073	3111	879	858	851	843
TOTAL	80	727	10793	39872	79993	89233	79135	31730	33361	31243	31201	31190	31179
ALTERNATIVE 2													
BASE CONSTRUCTION	80	164	216	368	2700	3937	2382	1403	0	0	0	0	0
CLUSTER CONSTRUCTION	0	163	3926	17048	29762	27593	24383	8398	0	0	0	0	0
ASSEMBLY & CHECKOUT	0	400	1000	3350	6000	6000	3900	3750	100	0	0	0	0
MILITARY OPERATIONS	0	0	2640	5343	11064	16722	22380	28163	28163	28163	28163	28163	28163
CIVILIAN OPERATIONS	0	0	0	21	305	1048	1770	2355	2331	2348	2347	2344	2342
INDIRECT	0	0	2808	12360	27354	27036	20252	3538	3141	134	71	70	70
TOTAL	80	727	10672	37091	79384	84341	77677	31324	33754	30844	30380	30377	30374
ALTERNATIVE 3													
BASE CONSTRUCTION	1980	3514	4385	4175	5300	4740	3302	1377	0	0	0	0	0
CLUSTER CONSTRUCTION	0	163	3971	17210	30151	27746	24722	8320	0	0	0	0	0
ASSEMBLY & CHECKOUT	0	400	1000	3350	6000	6000	3700	3750	100	0	0	0	0
MILITARY OPERATIONS	0	0	2640	5343	11063	16721	22378	28161	28161	28161	28161	28161	28161
CIVILIAN OPERATIONS	0	0	744	786	1607	3918	3918	3018	3003	4953	4984	4972	4962
INDIRECT	1422	4478	7702	12367	24673	26068	20344	6413	4046	1270	1070	1062	1053
TOTAL	3411	8334	20112	43431	78804	83998	60363	37447	37914	34433	34214	34196	34180
ALTERNATIVE 4													
BASE CONSTRUCTION	1980	3514	4395	3776	2261	184	131	62	0	0	0	0	0
CLUSTER CONSTRUCTION	0	163	3971	17146	30767	27543	24543	8328	0	0	0	0	0
ASSEMBLY & CHECKOUT	0	400	1000	3350	6000	6000	3900	3750	100	0	0	0	0
MILITARY OPERATIONS	0	0	2640	5343	11063	16721	22378	28161	28161	28161	28161	28161	28161
CIVILIAN OPERATIONS	0	0	744	786	1607	3918	3918	3018	3003	4953	4984	4972	4962
INDIRECT	1422	4478	7702	12367	24673	26068	20344	6413	4046	1270	1070	1062	1053
TOTAL	3411	8334	20112	43431	78804	83998	60363	37447	37914	34433	34214	34196	34180

Table 2.2-3. (Page 2 of 2)

ALTERNATIVE 5												
BASE CONSTRUCTION	2158	3677	4493	4165	5506	4768	3202	1377	0	0	0	0
CLUSTER CONSTRUCTION	0	143	4014	17208	30126	27746	24722	8528	0	0	0	0
ASSEMBLY & CHECKOUT	0	400	1000	3550	6000	6000	5900	5750	100	0	0	0
MILITARY OPERATIONS	0	0	2640	5393	11064	16722	23379	28162	28162	28162	28162	28162
CIVILIAN OPERATIONS	1313	0	462	912	1739	2026	4054	5150	5141	5132	5126	5114
INDIRECT	3472	8931	19276	41579	20200	26041	20273	9110	4485	1098	885	072
TOTAL									34394	34172	34154	34136
ALTERNATIVE 6												
BASE CONSTRUCTION	2158	3677	4493	4946	5439	179	134	63	0	0	0	0
CLUSTER CONSTRUCTION	0	143	4014	17164	30042	27563	24362	8358	0	0	0	0
ASSEMBLY & CHECKOUT	0	400	1000	3550	6000	6000	5700	5750	100	0	0	0
MILITARY OPERATIONS	0	0	2640	5343	11064	16722	22379	28162	28162	28162	28162	28162
CIVILIAN OPERATIONS	1313	0	462	912	1776	1970	2495	3064	3058	3052	3050	3046
INDIRECT	3472	8931	19341	40225	21172	30362	22488	5731	1812	1036	984	972
TOTAL									33132	32252	32193	32181
ALTERNATIVE 8A												
BASE CONSTRUCTION	75	159	205	179	115	0	0	0	0	0	0	0
CLUSTER CONSTRUCTION	0	162	3508	12346	13819	12719	8539	2504	0	0	0	0
ASSEMBLY & CHECKOUT	0	300	800	2700	4450	3800	3000	2950	50	0	0	0
MILITARY OPERATIONS	0	0	2640	5280	7921	10561	13327	15841	15841	15841	15841	15841
CIVILIAN OPERATIONS	0	0	0	17	44	72	99	120	119	118	118	117
INDIRECT	0	0	2124	9439	10073	7024	3332	36	123	76	71	70
TOTAL	75	622	9278	29977	37223	34175	20316	21150	16133	16035	16030	16028

*EMPLOYMENT CATEGORY IS FOR PRIMARY WORKER IN HOUSEHOLD SINCE I DR SCIENCES. I-NOV-80

however, an even larger share of the permanent in-migrants (98 percent) would be military personnel and their dependents. About 10 percent of the permanent in-migrants would be civilian labor force participants while another 30 percent would be school age population.

REGIONAL-SCALE EFFECTS BY PLACE OF RESIDENCE

The projected in-migrant population at the county level has been disaggregated to three spatial categories of residence, where applicable: the bases, temporary construction camps, and local communities. The latter category should be interpreted as a group of several nearby communities, rather than one particular place. Population growth within particular communities is likely to be influenced by services such as housing and schools, which if not available may reduce local population growth as temporary workers may leave their families behind in other locations. Changes in the size of the community portion of the in-migrant population are especially important because they generate changes in demands for housing, urban land, and community services and facilities. Effects on communities would be less than suggested by aggregate population changes since substantial shares of the transient population during construction would be accommodated in temporary construction camps and a majority of the permanent in-migrants would be housed on the operating bases.

Full Deployment

For the Proposed Action, about two-thirds of the in-migrants present in the peak year, 58,700 persons, are projected to reside in local communities, with about 11 percent in construction camps and 20 percent on the bases. In the long term, a small share, *less than one-third*, would require accommodations in communities while the remainder would be housed on the bases. The number of persons to be accommodated in communities in the long term, about 9,500, is only about 16 percent of the amount present in the peak year. Data for the Proposed Action and all alternatives affecting the Nevada/Utah region are shown in Table 2.2-4, assuming the trend growth baseline.

Split Deployment

In the peak year, 1986, about 23,100 (62 percent) M-X related in-migrants would be present in communities, while 15 percent would be in construction camps and 23 percent would be housed on the base. Only about 40 percent as many as would be present in communities as compared to full deployment. In the long term, the number projected to require accommodations in communities drops by 85 percent to about 3,400 persons, only about one-third as many as forecast for full deployment alternatives. Assuming the high growth baseline, the number of in-migrants to local communities would be slightly lower.

GEOGRAPHIC DISTRIBUTION OF POPULATION EFFECTS

The distribution of population effects among the counties in the deployment region varies from alternative to alternative depending primarily upon the location of the operating bases, since DDA facilities remain virtually the same for all full deployment alternatives in Nevada/Utah. During the peak year, substantial population effects would be experienced in most of the counties within the DDA, while all

Table 2.2-4.

PROJECTED CUMULATIVE POPULATION IN-MIGRATION BY PLACE OF RESIDENCE, BY ALTERNATIVE, IN DEPLOYMENT REGION ASSUMING TREND BASELINE

ALTERNATIVE / PLACE OF RESIDENCE	1987	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
PROPOSED ACTION													
CONSTRUCTION CAMPS	0	92	1115	5846	10300	9742	8857	5107	50	0	0	0	0
OPERATIONS BASE	340	340	3012	6174	12129	16749	20672	24568	21603	21535	21555	21555	21555
LOCAL COMMUNITIES	80	283	6445	27262	52649	58719	49606	21987	11789	7614	9588	9586	9541
TOTAL	80	727	10773	39285	78698	85229	79156	51661	33443	31168	31123	31110	31096
ALTERNATIVE 1													
CONSTRUCTION CAMPS	0	92	1115	5846	10294	9742	8857	5107	50	0	0	0	0
OPERATIONS BASE	0	330	3012	6138	12097	16731	20664	24539	21603	21555	21555	21555	21555
LOCAL COMMUNITIES	80	283	6667	27884	52601	58763	49633	22083	11907	7691	9647	9635	9624
TOTAL	80	727	10793	39872	79993	85235	79155	51730	33361	31245	31201	31170	31179
ALTERNATIVE 2													
CONSTRUCTION CAMPS	0	92	1115	5847	10300	9749	8861	5112	50	0	0	0	0
OPERATIONS BASE	542	350	3012	6174	12249	17004	21061	25062	22092	22042	22042	22042	22042
LOCAL COMMUNITIES	80	285	6493	27067	52036	57389	47754	21150	11612	8602	8537	8535	8532
TOTAL	80	727	10622	39091	77386	84341	77677	51324	33734	30644	30580	30577	30574
ALTERNATIVE 3													
CONSTRUCTION CAMPS	0	92	1115	5856	10312	9783	8857	5107	50	0	0	0	0
OPERATIONS BASE	542	1266	3916	6701	12277	16356	20307	24221	21302	21252	21252	21252	21252
LOCAL COMMUNITIES	2869	7197	14426	27939	56133	57639	51400	28118	16361	13182	12962	12944	12928
TOTAL	3411	8354	20112	41451	78904	83998	80565	57447	37914	34435	34214	34176	34180
ALTERNATIVE 4													
CONSTRUCTION CAMPS	0	92	1125	5846	10294	9742	8857	5107	50	0	0	0	0
OPERATIONS BASE	542	1266	3916	6611	11620	15372	19537	23902	21302	21252	21252	21252	21252
LOCAL COMMUNITIES	2869	7197	14426	27939	56133	57639	52505	22187	11845	11064	11006	10973	10979
TOTAL	3411	8354	19437	40397	78046	82733	78000	51176	33178	32313	32238	32245	32232
ALTERNATIVE 5													
CONSTRUCTION CAMPS	0	92	1125	5843	10317	9783	8857	5107	50	0	0	0	0
OPERATIONS BASE	564	1289	3941	6750	12309	16356	20307	24221	21302	21252	21252	21252	21252
LOCAL COMMUNITIES	2908	7050	14231	30483	56372	57945	51445	28148	16356	13140	12950	12901	12883
TOTAL	3472	8431	19796	41279	78900	84103	80609	57476	37888	34394	34172	34154	34136
ALTERNATIVE 6													
CONSTRUCTION CAMPS	0	92	1125	5853	10299	9742	8857	5107	50	0	0	0	0
OPERATIONS BASE	564	1289	3941	6640	11652	15372	19637	23902	21302	21252	21252	21252	21252
LOCAL COMMUNITIES	2908	7050	14276	27299	56162	57661	49465	22117	11780	10999	10943	10928	10919
TOTAL	3472	8431	19341	40225	78113	82774	77958	51125	33132	32252	32195	32181	32167
ALTERNATIVE 7A													
CONSTRUCTION CAMPS	0	92	1026	4413	5637	4787	3129	1535	0	0	0	0	0
OPERATIONS BASE	0	250	2012	3574	6487	10399	12761	14673	12723	12673	12673	12673	12673
LOCAL COMMUNITIES	75	280	5460	19980	33101	18789	12431	4942	3410	3362	3357	3355	3354
TOTAL	75	422	9298	29977	41720	34179	28316	21150	16133	16035	16030	16028	16027

SOURCE: WDR SURVEY, 1 NOV 80

long-term effects are attributable to the bases alone. Permanent population effects are, therefore, largely limited to counties where the base would be located, with some spillover to communities within commuting distances in adjacent counties.

Full Deployment

The distribution of M-X-related in-migrant population by county is shown in Table 2.2-5 for the Proposed Action. During the peak year of the construction "boom" period, about 42,800 persons, or one-half of all project-related in-migrants, would be located in the two counties, Clark and Beaver, with operating bases, with most of the remainder spread among counties in the DDA. About 56 percent of the in-migrants present during the peak year would be in Nevada, with the other 44 percent in Utah. Long-term effects associated with the bases occur primarily within Clark and Beaver counties, with some spillover to Lincoln County in Nevada, and Iron, Washington, and Millard counties, Utah.

Table 2.2-6 presents estimates of population impacts using the alternative methodologies discussed in section 2.1 regarding employment effects (see Table 2.1-13). This comparison is made for Alternative 3, the only alternative for which both model runs are available. The simulation results for population impacts reported in Table 2.2-6 display the same general pattern as the results of the simulation analysis for employment. The simulation analysis shows a peak population impact of 91,300 persons, compared to the interindustry model, while DDA county impacts are higher using the simulation analysis.

Split Deployment

The split deployment alternative concentrates a greater share of the effects within Nevada. In the peak year (1986) over 55 percent of the project-related in-migrant population would be in Clark County, while in the long term virtually all of the population effects would occur in Clark. Table 2.2-7 shows the distribution of M-X-related in-migrant population by county for split deployment in Nevada/Utah.

Table 2.2-5 (page 1 of 2)

POPULATION IMPACTS

PROPOSED ACTION FULL DEPLOYMENT - NEVADA/UT/MT (L)
 BASE I AT COYOTE SPRINGS, NV (CLARK CO.)
 BASE II AT MILFORD, UT (BEAVER CO.)

COUNTY	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
CLARK													
BASELINE	485433	503411	523124	543837	559947	579277	591443	607435	623794	637670	655936	671515	686699
WITH M-X	485433	503761	528785	561496	587773	601984	616283	626032	639811	655637	671903	687482	702666
DIFFERENCE	0	750	5661	17639	27826	24707	24840	18617	16017	15967	15967	15967	15967
PERCENT INCREASE	0.0	0.1	1.1	3.2	5.0	4.6	4.2	3.1	2.6	2.5	2.4	2.4	2.3
OVER BASELINE													
EVREKA													
BASELINE	1101	1121	1144	1169	1190	1211	1234	1255	1278	1301	1324	1347	1368
WITH M-X	1101	1121	1148	1230	2078	7146	8215	4177	1319	1304	1324	1347	1368
DIFFERENCE	0	0	4	61	688	5929	6987	2922	41	0	0	0	0
PERCENT INCREASE	0.0	0.0	0.3	6.9	74.6	490.1	363.7	232.8	3.2	0.2	0.0	0.0	0.0
OVER BASELINE													
LINCOLN													
BASELINE	3763	3850	3943	4043	4121	4194	4272	4347	4424	4500	4576	4647	4715
WITH M-X	3843	4227	5969	7969	8079	8178	8491	5067	4830	4846	4915	4985	5031
DIFFERENCE	80	377	2026	3926	4758	3984	1219	720	406	346	339	338	336
PERCENT INCREASE	2.1	9.8	31.4	77.1	115.5	95.0	28.5	16.4	9.2	7.7	7.4	7.3	7.1
OVER BASELINE													
MTF													
BASELINE	10000	10246	10313	10799	11033	11238	11497	11730	11971	12208	12445	12677	12901
WITH M-X	10000	10246	11245	16109	21187	19737	22714	17935	12429	12227	12445	12677	12901
DIFFERENCE	0	0	732	5310	10154	8479	11217	6205	458	19	0	0	0
PERCENT INCREASE	0.0	0.0	7.0	49.2	92.0	75.3	97.6	52.9	3.8	0.2	0.0	0.0	0.0
OVER BASELINE													
WHITE PINE													
BASELINE	8346	8426	8522	8630	8807	8987	9132	9344	9545	9725	9905	10077	10238
WITH M-X	8346	8426	8532	10781	15652	11533	10052	9456	9545	9725	9905	10077	10238
DIFFERENCE	0	0	10	1151	6843	2346	870	110	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	0.1	14.9	77.7	28.3	9.3	1.2	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													
BEAVER													
BASELINE	4630	4778	4911	5051	5115	5161	5207	5254	5297	5357	5417	5471	5516
WITH M-X	4630	4778	6147	10477	17631	21278	22339	22709	19702	18479	18545	18545	18597
DIFFERENCE	0	0	1216	5426	12516	16117	17328	17855	14603	13072	13072	13071	13071
PERCENT INCREASE	0.0	0.0	25.2	107.4	244.7	312.3	332.8	316.0	275.7	244.0	241.3	238.9	237.0
OVER BASELINE													
UTAH													
BASELINE	18410	18793	19649	20340	20861	21346	21891	22362	22893	23314	23747	24164	24536
WITH M-X	18410	18793	19849	20378	22199	22776	23923	24335	24463	24785	25209	25621	26008
DIFFERENCE	0	0	0	270	1338	1940	2072	1766	1570	1471	1462	1457	1452
PERCENT INCREASE	0.0	0.0	0.0	1.1	6.4	9.0	9.5	8.8	6.9	6.3	6.2	6.0	5.9
OVER BASELINE													

Table 2.2-5 (page 2 of 2)

ARIZONA													
BASELINE	5995	6065	6363	6888	7044	7190	7345	7496	7650	7764	7877	7983	8077
WITH M-X	5995	6065	6363	7277	10533	12803	9034	7534	7650	7764	7877	7983	8077
DIFFERENCE	0	0	0	0	3489	5613	1689	38	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	0.0	5.7	47.5	78.1	23.0	0.5	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													
MILLARD													
BASELINE	9600	10013	10458	10940	11192	11432	11682	11931	12179	12285	12378	12463	12528
WITH M-X	9600	10013	11262	15071	14662	15354	18029	14877	12251	12356	12449	12534	12598
DIFFERENCE	0	0	1104	4131	3470	3722	6347	2946	72	71	71	71	70
PERCENT INCREASE	0.0	0.0	10.6	37.8	31.0	31.3	54.3	24.7	0.6	0.6	0.6	0.6	0.6
OVER BASELINE													
SALT LAKE/UTAH													
BASELINE	876036	907980	942741	980701	1001843	1020840	1040976	1060249	1079131	1096781	1114088	1130135	1144685
WITH M-X	876036	907980	942741	980701	1009834	1030216	1046963	1060249	1079131	1096781	1114088	1130135	1144685
DIFFERENCE	0	0	0	0	8091	10376	16987	0	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	0.0	0.0	0.8	0.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													
WASHINGTON													
BASELINE	24046	25055	26105	27200	27948	28716	29505	30317	31150	31773	32449	33119	33802
WITH M-X	24046	25055	26105	27200	28356	29356	30113	30759	31424	32112	32641	33335	34002
DIFFERENCE	0	0	0	0	408	640	608	482	274	219	212	206	200
PERCENT INCREASE	0.0	0.0	0.0	0.0	1.5	2.2	2.1	1.6	0.9	0.7	0.7	0.6	0.6
OVER BASELINE													
NEVADA 5 COUNTY TOTAL													
BASELINE	508645	527034	547246	568498	585100	600927	617598	634113	651012	667424	684184	700363	715921
WITH M-X	508723	527781	555679	597603	635369	648378	662725	676287	690759	700492	700492	716548	732524
DIFFERENCE	80	727	8433	29107	50469	47651	45127	28574	16722	16335	16306	16305	16303
PERCENT INCREASE	0.0	0.1	1.5	5.1	8.6	7.9	7.3	4.5	2.6	2.4	2.4	2.3	2.3
OVER BASELINE													
UTAH 7-COUNTY TOTAL													
BASELINE	938773	973084	1010627	1051128	1074003	1094705	1114566	1137616	1158302	1177294	1195956	1213135	1229164
WITH M-X	938773	973084	1012767	1061306	1103234	1132283	1150529	1167033	1182823	1192127	1210773	1228140	1243957
DIFFERENCE	0	0	2340	10178	29229	37978	34029	23087	16321	14833	14817	14805	14793
PERCENT INCREASE	0.0	0.0	0.2	1.0	2.7	3.4	3.0	2.0	1.4	1.3	1.2	1.2	1.2
OVER BASELINE													
EMPLOYMENT REGION TOTAL													
BASELINE	1447418	1500138	1557873	1617626	1637103	1675632	1734164	1771729	1809214	1844718	1880142	1913378	1945085
WITH M-X	1447498	1500865	1568646	1638911	1738903	1760861	1813320	1823350	1842757	1875886	1911265	1944708	1976181
DIFFERENCE	80	727	10773	31285	79698	85229	79156	31661	33443	31168	31123	31110	31096
PERCENT INCREASE	0.0	0.0	0.7	2.4	4.0	5.0	4.6	2.9	1.8	1.7	1.7	1.6	1.6
OVER BASELINE													
SOURCE: HRD SCIENCES, I-MTV-80													

Table 2.2-6. Comparison of interindustry and simulation model population impact projections, Alternative 3.

REGION	TREND GROWTH BASELINE PROJECTION	INTERINDUSTRY MODEL IMPACT	PROJECTIONS	SIMULATION MODEL IMPACT	PROJECTIONS
		PROJECTED IN-MIGRANT POPULATION	IN-MIGRANT POPULATION AS % OF BASELINE	PROJECTED IN-MIGRANT POPULATION	IN-MIGRANT POPULATION AS % OF BASELINE
Regional Total					
Peak Year (1987)	1,695,632	83,998	5.0	91,345	5.4
Long Term	1,945,085	34,180	1.8	35,951 ¹	1.8
Clark County, NV					
Peak Year (1986)	359,947	591	0.1	6,046	1.1
Long Term	686,699	0	0.0	1,961	0.3
Eureka County, NV					
Peak Year (1988)	1,234	6,981	565.7	9,058	734.0
Long Term	1,368	0	0.0	1	0.0
Lincoln County, NV					
Peak Year (1986)	4,121	4,758	115.5	13,855	336.2
Long Term	4,715	361	7.7	14	0.3
Nye County, NV					
Peak Year (1988)	11,497	11,252	97.9	19,517	169.8
Long Term	12,901	6	0.0	10	0.1
White Pine County, NV					
Peak Year (1983)	9,152	21,514	235.1	16,285 ²	184.9
Long Term	10,128	14,347	140.1	10,989	107.3
Beaver County, UT					
Peak Year (1986)	5,115	4,483	87.6	56	1.1
Long Term	5,516	1,280	23.2	23	0.4
Iron County, UT					
Peak Year (1986)	20,861	21,642	103.7	16,844	80.7
Long Term	24,550	16,943	69.0	14,514	59.1
Juab County, UT					
Peak Year (1987)	7,190	5,613	78.1	7,603	105.7
Long Term	8,077	0	0.0	13	0.2
Millard County, UT					
Peak Year (1988)	11,682	5,301	53.9	8,609	73.7
Long Term	12,528	0	0.0	23	0.2
Salt Lake/Utah County, UT					
Peak Year (1987)	1,020,860	10,403	1.0	21,260	2.1
Long Term	1,144,685	0	0.0	7,563	0.7
Washington County, UT					
Peak Year (1989)	30,317	1,893	6.2	—	—
Long term	33,802	2,143	3.7	—	—

4251

¹Data are for 1995. baseline population is 1,963,889 in that year.

²BEBR Projections show the peak year in 1986. baseline population is 8,809 in that year.

NOTE: Regional totals for the peak year represent the highest absolute population impacts for the region as a whole. Individual county estimates are for the peak year in that county. Long-term projections are for 1994. Interindustry estimates are used in the analysis because of their comparability with other alternatives and other regions.

Sources: Interindustry estimates are from HDR Sciences (see ETR-27). Simulation estimates are from University of Utah, BEBR, October 1980.

Table 2.2-7 (page 1 of 2). POPULATION IMPACTS
 ALTERNATIVE BA SPLIT DEPLOYMENT (70/30) - NEVADA/UTAH (L)
 BASE 1 AT COYOTE SPRINGS, NV (CLARK CU)

COUNTY	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
CLARK													
BASELINE	485433	503411	523124	543837	559747	575277	591443	607435	623794	637670	655936	671315	686699
WITH M-X	485433	503461	528568	559927	580561	594650	610056	625276	639685	655531	671777	687356	702540
DIFFERENCE	0	250	5444	16070	20614	19373	18613	17841	15891	13841	13841	13841	13841
PERCENT INCREASE OVER BASELINE	0.0	0.0	1.0	3.0	3.7	3.4	3.1	2.9	2.5	2.5	2.4	2.4	2.3
ELUREKA													
BASELINE	1101	1121	1144	1169	1190	1211	1234	1255	1278	1301	1324	1347	1368
WITH M-X	1101	1121	1144	1169	1191	1213	1237	1257	1278	1301	1324	1347	1368
DIFFERENCE	0	0	0	0	1	2	3	2	0	0	0	0	0
PERCENT INCREASE OVER BASELINE	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0
LINCOLN													
BASELINE	3765	3850	3943	4043	4121	4194	4272	4347	4424	4500	4576	4647	4715
WITH M-X	3840	4222	6071	7396	5534	6523	7900	5893	4662	4674	4765	4834	4901
DIFFERENCE	75	372	2128	3553	1413	2329	3628	1546	238	194	189	107	186
PERCENT INCREASE OVER BASELINE	2.0	9.7	54.0	87.9	34.3	55.9	84.9	35.6	5.4	4.3	4.1	4.0	3.9
NYE													
BASELINE	10000	10246	10513	10799	11033	11238	11497	11730	11971	12208	12445	12677	12901
WITH M-X	10000	10246	11459	15265	17202	16065	15685	13441	11975	12208	12445	12677	12901
DIFFERENCE	0	0	946	4466	6169	4807	4188	1711	4	0	0	0	0
PERCENT INCREASE OVER BASELINE	0.0	0.0	9.0	41.4	55.9	42.7	36.4	14.6	0.0	0.0	0.0	0.0	0.0
WHITE PINE													
BASELINE	8346	8426	8522	8630	8809	8987	9152	9346	9545	9725	9905	10077	10238
WITH M-X	8346	8426	8522	8648	8880	9001	9152	9346	9545	9725	9905	10077	10238
DIFFERENCE	0	0	0	18	71	14	0	0	0	0	0	0	0
PERCENT INCREASE OVER BASELINE	0.0	0.0	0.0	0.2	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WILSON													
BASELINE	4658	4778	4911	5051	5115	5161	5207	5254	5297	5357	5417	5471	5516
WITH M-X	4658	4778	4911	5322	7079	9348	6879	5304	5297	5357	5417	5471	5516
DIFFERENCE	0	0	0	271	1764	4187	1672	30	0	0	0	0	0
PERCENT INCREASE OVER BASELINE	0.0	0.0	0.0	5.4	38.4	81.1	32.5	1.0	0.0	0.0	0.0	0.0	0.0
YUM													
BASELINE	18410	18773	19449	20348	20661	21346	21851	22369	22875	23314	23747	24164	24556
WITH M-X	18410	18773	17649	20348	21090	21733	21971	22369	22875	23314	23747	24164	24556
DIFFERENCE	0	0	0	0	772	307	130	0	0	0	0	0	0
PERCENT INCREASE OVER BASELINE	0.0	0.0	0.0	0.0	3.7	1.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0

Table 2.2-7 (page 2 of 2).

JUNO													
BASELINE	5995	6265	6563	6888	7044	7190	7345	7496	7650	7764	7877	7983	8077
WITH M-X	5995	6265	6563	7060	7253	7245	7345	7496	7650	7764	7877	7983	8077
DIFFERENCE	0	0	0	172	207	55	0	0	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	0.0	2.5	3.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													
HITLLARD													
BASELINE	9608	10013	10458	10940	11192	11432	11682	11931	12179	12285	12378	12463	12528
WITH M-X	9608	10013	11218	16367	17747	14445	11794	11931	12179	12285	12378	12463	12528
DIFFERENCE	0	0	760	5427	6555	3013	72	0	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	7.3	49.6	58.6	26.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													
SALT LAKE/UTAH													
BASELINE	876056	907980	942941	980701	1001845	1020860	1040976	1060249	1079131	1096781	1114088	1130135	1144685
WITH M-X	876056	907980	942941	980701	1001845	1020860	1040976	1060249	1079131	1096781	1114088	1130135	1144685
DIFFERENCE	0	0	0	0	0	0	0	0	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													
WASHINGTON													
BASELINE	24046	25055	26105	27200	27948	28716	29505	30317	31150	31723	32449	33117	33802
WITH M-X	24046	25055	26105	27200	27948	28724	29505	30317	31150	31723	32449	33117	33802
DIFFERENCE	0	0	0	0	0	8	0	0	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													
NEVADA 5-COUNTY TOTAL													
BASELINE	508645	527054	547246	568498	585100	600927	617598	634113	651012	667424	684186	700263	715921
WITH M-X	508720	527676	555784	592605	613368	627452	644030	655213	667145	683457	700216	716291	731948
DIFFERENCE	75	622	8538	24107	28268	26525	26432	21100	16133	16035	16030	16028	16027
PERCENT INCREASE	0.0	0.1	1.6	4.2	4.8	4.4	4.3	3.3	2.5	2.4	2.3	2.3	2.2
OVER BASELINE													
UTAH 7 COUNTY TOTAL													
BASELINE	938773	973084	1010627	1051128	1074005	1094705	1116566	1137616	1158302	1177224	1195956	1213335	1232164
WITH M-X	938773	973084	1011387	1036998	1082762	1102355	1118450	1137666	1158302	1177294	1195956	1213335	1232164
DIFFERENCE	0	0	760	5870	8957	7650	1884	50	0	0	0	0	0
PERCENT INCREASE	0.0	0.0	0.1	0.6	0.8	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0
OVER BASELINE													
DEPLOYMENT REGION TOTAL													
BASELINE	1447418	1500138	1557873	1619626	1659105	1695632	1734164	1771729	1809314	1844718	1880142	1913598	1945089
WITH M-X	1447423	1500760	1567171	1647603	1696330	1729807	1762480	1792879	1825447	1860753	1896172	1929626	1961112
DIFFERENCE	5	622	9298	27977	37225	34175	28316	21150	16133	16035	16030	16028	16027
PERCENT INCREASE	0.0	0.0	0.6	1.9	2.2	2.0	1.6	1.2	0.9	0.7	0.6	0.6	0.6
OVER BASELINE													
SOURCE HDR SCIENCES 1-NOV-80													

PARTIAL LIST OF REFERENCES

- ABT Associates, Inc., 1979. Socioeconomics Technical Report Anaconda, Nevada Moly Project
- Baker III, Arthur, N. L. Archbold and W. J. Stoll, 1973. Forecasts for the future - Minerals. Nevada Bureau Mines Bull. 82.
- Barone, Robert N., et al., July 1979. Socioeconomic Analysis of the White Pine Power Project. Bureau of Business and Economic Research, University of Nevada, Reno.
- Dennehy, E.P., American Electric Power, telephone conversation, April 10, 1980.
- Kilcup, R. G., Construction Problems in the Power Industry, Massachusetts Institute of Technology, Cambridge, 1974.
- Mountain West Research, Inc., 1975.
- Nevada Employment Security Department, Occupational Projections Program, Carson City, 1980.
- Nevada National Bank, undated, An Economic Overview of the Western States, 1970-1977. Reno, Nevada.
- The Business Roundtable, Coming to Grips with Some Major Problems in the Construction Industry, New York, 1974.
- U.S. Department of Commerce, Bureau of Economic Analysis, 1979. Personal Income by Major Sources 1970-75, Texas.
- Willie, J., 1980. St. George City Master Plan (Utah), 1980.

DATE
FILMED
— 8