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HAMMER SILER GEORGE ASSOCIATES WASHINGTON DC*
SOCIOECONOMIC ASSESSMENT OF POTENTIAL IMPACTS RELATED TO THE PR--ETC(U)
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FINAL REPORT.

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SOCIOECONOMIC ASSESSMENT OF POTENTIAL
IMPACTS RELATED TO THE PROPOSED
STRATEGIC AIR COMMAND REALIGNMENTS.

To

Headquarters United States Air Force
Deputy Chief of Staff, Programs and Resources
Directorate of Engineering and Services
Environmental Planning Division
Washington, D.C. 20330

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I. INTRODUCTION

I. INTRODUCTION

SCOPE OF WORK

→ This report, one of two separate reports prepared under contract to the United States Air Force, summarizes and compares the analyses of the potential socioeconomic impacts of a set of candidate and alternative candidate Air Force realignment actions being considered for four Strategic Air Command bases. The purpose of this research and analysis is to pragmatically determine and compare the anticipated potential socioeconomic impacts which the realignment action, if implemented, would have on the respective regions surrounding Kincheloe AFB, Michigan; Wurtsmith AFB, Michigan; and Blytheville AFB, Arkansas. The second report is similar to the first in objective but compares instead the impacts at Loring AFB, Maine; with the impacts at Blytheville AFB and Wurtsmith AFB. ↑

The following impact considerations, as outlined in the socioeconomic section of the Air Force Tab A-1 Environmental Narrative are included in the scope of this study. However, where initial analysis indicated that there was no potential for significant impact in a given subject area, no further data gathering or analysis was conducted. Therefore, some elements contained in the following list are not actually included in the text though they were analyzed during the overall study process.

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 - 4.1.1.1 Population Change by Location
 - 4.1.1.2 Population Distribution by Age and Sex for Community and Base
 - 4.1.2 o Ethnic/Racial Distribution
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- 4.2 ECONOMIC CHARACTERISTICS
 - 4.2.1 o Definition of Region
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This report is organized into three sections, the format of which is consistent with the requirements of the Council for Environmental Quality (CEQ) guidelines for an Environmental Impact Assessment. Included are only those points which must be addressed from a socioeconomic perspective. Those points which are the responsibility of the Air Force and/or other Air Force consultants are not addressed. The organizational format is outlined below.

- I. Introduction
- II. A. Comparative Analysis of Impacts of Viable Alternatives - Summary
- III. B Impact Analysis (By Base)
- III. A. Irreversible and Irretrievable Commitments of Socioeconomic Resources (By Base)
 - B. Unavoidable Adverse Effects and Mitigation Possibilities (By Base)
 - C. Unresolved Issues

It should be noted that this analysis addresses only the anticipated potential socio-economic impact upon the area surrounding each of the bases and does not address:

- (1) the total cost of the proposed realignment to the Federal government; or,
- (2) the merits or demerits of the proposed realignment; or, (3) the impact upon specific individuals imposed by the proposed realignment. While these may be relevant issues in realignment decisions, they are not within the scope of the consultant's study and specifically are excluded.

DESCRIPTION OF THE PROPOSED CANDIDATE ACTION AND ALTERNATIVES

The United States Air Force has defined two sets of alternative realignment actions for the four Strategic Air Command bases included in this analysis. Each set includes the defined candidate action and two alternative candidate actions. Only the first set of alternatives is considered in this report. The analysis of the second set is contained in our accompanying report. Each of the two sets of alternatives is described below:

I. Candidate Action: Kincheloe AFB, Michigan

Should this alternative be implemented, the 449th Bombardment Wing and its supporting organizations would be inactivated and Kincheloe AFB, Michigan, would be closed by the end of FY 1977. The base would be declared excess to Air Force requirements.

The 16 B-52H aircraft would be relocated to other SAC bases. The 16 KC-135 aircraft assigned to Kincheloe AFB would be transferred to the Air Reserve Forces. The 31 March 76 Kincheloe manpower authorizations of 3,074 military and 737 full-time equivalent civilian positions would be eliminated. Approximately 327 caretaker manpower positions which would be retained after the initial reduction would be eliminated upon completion of excessing actions. Aircraft operations at Kincheloe would be reduced to zero.

Alternate Candidate: Wurtsmith AFB, Michigan

Should this alternative be implemented, the base would be inactivated totally and would be closed by the end of FY 1977. The 31 March 76 Wurtsmith manpower authorizations of 3,103 military and 736 full-time equivalent civilian positions would be eliminated. Approximately 321 caretaker manpower positions which would be retained after the initial reduction would be eliminated upon completion of base excessing actions.

Alternate Candidate: Blytheville AFB, Arkansas

Should this alternative be implemented, the base would be inactivated totally and closed by the end of FY 1977. The 31 March 76 Blytheville manpower authorizations

of 2,830 military and 617 full-time equivalent civilian positions would be eliminated. Approximately 321 caretaker manpower positions which would be retained after the initial reduction would be eliminated upon completion of excessing actions.

II. Candidate Action: Loring AFB, Maine

Should this alternative be implemented, Loring AFB would be reduced to a forward operating base by inactivating the 42d Bombardment Wing and its supporting operational and maintenance squadrons. The 14 B-52G aircraft would be relocated to remaining installations that support the same weapons systems or be transferred to non-operating active status. The 30 KC-135 aircraft assigned to Loring AFB would be relocated and transferred to the Air Reserve Forces. Selected tenant organizations would be retained due to special mission requirements; specifically, the 4000th Aerospace Applications Detachment and the 49th Fighter Interceptor Squadron detachment (2 F-106 aircraft on day-to-day alert). Additionally, on inactivation of the 42nd bombardment wing, the 42nd Strategic wing would be activated to maintain the base as a forward operating location supporting day-to-day alert operations for approximately 10 KC-135 rotational aircraft and capable of supporting large scale contingency operations. The residual level of maintenance would be adequate to permit quick restoration of the base to its current operational level and a hedge against future threats to the national security of the United States. The candidate action, if approved, would be completed by the end of fiscal year 1977.

The 31 March 76 Loring manpower authorization of 3,690 military and 930 civilian positions would be reduced by approximately 2,985 military and 572 civilian positions leaving residual authorizations of approximately 705 military and 358 civilian positions. The latter residual number does not include an additional estimated 250 contractor employees who will be personnel to handle food service, laundry, transportation, and civil engineering support activities. This residual manpower is based on maximum reliance on contractual services for base operating support.

Alternate Candidate: Wurtsmith AFB, Michigan

Should this alternative be implemented, the base would be inactivated totally and closed. The 31 March 76 Wurtsmith manpower authorizations of 3,103 military and 736 civilian positions would be eliminated by the end of FY 1977. Approximately 327 caretaker manpower positions which would be retained after the initial reduction would be eliminated upon completion of base excessing actions.

Alternative Candidate: Blytheville AFB, Arkansas

Should this alternative be implemented, the base would be inactivated totally and closed. The 31 March 76 Blytheville manpower authorizations of 2,830 military and 617 civilian positions would be eliminated by the end of FY 1977. Approximately 327 caretaker manpower positions which would be retained after the initial reduction would be eliminated upon completion of base excessing actions.

The potential manpower impacts at each of the bases which would result from the implementation of the alternatives are shown in Table 1, following:

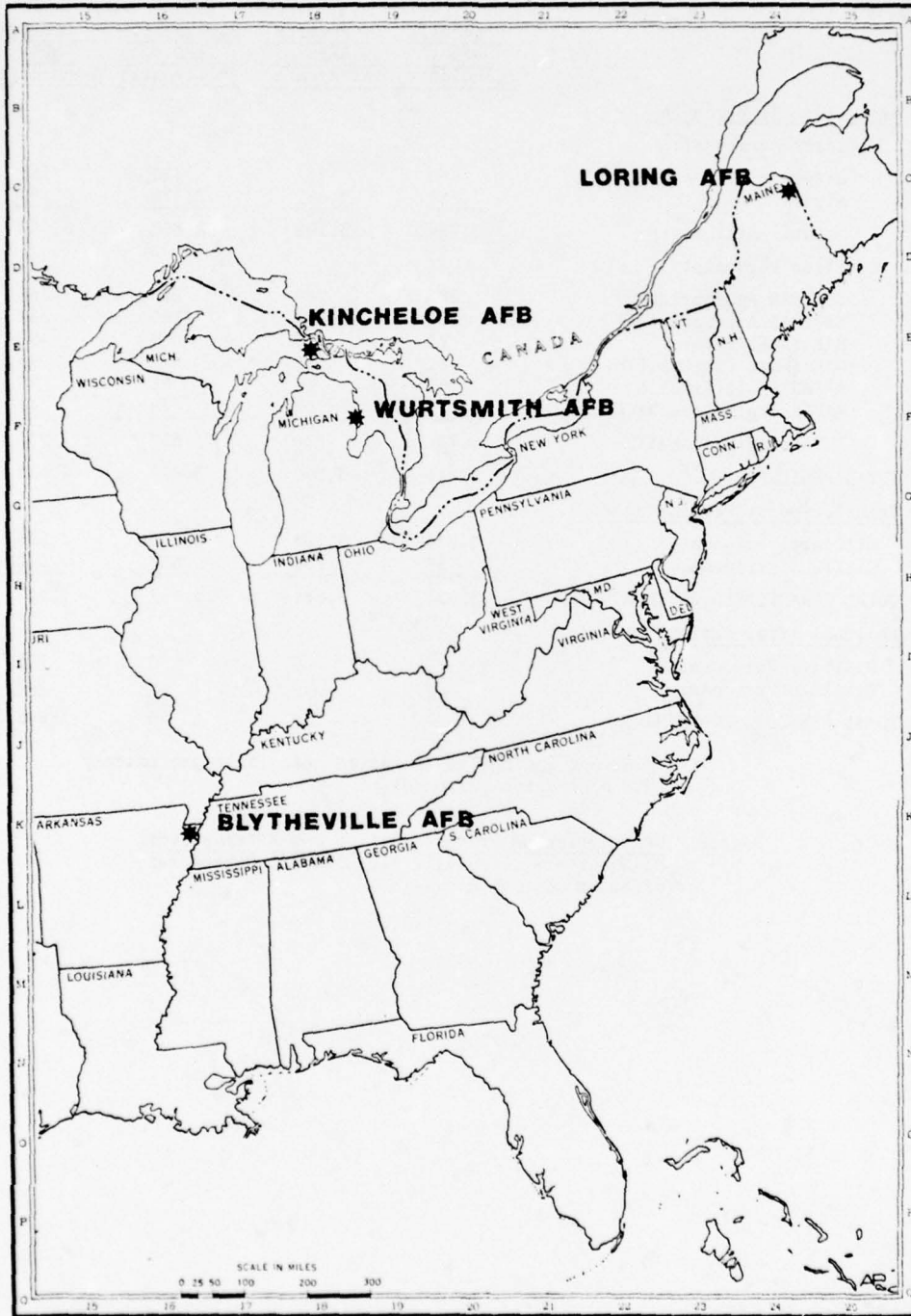
Table 1. DIRECT PERSONNEL REDUCTIONS, CANDIDATE AND ALTERNATE CANDIDATE BASES

	<u>Kincheloe</u> <u>AFB</u> <u>(Candidate)</u>	<u>Wurtsmith</u> <u>AFB</u> <u>(Alternate)</u>	<u>Blytheville</u> <u>AFB</u> <u>(Alternate)</u>	<u>Loring</u> <u>AFB</u> <u>(Candidate)</u>
<u>Assigned: 31 March 76</u>				
<u>Military Personnel:</u>				
Officers	460	462	454	551
Airmen	<u>2,614</u>	<u>2,641</u>	<u>2,376</u>	<u>3,139</u>
Total Military	3,074	3,103	2,830	3,690
<u>Civilian Personnel</u>				
GS (DAF Appropriated)	223	280	218	286
WB (DAF Appropriated)	320	274	199	384
NAF (Full Time)	25	31	34	57
NAF (Part Time as FTE)	81	65	77	99
AAFES (Full Time)	41	45	61	60
AAFES (Part Time as FTE)	<u>47</u>	<u>41</u>	<u>28</u>	<u>44</u>
Total Civilian FTE	737	736	617	930
TOTAL ASSIGNED	3,811	3,869	3,477	4,620
<u>Transferred or Terminated FY77</u>				
Military Personnel	3,074	3,103	2,830	2,985
Civilian Personnel	<u>737</u>	<u>736</u>	<u>617</u>	<u>572</u>
TOTAL TRANSFERRED OR TERMINATED	3,811	3,869	3,477	3,557
<u>Residual After Action</u>				
Military Personnel	0	0	0	705
Civilian Personnel	<u>0</u>	<u>0</u>	<u>0</u>	<u>358</u>
TOTAL RESIDUAL EMPLOYMENT	0	0	0	1,063 ^{1/}

^{1/} Does not include an estimated need for approximately 250 contractor personnel.

Source: Description of Proposed Action and Alternatives, Headquarters, Strategic Air Command, Directorate of Bases and Units.

Location of Subject SAC Bases



THE RESEARCH APPROACH

In order to accurately assess and compare the socioeconomic consequences of the proposed realignments at the candidate base and its alternatives, it is necessary that the impact determination be made based on equal depth of analysis of consistent and standardized factors. These factors, enumerated in the Air Force Environmental Reference (AFERN) system, fall basically within the realm of population, employment and general economic considerations. Together, these factors provide the overall economic context within which the analysis was performed.

To insure the level of comparability of analysis among the four bases, many of the conclusions of this study were derived based upon published data generally available for all of the locations being considered. The conclusions derived are based upon an analysis of key impact descriptors -- those factors which most accurately portray a socioeconomic impact. This emphasis upon key impact descriptors is consistent with our objective of providing a general overview of the impacts of the proposed realignment and accurately portraying what happens to surrounding towns and jurisdictions if the proposed base realignments are implemented. In quantifying these impacts, March 31, 1976 served as the baseline data from which all analyses were made.

Although standardized data bases served as the major foundation for performing this analysis, two additional data sources have played a prominent role in shaping our conclusions. First, in addition to general data collected by Air Force personnel a special survey was conducted at Kincheloe Air Force Base. The results of this survey are incorporated into the final socioeconomic assessment for the base. Secondly, the results of the pre-hearing meetings and public hearing testimony and submittals were carefully considered and were incorporated into the final report where appropriate. Such revisions were based on supplemental data, comments regarding omissions, conceptual differences, and other issues raised during the public review and comment period.

In order to establish the baseline "status quo" socioeconomic conditions which exist in each of the base's region of influence, information from each base's 1975 Tab A-1 Environmental Narrative (Revised) served as a basic data source. These documents contain pertinent data on the base, the surrounding communities, and the interrelationships which have developed between them. Information from these documents were supplemented by several other sources. Among them are the U.S. Census of Population, 1970; U.S. Census of Housing, 1970; State Employment Security Commission Records; Series C-40 Construction Reports; Census of Retail Trade, 1972; Survey of Current Business; data collected in local impact communities; and, all data available through the Department of the Air Force. As indicated earlier, data from these sources have been supplemented by public pre-hearing meetings and review of public hearing submissions and calls to local officials.

The Initial Step - Definition of The Impact Area

Concept

Particularly in rural areas and less densely settled urban regions, the economic influence of an Air Force installation extends throughout a broad geographic area that may include several counties. As the distance from the base itself increases, however, the economic influence of the base and the proportion of total economic activity attributable to it diminish.

To best express the economic influence of the Air Force bases on the surrounding communities and measure the impact on the area that would be most severely affected if the base were closed or reduced in scale of operation, Primary Impact Areas have been designated. The Primary Impact Area includes the political subdivisions, population centers and the employment nodes that would be most severely affected by base closure or reduction.

Some impacts, of course, will extend beyond the Primary Impact Area and affect other nearby jurisdictions. Impacts on such other areas outside of the Primary Impact Area have been addressed where appropriate.

Criteria and Methodology

In determining the boundaries of the Primary Impact Area for each Air Force base, the following criteria were utilized:

- o That at least 90 percent of the Air Force base personnel and their dependents reside within the boundaries of the Primary Impact Area;
- o That it be defined in terms of major political subdivisions which would be fiscally impacted and for which comparable and standardized secondary data are available; and,
- o That it correspond with the U.S. Commerce Department, Bureau of Economic Analysis designations of Labor Market Areas; employment areas and commutation sheds for which labor force, employment and unemployment data are reported.

Within the boundaries of the Primary Impact Area, an effort was made to single out the specific political subdivisions that would bear the brunt of the impacts. The criteria in singling out such political subdivisions within the Primary Impact Area for detailed evaluation were as follows:

- o That at least 100 base personnel and their dependents live within the political subdivision; or if fewer than 100,
- o That base personnel and their dependents account for at least five percent of the 1976 total base population.

In applying these criteria to the determination of Primary Impact Areas and in identifying specific jurisdictions to be considered in detail, the following steps were involved:

- o Using a report supplied by each Air Force base which identified the zip codes of civilian and military personnel receiving Leave and Earning Statements in January 1976, zip code delivery areas were correlated with political subdivisions and the number of civilian and military personnel residing within each was determined.
- o Using average dependency ratios derived from actual surveys of off-base civilian and military personnel at two of the Strategic Air Command bases, the total number of base personnel and dependents residing within each jurisdiction was calculated.
- o The resulting base-related population within each political subdivision was then compared to the 1973 estimate of total population prepared by the U.S. Bureau of the Census and reported in the P-25 series of Census publications.
- o When the base-related population numbered at least 100 or accounted for at least five percent of the population within a political subdivision, these subdivisions were singled out for detailed evaluations.
- o Baseline March 31, 1976 population estimates for the Primary Impact Area as a whole and component political subdivisions that would be principally impacted were developed using 1970 Census counts and 1973 estimates prepared by the U.S. Bureau of the Census.
- o The actual number of civilian and military personnel assigned to each base on March 31, 1976 was distributed among political subdivisions and converted to base-related population using geographic distributions from the January 1 Leave and Earnings Statement mailings and averaged dependency ratios.

Primary Impact Area Designations

Based on the procedure outlined above, the Primary Impact Area for each Air Force base was determined. The designations are listed in Table 2 below.

Table 2. PRIMARY IMPACT AREA DESIGNATIONS

<u>Air Force Base</u>	<u>Primary Impact Area</u>
Kincheloe AFB	Chippewa County
Wurtsmith AFB	Iosco County
Blytheville AFB	Mississippi County

Source: Hammer, Siler, George Associates.

As illustrated, all three of the Primary Impact Areas include the single county in which the base itself is located. In every case, the counties account for well over 90 percent of all base personnel and their dependents. Moreover, both Chippewa County in Michigan and Mississippi County in Arkansas comprise designated Labor Market Areas. Only in the case of Wurtsmith is there an incompatibility between the designated Primary Impact Area and the Labor Market Area delineation.

In that particular case, the Labor Market Area includes both Iosco and Alcona counties. Iosco County itself, however, accounts for 76 percent of total employment in the two-county area and 93 percent of all base personnel and their dependents. While Iosco County itself would bear the brunt of the impact and has been designated as the Primary Impact Area for this analysis, impacts on adjacent Alcona County have been identified wherever possible.

The interdependence between the individual Air Force bases and the designated Primary Impact Areas is illustrated in Table 3 below.

Table 3. PRIMARY IMPACT AREA COMPARISON

	<u>Kincheloe</u> <u>AFB</u>	<u>Wurtsmith</u> <u>AFB</u>	<u>Blytheville</u> <u>AFB</u>
Estimated 1976 Baseline Population in Primary Impact Area	36,550	30,800	60,500
Base Personnel and Dependents Residing in Primary Impact Area	9,710	9,500	8,550
Percent of Total Base Personnel and Dependents Accounted For	98.0%	93.2%	98.6%
Percent of Total Primary Impact Area Population	26.6%	30.9%	14.1%

Source: Hammer, Siler, George Associates

As illustrated, total 1976 population within the Primary Impact Areas ranged from 30,000 to 60,000. The 8,500 to nearly 10,000 base personnel and dependents residing within each Primary Impact Area accounted for well over 90 percent of the total number of base personnel and their dependents. In Kincheloe and Blytheville, the Primary Impact Area includes 98 percent of the total number of base personnel and their dependents; in other words, only two percent or less of the direct base-related population lived outside the Primary Impact Area. Only in the case of Wurtsmith do as many as seven percent reside outside of the Primary Impact Area. This is attributable to 700 base personnel and their dependents residing in Alcona County. While the Iosco County Primary Impact Area is the focus for the analysis, wherever possible the resulting impacts on adjacent portions of Alcona County have been identified.

Impact Area Quantifications

The Primary Impact Areas specified above are the focus for much of the analysis which follows. For factors such as payrolls, employment, unemployment and similar economic indicators which have meaning only on an areawide basis, the Primary Impact Area comprises the sole unit of measurement. In other areas, such as population loss, housing markets and vacancy trends which can be measured in terms of component political subdivisions, major jurisdictions have been singled out for detailed analysis. In gauging the impacts on the school systems and educational budgets,

individual school districts within the Primary Impact Area have been identified and analyzed. Wherever possible, impacts extending beyond the Primary Impact Area have been identified and evaluated.

Impact Assessment - The Multiplier Approach

In order to assess the socioeconomic consequences of the proposed base realignment actions on the impacted regions, it is necessary to use the tools of regional analysis. Among the tools available for such analysis, one of the most widely used is the economic base employment multiplier approach for measuring indirect employment losses. In the following sections we will explore the theory behind this approach and the methodology employed for its development. Also, we will examine the results for each of the subject bases.

The Theory

The theory of the economic base regional multiplier was originally the contribution of Hoyt and was later developed by Andrews and Tiebout. Base theory conceives the structure of the economy as made up of two broad classes of productive effort - the basic activities which produce and distribute goods and services for export to firms and individuals outside a defined localized economic area, and the service or non-basic activities whose goods and services are consumed at home within the confinement of the localized economic area.

The theoretical underpinning for this theory lies in the distinction between the basic and non-basic sectors. The premise behind this distinction states that the reason for the existence and growth of a region lies in the goods and services that are produced locally but sold beyond regional borders. These basic activities not only provide the means of payment for raw materials, food, etc., which the region cannot produce itself, but also support the non-basic activities which are principally local in productive scope and market area. Therefore, both sectors are related to exogenous demand, the basic sector directly and the non-basic sector indirectly. If exogenous demand for the exports of the region increases, the basic sector expands. This, in turn, generates an expansion in the supporting activities of the non-basic sector. Since economic base theory holds that all economic activity can be classified as basic or non-basic, it follows that changes in basic employment will include changes in non-basic employment.

In terms of its actual application, the theory provides a valuable framework for quantifying the impact of selected federal activities and other exogenous sources of economic impact on a defined region. It is for this reason that this approach has been chosen for this analysis.

The Approach

The economic base employment multiplier is an appropriate tool with which to measure changes in regional employment which would result if the proposed base realignment

actions were to take place. This multiplier represents the mathematical relationship between employment changes in the basic sector of the regional economy and the resulting changes in total employment in the region. The underlying assumption in this approach is that an increase in community exports leads to an increase in basic employment (military employment is basic in that, although there is no actual good or service exported from the region, there is an inflow of new dollars from outside the region); that such an increase in employment directly leads to an increase in community income, which is spent and induces a derived and calculable increase in service or non-basic employment. In essence, the employment multiplier is equal to total (or increase in) employment in both basic and service activities divided by total (or increase in) basic employment. The resultant multiplier measures the total local employment effect resulting from changes in basic industries.

The Calculation

The first step in this analysis involved the differentiation of the basic and non-basic components of total employment. This differentiation was necessary in order that the baseline relationships between basic and non-basic employment could be identified. This identification led to the basic/non-basic ratio which in turn led to the development of our multipliers.

Of the several methods available for differentiating between basic and non-basic employment, the location quotient method has been chosen for this analysis. The location quotient is the measure of the relative concentration of employment in a given industry in one area (the subject economy) compared with another area (benchmark economy). The assumption in this approach is that if the location quotient of an industry is greater than unity (1), it may be inferred that a region is export-oriented in that industry. The formula for the location quotient is:

$$(1) \quad LQ = \frac{A_i/A_t}{N_i/N_t}$$

where, A_i = area employment in industry i

A_t = total area employment

N_i = national employment in industry i

N_t = total national employment

Because of data availability, the formulation which uses national employment as the benchmark economy was chosen over others which utilized regional employment as the benchmark economy. This method assumes that an area would be neither an exporter nor an importer if the proportion allocated to a sector is the same as the national proportion. Although location quotients are possibly subject to some errors in comparison with other forms of employment allocation, these errors with regard to specific industries do not cause significant final errors with regard to aggregate

activities, such as all non-basic employment when taken collectively. The calculation of location quotients for each of the subject bases is presented in the Appendix.

Once location quotients were derived, the basic/non-basic shares of total employment were calculated. This conversion was made as follows:

$$(2) \frac{LQ}{LQ+1} = \text{Basic Employment Share}$$

These basic/non-basic share were then applied to the sectoral employment profile of the region to obtain its basic/non-basic ratios. By summing for all industries in the profile, we obtained the basic/non-basic ratios used in this study. The corresponding regional employment multiplier was simply the ratio of the total employment to basic employment, unity plus the basic/non-basic ratio (i.e., $M = 1 + B/N$).

The regional employment multiplier calculated under this technique was in essence a gross multiplier. That is, the direct employment loss is incorporated into the final figure. This multiplier reflects total employment loss. For this analysis, however, we used the net employment multiplier which measures the level of indirect employment loss. Essentially, the basic/non-basic ratio constitutes the net employment multiplier, the one by which direct employment losses are measured. For example, a basic/non-basic ratio of 1:2.5 indicates that for every job change in the basic sector, there will be 2.5 job changes in the non-basic sector.

Each of the regional employment multipliers in this study was developed using this methodology. The use of this consistent methodology allowed for the most accurate comparison of the indirect employment losses to be experienced by the regional economies of the subject bases if the proposed realignments were implemented.

The Results

Because we are attempting to assess the impact of a change in a particular sector, the military, it was considered necessary to develop both a civilian and a military multiplier. In calculating the military multiplier, we were concerned mainly with the changes in the non-basic employment sector. Therefore, our formulation was revised to reflect the relationship between military employment and employment in the non-basic sector. This was done largely in response to the fact that major employment changes indirectly generated by the change in the level of military employment will be primarily in the non-basic sector. The complete set of base-by-base calculations for the regional employment multipliers is presented in the Appendix to the text.

Before proceeding, one important point must be made. It is important to recognize that all communities or regions are not homogeneous in character and that socioeconomic evaluation criteria cannot be applied universally in all instances. This factor is dramatically illustrated by a comparison of net employment multipliers calculated for the four subject bases. As indicated in Table 4, on the following page, net

civilian multipliers range from a high of .90 at Wurtsmith Air Force Base, Michigan to a low of .56 at Blytheville Air Force Base, Arkansas. At the same time, net military multipliers range from a high of .36 at Blytheville Air Force Base, Arkansas to a low of .14 at Kincheloe Air Force Base, Michigan. Although the implications of each of these multipliers will be discussed in the appropriate section, it is important to note the fact that each is different. This difference dramatically points out the differences in each base, the surrounding communities, and the interrelationships which have developed in each area between the base and the surrounding communities.

Table 4. COMPARATIVE NET EMPLOYMENT MULTIPLIERS
PROPOSED REALIGNMENT CANDIDATE AND
ALTERNATE BASES

<u>Base</u>	<u>Net Civilian</u> <u>Multiplier</u>	<u>Net Military</u> <u>Multiplier</u>
Kincheloe AFB, Michigan	.77	.14
Wurtsmith AFB, Michigan	.90	.28
Blytheville AFB, Arkansas	.56	.36

Source: Hammer, Siler, George Associates

On the whole, Air Force base employment, both civilian and military, represents a basic sector in that the dollars paid to its employees are derived from outside of the local area. However, the impact which civilian and military employment changes have on the local economy varies. The military employment multiplier tends to be much lower than the civilian employment multiplier, largely because lower rank enlisted personnel who comprise a significant portion of military employees normally have lower incomes than do the civilian employees and frequently reside, shop and eat on the base. Secondly, many military personnel are single and do not have dependents on whom to spend their incomes. The civilian multiplier tends to be greater because civilians participate more fully in the local economy and usually have families for which purchases must be made.

Although these multipliers are lower than one might initially suspect, they are consistent with those developed in earlier studies of Department of Defense actions in similar economies. In addition, recent experience suggests that the actual multipliers in a Defense Department realignment community are in the range of .3 to .7 on a net basis.

The Caveats

Although economic base employment multipliers have gained wide acceptance in regional analysis, there are certain caveats which must be attached to their use. These limitations must be considered in all decisions resulting from the application of this technique in impact assessment.

First, and perhaps most importantly, the value of regional employment multiplier analysis lies largely in its ability to approximate the magnitude of an impact, not to predict the exact change. The technique is not intended to portray the actual impact on a

component of the overall economy but rather the magnitude of the impact on total employment within the economy. The major benefit of this approach lies in its portrayal of the magnitude of change which will be generated in total employment by shifts in basic employment at the regional level.

Second, by their nature, regional employment multipliers will be different for each regional economy under study. There is no single private employment multiplier which base closure communities can apply in all instances. The multiplier provides a first-cut approximation of the magnitude of employment losses to be anticipated. It must be supplemented by additional quantitative and qualitative data.

Recognizing these limitations, a two staged process has been followed which has allowed us to assess the impact on the key socioeconomic descriptors. First, the employment multipliers served to define the magnitude of the impact in each of the subject economies. Second, additional quantitative and qualitative data were used to describe those impacts which were not accounted for by the multiplier. This two-stage approach has yielded an accurate assessment of the potential impacts of the proposed base realignments on the subject economies.

II. A. COMPARATIVE ANALYSIS OF IMPACTS
OF VIABLE ALTERNATIVES

II. B. IMPACT ANALYSIS (BY BASE)

II.A. COMPARATIVE ANALYSIS OF IMPACTS OF VIABLE ALTERNATIVES - SUMMARY

It is anticipated that the implementation of either the candidate action at Kincheloe AFB, Michigan, or the alternative realignment actions at Wurtsmith AFB, Michigan or at Blytheville AFB, Arkansas, would result in direct and indirect socioeconomic impacts on the region surrounding each base in general and in specific population centers adjacent or proximate to the base. In the "A" portion of this section the probable impacts on the key socioeconomic descriptors will be summarized and compared for the full set of viable alternative Strategic Air Command bases under consideration. In the summary tables following, each key socioeconomic descriptor impact is discussed within the framework of the Primary Impact Area and, where appropriate, the communities significantly impacted. The Primary Impact Area for each base is discussed in "Definition of the Region" and shown on an accompanying map in Part I.B. In the "B" portion of this section the assumptions and methodologies used to determine these probable impacts at each base will be presented and the impacts derived.

Population

Each impact area will experience a direct population loss due to the proposed action at its subject base. The estimated direct population loss would consist of both the military personnel and their dependents who would be transferred out of the area and 62 percent of the civilian Department of the Air Force Appropriated Fund employees and their dependents who are anticipated to find new federal employment positions in other geographic areas. The projected population losses in both the communities experiencing significant impacts and the Primary Impact Area are shown in Table II.A.1.

Table II.A.1. ESTIMATED TOTAL DIRECT POPULATION LOSSES

Base	Primary Impact Area			Communities Significantly Impacted		
	1976 Population	Estimated Loss Number	Percent	1976 Population	Estimated Loss Number	Percent
Kincheloe AFB	36,350	8,670	23.9%	29,660	8,360	28.2%
Wurtsmith AFB	30,800	8,680	28.2%	21,650	8,660	40.0%
Blytheville AFB	60,500	7,680	12.7%	27,100	7,610	28.1%

Population losses in Primary Impact Areas range from 7,680 at Blytheville, the smallest of the bases, up to 8,680 at Wurtsmith. The losses, when taken as a percentage of the population in the communities where significant impacts are anticipated, range from a high of 40 percent at Wurtsmith to approximately 28 percent for both Kincheloe and Blytheville.

Employment

The alternative realignment actions will cause both direct and indirect employment losses in the Primary Impact Area of each base. While the majority of total job losses will result directly from the proposed realignment action, indirect losses will also be evident. These losses will be concentrated in the civilian employment sector and particularly impact the Trade, Services, and Finance, Insurance, and Real Estate (F.I.R.E.) sectors. In all cases, the losses will be significant. A comparison of total employment losses in the Primary Impact Area of each candidate or alternate base is presented in the table below.

Table ESTIMATED TOTAL EMPLOYMENT
LOSSES IN PRIMARY IMPACT AREAS

Base Impact Area	Employment Loss			Percent of Total Employment ^{1/}
	Direct	Indirect	Total	
<u>Kincheloe AFB</u>				
Military (.14 net multiplier)	3,074	430	3,504	31.6%
Civilian (.77 net multiplier)	737	567	1,304	11.8
Total	3,811	997	4,808	43.4%
<u>Wurtsmith AFB</u>				
Military (.28 net multiplier)	3,103	869	3,972	37.7%
Civilian (.90 net multiplier)	736	662	1,398	13.3%
Total	3,839	1,531	5,370	51.0%
<u>Blytheville AFB</u>				
Military (.36 net multiplier)	2,830	1,019	3,849	15.6%
Civilian (.56 net multiplier)	617	346	963	3.9
Total	3,447	1,365	4,812	19.5%

^{1/} Includes both military and civilian employment

As indicated, total employment losses range from approximately 4,800 to 5,400 in the Primary Impact Area of the respective bases. Losses of this magnitude constitute substantial portions of the total employment (military and civilian) bases in these areas. It must be emphasized, however, that these losses represent the 'worst case' examples. No allowance has been made for the fact that some of these jobs are held by the dependents of departing military personnel, some of those becoming unemployed may choose to retire, and some of those becoming unemployed may choose to relocate out of the Primary Impact Area.

Based on the above considerations, it was possible to calculate the 'worst case' civilian unemployment rates which would result from the proposed base realignments. By adjusting the civilian labor force to reflect the fact that approximately 60 percent of Department of the Air Force Appropriated Fund personnel relocate outside the area, the following profile emerged.

ESTIMATED UNEMPLOYMENT INCREASES IN THE PRIMARY
IMPACT AREA

<u>Base Impact Area</u>	<u>1976 Baseline</u>		<u>Post-Action</u>		<u>National</u>
	<u>Civilian Labor Force</u>	<u>Unemployment Rate</u>	<u>Civilian Labor Force</u>	<u>Unemployment Rate</u>	<u>Unemployment Rate</u>
Kincheloe AFB	11,225	18.7%	10,908	31.9%	8.0%
Wurtsmith AFB	8,425	11.9%	8,162	40.0%	8.0%
Blytheville AFB	23,475	7.2%	23,247	14.6%	8.0%

It is evident from the above Table that the proposed realignment actions would have dramatic effects on the unemployment rates in each of the Primary Impact Areas. In all cases, the post-action unemployment rates have exhibited significant increases over the baseline rates. Also, assuming a national unemployment rate of 8 percent, it is evident that post-action rates are substantially higher. These resultant unemployment rates range from 14.6 percent (183 percent of the national average) in the Blytheville AFB Primary Impact Area to 40.0 percent (500 percent of the national average) in the Wurtsmith AFB Primary Impact Area. Although these rates represent the 'worst case' examples, it is evident from their magnitude that the impact of the proposed realignment on the employment bases of the Primary Impact Areas would be substantial.

Base Payroll and Total Personal Income

In all instances, the payroll generated directly by the subject base constitutes a significant percentage of total personal income in the Primary Impact Area. This percentage ranges from 12.3 percent in the Blytheville Primary Impact Area to 26.1 percent in the Primary Impact Area of Wurtsmith AFB. A comparison of base payrolls and Primary Impact Area total personal income is presented in the following table.

Table BASE PAYROLL CONTRIBUTION TO TOTAL PERSONAL INCOME
IN THE PRIMARY IMPACT AREA (\$ million)

	<u>Estimated</u>	<u>Annual Base Payroll</u>	
	<u>1975 Total</u>	<u>Amount</u>	<u>Percent of</u>
	<u>Personal Income</u>		<u>TPI</u>
Kincheloe AFB	\$ 161.1	\$36.3	22.5%
Wurtsmith AFB	\$ 282.0	\$34.6	12.3%
Blytheville AFB	\$ 139.7	\$36.5	26.1%

If the proposed closure actions are implemented, the economies of the Primary Impact Areas will experience a direct loss of the base payrolls from the level of total personal income. Because it is basic income, direct loss of this payroll income will generate a secondary round of income losses. Although not quantified, these losses will be substantial in all cases.

Procurement and Construction Awards

The proposed realignment actions at the candidate and alternate Strategic Air Command bases under study will result in the loss of income from both locally purchased procurements and locally awarded construction contracts. The incomes from these sources play a key role in the economies of the Primary Impact Areas in that they directly generate employment. If the proposed actions or alternatives are implemented, the total amount of this basic income will be withdrawn from the Primary Impact Area economies.

ESTIMATED LOSS OF PROCUREMENT AND CONSTRUCTION AWARDS, PRIMARY IMPACT AREA (\$ 000's)

	<u>Non-Construction Procurement Awards</u>	<u>Annual Average Construction Awards</u>	<u>Total</u>
Kincheloe AFB	\$5,536.5	\$326.5	\$5,863.0
Wurtsmith AFB	\$3,177.8	\$630.3	\$3,808.1
Blytheville AFB	\$6,076.2	\$697.1	\$6,773.3

As indicated, total procurement and construction award income lost to the Primary Impact Area economies ranges from \$3.8 million at Wurtsmith AFB to \$6.8 million at Blytheville AFB. The indirect job losses which will be associated with this reduction in basic income will be concentrated largely in the Trade, Services, and Transportation, Communications and Utilities (T.C.U.) sectors. At Blytheville, these losses will be concentrated in those occupations related to the 'travel of things' and commissary/exchange supply. At both Kincheloe and Wurtsmith, these losses will be concentrated in those Trade sector occupations related to the provision of commissary/exchange supplies. In addition, the construction occupations will be severely impacted in each case.

Housing

The departure of off-base military and civilian households will impact the housing market of each base's Primary Impact Area. In all cases, the baseline market vacancy rate will be nearly tripled by the closure of the subject base. Estimated housing vacancy rates resulting from proposed base closure are presented in the following table.

ESTIMATED HOUSING VACANCY RATES

<u>Base Impact Area</u>	<u>1976 Baseline</u>			<u>Post-Action</u>		
	<u>Occupied Units</u>	<u>Vacant Units</u>	<u>Vacancy Rate</u>	<u>Occupied Units</u>	<u>Vacant Units</u>	<u>Vacancy Rate</u>
Kincheloe AFB	9,960	469	4.5%	8,950	1,459	14.0%
Wurtsmith AFB	8,881	392	4.5%	7,800	1,473	15.9%
Blytheville AFB	19,812	692	3.4%	18,452	2,052	10.0%

Because of its size, the Blytheville housing market will experience the largest absolute increase in vacancies but the smallest resultant increase in its vacancy rate. The vacancy rate of the Kincheloe AFB and Wurtsmith AFB housing markets will also increase substantially but won't represent the 'worst case' example. In both of these housing markets, the substantial numbers of seasonal units have been factored out.

Public School Enrollment

The departure of military and civilian personnel and their dependents will result in a loss in public school enrollment. Such a loss would have direct implications for the level of funding which each school district receives in the form of Federal Impact Aid (PL 81-874) and state aid. The following table presents enrollment and estimated loss in both the impacted districts and the school district where the most significant impact is anticipated.

Table ESTIMATES OF PUBLIC SCHOOL ENROLLMENT LOSSES

	<u>All School Districts Impacted</u>			<u>School Districts Significantly Impacted</u>		
	<u>1976 Enrollment</u>	<u>Estimated Loss</u>		<u>1976 Enrollment</u>	<u>Estimated Loss</u>	
		<u>Number</u>	<u>Percent</u>		<u>Number</u>	<u>Percent</u>
Kincheloe AFB	7,822	1,627	20.8%	2,167	1,437	66.3%
Wurtsmith AFB	5,926	1,810	30.6%	3,954	1,770	44.8%
Blytheville AFB	7,242	1,289	17.8%	1,673	1,099	65.7%

The estimated number of students lost ranges from 1,289 in the schools serving Blytheville AFB to 1,810 in school districts serving Wurtsmith AFB. When the estimated losses are looked at as a percentage of enrollment in the individual school district most directly impacted, both the Rudyard School District (KAFB) and the Gosnell School District (WAFB), which has a larger total enrollment base, will lose about 45 percent of its students.

Retail Sales

The closing of the proposed candidate base or either of its alternatives will directly reduce the level of retail sales in the subject areas. Even with a large part of military retail sales taking place at the BX and commissary, substantial amounts of money are injected into the economies of the Primary Impact Areas. This revenue will be directly withdrawn from the level of total retail sales. The amounts which will be directly lost are indicated in the table following.

Table ESTIMATED DIRECT RETAIL SALES LOSS (\$000)

<u>Base Impact Area</u>	<u>Total Retail Sales</u>	<u>Sales to Base Personnel</u>	<u>Percent of Total</u>
Kincheloe AFB	\$ 79,656	\$10,786	13.5%
Wurtsmith AFB	\$ 71,897	8,419	11.7%
Blytheville AFB	\$160,604	10,454	6.5%

As indicated, the retail establishments in each base's Primary Impact Area will experience substantial losses in retail sales revenue. These direct losses will in all cases be supplemented by losses resulting from indirect employment and personal income declines.

Summary

The evaluation of the socioeconomic impact of the proposed closure of Kincheloe AFB and of the alternatives revealed that the economy of the area of influence around the base would suffer severely in all cases. Unemployment rates would rise drastically, local businesses would endure economic hardships, real estate values would increase and school budgets would suffer the loss of federal and other student population-related funds, to mention but a few of the more prominent impacts. In other words, the closure of any of the major Air Force installations considered will have a significant adverse impact on the socioeconomic climate of the surrounding area.

II. B. IMPACT ANALYSIS: KINCHELOE AFB

IMPACT ANALYSIS: KINCHELOE AFB

Definition of The Region (AFERN 4.2.1 KAFB)

Kincheloe Air Force Base is located in the Upper Peninsula of the State of Michigan approximately 20 miles south of Sault Ste. Marie. Sault Ste. Marie and its sister city on the Canadian side straddle the Soo Locks, an important passage between Lake Huron and Lake Superior in Great Lakes waterborne commerce. Apart from the City of Sault Ste. Marie itself, the area is largely rural in character with sparsely settled townships and small-scale urban nodes.

The principal highway in the area is Interstate 75 which provides access to the eastern Upper Peninsula from the lower mainland portion of Michigan. This highway extends in a northerly direction from its point of access across the Mackinac Bridge at the City of St. Ignace and terminates in Sault Ste. Marie at the Canadian border. Most other roadways in the region are secondary in nature; large portions of the area are not traversed by any roads at all.

The base itself is located near I-75 in the Kinross Township of Chippewa County within a very rural setting. Small residential and commercial nodes are near the entrances to the base but the immediate surrounding area is sparsely settled. Approximately one-fourth of the military personnel assigned to the base and virtually all of its civilian employees live in communities outside the base itself. These residential distributions are presented in the table below.

Table K-1. ON-BASE AND OFF-BASE RESIDENCE PATTERNS
OF CIVILIAN AND MILITARY PERSONNEL,
KINCHELOE AIR FORCE BASE, MARCH 31, 1976

	Total Personnel	
	<u>Number</u>	<u>Percent</u>
On-Base Residence	2,372	62.2%
Off-Base Residence	<u>1,439</u>	37.8
Total	3,811	100.0%

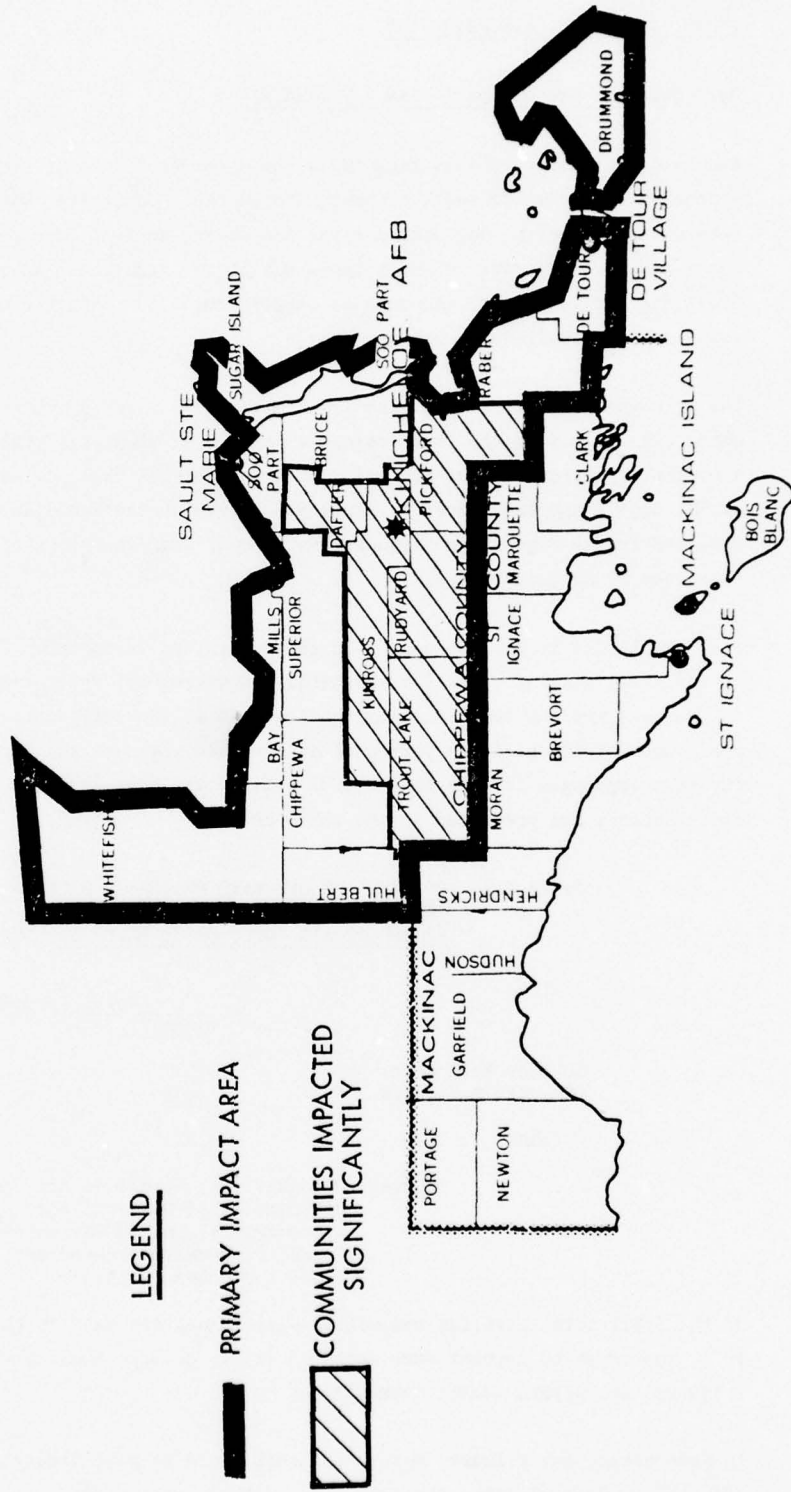
Source: Headquarters, Strategic Air Command, Directorate of Housing; and Headquarters, United States Air Force, Programs and Resources, Bases and Units Division.

Of the 3,811 total civilian and military personnel assigned to the base on March 31, 1976, just over 60 percent were accommodated in on-base housing while somewhat over 1,400 resided within nearby communities.

In determining the Primary Impact Area that would be most directly and severely affected by base closure, the following criteria were used:

- o That it include at least 90 percent of all Kincheloe personnel and their dependents.

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- o That it be defined in terms of major political subdivisions which would be fiscally impacted and for which comparable and standardized secondary data are available;
- o That it correspond insofar as possible with the Labor Market Area delineated by the U.S. Department of Commerce Bureau of Economic Analysis.

Based on this evaluation, Chippewa County was designated as the Primary Impact Area. Ninety-eight percent of all base personnel and their dependents reside within the county and this jurisdiction would bear the brunt of economic and fiscal impacts stemming from base closure. Moreover, Chippewa County has been designated as the Labor Market Area for the region in which the Air Force Base is located.

With an estimated 1976 county population of 36,350, base personnel and their dependents residing within Chippewa County accounted for 26.7 percent of the population total. Moreover, a number of townships and other civil divisions within the county have comparatively high concentrations of base personnel. Specific civil divisions in which base personnel and their dependents amount to at least 100 or account for at least five percent of the total population, are presented in the table below.

Table K-2. KINCHELOE AIR FORCE BASE IMPACT AREAS

	<u>Estimated 1976 Population</u>	<u>Base Personnel And Dependents Residing in Area Number</u>	<u>Percent of Total Population</u>
<u>Primary Impact Area:</u>			
<u>Chippewa County</u>			
Kinross Twp.	8,320	6,280	75.5%
Kincheloe AFB	(5,900)	(5,900)	(100.0)
Balance of Twp.	(2,420)	(380)	(15.7)
Sault Ste. Marie City	16,400	1,670	10.2
Dafter Twp.	1,030	220	21.4
Pickford Twp.	1,330	360	27.1
Rudyard Twp.	1,470	340	23.1
Superior Twp.	780	120	15.4
Trout Lake Twp.	330	30	9.1
Subtotal	29,660	9,020	30.4
Balance of Chippewa County	6,690	690	10.3
<u>TOTAL PRIMARY IMPACT AREA</u>	<u>36,350</u>	<u>9,710</u>	<u>26.7%</u>
<u>Other Impact Areas:</u>			
<u>Mackinac County</u>			
Clark Twp.	2,060	130	6.3%
Balance of Mackinac County	8,630	70	0.8
<u>TOTAL OTHER IMPACT AREAS</u>	<u>10,690</u>	<u>200</u>	<u>1.9%</u>

Source: Hammer, Siler, George Associates

As illustrated, Kinross Township accounts for the largest number of base personnel and their dependents; approximately 75 percent of the total township population is base-related. The vast majority of these, however, are domiciled in on-base housing and only 16 percent of the township's off-base population consists of base personnel and their dependents.

The largest single number of off-base personnel reside within the City of Sault Ste. Marie. With its larger population base, the 1,670 base personnel and their dependents account for approximately 10 percent of the city's total population. Though smaller in number, base-related populations residing in five other townships account for approximately 10 to nearly 30 percent of the total. In sum, base personnel are widely distributed among the civil divisions of Chippewa County and account for a significant share of total population in many of them.

Only two percent of base personnel and their dependents live outside the Primary Impact Area and these reside within Mackinac County. Most of these are located in Clark Township abutting the southern boundary of Chippewa County. Though their numbers are small, the 130 base-related population in Clark Township accounts for six percent of the total. Throughout the balance of Mackinac County, base personnel and their dependents account for less than one percent of the total population.

Throughout the analysis which follows, the Primary Impact Area and minor civil divisions listed above will be the focus for analysis. As appropriate, impacts affecting Clark Township and other portions of Mackinac County will be addressed.

Population (AFERN 4.1.1 KAFB)

In the early 1960's, major Strategic Air Command units were transferred to Kincheloe Air Force Base; this transfer of personnel and their dependents increased the total population living in the Township. Apart from this base-related population impact on Kinross Township, virtually every other civil division within Chippewa County lost population over the decade. Population changes over the 1960-70 decade and estimates for 1976 are presented in the table below. Because the reporting periods over the 16 year span are not equivalent, percentage rates of change have been expressed on an average annual basis.

Table K-3. POPULATION TRENDS, KINCHELOE AIR FORCE
BASE IMPACT AREAS, 1960, 1970 AND 1976

	<u>Population</u>			<u>Average Annual Rate of Change</u>	
	<u>1960</u>	<u>1970</u>	<u>1976</u>	<u>1960-70</u>	<u>1970-76</u>
<u>Primary Impact Area:</u>					
<u>Chippewa County</u>					
Kinross Twp.	1,958	6,763	8,320	24.5%	2.0%
Sault Ste. Marie City	18,722	15,136	16,400	-2.1	1.3
Dafter Twp.	1,070	942	1,030	-1.3	1.5
Pickford Twp.	1,302	1,198	1,330	-0.8	1.8
Rudyard Twp.	1,486	1,273	1,470	-1.6	2.4
Superior Twp.	906	694	780	-2.6	2.0
Trout Lake Twp.	400	306	330	-2.6	1.3
Subtotal	25,844	26,312	29,660	1.2	2.0
Balance of Chippewa County	6,821	6,100	6,690	-1.1	1.6
<u>TOTAL PRIMARY IMPACT AREA</u>	<u>32,665</u>	<u>32,412</u>	<u>36,550</u>	<u>-0.1%</u>	<u>2.0%</u>
<u>Other Impact Areas</u>					
<u>Mackinac County</u>					
Clark Twp.	1,563	1,771	2,060	1.3%	2.6
Balance of Mackinac County	9,290	7,889	8,630	-1.6	1.5
<u>TOTAL OTHER IMPACT AREAS</u>	<u>10,853</u>	<u>9,660</u>	<u>10,960</u>	<u>-1.2%</u>	<u>1.7%</u>

Source: U.S. Census of Population, 1960
and 1970; and Hammer, Siler,
George Associates

Since the Air Force Base population was not included in the 1960 Census, population growth in Kinross Township over the succeeding decade is grossly overstated in the table above: the bulk of the reported growth is simply attributable to inclusion of Kincheloe AFB population in the county's 1970 population. As illustrated, the reported Kinross population gains were the only offsetting feature to population losses elsewhere in the county between 1960 and 1970. In every other civil division presented in the table, net average annual losses over the decade ranged between one and three percent.

For the county as a whole, population decreased approximately one percent over the full ten year period. If the Air Force Base population is excluded from the 1970 counts to provide comparability with 1960 data, the off-base population in the county as a whole declined 20 percent over the decade.

In contrast to the losses over the prior decade, population in the county and its component subdivisions increased somewhat since 1970. In no small part, these population gains can be attributed to Kincheloe personnel levels. Between 1972 and 1976, personnel levels at Kincheloe AFB increased by 357 positions. Dependents of these personnel plus additional increases in civilian employment and their dependents account for a large portion of the growth in Chippewa County since 1970. In addition,

growth in the tourism industry and an increasing number of retirees taking up residence in the county have contributed to population growth in recent years.

Population Change By Location (AFERN 4.1.1.1 KAFB)

If the proposed action to close Kincheloe is implemented, population losses throughout the Primary Impact Area can be anticipated. As a direct result of base closure, somewhat over 3,000 military households would be transferred to other installations and depart from Chippewa County. It is more difficult to predict the behavior of base civilian employees terminated by the closure action.

Some Civil Service employees nearing retirement age may take early retirement and remain in the area. Other employees may be secondary wage earners whose spouses retain their jobs in the civilian sector; some such households may forego the secondary wage earner's income and remain in the area sustained only by the spouse's income. Some civilian employees with strong roots and family ties in the area may remain when their jobs are terminated and collect unemployment compensation until new employment opportunities are found or unemployment benefits run out. Still others may decide to move and seek employment in other Michigan counties or be placed by the Civil Service in positions elsewhere in the county.

It is virtually impossible to predict with certainty the decisions among civilian employees to remain in the community or relocate to other areas. Based on studies at Air Force Bases following actual closure or reduction actions since 1964, 62 percent of appropriated fund civilian personnel relocated from the impact area and moved to find employment elsewhere; 15 percent of the terminated appropriated fund civilian personnel retired. With this actual experience from other Air Force Base actions, household and population losses directly attributable to closure of Kincheloe AFB can at least be approximated. The same cannot be said for secondary employment losses and population impacts.

As the economic impact of the base closure reverberates throughout the local economy, indirect population losses will undoubtedly occur. As noted in the following section on employment measures, approximately 1,000 jobs in the civilian sector of the economy will be lost as an indirect result of the base closure. Employees laid off as an indirect result of base closure will likewise face the decision whether to remain in the community collecting unemployment benefits and seeking alternative employment opportunities or move with their families to seek jobs elsewhere. With no previously documented experience upon which to base estimates, indirect population losses can certainly be anticipated but the quantitative magnitudes cannot be predicted with any reasonable degree of certainty. Therefore, for purposes of this analysis, only direct population losses have been computed.

Based on previous experience at other Air Force Base installations, the following assumptions have been made:

- o All military personnel and their dependents would leave the Primary Impact Area;
- o Sixty-two percent of Appropriated Fund personnel and their dependents would leave the area and relocate in other jurisdictions outside the Primary Impact Area;
- o Fifteen percent of the Appropriated Fund personnel would retire and remain in the community;
- o The residual 23 percent of the Appropriated Fund personnel terminated would remain in the community along with their dependents for as long as they receive unemployment benefits or until they secure alternative employment;
- o All Non-Appropriated Fund civilian personnel, which have no Civil Service protection, would remain in the community and join the unemployment rolls.

In applying these assumptions, Chippewa County would lose nearly 25 percent of its 1976 baseline population as a direct result of Air Force Base closure. Estimated direct population losses for all the impact areas are presented in the table below.

Table K-4. ESTIMATED DIRECT POPULATION LOSS,
KINCHELOE AIR FORCE BASE IMPACT AREAS

	<u>1976 Baseline</u> <u>Population</u>	<u>Estimated Direct</u> <u>Population Loss</u>	
		<u>Number</u>	<u>Percent</u>
<u>Primary Impact Area:</u>			
<u>Chippewa County</u>			
Kinross Twp.	8,320	6,230	74.9%
Kincheloe AFB	(5,900)	(5,900)	(100.0)
Balance of Twp.	(2,420)	(330)	(13.6)
Sault Ste. Marie	16,400	1,240	7.6
Dafter Twp.	1,030	170	16.5
Pickford Twp.	1,330	330	24.8
Rudyard Twp.	1,470	280	19.1
Superior Twp.	780	90	11.5
Trout Lake Twp.	330	20	6.1
Subtotal	29,660	8,360	28.2
Balance of Chippewa County	6,690	310	4.6
<u>TOTAL PRIMARY</u> <u>IMPACT AREA</u>	<u>36,350</u>	<u>8,670</u>	<u>23.7%</u>
<u>Other Impact Areas:</u>			
<u>Mackinac County</u>			
Clark Twp.	2,060	100	4.9%
Balance of Mackinac County	8,630	40	0.5
<u>TOTAL OTHER</u> <u>IMPACT AREAS</u>	<u>10,690</u>	<u>140</u>	<u>1.3%</u>

Source: Hammer, Siler, George Associates

As illustrated, the population loss would be most severe in Kinross Township. The departure of nearly 2,500 base personnel and their dependents would result in a total population loss of approximately 75 percent. The vast majority of these, however, represent persons currently living on the Air Force Base itself and the off-base

population loss within Kinross Township would amount to roughly 14 percent of the township's non-base population.

Other jurisdictions within the Primary Impact Area would suffer population losses ranging from six percent to 25 percent. Reflecting the numerical concentration of base personnel within Sault Ste. Marie, the estimated population loss would be 1,240 or 7.6 percent of the city's total. Though the losses are not nearly so high in numerical terms, estimated population losses for Dafter, Pickford, Rudyard and Superior townships would reduce their 1976 baseline populations 12 to 25 percent.

Within Mackinac County, only Clark Township would be significantly affected. The 100 persons estimated to leave as a direct result of base closure account for five percent of the Township's baseline population. Throughout Mackinac County as a whole, the estimated direct population loss is on the order of one percent.

Even in measuring only the direct population loss associated with closure of Kincheloe AFB, the action would severely impact Chippewa County; almost one-fourth of its baseline population would be lost. The impact on population would be compounded significantly by indirect population losses but these cannot be reliably estimated or quantified.

Employment (AFERN 4.2.2 KAFB)

There are three principal components in the economic base of the Chippewa County Primary Impact Area: the Air Force base itself, the Soo Locks and Great Lakes waterborne commerce as well as an expanding tourism industry.

The Soo Locks date back to 1855 when the first ship canal was built with Congressional aid. The Locks were transferred to the United States Government in 1881 and placed under the jurisdiction of the U.S. Army Corps of Engineers; the Engineers have operated the Locks since that time. As the only water connection between Lake Superior and the other Great Lakes, ships passing through the Soo Locks carry two-thirds of the iron ore produced in the United States and Canada annually. While there is little spin-off employment related to goods movements through the Locks, they have become one important tourism attraction in the area.

Largely seasonal in nature, the tourism industry attracts people because of the Locks, natural amenities, as well as hunting, fishing and other water-related activities. Particularly in the City of Sault Ste. Marie, a wide variety of establishments cater to the tourist trade on a seasonal basis.

The Chippewa County Primary Impact Area had an employment level of approximately 8,000 in March 1976. Of this number, 3,769 or 45.9 percent of the total were employed in civilian government jobs. Because of the Corps of Engineers activity at the Soo Locks and Kincheloe Air Force Base itself, government sector employment was abnormally high. A profile of civilian employment is presented in the table on the following page.

Table K-5. CIVILIAN EMPLOYMENT PROFILE, KINCHELOE AFB
PRIMARY IMPACT AREA, MARCH 1976

<u>Sector</u>	<u>Employment</u>	<u>Percent of Total</u>
Agriculture	350	4.4%
Construction	275	3.4
Manufacturing	375	4.7
T.C.U. ^{1/}	550	6.9
Trade	1,575	19.7
F.I.R.E. ^{2/}	225	2.8
Services	975	12.2
Government	<u>3,675</u>	45.9
Total	8,000	100.0%

^{1/} Transportation, Communications, Utilities

^{2/} Finance, Insurance, Real Estate

Source: Michigan Employment Security Commission.

With very little agricultural or manufacturing employment, the lack of diversity in the economy is underscored by the heavy dependence on government activity. As a consequence, the economy is very fragile and highly sensitive to external changes in government policy.

On-Base Employment (AFERN 4.2.2.2 KAFB)

As of March 31, 1976, 3,811 persons were employed at Kincheloe Air Force Base. Of this number, 3,074 were assigned military personnel and 737 were assigned civilian personnel. The majority of the civilian personnel were Department of the Air Force (DAF) Appropriated Fund Civil Service and Wage Board employees. The employment profile for Kincheloe Air Force Base is presented in the following table.

Table K-6. ON-BASE EMPLOYMENT PROFILE
KINCHELOE AFB, MARCH 31, 1976

<u>Assigned Military</u>	<u>Number of Personnel</u>
Officers	460
Airmen	<u>2,614</u>
Subtotal	(3,074)
<u>Assigned Civilian</u>	
DAF Appropriated	543
Nonappropriated Fund ^{1/}	<u>194</u>
Subtotal	(737)
Total	3,811

^{1/} Includes the full-time equivalent for part-time AAFES personnel.

Source: Headquarters, United States Air Force, Programs and Resources, Bases and Units Division

Under the proposed action, the 449th Bombardment Wing and its supporting organizations would be inactivated and Kincheloe Air Force Base would be closed. The base would then be declared excess to Air Force requirements. This would result in the direct loss of 3,074 military and 737 civilian positions. A summary of the proposed personnel realignment at Kincheloe AFB is presented in the following table.

Table K-7. SUMMARY OF PROPOSED PERSONNEL
REALIGNMENT AT KINCHELOE AFB

	<u>Military</u>			<u>Civilian</u>			<u>Total Personnel</u>
	<u>Officers</u>	<u>Airmen</u>	<u>Total</u>	<u>DAF</u>	<u>NAF</u>	<u>Total</u>	
Assigned as of 3-31-76	460	2,614	3,074	543	194	737	3,811
Number To Be Reduced	<u>460</u>	<u>2,614</u>	<u>3,074</u>	<u>543</u>	<u>194</u>	<u>737</u>	<u>3,811</u>
Residual After Action	0	0	0	0	0	0	0

Source: Description of Proposed Action and Alternatives, Headquarters, Strategic Air Command, Directorate of Bases and Units.

Employment Loss

The proposed action at Kincheloe Air Force Base would result in both direct and indirect employment losses. Transferred or terminated military and civilian personnel assigned to the base represent the direct employment losses. The elimination of these jobs and the termination of other base influences such as procurements and other purchases in the local economy would reverberate and have secondary job loss effects. These indirect job losses would occur in several ways.

Both civilian and military personnel at the base eat in local restaurants, buy clothing and other goods from local retail establishments and purchase at least some grocery items from local supermarkets. With the departure of base personnel and their

dependents, retail sales will diminish and local retailers may be forced to reduce employment levels.

Similarly, the termination of base procurement and construction awards to local firms may also affect employment levels at these establishments. Utility companies, public school systems, local governments and other employers in the area may likewise be forced to lay off employees because of diminished activity resulting from base closure. Some small businesses and others only marginally profitable may be forced to liquidate and go out of business entirely. These impacts will continue to ripple throughout the local economy in a variety of subtle ways and have a total cumulative impact on total employment in the civilian sector.

In order to measure the magnitude of these indirect losses, employment multipliers were developed for the Kincheloe AFB Primary Impact Area. The specific methodology for development of these multipliers is discussed in the introductory section of this report on the research approach. Two separate multipliers have been derived: a civilian multiplier and a military multiplier.

The civilian multiplier represents the mathematical relationship between civilian personnel working on the base and total employment in the civilian sector of the local economy as a whole. Reflecting their incomes and expenditure patterns within the local civilian sector, the multiplier derived for the Kincheloe Primary Impact Area indicates that for every one civilian employee at the base another .77 jobs in the civilian sector are attributable to civilian employment on the base.

Because of on-base housing, exchange and commissary privileges, the average military man spends less in the civilian sector of the economy. The military multiplier developed for the Kincheloe Primary Impact Area indicates that for every uniformed military person assigned to the base, .14 jobs in the civilian sector are attributable to military personnel levels at Kincheloe.

Applying these multipliers to the direct reduction in Kincheloe's civilian and military personnel levels expresses the indirect job loss in the civilian sector of the economy that can be expected following base closure. As an indirect result of the 3,811 civilian and military personnel transferred or terminated, then, the Chippewa County economy will lose an additional 907 jobs. A summary of these direct and indirect employment losses is presented in the table below. The calculations used in deriving the civilian and military multipliers are included in the Appendix.

Table K-8. SUMMARY OF DIRECT AND INDIRECT EMPLOYMENT
LOSSES IN THE KINCHELOE AFB PRIMARY IMPACT AREA

<u>Direct Employment Loss</u>	<u>Number of Jobs</u>
Military	3,074
Civilian	<u>737</u>
Subtotal	(3,811)
<u>Indirect Employment Loss</u>	
Military (Net Multiplier of .14)	430
Civilian (Net Multiplier of .77)	<u>567</u>
Subtotal	(997)
<u>Total Employment Loss</u>	<u>4,808</u>
Percent of Total Baseline Employment ^{1/}	43.4%

^{1/} Includes both civilian and military employment.

Source: Description of Proposed Action and Alternatives, Headquarters, Strategic Air Command, Directorate of Bases and Units; and Hammer, Siler, George Associates

The direct loss of 3,074 military positions will result in a net loss of 430 additional jobs in the civilian sector while the termination of 737 civilian employees at the base will result in a net loss of 567 additional jobs in the civilian sector. When both direct and indirect employment losses are taken into account, the 4,808 jobs lost as a result of the base closure action represent 43.4 percent of all jobs in Chippewa County as of March 31, 1976. In losing nearly half of its baseline military and civilian employment, the Kincheloe AFB Primary Impact Area would suffer a severe employment loss.

Resultant Unemployment

It is estimated that the March 1976 civilian labor force in Chippewa County consisted of 11,225 persons. Of this number, 2,100 or 18.7 percent were unemployed. This severe and persistent unemployment rate was more than twice the national average of 8.1 percent.

If the proposed action at Kincheloe Air Force Base were to take place, the resident civilian labor force in the Primary Impact Area would be reduced to 10,908 persons. This is based on the assumption that 62 percent of the Appropriated Fund civilian workers living in the Primary Impact Area would relocate. Since the worst possible case has been assumed, those persons who may choose to retire or the dependents of base personnel who hold jobs in the local economy have not been eliminated from the labor force. Therefore, the 1,374 civilians unemployed as a result of the proposed action in addition to the 2,100 persons unemployed before the action would result in a staggering unemployment rate of 31.9 percent. Labor force and unemployment data are presented in the table on the following page.

Table K-9. CIVILIAN LABOR FORCE AND UNEMPLOYMENT
IN THE KINCHELOE AFB PRIMARY IMPACT AREA

March 31, 1976 Baseline

Civilian Labor Force	11,225
Total Unemployed	2,100
Unemployment Rate	18.7%

Post-Action

Civilian Labor Force	10,908
Total Unemployed	3,474
Unemployment Rate	31.9%

Source: Hammer, Siler, George Associates and
Michigan Employment Security Commission

Already beset by severe and persistent unemployment, the Primary Impact Area would suffer a devastating blow following Kincheloe closure; nearly one-third of its labor force would be unemployed. With a depressed economy to begin with, Chippewa County has few resources for recovery.

Personal Income

Civilian and military payrolls on the base represent an important component in total personal income (TPI) for the Chippewa County Primary Impact Area and closure of the base would have a detrimental effect on TPI in the area. As illustrated in the table below, monthly gross payrolls during March 1976 totalled \$3,025,850. On an annual basis, Kincheloe AFB payrolls amount to \$36.3 million.

Table K-10. MONTHLY GROSS PAYROLL,
KINCHELOE AFB, MARCH 1976

<u>Military</u>	<u>Amount</u>
Officers	\$ 681,010
Airmen	1,678,540
Subtotal	\$2,359,550
<u>Civilian</u>	
DAF Appropriated	\$565,860
Non-appropriated Fund	100,440
Subtotal	\$666,300
Total	\$3,025,850

Source: November 30, 1976 Leave and Earning Statement
File, U.S. Air Force Accounting and Finance
Center; Non-Appropriated Fund Financial
Analysis Office, Kincheloe Air Force Base.

To compare base payrolls with total personal income in the area, TPI for the Primary Impact Area was derived using the following methodology:

- o Bureau of Economic Analysis figures for resident total personal income in 1970 and 1974 were extracted from published sources;

- o 1970 total personal income was converted into 1974 constant dollars by using the Consumer Price Index inflation factor;
- o Annual average real income growth over the five-year period was calculated;
- o 1974 TPI was updated to 1975 constant dollars; and
- o The annual average real income growth rate was applied to get an estimate of 1975 total personal income.

Based on this methodology, total personal income in the Chippewa County Primary Impact Area totalled approximately \$161.1 million during calendar year 1975. As illustrated in the table below, base payrolls represented 22.5 percent of total personal income in the county, a sizeable proportion of the total.

Table K-11. BASE PAYROLL CONTRIBUTION OF TOTAL PERSONAL INCOME IN THE KINCHELOE AFB PRIMARY IMPACT AREA

1975 Total Personal Income	\$161,100,000
Annual Base Payrolls	36,274,000
Percent of TPI	22.5%

Note: Values expressed in 1975 constant dollars.

Source: November 30, 1976, Leave and Earning Statement File, U.S. Air Force Accounting and Finance Center; Non-Appropriated Fund Financial Analysis Office, Kincheloe Air Force Base; and Hammer, Siler, George Associates

If closure of Kincheloe AFB were implemented and its payroll contribution to the community terminated, the economy of Chippewa County would experience not only a direct loss of 22.5 percent of its total personal income but an additional decline in income due to indirect job losses. Because on-base pay levels tend to be higher than those in the community at-large, the loss would be disproportionately severe. While other indirect personal income losses would occur, only those directly associated with base payrolls can be estimated with certainty.

Retail Sales

In 1975, the last full year for which comprehensive retail sales data is available, retail sales in Chippewa County totalled \$79.7 million. This figure does not include sales on the Air Force base itself in the commissary, exchange and clubs. To determine current spending by base personnel in civilian sector retail establishments and to estimate the direct impacts of base closure on total retail sales in the civilian sector, the following methodology was used:

- o The total annual retail expenditure potential of civilian and military personnel assigned to the base was derived by applying a retail sales expenditure factor to total base payroll.
- o Actual retail sales at the Kincheloe AFB commissary, exchange and clubs were subtracted from the total expenditure potential to indicate the amount spent in civilian sector establishments.
- o It was assumed that the residual expenditure potential available to the civilian sector was in fact spent in Primary Impact Area retail establishments.

This methodology overstates the contribution of base personnel to civilian retail sales in the area somewhat since some purchases were undoubtedly made in other areas. As a "worst case" methodology, however, it expresses the maximum possible direct impact of base personnel on local retail sales and the loss that would accompany base closure. The results of the analysis are presented in the table below.

Table K-12. ESTIMATED DIRECT IMPACT OF KINCHELOE AFB
PERSONNEL ON RETAIL SALES IN THE PRIMARY
IMPACT AREA

<u>Retail Expenditure Potential of Base Personnel</u>	
Annual Base Payroll ^{1/}	\$36,274,200
Retail Sales Expenditure Factor	x .55
Total Expenditure Potential ^{2/}	\$19,950,800
Less: On-Base Retail Sales ^{2/}	-9,165,150
Net Expenditure Potential in Civilian Sector	\$10,785,650
<u>Primary Impact Area Retail Sales</u>	
Total 1975 Retail Sales	\$79,656,000
Maximum Attributable to Base Personnel	\$10,785,650
Percent of Total	13.5%

^{1/} Based on March 1976 payroll.

^{2/} Includes Base Exchange, Commissary Sales, and food and beverage sales at on-base clubs.

Source: Bureau of Labor Statistics, U.S. Department of Labor; Survey of Buying Power, 1976; Tab A-1 (revised) KAFB; and Hammer, Siler, George Associates

Base personnel accounted for a maximum of \$10.8 million in retail sales at Primary Impact Area establishments, 13.5 percent of total reported sales. If retail sales were to decline 13.5 percent following base closure, it is anticipated that a number of employees would be laid off and that some small businesses, especially those catering to base personnel, would go out of business. The loss of these jobs is accounted for in the multiplier used to express total indirect job losses.

Public Finance (AFERN 4.2.3 KAFB)

If Kincheloe AFB were closed, a variety of realignments in public revenues and expenditures would ensue. These impacts would be evident at both the state and local levels.

Because of the formulas often used in the assessment of state and local revenues as well as the variety of complicated formulas used in the apportionment of federal and state funds among constituent jurisdictions, few of the revenue and expenditure impacts can be evaluated in detail. Only one of them can be quantified with any degree of confidence: as reported under AFERN 4.3.5, public school revenue losses from federal and state sources have been estimated.

Apart from these fiscal impacts on local school system revenues, other major sources of state and local revenues will be affected even if the dollar values cannot be quantified with certainty; income and sales taxes, federal revenue sharing and local ad valorem real property taxes. At the state level, the two major sources of revenue that would be affected are the personal income tax and the sales tax.

Income Taxes (AFERN 4.2.3.1.1 KAFB)

Since many military personnel assume one permanent place of residence for tax purposes throughout their careers, transfers from Kincheloe AFB to other bases in the country will not have a major impact on state income tax revenues. The income tax loss from terminated civilian employees and indirect job losses may be more severe even if their numbers are smaller. These impacts cannot, however, be quantified.

No local income taxes are collected by Michigan counties. A portion of state income tax collections are returned to counties, but these are based on the county's share of the state's 1970 population. No impact on income tax distributions by the State of Michigan to the Primary Impact Area would be perceived until 1980, the year a new population base would be established.

Sales Taxes (AFERN 4.2.3.1.3 KAFB)

State sales tax losses attributable to direct impacts of base closure can at least be approximated. Based on the estimated \$10.8 million spent by base personnel at retail establishments in the civilian sector, the state derives approximately \$430,000 annually in sales tax revenues from base personnel at its four percent taxing rate. Even as a "worst case" example, this loss in sales tax revenues represents less than one-tenth of one percent of total state sales tax collections of \$1.1 billion in 1975.

No local sales taxes are collected by Chippewa County. Therefore, no impact on county tax revenues is expected due to reductions in retail purchases by Kincheloe personnel.

Unemployment Compensation

Base closure would create both direct and indirect job losses. In most cases, unemployed personnel would be eligible for unemployment compensation benefits. An unemployment compensation benefit program is actually an insurance program which by design is intended to be wholly supported by the mandated contributions of the private and public sector employers who participate in the state administered program. Although unemployment benefits are paid through a state program, the funds utilized originate with the employers whose contributions are "banked" until needed. Any overdraw against contributions banked must be repaid to the state in the future.

At this point in time, the number of people finding new jobs in the area, increasing their average daily commuting distances to take jobs outside the area, or relocating to other areas cannot be accurately projected. In this analysis, then, a specific unemployment benefit program impact -- or cost -- was not developed. It is anticipated that due to the magnitude of the indirect job losses estimated, the number of people applying for unemployment benefits will increase significantly and the payout will increase accordingly.

Revenue Sources (4.2.3.3 KAFB)

At the local level, the closure action would have a more pronounced impact on fiscal affairs. Federal revenue sharing and ad valorem taxes are among the revenue sources most nettlesome to evaluate.

Title I of the State and Local Fiscal Assistance Act of 1972 (Revenue Sharing) provides for the distribution of Federal funds to units of local government. The amounts to be distributed to each unit of government are determined by applying a set of formulas to descriptive data pertaining to each unit. These formulas utilize population, per capita income, adjusted taxes and inter-governmental transfers as their basic data elements and are used to determine each government's share of the total amount. The resulting computations distribute available funds among all eligible units of local government on a national basis. While the closure action will undoubtedly alter many of the measures drawn upon in the allocation formula, the Office of Federal Revenue Sharing in the U.S. Treasury Department has stated that no reliable estimates of the impacts on a local government can be made. In part, this is due to the nature of the allocation process: the effect of changes in one local area is dependent upon comparisons with all other eligible units of local government in the U.S. Even estimated direct changes in population are not a reliable indicator since this factor in the formula is important only within certain minimum and maximum thresholds concerning per capita income.

In sum, estimated changes in revenue sharing based on per capita amounts do not reflect the characteristics of the distribution formula and no other reliable method of gauging the impacts is available. While federal revenue sharing funds may diminish, it is impossible in this analysis to predict the amounts or order of magnitude.

Real Estate Property Taxes (AFERN 4.2.3.1.2 KAFB)

Real estate property taxes are the single largest source of revenue for most units of local government. While real estate values in the marketplace will undoubtedly diminish, it is not certain that property tax revenues will necessarily decrease. This depends upon local government operating costs and budget requirements, changes in assessed values or the effective tax mill rate.

To some extent, the departure of base personnel and their dependents as well as other indirect population losses may diminish the demand for certain types of public services. However, many operating costs in local government are "fixed" and cannot be readily adjusted to reflect changes in the population level. In continuing to meet operating costs, the same or only slightly diminished amounts of property tax revenues may be required by the local governments most severely impacted by base closure.

In the face of a depressed real estate market and diminished values, local governments have several options in closing the gap between revenue requirements and the value of their real estate tax bases: institute new types of taxes, alter the assessment/market value ratio used in levying real estate taxes or raise the real estate tax rate itself. Whatever options they pursue, local government decisions will undoubtedly increase the tax burden on remaining households in one way or another.

Capital Improvements Programming (AFERN 4.2.3.5 - KAFB)

The City of Sault Ste. Marie has capital improvements planned or underway with a total cost of \$7.4 million over the next three years. These programs include water and sewer repairs and extensions, a housing project and urban renewal. Chippewa County has programmed projects worth \$670,000 over the next two years, primarily in the areas of road and bridge construction.

The proposed closing of Kincheloe AFB could affect the status of these projects in several ways. It could be determined that some projects are no longer necessary if the population they were to serve is substantially reduced. The cost of others may not be supportable as the county's tax bases and consequent bonding capacities are reduced over the next few years. Commitments which have already been made to projects which are no longer financially feasible or politically desirable may cause problems in local government financing and channel available resources away from basic service provisions to debt service. Some projects which may be necessary to the area will no longer be financially feasible and will have to be postponed.

Base Procurement (AFERN 4.2.4 KAFB)

In Fiscal Year 1976, Kincheloe AFB made approximately \$25 million worth of non-construction purchases. Of this amount, approximately \$5.6 million or 22.2 percent of the total was made within the Primary Impact Area. A profile of non-construction procurements is presented in Table K-13, below.

Table K-13. NON-CONSTRUCTION PROCUREMENTS IN THE PRIMARY IMPACT AREA, KINCHELOE AFB, FISCAL YEAR 1976.

<u>Category</u>	<u>Total Procurements</u> (000)	<u>Procurements In</u> <u>Primary Impact Area</u>	
		<u>Amount</u> (000)	<u>Percent</u>
Supply	\$ 235.0	\$ 55.0	23.4%
Commissary	4,383.6	447.1	10.2
Exchange	3,934.9	741.4	18.9
Civil Engineering	209.1	72.1	34.5
Contract Maintenance	34.7	4.2	12.0
Medical	138.1	8.3	6.0
NAFI	888.8	698.7	78.6
Miscellaneous Services	37.0	14.9	40.4
COPARS	209.5	0	0
COCESS	716.7	0	0
Travel of Persons	150.2	137.8	91.7
Travel of Things	1,245.6	1,245.6	100.0
Utilities and Rent	832.9	403.2	48.4
Communications	286.0	23.6	8.2
POL	11,689.3	1,684.6	14.4
(JP-4)	(9,979.5)	(0)	(0)
Total	\$24,991.4	\$5,536.5	22.2%

Source: Base Procurement, Supply, Transportation, Exchange, Accounting and Finance Office, Kincheloe AFB, Michigan.

As indicated, base commissary and exchange procurements in the Primary Impact Area amounted to approximately \$1.2 million during the fiscal year that ended June 30, 1976. Fuel and other petroleum products accounted for another \$1.7 million in local procurement awards.

Since most supply procurement is handled through a Regional Headquarters for Exchange Services, locally awarded procurements tend to be concentrated in the services provision category. Such services include contract maintenance, the transport of persons and things and miscellaneous services. One of the largest categories of local procurement awards was for the "travel of things". The beneficiaries of these procurements are the numerous moving and storage firms in the area; there are approximately 15 such firms in Sault Ste. Marie alone.

In sum, were Kincheloe to be closed, the Primary Impact Area would lose approximately \$5.5 million in local non-construction procurement awards annually.

While non-construction procurements are relatively stable from year to year, construction procurements may fluctuate greatly depending on the projects undertaken. To evaluate the impact of base construction on the local economy, average annual awards

in recent years is the best measure. The table below summarizes base construction procurements over the past seven fiscal years.

Table K-14. ANNUAL CONSTRUCTION AWARDS IN THE PRIMARY IMPACT AREA, KINCHELOE AFB, FISCAL YEARS 1970-1976

<u>Fiscal Year</u>	<u>Total Construction Awards</u>	<u>Construction Awards In Primary Impact Area</u>
1970	\$ 66,206	\$ 24,099
1971	502,111	189,777
1972	1,358,615	326,198
1973	1,296,598	202,924
1974	1,215,121	254,481
1975	2,171,383	1,240,954
1976	208,529	47,099
Annual Average	\$ 974,080	\$ 326,505

Source: Contract Registers, Kincheloe AFB, Michigan

While the amounts during a single fiscal year ranged from a low of approximately \$25,000 to a high of \$1.2 million, they averaged roughly \$327,000 over the past seven fiscal years. Were the base to close, the Primary Impact Area and its contract construction firms would lose several hundred thousand dollars on an average annual basis.

In combining both non-construction procurements and average annual construction awards, Chippewa County would lose approximately \$5.9 million annually. These are summarized in the table below.

Table K-15. ESTIMATED ANNUAL LOSS IN CONSTRUCTION AND PROCUREMENT AWARDS, KINCHELOE AFB PRIMARY IMPACT AREA

<u>Procurement Type</u>	<u>Amount</u> <u>000</u>
Non-Construction Procurements	\$5,536.5
Average Annual Construction Awards	326.5
Total	\$5,863.0

Source: Hammer, Siler, George Associates.

Housing (AFERN 4.2.5 KAFB)

The housing stock in Chippewa County has several market dimensions. The majority of the stock consists of year-round units occupied by families permanently residing in the area. Hunting cottages and other seasonal units that are not winterized and intended only for intermittent use comprise another market segment. In addition, down-state Michigan residents have built and bought homes meeting year-round construction standards intended for vacation use and/or eventual retirement rather than permanent occupancy.

Because of the large number of seasonal and second homes within the county, straightforward analysis of the housing market and vacancy rates is inhibited by U.S. Census classification schemes. While hunting cottages and other units clearly intended for seasonal use are acknowledged and categorized as such within the Census, vacation homes built to year-round standards are included with all other units intended for permanent occupancy. Thus, if a vacation home was unoccupied at the time of the April census, it was counted as a vacant unit even if the vacancy had no adverse implications for the market.

Drawing upon these standard Census indicators, approximately 17 percent of the year-round units in Chippewa County were counted as vacant in 1970. A vacancy rate of this magnitude suggests a very soft housing market and a glut of surplus units. In fact, however, many of the vacant units counted were vacation homes with no adverse meaning for market conditions. To compensate for these distortions evident in standard Census measures, the housing stock has been purely in market terms.

Only those units available for sale or rent have been counted as vacant and computed in the vacancy rate to indicate true market conditions. On the assumption that most year-round units vacant at the time of the April census but not available for sale or rent represent vacation and second homes, these have been grouped with seasonal units and treated as a market separate from that serving the local population base. The results of these adjustments and portrayal of the 1970 housing stock within Chippewa County are presented in the table below.

Table K-16. 1970 HOUSING STOCK CHARACTERISTICS IN THE
KINCHELOE AIR FORCE BASE PRIMARY IMPACT AREA

	<u>Sault Ste. Marie</u>	<u>Balance of Chippewa County</u>	<u>Total Primary Impact Area</u>
<u>Total Housing Units</u>	5,231	7,840	13,071
Seasonal Units	29	2,074	2,103
Vacation/Second Homes	<u>292</u>	<u>944</u>	<u>1,236</u>
Subtotal	321	3,018	3,339
Percent of Total Stock	6.1%	38.5%	25.6%
<u>Units Intended for Year- Round Occupancy</u>	4,910	4,822	9,732
Occupied Year-Round Units	4,696	4,600	9,296
Owner-Occupied	(64.8%)	(60.7%)	(62.7%)
Renter-Occupied	(35.2%)	(39.3%)	(37.3%)
Vacant Units for Sale or Rent	24	222	436
Market Vacancy Rate	4.4%	4.6%	4.5%

Source: Census of Housing, 1970.

Of the 13,000 housing units within Chippewa County, approximately one-fourth were seasonal units and those intended for occasional vacation or second home use. Of the remaining 9,732 units intended for permanent year-round occupancy, only 436 were available for sale or rent. The market vacancy rate within the county as a whole, then, was 4.5 percent, a rate well within normal tolerance levels.

Although the composition of the housing stock was somewhat different in the City of Sault Ste. Marie -- only six percent of the units were intended for seasonal or vacation use -- vacant units for sale or rent represented a market vacancy rate of 4.4 percent. Throughout Chippewa County, then, market vacancy rates hovered about the 4.5 percent mark and were closely in keeping with normal market ranges.

Closure of Kincheloe Air Force Base would have both short-term and long-term effects on the previously healthy housing market in the Primary Impact Area.

Even the announcement that Kincheloe may be closed has had an adverse impact. In the atmosphere of uncertainty, developers have cancelled planned projects, financial institutions are reluctant to initiate new mortgage commitments and construction loans while consumers themselves are hesitant to make the financial commitments involved in purchasing a new home. In this current state of uncertainty, the housing market has come to a virtual standstill and the inventory of unsold units on the market continues to mount.

If the Air Force Base is closed, the impact on the community housing market would be severe. Departing military and civilian personnel currently living in off-base housing would place their vacated units on the market and increase the vacancy rates substantially. Though it would have no effect on the market as such, federal assistance would be available to military and civilian employees dislocated as a result of the proposed Kincheloe closing.

The Homeowners Assistance Program administered by the Army Corp of Engineers provides assistance to permanent military and civilian employees who own their homes and would be relocated as a result of base closure. If an eligible applicant sells his home on the private market for less than its "prior" appraised fair market value, the program reimburses the employee for 95 percent of the difference between its "prior" value and the actual sales price. If the eligible applicant is unable to sell his home on the private market within one year of the base action, the government will purchase the home and pay the applicant 90 percent of its "prior" appraised fair market value. Having virtually no effect on the local housing market as such, the program simply minimizes the financial loss to Defense Department home-owners affected by the base closure action.

Those losing their jobs as an indirect result of base closure would have no such assistance available to them; they may be confronted with several problems. Homeowners who lose their jobs as an indirect result of base closure may wish to relocate to other areas but have difficulty selling their homes. If they remain in the area and collect unemployment benefits, terminated employees may have difficulty meeting rent and mortgage payments. As a consequence, mortgage delinquency rates may increase and unless the homeowner has substantial equity in the unit, mortgage default rates may likewise increase somewhat.

As a consequence of both direct and indirect impacts, the housing market in the Primary Impact Area will be depressed. Even those who retain their jobs and could afford to buy new housing may be discouraged from doing so by the uncertainty

concerning the future of the area and the general "depression" mentality. If homes are sold at all, prices will undoubtedly be depressed but it is impossible to predict the relative decline in values with any degree of certainty. In the short run, certainly, supply would far exceed the demand. To some extent, continued growth in Lake Superior State College enrollments and the demand for off-campus student housing may absorb some of the vacated rental units but will have little impact on the owner-occupied stock.

With no other strong sources of economic growth or expansion, the housing market will be depressed for some time to come unless concentrated recovery efforts stimulate sufficient growth in the local economy to absorb excess units.

In measuring the quantifiable effects of base closure on the housing market, only the increase in vacancies attributable to direct civilian and military household losses can be computed. There are several problems in updating 1970 Census data to accurately depict 1976 housing market baseline conditions, however. While mobile homes account for an increasingly important part of the housing stock in such areas, there is no reliable data on the number of mobile homes occupied since 1970. Data on new construction is available for building permit issuing-jurisdictions, but many rural areas do not require permits and reliable indicators of new construction are not available. By the same token, virtually no data is available on current vacancy rates.

Nonetheless, estimates of the baseline 1976 housing stock have been developed using the best available data. These data include building permit activity reported in the C-40 Series of Construction Reports published by the U.S. Department of Commerce, estimates of housing stock losses due to fire, demolition and other causes as well as comments by local members of the real estate industry.

Since 1970, it is estimated that the number of housing units intended for year-round occupancy in Chippewa County increased approximately seven percent. Based on the insights and comments of local real estate brokers, vacancy rates have changed little since 1970 and are estimated to be in the 4.5 percent range, well within market tolerance levels. These baseline conditions and estimated direct impacts of base closure are depicted in the table.

Table K-17 ESTIMATED DIRECT IMPACT OF KINCHELOE AFB CLOSURE
ON HOUSING MARKET VACANCIES IN THE PRIMARY IMPACT AREA

	<u>Sault Ste. Marie</u>	<u>Balance of Chippewa County</u>	<u>Total Primary Impact Area</u>
<u>Estimated 1976 Housing Market Baseline</u>			
Units Intended for Year-Round Occupancy	5,091	5,318	10,409
Occupied	4,867	5,073	9,940
Vacant For Sale or Rent	224	245	469
Market Vacancy Rate	4.4%	4.6%	4.5%
<u>Direct Base Closure Impact</u>			
Total Units Vacated by Departing Personnel	444	546	990
Total Vacant Units For Sale or Rent	668	791	1,459
Total Market Vacancy Rate	13.1%	14.9%	14.0%

Source: Hammer, Siler, George Associates.

As a direct result of military and civilian base personnel leaving the Primary Impact Area, it is estimated that nearly 1,000 owner-occupied and rental units will be placed on the market. This will more than triple the number of vacant units for sale or rent and increase the market vacancy rate substantially. While the absolute values are somewhat different, resulting market vacancy rates within the City of Sault Ste. Marie and the balance of Chippewa County are a roughly comparable 13 to 15 percent.

While these increases in the market vacancy rate are significant, they only represent those attributable to direct household losses and do not begin to account for other indirect job losses and departures from the region. Such secondary impacts will certainly compound the market vacancy rates and add to the severity of depressed housing market conditions.

Education (AFERN 4.3.3 KAFB)

If the closure action propped for Kincheloe AFB were implemented, three of the five school districts in Chippewa County would be impacted. These districts are: (1) the Rudyard School District, which administers the schools on the base itself and serves Rudyard, Kinross and Trout Lake Townships; (2) the Sault Ste. Marie School District; and (3) the Pickford School District. These three districts, with a total enrollment of 7,822 students, serve the students from 98 percent of Kincheloe AFB-related households. Base closure would result in enrollment losses, funding losses, employment losses, and underutilization of existing school district physical facilities.

Public School Enrollment (AFERN 4.3.3.1 KAFB)

A total of 1,906 students from Kincheloe military and civilian households are enrolled in the three school districts which would be impacted by the proposed base closure action. Students fall into two categories: Type A students are military dependents

residing on-base and Type B students are the dependents of military and civilian Appropriated Fund employees living in off-base housing.

Rudyard schools, which serve almost 80 percent of base-related students, would be significantly impacted. As shown in Table K-18, it is estimated that Rudyard would lose all of its 1,362 Type A students and 75 Type B students whose parents are Department of the Air Force Appropriated Fund employees expected to transfer to federal employment positions outside of the area. It is assumed for the purpose of this analysis that the remaining Type B students would remain in the area.

Table K-18. IMPACT ON PUBLIC SCHOOL ENROLLMENT, KINCHELOE AFB

<u>School District</u>	<u>Total Membership</u>	<u>AFB Dependents</u>			<u>Estimated Loss</u>			<u>Percent of Total Membership</u>
		<u>Type A</u>	<u>Type B</u>	<u>Total</u>	<u>Type A</u>	<u>Type B</u>	<u>Total</u>	
Rudyard	2,167	1,362	133	1,495	1,362	75	1,437	66.3%
Sault Ste. Marie	5,134	0	339	339	0	155	155	3.0
Pickford	521	0	72	72	0	35	35	6.7
Total	7,822	1,362	544	1,906	1,362	265	1,627	20.8%

Source: Superintendent of Rudyard Area Schools; Office of Education, U.S. Department of Health, Education and Welfare. Tab A-1 (revised) Kincheloe AFB; and Hammer, Siler, George Associates.

As illustrated, the Rudyard School District would lose 1,437 students, or 66.3 percent of its enrollment. In the Sault Ste. Marie schools, the enrollment losses are estimated to be 155 students, or 3.0 percent of total enrollment. It should be noted that only Kincheloe AFB dependents have been considered in this analysis. Neither the U.S. Coast Guard nor Army Corps of Engineers dependents have been considered since they would not be affected by the closure action.

Private School Enrollment (AFERN 4.3.3.2 KAFB)

In addition to public school enrollment, there is one parochial/private school in the area which serves Air Force base dependents. This school has a total enrollment of 16 students, none of which are military dependents. The number of civilian dependents is not available.

Public School Funding (AFERN 4.3.3.8 KAFB)

Two funding sources for local public schools would be directly affected by base closure: Public Law (PL) 81-874 funds to areas impacted by federal facilities and state supplementary aid.

PL 81-874 funds from the federal government are based on the Average Daily Attendance (ADA) of dependents. The three school districts which would be impacted received more than \$930,000 in PL 81-874 funds due to Air Force base dependents. Section 3(e) of the

law provides for continued but reduced funding to school districts in which total ADA falls below 90 percent of the previous year's level and in which ADA of federal dependents equalled at least 10 children and 10 percent of the total enrollment. Under these criteria, only the Rudyard School District would be eligible for continued federal aid at a reduced rate. PL 81-874 impact aid funds would continue at 90 percent of each previous fiscal year until 1978 when the current law expires. If the law is extended, aid to Rudyard schools would continue for the three years following implementation of the proposed action.

When Federal Impact Aid funds to the Rudyard School District are discontinued, a revenue loss of \$834,150 per year is estimated to occur. The PL 81-874 payments for the base-related students at the Pickford and Sault Ste. Marie schools would be discontinued in the year immediately following base closure since these districts do not meet the criteria for continued payments. Base closure, then, would result in estimated revenue losses of \$19,000 and \$80,445, respectively.

Additional revenue losses would occur as state aid is reduced. It is estimated that Rudyard schools would lose \$1,241,300 in state aid while Sault Ste. Marie would lose \$343,150 and Pickford would lose \$36,750.

Losses from both federal and state sources would total \$2,075,450 in Rudyard, \$423,595 in Sault Ste. Marie, and \$55,760 in Pickford. These are summarized in the table below.

Table K-19. ESTIMATED FUNDING AND EMPLOYMENT LOSSES
TO PUBLIC SCHOOLS, KINCHELOE AFB PRIMARY
IMPACT AREA

	<u>Estimated PL 81-874 Funds Loss</u>	<u>Estimated State Aid Loss</u>	<u>Total Estimated Fund Loss</u>	<u>Estimated Teaching/ Support Loss</u>
Rudyard	\$834,150	\$1,241,300	\$2,075,450	84/69
Sault Ste. Marie	80,445	343,150	423,595	9/8
Pickford	19,010	36,750	55,760	2/2
Total	\$933,605	\$1,621,200	\$2,554,805	95/79

Source: Office of Education, U.S. Department of Health, Education and Welfare; Superintendents of Rudyard and Sault Ste. Marie School Districts; Kincheloe AFB Special Impact Study; and Hammer, Siler, George Associates.

Insofar as a school district's operating expenses are unlikely to be reduced proportionately to enrollment losses, it is likely that the school districts impacted may find that they require increased tax mill rates in order to compensate for the revenue losses discussed above.

It is also anticipated that as a result of projected enrollment declines, the teaching and support staff at each of the school districts would probably be reduced. Based on the enrollment losses, it is estimated that 84 teaching positions and 69 support staff positions would no longer be required in the Rudyard School District. As 21 of the current teaching positions are filled by spouses of military personnel who would leave

the area, a net maximum of 132 people could become unemployed. A total of 17 positions in Sault Ste. Marie schools and four positions in Pickford schools would no longer be filled.

According to Michigan statute, each of the school districts would be responsible for all of the unemployment insurance costs for any of the unemployed personnel who could not find new jobs. It is estimated that these costs could amount to a maximum of \$1,082,000 in Rudyard, \$120,225 in Sault Ste. Marie, and \$28,300 in Pickford.

The Superintendent of the Rudyard School District estimates that three to four elementary schools, two of which are on Kincheloe AFB, would be vacated as a result of the enrollment decline.

The Soo Area Skills Center -- a joint facility providing supplementary skills training to high school students in a three-county area -- would also be affected in several ways following base closure. Since approximately 12 percent of its current enrollees are Kincheloe dependents, the resulting decline in enrollments may force a reduction in course offerings or result in higher per capita operating costs if the curriculum remains the same. State "added cost" revenues would also decrease as a result of diminished enrollment. Both direct and indirect job losses in the local economy will affect the ability of the Skills Center to attract students and place them in jobs upon completion of their training.

Higher Education (AFERN 4.3.3.3 KAFB)

Lake Superior State College, located in Sault Ste. Marie, has a current enrollment of approximately 2,200. Approximately 385 Kincheloe personnel and dependents attend classes off-base. Over 2,000 military personnel and dependents were enrolled in on-base courses in 1975. Since on-base courses are financed by tuition paid on base, it is likely that there would be an impact on the college's finances from closure of the base. Total off-base enrollment would be decreased by 17.5 percent.

Medical (AFERN 4.3.4 KAFB)

There are approximately 700 hospital beds in the civilian hospitals located in the Primary Impact Area of Kincheloe AFB and Sault Ste. Marie, Canada. These facilities employ approximately 550 people. On-base, there are an additional twenty beds and a staff of eight physicians. If Kincheloe AFB were to be closed, the major impact would be the termination of the informal agreement between the base and the residents of Rudyard, Pickford and Kinross which permits civilian emergency patients to be treated at the base hospital if it is closer than the civilian hospitals at Sault Ste. Marie or St. Ignace. This benefit to the community would be terminated upon base closure.

In addition, nursing students at Lake Superior State College participate in training opportunities at the Kincheloe hospital facility. This benefit would also be terminated with base closure.

Community Services and Facilities (AFERN 4.3.5 KAFB)

Various agreements exist between the Base Police and the Chippewa County and local police departments for mutual aid. Mutual aid agreements also exist between the Kincheloe AFB Fire Department and the fire departments of Sault Ste. Marie, Pickford, Rudyard, Clark Township, and the Michigan Department of Natural Resources. These benefits would be lost to the local community if the proposed action were carried out.

In addition to these mutual aid agreements, Kincheloe AFB provides air traffic control for the Sault Ste. Marie, Michigan County Airport, and the Sault Ste. Marie, Ontario Federal Airport. These activities would have to be taken over by another entity if the closure action were to be implemented.

The proposed closure of Kincheloe AFB would also impact religious, civic and charitable organizations which now depend on Air Force personnel and their dependents to provide both physical and financial support in varying degrees. Among these organizations are the numerous churches, civic organizations and charities which now operate in Chippewa County.

Major financial institutions in the Primary Impact Area include Central Savings Bank, Citizens State Bank of Rudyard, First National Bank, Sault Savings Bank and the Detroit and Northern Savings and Loan Association. As a direct result of base closure, such institutions would lose the demand accounts and savings deposits of Air Force base personnel leaving the area.

In addition, indirect job losses and the depressed state of the local economy may affect these institutions in other ways.

Indirect job losses and reductions in total personal income will further impact deposit levels at these institutions. Financially troubled households may encounter difficulties in meeting the payments on personal, home improvement and mortgage loans made by these institutions. Delinquency and default rates may increase accordingly.

Military Retirees (AFERN 4.3.5.7 KAFB)

There are approximately 250 military retirees from all the services residing in Chippewa County at the present time. In addition, many other military retirees who live outside of Chippewa County also make use of the facilities at Kincheloe AFB on a regular basis. Retirees and their dependents are authorized to use the commissary, exchange and the medical facilities at the base, and they have access to many of the administrative services and recreational facilities on the base also. If Kincheloe is closed, retirees will have few options in taking advantage of their retirement benefits. Because of its relatively isolated location, Kincheloe is more than 150 miles from any other major military facility which can provide these services. Medical services could be obtained in the area at civilian hospitals utilizing the CHAMPUS program, however, use of commissary, exchange and other base services would effectively be terminated.

IMPACT ANALYSIS: WURTSMITH AFB

IMPACT ANALYSIS: WURTSMITH AFB

Definition of the Region (AFERN 4.2.1 WAFB)

Wurtsmith Air Force Base is located near the shores of Lake Huron in the mainland portion of the state of Michigan. It lies in a largely rural area approximately 20 miles north of the twin cities of Tawas and East Tawas.

The principal highway through the area is U.S. 23 which parallels the shoreline of Lake Huron. The base itself is located near U.S. 23 in Oscoda Township in the northeastern part of the county. Approximately 30 percent of the military personnel assigned to the base and virtually all its civilian employees live in communities outside the base itself. These residential distributions are illustrated in the table below.

Table W-1. ON-BASE AND OFF-BASE RESIDENCE PATTERNS
OF CIVILIAN AND MILITARY PERSONNEL,
WURTSMITH AIR FORCE BASE, MARCH 31, 1976

	<u>Total Personnel</u>	
	<u>Number</u>	<u>Percent</u>
On-Base Residence	2,209	57.6%
Off-Base Residence	<u>1,630</u>	42.4
Total	3,839	100.0%

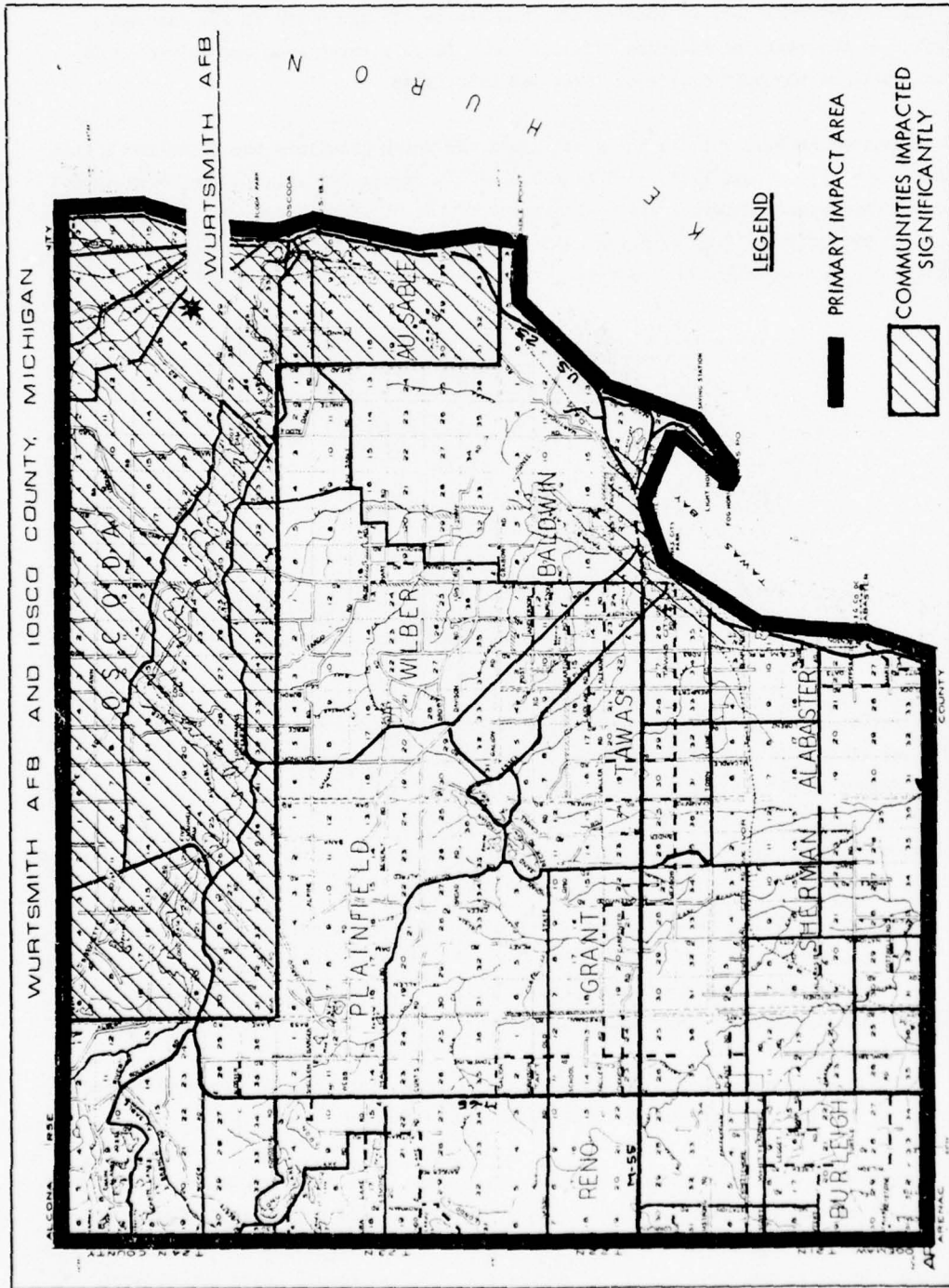
Source: Headquarters, Strategic Air Command, Directorate of Housing; and Headquarters, United States Air Force, Programs and Resources, Bases and Units Division.

Of the 3,839 total civilian and military personnel assigned to the base on March 31, 1976, somewhat less than 60 percent were accommodated in on-base housing while approximately 1,600 resided within surrounding communities.

In determining the Primary Impact Area that would be most directly and severely affected by base closure, the following criteria were used:

- o That it include at least 90 percent of all Wurtsmith personnel and their dependents.
- o That it be defined in terms of major political subdivisions which would be fiscally impacted and for which comparable and standardized secondary data are available.
- o That it correspond insofar as possible with the Labor Market Area delineated by the U.S. Department of Commerce Bureau of Economic Analysis.

Based on this evaluation, Iosco County was designated as the Primary Impact Area. Over 90 percent of all base personnel and their dependents reside within Iosco County and this jurisdiction would bear the brunt of economic and fiscal impacts stemming from base closure. While Alcona County is also included in the two-county Labor Market Area, Iosco County itself accounts for 75 percent of total employment. While base closure impacts would undoubtedly be felt in Alcona County as well, Iosco County is the principal focus for the analysis which follows.



With an estimated 1976 total population of 30,800 in Iosco County, base personnel and their dependents residing within the county accounted for 30.9 percent of the population total. Base-related population, however, is concentrated primarily in Oscoda and Au Sable Townships. Population estimates and base-related concentrations for Iosco County, its principally impacted civil divisions and those in adjacent Alcona County are presented in the table following.

Table W-2. WURTSMITH AIR FORCE BASE IMPACT AREAS

	<u>Estimated 1976 Population</u>	<u>Base Personnel and Dependents Residing in Area</u>	
		<u>Number</u>	<u>Percent of Total Population</u>
<u>Primary Impact Area:</u>			
<u>Iosco County</u>			
Oscoda/Au Sable Twps.	16,750	9,160	54.7%
Wurtsmith AFB	(5,660)	(5,660)	(100.0)
Balance of Twps.	(11,090)	(3,500)	(31.6)
East Tawas City	2,850	170	6.0
Tawas City	<u>2,050</u>	<u>140</u>	<u>6.8</u>
Subtotal	21,650	9,470	43.8
Balance of Iosco County	9,150	30	0.3
<u>TOTAL PRIMARY IMPACT AREA</u>	<u>30,800</u>	<u>9,500</u>	<u>30.9%</u>
<u>Other Impact Areas:</u>			
<u>Alcona County</u>			
Greenbush Twp.	1,000	270	27.0%
Harrisville/ Harrisville Twp.	1,900	160	8.4
Lincoln Village	500	90	18.0
Mikado Twp.	900	140	15.6
Balance of County	<u>5,420</u>	<u>30</u>	<u>0.6</u>
<u>TOTAL OTHER IMPACT AREAS</u>	<u>9,720</u>	<u>690</u>	<u>7.1%</u>

Source: Hammer, Siler, George Associates

As illustrated, Oscoda/Au Sable Townships account for the largest number of base personnel and their dependents; approximately 50 percent of the townships' total population is base-related. The majority of these, however, are domiciled in on-base housing and a somewhat lesser percent of the township's off-base population consists of base personnel and their dependents.

In the twin cities of Tawas and East Tawas, base-related population is less than 200 each but these nonetheless account for six to seven percent of these cities' total. Apart from these major civil divisions within Iosco County, only 30 base personnel and their dependents reside in other portions of the county; these account for only 0.3 percent of the total population.

Reflecting its location close to the county boundary, Wurtsmith AFB has a somewhat lesser but still strong influence on adjoining portions of Alcona County. As illustrated in the table, Greenbush Township is populated by approximately 300 base personnel and their dependents. They account for 27 percent of the 1,000 persons residing in that township. Though their numbers are small, base-related populations account for 8 to 18 percent of the total in three other civil divisions of Alcona County.

Throughout the analysis which follows, the Primary Impact Area and the minor civil divisions listed above will be the focus for analysis. As appropriate, impacts affecting Alcona County and its minor civil divisions will be addressed.

Population (AFERN 4.1.1 WAFB)

In the early 1960's, a Strategic Air Command bombardment wing and supporting units took over Wurtsmith Air Force Base; this transfer of personnel and their dependents increased the total population living in the two townships. Apart from this base-related population impact, other portions of the county remained virtually stable or declined somewhat in population. Population changes over the 1960-70 decade and estimates for 1976 are presented in the table below. Because the reporting periods over the 16-year span are not equivalent, percentage rates of change have been expressed on an average annual basis.

Table W-3. POPULATION TRENDS, WURTSMITH AIR FORCE BASE IMPACT AREAS, 1960, 1970 AND 1976

	<u>Population</u>		<u>1976</u>	<u>Average Annual Rate of Change</u>	
	<u>1960</u>	<u>1970</u>		<u>1960-70</u>	<u>1970-76</u>
<u>Primary Impact Area:</u>					
<u>Iosco County</u>					
Oscoda/Au Sable Twps.	5,861	13,634	16,750	8.8%	3.5%
East Tawas City	2,462	2,372	2,850	-0.4	3.1
Tawas City	1,810	1,666	2,050	-0.8	3.5
Subtotal	10,133	17,672	21,650	5.7	3.4
Balance of Iosco County	6,372	7,233	9,150	1.3	4.0
<u>TOTAL PRIMARY IMPACT AREA</u>	<u>16,505</u>	<u>24,905</u>	<u>30,800</u>	<u>4.2%</u>	<u>3.6%</u>
<u>Other Impact Areas:</u>					
<u>Alcona County</u>					
Greenbush Twp.	536	760	1,000	3.6%	4.7%
Harrisville/ Harrisville Twp.	1,274	1,443	1,900	1.3	4.7
Lincoln Village	441	371	500	-1.7	5.0
Mikado Twp.	617	636	900	0.3	6.0
Balance of Alcona County	3,484	3,903	5,420	1.1	5.6
<u>TOTAL OTHER IMPACT AREAS</u>	<u>6,352</u>	<u>7,113</u>	<u>9,720</u>	<u>1.1%</u>	<u>5.3%</u>

Source: U.S. Census of Population, 1960 and 1970; and Hammer, Siler, George Associates

Since the Air Force Base population was not included in the 1960 Census, population growth in Oscoda/Au Sable over the succeeding decade is grossly overstated in the table above: the bulk of the reported population growth is simply attributable to inclusion of Wurtsmith AFB population in the 1970 counts. The non-base population did, however, increase approximately 15 percent between 1960 and 1970. Both East Tawas and Tawas cities declined slightly in population over the decade. While the balance of the county increased only slightly, the massive population gains within Oscoda and Au Sable townships associated with the change in Air Force base counts raised the county total 4.2 percent on an average annual basis over the decade. If the Air Force base population is excluded from the 1970 counts to provide comparability with 1960 data, the off-base population in the county increased 8.9 percent over the decade.

Undoubtedly impacted by the increase in Wurtsmith activity, Greenbush Township in Alcona County outpaced all other jurisdictions within Alcona County in population growth over the ten year period. Throughout the remainder of the county and on an overall basis, population changed very little between 1960 and 1970.

While expansion at Wurtsmith was the principal impetus for population growth during the 1960's, recreation, tourism, second home and retirement aspects of the civilian sector have sustained population growth throughout the area during the 1970's. As illustrated in the table, both Iosco and Alcona counties as well as their minor civil divisions grew in population on the order of three to six percent per year.

Population Change by Location (AFERN 4.1.1.1 WAFB)

If the proposed alternative action involving closure of Wurtsmith is implemented, population losses throughout the Primary Impact Area and adjacent portions of Alcona County can be anticipated. As a direct result of base closure, somewhat over 3,000 military households would be transferred to other installations and depart from Iosco County. However, it is more difficult to predict the behavior of base civilian employees terminated by the closure action.

Some Civil Service employees nearing retirement age may take early retirement and remain in the area. Other employees may be secondary wage earners whose spouses retain their jobs in the civilian sector; some such households may forego the secondary wage earner's income and remain in the area sustained only by the spouse's income. Some civilian employees with strong roots and family ties in the area may remain when their jobs are terminated and collect unemployment compensation until new employment opportunities are found or unemployment benefits run out. Still others may decide to move and seek employment in other Michigan counties or be placed by the Civil Service in positions elsewhere in the country.

It is virtually impossible to predict with certainty the decisions among civilian employees to remain in the community or relocate to other areas. Based on studies following closure or reduction actions at several bases since 1964, 62 percent of Appropriate Fund civilian personnel relocated from the impact area and moved to find

employment elsewhere; 15 percent of the terminated Appropriated Fund civilian personnel retired. With this actual experience from other Air Force base actions, household and population losses directly attributable to closure of Wurtsmith AFB can at least be approximated. The same cannot be said for secondary employment losses and population impacts.

As the economic impact of the base closure reverberates throughout the local economy, indirect population losses will undoubtedly occur. As noted in the following section on employment measures, approximately 1500 jobs in the civilian sector of the economy will be lost as an indirect result of the base closure. Employees laid off as an indirect result of base closure will likewise face the decision whether to remain in the community collecting unemployment benefits and seeking alternative employment opportunities or move with their families to seek jobs elsewhere. With no previously documented experience upon which to base estimates, indirect population losses can certainly be anticipated but the quantitative magnitudes cannot be predicted with any reasonable degree of certainty. Therefore, for purposes of this analysis, only direct population losses have been computed.

Based on previous experience at other Air Force base installations, the following assumptions have been made:

- o All military personnel and their dependents would leave the Primary Impact Area;
- o Sixty-two percent of Appropriate Fund personnel and their dependents would leave the area and relocate in other jurisdictions outside the Primary Impact Area;
- o Fifteen percent of the Appropriated Fund personnel would retire and remain in the community;
- o The residual 23 percent of the Appropriated Fund personnel terminated would remain in the community along with their dependents for as long as they receive unemployment benefits or until they secure alternative employment;
- o All Non-Appropriated Fund civilian personnel, who have no Civil Service protection, would remain in the community and join the unemployment rolls.

In applying these assumptions, Iosco County would lose nearly 30 percent of its 1976 baseline population as a direct result of Wurtsmith closure. Estimated direct population losses for all the impacted areas are presented in the table on the following page.

Table W-4. ESTIMATED DIRECT POPULATION LOSS, WURTSMITH AIR FORCE BASE IMPACT AREAS

	<u>1976 Baseline Population</u>	<u>Estimated Direct Population Loss</u>	
		<u>Number</u>	<u>Percent</u>
<u>Primary Impact Area:</u>			
<u>Iosco County</u>			
Oscoda/Au Sable Twps.	16,750	8,490	50.7%
Wurtsmith AFB	(5,660)	(5,660)	(100.0)
Balance of Twps.	(11,090)	(2,830)	(25.5)
East Tawas City	2,850	90	3.2
Tawas City	<u>2,050</u>	<u>80</u>	<u>3.9</u>
Subtotal	21,650	8,660	40.0
Balance of Iosco County	9,150	20	0.2
<u>TOTAL PRIMARY IMPACT AREA</u>	<u>30,800</u>	<u>8,680</u>	<u>28.2%</u>
<u>Other Impact Areas:</u>			
<u>Alcona County</u>			
Greenbush Twp.	1,000	210	21.0%
Harrisville/ Harrisville Twps.	1,900	80	4.2
Lincoln Village	500	40	8.0
Mikado Twp.	900	80	8.9
Balance of County	5,240	10	0.2
<u>TOTAL OTHER IMPACT AREAS</u>	<u>9,720</u>	<u>420</u>	<u>4.3%</u>

Source: Hammer, Siler, George Associates

As illustrated, the population loss would be most severe in the Oscoda/Au Sable Townships area. The departure of approximately 3,200 base personnel and their dependents would result in a total population loss of approximately 50 percent. The majority of these, however, are those currently living on the Air Force base itself and the off-base population loss within Oscoda and Au Sable Townships would be a somewhat lesser but still significant 25.5 percent. In Tawas, East Tawas and the balance of Iosco County, estimated population losses would not exceed four percent of their current total.

Among Alcona County jurisdictions, Greenbush Township would suffer the most severe population loss. The nearly 80 civilian and military households departing the area along with their dependents account for 21 percent of the township's total population. Three other areas within Alcona County would lose population on the order of four to nine percent. With base-related population concentrated in only a few of Alcona's civil divisions, the county as a whole is expected to lose approximately four percent of its total population as a direct result of base closure.

Even in measuring only the direct population losses associated with closure of Wurtsmith AFB, the action would severely impact Iosco County and adjacent portions of neighboring Alcona County. The impact on population would be compounded significantly by indirect population losses but these cannot be reliably estimated or quantified.

Employment (AFERN 4.2.2 WAFB)

The growth of Iosco County began with fishing settlements along the shores of Lake Huron and Saginaw Bay. The manufacturing of lumber soon sprang up along the Au Sable River and with the addition of rail lines in the 1850's, became the major industry of Iosco County. The only other industry to contribute significantly to the county's economic base before the 1920's was the quarrying of gypsum.

The two largest communities in the county, Oscoda and Au Sable, were destroyed by fire in 1911. Even today there is very little industry of any kind in the county. The primary source of income is the tourism and recreation industry related to Lake Huron and Saginaw Bay and focused almost entirely around Tawas. Wurtsmith AFB is the major employer of the county's population.

According to the Michigan Employment Security Commission, total civilian employment was approximately 7,425 in Iosco County in March 1976. Of this amount, the largest sector was government employment with 2,425 employees. Many of these employees are directly related to the presence of Wurtsmith AFB. In addition, both Trade and Services represent significant sectors of total employment. These employment sectors have also developed largely in response to the presence of the base. The civilian employment profile for Iosco County, Michigan, in March 1976 is presented in the following table.

Table W-5. CIVILIAN EMPLOYMENT PROFILE, WURTSMITH AFB
PRIMARY IMPACT AREA, MARCH 1976

<u>Sector</u>	<u>Employment</u>	<u>Percent of Total</u>
Agriculture	300	4.0%
Construction	360	4.9
Manufacturing	740	9.9
T.C.U. ^{1/}	500	6.8
Trade	1,750	23.6
F.I.R.E. ^{2/}	200	2.7
Services	1,150	15.5
Government	<u>2,425</u>	32.6
Total	7,425	100.0%

^{1/} Transportation, Communications, Utilities

^{2/} Finance, Insurance, Real Estate

Source: Michigan Employment Security Commission

On-Base Employment (AFERN 4.2.2.2 WAFB)

As of March 1976, there were a total of 3,839 civilian and military personnel employed at Wurtsmith Air Force Base. Of this number, 3,103 were assigned military personnel and 736 were assigned civilian personnel. Of the assigned civilian personnel, 554 were Department of the Air Force Appropriated Fund Civil Service and Wage Board employees. The remainder were Non-Appropriated Fund (NAF) and Army-Air Force Exchange Service (AAFES)

personnel. The on-base employment profile for Wurtsmith Air Force Base is presented in the following table.

Table W-6. ON-BASE EMPLOYMENT PROFILE,
WURTSMITH AFB, MARCH 1976

	<u>Number of Personnel</u>
<u>Assigned Military</u>	
Officers	462
Airmen	<u>2,641</u>
Subtotal	(3,103)
<u>Assigned Civilian</u>	
DAF Appropriated	554
Non-Appropriated Fund ^{1/}	<u>182</u>
Subtotal	(736)
Total	3,839

^{1/} Includes the full-time equivalent for part-time personnel.

Source: Headquarters, United States Air Force, Programs and Resources, Bases and Units Division

As an alternative to the closure of Kincheloe Air Force Base, Wurtsmith Air Force Base would be inactivated. This would result in the direct loss of 3,103 military positions and 736 civilian positions. A summary of this proposed personnel realignment at Wurtsmith is presented in the following table.

Table W-7. SUMMARY OF PROPOSED PERSONNEL
REALIGNMENT AT WURTSMITH AFB, MICHIGAN

	<u>Military</u>			<u>Civilian</u>			<u>Total Personnel</u>
	<u>Officers</u>	<u>Airmen</u>	<u>Total</u>	<u>DAF</u>	<u>NAF</u>	<u>Total</u>	
Assigned As Of 3-31-76	462	2,641	3,103	554	182	736	3,839
Number To Be Reduced	<u>462</u>	<u>2,641</u>	<u>3,103</u>	<u>554</u>	<u>182</u>	<u>736</u>	<u>3,839</u>
Residual After Action	0	0	0	0	0	0	0

Source: Description of Proposed Action and Alternatives, Headquarters, Strategic Air Command, Directorate of Bases and Units

Employment Loss

The proposed alternative action at Wurtsmith AFB would result in both direct and indirect employment losses. Transferred or terminated military and civilian personnel assigned to the base represent the direct employment losses. The elimination of these jobs and the termination of other base influences such as procurements and other purchases in the local economy would reverberate and have secondary job loss effects. These indirect job losses would occur in several ways.

Both civilian and military personnel at the base eat in local restaurants, buy clothing and other goods from local retail establishments and purchase at least some grocery items from local supermarkets. With the departure of base personnel and their dependents, retail sales would diminish and local retailers may be forced to reduce employment levels.

Similarly, the termination of base procurement and construction awards to local firms may also affect employment levels at these establishments. Utility companies, public school systems, local governments and other employers in the area may likewise be forced to lay off employees because of diminished activity resulting from base closure. Some small businesses and others only marginally profitable may be forced to liquidate and go out of business entirely. These impacts will continue to ripple throughout the local economy in a variety of subtle ways and have a cumulative impact on total employment in the civilian sector.

In order to measure the magnitude of these indirect losses, employment multipliers were developed for the Wurtsmith AFB Primary Impact Area. The specific methodology for development of these multipliers is discussed in the introductory section of this report on the research approach. Two separate multipliers have been derived: a civilian multiplier and a military multiplier.

The civilian multiplier represents the mathematical relationship between civilian personnel working on the base and total employment in the civilian sector of the local economy as a whole. Reflecting their incomes and expenditure patterns within the local civilian sector, the multiplier derived for the Wurtsmith Primary Impact Area suggests that for every one civilian employee at the base another .90 jobs in the civilian sector is supported.

Because of on-base housing, exchange and commissary privileges, the average military man spends less in the civilian sector of the economy. The military multiplier developed for the Wurtsmith Primary Impact Area indicates that for every uniformed military person assigned to the base, .28 jobs in the civilian sector is supported.

Applying these multipliers to the direct reduction in Wurtsmith's civilian and military personnel levels expresses the indirect job loss in the civilian sector of the economy that can be expected following base closure. As an indirect result of the 3,839 civilian and military personnel transferred or terminated, then, the Chippewa County economy will lose an additional 1,531 jobs. A summary of these direct and indirect employment losses is presented in the table on the following page. The calculations used in deriving the civilian and military multipliers are included in the Appendix.

Table W-8. SUMMARY OF DIRECT AND INDIRECT EMPLOYMENT LOSSES
IN THE WURTSMITH AFB PRIMARY IMPACT AREA

<u>Direct Employment Loss</u>	<u>Number of Jobs</u>
Military	3,103
Civilian	<u>736</u>
Subtotal	(3,839)
<u>Indirect Employment Loss</u>	
Military (Net Multiplier of .28)	869
Civilian (Net Multiplier of .90)	<u>662</u>
Subtotal	(1,531)
<u>Total Employment Loss</u>	5,370
Percent of Total Baseline Employment ^{1/}	51.1%

^{1/} Includes both civilian and military employment.

Source: Description of Proposed Action and Alternatives, Headquarters, Strategic Air Command, Directorate of Bases and Units; and Hammer, Siler, George Associates

As illustrated, the direct loss in 3,103 military positions would result in a net loss of 869 additional jobs in the civilian sector while the termination of 736 civilian employees at the base would result in a net loss of 662 additional jobs in the civilian sector. When both direct and indirect employment losses are taken into account, the 5,370 jobs lost as a result of the alternative base closure action represent 51.0 percent of all jobs in Iosco County as of March 31, 1976.

In losing just over half of its baseline military and civilian employment, Iosco County would suffer a severe employment loss.

Resultant Unemployment

It is estimated that the March 1976 civilian labor force in Iosco County consisted of 8,425 persons. Of this number, 1,000 or 11.9 percent were unemployed. This unemployment rate was nearly 50 percent higher than the national average of 8.1 percent.

If the alternative action to close Wurtsmith is implemented, the civilian labor force in the Primary Impact Area will decline to 8,162 persons. As indicated previously this is based on the assumption that 62 percent of the terminated Appropriated Fund personnel will relocate out of the area. Even assuming a somewhat smaller civilian labor force, the 2,267 direct and indirect job losses associated with the closure of Wurtsmith Air Force Base will nearly quadruple the existing unemployment rate to 40 percent. The resultant unemployment rate for the Wurtsmith Air Force Base impact area is presented in the table on the following page.

Table W-9. CIVILIAN LABOR FORCE AND UNEMPLOYMENT
IN THE WURTSMITH AFB PRIMARY IMPACT AREA

March 31, 1976 Baseline

Civilian Labor Force	8,425
Total Unemployed	1,000
Unemployment Rate	11.9%

Post-Action

Civilian Labor Force	8,162
Total Unemployed	3,267
Unemployment Rate	40.0%

Source: Michigan Employment Security Commission; and
Hammer, Siler, George Associates

As indicated, the Primary Impact Area would suffer a devastating blow following Wurtsmith closure; fully 40 percent of its civilian labor force would be unemployed. Modest growth in the tourism, recreation, second home and retirement aspects of the economy could absorb only a fraction of those left unemployed following Wurtsmith closure.

The Iosco/Au Sable Townships area will experience the greatest job losses. Another heavily impacted area will be Greenbush Township, located in nearby Alcona County.

Personal Income

Civilian and military payrolls on the base represent an important component in total personal income (TPI) for the Primary Impact Area and closure of the base would have a detrimental effect on TPI in the area. As illustrated in the table below, monthly gross payrolls during March 1976 totalled \$3,041,790. On an annual basis, Wurtsmith AFB payrolls amount to \$36.5 million.

Table W-10. GROSS MONTHLY PAYROLL,
WURTSMITH AFB, MARCH 1976

<u>Military</u>	<u>Amount</u>
Officers	\$ 688,800
Airmen	1,718,200
Subtotal	(\$2,407,000)
<u>Civilian</u>	
DAF Appropriated	\$557,970
Non-Appropriated Fund	76,820
Subtotal	(\$634,790)
Total	\$3,041,790

Source: November 30, 1976 Leave and Earning Statement File,
U.S. Air Force Accounting and Finance Center; Non-
appropriated Fund Financial Analysis Office, Wurtsmith
Air Force Base.

To compare base payrolls with total personal income in the area, TPI for the Primary Impact Area was derived using the following methodology:

- o Bureau of Economic Analysis figures for resident total personal income in 1970 and 1974 were extracted from published sources;
- o 1970 total personal income was converted into 1974 constant dollars by using the Consumer Price Index inflation factor;
- o Annual average real income growth over the five-year period was calculated;
- o 1974 TPI was updated to 1975 constant dollars; and
- o The annual average real income growth rate was applied to get an estimate of 1975 total personal income.

Based on this methodology, total personal income in the Iosco County Primary Impact Area totalled approximately \$139.7 million during calendar year 1975. As illustrated in the table below, base payrolls represented over one-fourth of total personal income in the county, a sizeable proportion of the total.

Table W-11. BASE PAYROLL CONTRIBUTION TO TOTAL PERSONAL INCOME IN THE WURTSMITH AFB PRIMARY IMPACT AREA

1975 Total Personal Income	\$139,700,000
Annual Base Payrolls	36,500,000
Percent of TPI	26.1%

Note: Values expressed in 1975 constant dollars.

Source: November 30, 1976, Leave and Earnings Statement File, U.S. Air Force Accounting and Finance Center, Non-appropriated Fund Financial Analysis Office, Wurtsmith Air Force Base; and Hammer, Siler, George Associates.

If closure of Wurtsmith AFB were implemented and its payroll contribution to the community terminated, the economy of Iosco County would experience not only a direct loss of 26.1 percent of its total personal income but an additional decline in income due to indirect job losses. Because on-base pay levels tend to be higher than those in the community at large, the loss would be disproportionately severe. While other indirect personal income losses would occur, only those directly associated with base payrolls can be estimated with certainty.

Retail Sales

In 1975, the last full year for which comprehensive retail sales data is available, retail sales in Iosco County totalled \$71.9 million. This figure does not include sales on the Air Force base itself in the commissary, exchange and clubs. To determine current spending by base personnel in civilian retail establishments and to estimate the direct impacts of base closure on total retail sales in the civilian sector, the following methodology was used:

- o The total annual retail expenditure potential of civilian and military personnel assigned to the base was derived by applying a retail sales expenditure factor to a total base payroll.

- o Actual retail sales at the Wurtsmith AFB commissary, exchange and clubs were subtracted from the total expenditure potential to indicate the amount spent in civilian sector establishments.
- o It was assumed that the residual expenditure potential available to the civilian sector was in fact spent in Primary Impact Area retail establishments.

This methodology overstates the contribution of base personnel to civilian retail sales in the area somewhat since some purchases were undoubtedly made in other areas. As a "worst case" methodology, however, it expresses the maximum possible impact of base personnel on local retail sales and the loss that would accompany base closure. The results of the analysis are presented in the table below.

Table W-12. ESTIMATED DIRECT IMPACT OF WURTSMITH AFB PERSONNEL ON RETAIL SALES IN THE PRIMARY IMPACT AREA

<u>Retail Expenditure Potential of Base Personnel</u>	
Annual Base Payroll ^{1/}	\$36,901,480
Retail Sales Expenditure Factor	<u> x .55</u>
Total Expenditure Potential ^{2/}	\$20,075,800
Less: On-Base Retail Sales ^{2/}	<u>11,656,565</u>
Net Expenditure Potential in Civilian Sector	\$8,419,235
<u>Primary Impact Area Retail Sales</u>	
Total 1975 Retail Sales	\$71,897,000
Maximum Attributable to Base Personnel	8,419,235
Percent of Total	11.7%

^{1/} Based on March 1976 payroll.

^{2/} Includes Base Exchange, Commissary Sales, and food and beverage sales at on-base clubs.

Source: Bureau of Labor Statistics, U.S. Department of Labor; Survey of Buying Power, 1976; Tab A-1 (revised) KAFB; and Hammer, Siler, George Associates.

As illustrated, base personnel accounted for a maximum of \$10.8 million in retail sales at Primary Impact Area establishments, 11.7 percent of total reported sales. If retail sales were to decline 13.5 percent following base closure, it is anticipated that a number of employees would be laid off and that some small businesses, especially those catering to base personnel, would go out of business. The loss of these jobs is accounted for in the multiplier used to express total indirect job losses.

Public Finance (AFERN 4.2.3. WAFB)

If Wurtsmith AFB were closed, a variety of realignments in public revenues and expenditures would ensue. These impacts would be evident at both the state and local levels.

Because of the formulas often used in the assessment of state and local revenues as well as the variety of complicated formulas used in the apportionment of federal and state funds among constituent jurisdictions, few of the revenue and expenditure impacts can be evaluated in detail. Only one of them can be quantified with any degree of confidence: as reported in AFERN 4.3.5, public school revenue losses from federal and state sources have been estimated.

Apart from these fiscal impacts on local school system revenues, other major sources of state and local revenues will be affected even if the dollar values cannot be quantified with certainty: income and sales taxes, federal revenue sharing, and local ad valorem real property taxes. At the state level, the two major sources of revenue that would be affected are the personal income tax and the sales tax.

Income Taxes (AFERN 4.2.3.1.1 WAFB)

Since many military personnel assume one permanent place of residence for tax purposes throughout their careers, transfers from Wurtsmith AFB to other bases in the country will not have a major impact on state income tax revenues. The income tax loss from terminated civilian employees and indirect job losses may be more severe even if their numbers are smaller. These impacts cannot, however, be quantified.

No local income taxes are collected by Michigan counties. A portion of state income tax collections are returned to counties, but these are based on the county's share of the state's 1970 population. No impact on income tax distributions by the State of Michigan to the Iosco County would be perceived until 1980, the year a new population base would be established.

Sales Taxes (AFERN 4.2.3.1.3 WAFB)

State sales tax losses attributable to direct impacts of base closure can at least be approximated. Based on the estimated \$8.4 million spent by base personnel at retail establishments in the civilian sector, the state derives approximately \$337,000 annually in sales tax revenues from base personnel at its four percent taxing rate. Even as a "worst case" example, this loss in sales tax revenues represents less than one-tenth of one percent of total state sales tax collections of \$1.1 billion in 1975.

No local sales taxes are collected by Iosco County. Therefore, no impact on county tax revenues is expected due to reductions in retail purchases by Wurtsmith personnel.

Unemployment Compensation

A base closure would create both direct and indirect job losses. In most cases, these unemployed personnel would be eligible for unemployment compensation benefits. An unemployment compensation benefit program is actually an insurance program which by design is intended to be wholly supported by the mandated contributions of the private and public sector employers who participate in the state-administered program. Although unemployment benefits are distributed through a state program, the funds utilized originated with the employers' contributions are "banked" until needed. Any overdraw against contributions must be repaid to the state in the future.

At this point in time the number of people finding new jobs in the area, increasing their average daily commutes to take jobs outside the area, or relocating to other areas cannot be accurately projected. In this analysis, then, a specific unemployment benefit program -- or cost -- was not developed. It is anticipated that due to the magnitude of indirect job losses estimated, the number of people applying for unemployment benefits will increase significantly and the payout will increase accordingly.

Revenue Sources (4.2.3.3 WAFB)

At the local level, the closure actions will have a more pronounced impact on fiscal affairs. Federal revenue sharing and income taxes are among the revenue sources most nettlesome to evaluate.

Title I of the State and Local Fiscal Balance Act of 1972 (Revenue Sharing) provides for the distribution of Federal funds to units of local government. The amounts to be distributed to each unit of government are determined by applying a set of formulas to descriptive data pertaining to each unit. These formulas utilize population, per capita income, adjustments, and inter-governmental transfer as their basic data elements and are used to determine each government's share of the total amount. The resulting computation distributes available funds among all eligible units of local government on a national basis. The closure action will undoubtedly alter many of the measures drawn upon in the allocation formula, the Office of Federal Revenue Sharing in the U.S. Treasury Department has stated that no reliable estimates of the impacts on a local government can be made. In part, this is due to the nature of the allocation process: the effect of changes in one local area is dependent upon comparisons with all other eligible units of government in the U.S. Even estimated direct changes in population are not a reliable indicator since this factor in the formula is important only within certain minimum and maximum thresholds concerning per capita income.

In sum, estimated changes in revenue based on per capita amounts do not reflect the characteristics of the distribution and no other reliable method of gauging the impacts is available. While federal revenue sharing funds may diminish, it is impossible in this analysis to predict amounts or order of magnitude.

Real Estate Property Taxes (AFERN 4.2.3.1.2 WAFB)

Real estate property taxes are the single largest source of revenue for most units of local government. While real estate values in the market place will undoubtedly diminish, it not certain that property tax revenues will necessarily decrease. This depends upon local government operating cost and budget requirements, changes in assessed values or the effective tax mill rate.

To some extent, the departure of base personnel and their dependents as well as other indirect population losses may diminish the demand for certain types of public services. However, many operating costs in local government are "fixed" and cannot be readily adjusted to reflect changes in the population level. In continuing to meet operating costs, the same or only slightly diminished amounts of property tax revenues may be required by the local governments most severely impacted by base closure.

In the face of a depressed real estate market and diminished values, local governments have several options in closing the gap between revenue requirements and the value of their real estate tax bases: institute new types of taxes, alter the assessment/market value ratio used in levying real estate taxes or raise the real estate tax rate itself. Whatever options they pursue, local government decisions will undoubtedly increase the tax burden on remaining households in one way or another.

Capital Improvements Programming (AFERN 4.2.3.5 - WAFB)

Capital improvements programs totaling \$7,928,000 are planned for the Primary Impact Area. Most of these improvements are programmed for 1976 completion; however, nearly \$2,900,000 in improvements have no set completion date. These programs include water and sewer repairs and extensions, development of an industrial park and a recreation area and expansion of the Iosco Airport.

The proposed closing of Wurtsmith AFB could affect the status of these projects in several ways. It could be determined that some projects are no longer necessary if the population they were to serve is substantially reduced. The cost of others may not be supportable as the county's tax base and consequent bonding capacities are reduced over the next few years. Commitments which have already been made to projects which are no longer financially feasible or politically desirable may cause problems in local government financing and channel available resources away from basic service provisions to debt service. Some projects which may be necessary to the area will no longer be financially feasible and will have to be postponed.

Base Procurement (AFERN 4.2.4 WAFB)

In Fiscal Year 1976, Wurtsmith AFB made approximately \$28.6 million in non-construction procurement purchases. Of this amount, \$6.2 million or 21.7 percent was purchased within Iosco County, Michigan. A profile of non-construction base procurements is presented in the following table.

Table W-13. NON-CONSTRUCTION PROCUREMENTS IN THE PRIMARY IMPACT AREA, WURTSMITH AFB, FISCAL YEAR 1976

Category	Total Procurements (000)	Procurements In Primary Impact Area	
		Amount (000)	Percent
Supply	\$ 862.2	\$ 112.1	13.0%
Commissary	3,889.6	2,722.7	70.0
Exchange	4,435.5	184.1	4.0
Civil Engineering	307.5	76.9	25.0
Contract Maintenance	90.1	45.1	50.0
Medical	121.0	15.7	13.0
NAFI	733.0	293.2	40.0
Misc. Services	535.6	133.9	25.0
COPARS			
COCESS	600.0	300.0	50.0
Travel of Persons	108.0	0	0
Travel of Things	1,332.5	383.8	29.0
Utility & Rent	1,129.2	1,129.2	100.0
Communications	182.1	0	0
POL	13,800.2	744.2	5.0
Other	458.3	59.6	13.0
Total	\$28,584.8	\$6,200.5	21.7%

Source: Base Procurement, Supply, Transportation, Exchange, Accounting and Finance Office, Wurtsmith AFB, Michigan.

In terms of magnitude, procurements made by the base commissary constitute the biggest expenditure. The majority of these procurements are made at the several food distribution establishments within the region. In addition, the nearby communities of Alpena and Bay City also provide a substantial amount of commissary procurements.

Because the construction contracts awarded quite frequently cover a period of several years, it is helpful to examine the annual average level of construction awards. This provides the most accurate picture of the loss in awards which would be experienced if the proposed realignment of Wurtsmith were to occur. The following table presents annual construction awards by area over the period from Fiscal Year 1970 to Fiscal Year 1976.

Table W-14. ANNUAL CONSTRUCTION AWARDS IN THE PRIMARY IMPACT AREA, WURTSMITH AFB, FISCAL YEARS 1970-76

<u>Fiscal Year</u>	<u>Total Construction</u>	<u>Construction Awards</u>
	<u>Awards</u> (000)	<u>In Primary Impact Area</u> (000)
1970	\$1,374.6	\$ 508.6
1971	1,018.5	203.7
1972	1,695.6	305.2
1973	2,574.6	1,364.5
1974	1,142.0	239.8
1975	4,853.1	924.4
1976	1,904.9	865.2
Annual Average	\$2,080.5	\$ 603.3

Source: Base Procurement Office, Wurtsmith AFB, Michigan.

Over the seven year period from Fiscal Year 1970 to Fiscal Year 1976, Primary Impact Area firms received an average of \$630,300 annually in construction awards. If the proposed closure of Wurtsmith occurs, this income will be lost in addition to the \$6.2 million in non-construction procurement awards. A loss of basic income of this magnitude will have repercussions throughout the economy. Because of the basic nature of such procurement and construction awards, employment losses are included in the losses calculated by application of the regional employment multiplier. The dollar values are summarized in the table below.

Table W-15. ESTIMATED ANNUAL LOSS IN CONSTRUCTION AND PROCUREMENT AWARDS, WURTSMITH AFB PRIMARY IMPACT AREA

<u>Procurement Type</u>	<u>Amount</u> (000)
Non-Construction Procurements	\$6,200.5
Average Annual Construction Awards	630.3
Total	\$6,830.8

Source: Hammer, Siler, George Associates.

Housing (AFERN 4.2.5 WAFB)

The housing stock in Iosco County has several market dimensions. The majority of the stock consists of year-round units occupied by families permanently residing in the area. Hunting cottages and other seasonal units that are not winterized and intended only for intermittent use comprise another market segment. In addition, downstate Michigan residents have built and bought homes meeting year-round construction standards intended for vacation use and/or eventual retirement rather than permanent occupancy.

Because of the large number of seasonal and second homes within the county, straightforward analysis of the housing market and vacancy rates is inhibited by U.S. Census classification schemes. While hunting cottages and other units clearly intended for seasonal use are acknowledged and categorized as such within the Census, vacation homes built to year-round standards are included with all other units intended for permanent

occupancy. Thus if a vacation home was unoccupied at the time of the April census, it was counted as a vacant unit even if the vacancy had no adverse implications for the market.

Drawing upon these standard Census indicators, approximately 32 percent of the year-round units in Iosco County were counted as vacant in 1970. A vacancy rate of this magnitude suggests a very soft housing market and a glut of surplus units. In fact, however, many of the vacant units counted were vacation homes with no adverse meaning for market conditions. To compensate for these distortions evident in standard Census measures, the housing stock has been evaluated purely in market terms.

Only those units available for sale or rent have been counted as vacant and computed in the vacancy rate to indicate true market conditions. On the assumption that most year-round units vacant at the time of the April census but not available for sale or rent represent vacation and second homes, these have been grouped with seasonal units and treated as a market separate from that serving the local population base. The results of these adjustments and the portrayal of the 1970 housing stock within Iosco County are presented in the table below.

Table W-16. 1970 HOUSING STOCK CHARACTERISTICS IN THE WURTSMITH AIR FORCE BASE PRIMARY IMPACT AREA

	<u>East Tawas City</u>	<u>Tawas City</u>	<u>Balance Of Iosco County</u>	<u>Total Primary Impact Area</u>
<u>Total Housing Units</u>	1,056	678	12,203	13,937
Seasonal Units	1	32	3,163	3,196
Vacation/Second Homes	217	44	2,807	3,068
Subtotal	218	76	5,970	6,264
Percent of Total Stock	20.5%	11.2%	48.9%	45.0%
<u>Units Intended for Year Round Occupancy</u>	838	602	6,233	7,673
Occupied Year Round Units	808	589	5,930	7,327
Owner-Occupied	(83.1%)	(78.1%)	(61.1%)	(64.9%)
Renter-Occupied	(16.9%)	(21.9%)	(38.9%)	(35.1%)
Vacant Units for Sale or Rent	30	13	303	346
Market Vacancy Rate	3.6%	2.2%	4.9%	4.5%

Source: U.S. Census of Housing, 1970.

Of the 14,000 housing units within Iosco County, nearly half were seasonal units and those intended for occasional vacation or second home use. Of the remaining 7,673 units intended for permanent year-round occupancy, only 346 were available for sale or rent. The market vacancy rate within the county as a whole, then, was only 4.5 percent, a rate well within normal tolerance levels.

Although the composition of the housing stock was somewhat different in the cities of Tawas and East Tawas -- only 10 to 20 percent of the units were intended for seasonal or vacation use -- vacant units for sale or rent represented a market vacancy rate on the order of two to four percent. Throughout Iosco County, then, market vacancy rates were at or below the five percent mark and were closely in keeping with normal market ranges.

Closure of Wurtsmith AFB would have both short-term and long-term effects on the previously healthy housing market in the Primary Impact Area.

Even the announcement that Wurtsmith may be closed has had an immediate impact. In the atmosphere of uncertainty, developers have cancelled planned projects, financial institutions are reluctant to initiate new mortgage commitments and construction loans while consumers themselves are hesitant to make the financial commitments involved in purchasing a new home. In this current state of uncertainty, the housing market has come to a virtual standstill and the inventory of unsold units on the market continues to mount.

If the Air Force Base is closed, the impact on the community housing market would be severe. Departing military and civilian personnel currently living in off-base housing would place their vacated units on the market and increase the vacancy rates substantially. Though it would have no effect on the market as such, federal assistance would be available to military and civilian employees dislocated as a result of the proposed Wurtsmith closing.

The Homeowners Assistance Program administered by the Army Corps of Engineers provides assistance to permanent military and civilian employees who own their homes and would be relocated as a result of base closure. If an eligible applicant sells his home on the private market for less than its "prior" appraised fair market value, the program reimburses the employee for 95 percent of the difference between its "prior" value and the actual sales price. If the eligible applicant is unable to sell his home on the private market within one year of the base action, the government will purchase the home and pay the applicant 90 percent of its "prior" appraised fair market value. Having virtually no effect on the local housing market as such, the program simply minimizes the financial loss to Defense Department home-owners affected by the base closure action.

Those losing their jobs as an indirect result of base closure would have no such assistance available to them; they may be confronted with several problems. Homeowners who lose their jobs as an indirect result of base closure may wish to relocate to other areas but have difficulty selling their homes. If they remain in the area and collect unemployment benefits, terminated employees may have difficulty meeting rent and mortgage payments. As a consequence, mortgage delinquency rates may increase and unless the homeowner has substantial equity in the unit, mortgage default rates may likewise increase somewhat.

As a consequence of both direct and indirect impacts, the housing market in the Primary Impact Area will be depressed. Even those who retain their jobs and could afford to buy new housing may be discouraged from doing so by the uncertainty concerning the future of the area and the general "depression" mentality. If homes are sold at all, prices will undoubtedly be depressed but it is impossible to predict the relative decline in values with any degree of certainty. In the short run, certainly, supply would far exceed the demand. To some extent, continued growth in the vacation/second home and retirement market may absorb some of the vacated owner-occupied units, but still it will take quite some time for the overall market to return to a state of equilibrium.

In measuring the quantifiable effects of base closure on the housing market, only the increase in vacancies attributable to direct civilian and military household losses can be computed. There are several problems in updating 1970 Census data to accurately depict 1976 housing market baseline conditions, however. While mobile homes account for an increasingly important part of the housing stock in such areas, there is no reliable data on the number of mobile homes occupied since 1970. Data on new construction is available for building permit-issuing jurisdictions, but many rural areas do not require permits and reliable indicators of new construction are not available. By the same token, virtually no data is available on current vacancy rates.

Since 1970, it is estimated that the number of housing units intended for year-round occupancy in Iosco County increased approximately 20 percent. Based on the insights and comments of local real estate brokers, vacancy rates have changed little since 1970 and are estimated to be in the two to five percent range, well within market tolerance levels. These baseline conditions and estimated direct impacts of base closure are depicted in the table.

Table W-17. ESTIMATED DIRECT IMPACT OF WURTSMITH AFB CLOSURE ON HOUSING MARKET VACANCIES IN THE PRIMARY IMPACT AREA

	<u>East Tawas</u>	<u>Tawas</u>	<u>Balance of Iosco County</u>	<u>Total Primary Impact Area</u>
<u>Estimated 1976 Housing Market Baseline</u>				
Units Intended for Year Round Occupancy	1,035	655	7,583	9,273
Occupied	998	641	7,242	8,881
Vacant for Sale or Rent	37	14	341	392
Market Vacancy Rate	3.6%	2.1%	4.9%	4.5%
<u>Direct Base Closure Impact</u>				
Units Vacated by Departing Personnel	34	28	1,019	1,081
Total Vacant Units for Sale or Rent	71	42	1,360	1,473
Market Vacancy Rate	6.9%	6.4%	17.9%	15.9%

Source: Hammer, Siler, George Associates.

Nonetheless, estimates of the baseline 1976 housing stock have been developed using the best available data. These data include building permit activity reported in the C-40 Series of Construction Reports published by the U.S. Department of Commerce, estimates of housing stock losses due to fire, demolition and other causes as well as comments by local members of the real estate industry.

As illustrated in the table, the number of vacant units in both Tawas and East Tawas would more than double as a direct result of base closure. The resulting market vacancy rate, however, would increase but not to such an extent that the market would be severely jeopardized. In the remainder of Iosco County, particularly the Oscoda/Au Sable area, the impacts on market vacancy levels would be severe. The number of vacant units intended for year-round occupancy would increase by more than 1,000. As a consequence, the market vacancy rate would increase from approximately five percent to nearly 20 percent, a disastrously high level.

While these increases in the market vacancy rate are dramatic, they only represent those attributable to direct household losses and do not begin to account for other indirect job losses and departures from the region. Such secondary impacts will certainly compound the market vacancy rates and add to the severity of depressed housing market conditions.

Education (AFERN 4.3.3 WAFB)

Iosco County contains four separate school districts with an enrollment of 8,035 students. If the proposed closure action at Wurtsmith AFB were implemented, two of three school districts would be impacted. The two districts are the Oscoda Area Schools, which includes the base itself, and the Tawas Area Schools. These two districts enroll 93 percent of the students from Wurtsmith AFB households. Base closure would result in enrollment losses, funding losses, employment losses, and underutilization of physical facilities.

Public School Enrollment (AFERN 4.3.3.1 WAFB)

There are a total of 2,087 students whose parents are Wurtsmith AFB employees enrolled in the two school districts which would be impacted by the proposed base closure action. Oscoda area schools contain almost 96 percent of these students. As shown in Table W-18, it is estimated that Oscoda would lose all 1,296 of the Type A students and would lose 514 Type B students whose parents are Department of the Air Force Appropriated Fund employees who would transfer to federal jobs outside the area. The school district would lose a total of 1,770 students, or almost 49 percent of its enrollment. Tawas Area Schools are estimated to lose 40 students, or 2.0 percent of their enrollment. The remaining Wurtsmith AFB dependents are distributed in small communities elsewhere in Iosco County and in Alcona County.

Table W-18. IMPACT ON PUBLIC SCHOOL SYSTEM ENROLLMENT,
WURTSMITH AFB

School District	Total Membership	AFB Dependents			Estimated Loss			Percent of Total Membership
		Type A	Type B	Total	Type A	Type B	Total	
Oscoda Area Schools	3,954	1,256	739	1,995	1,246	514	1,770	44.8%
Tawas Area Schools	<u>1,972</u>	<u>0</u>	<u>92</u>	<u>92</u>	<u>0</u>	<u>40</u>	<u>40</u>	2.0%
Total	5,926	1,246	831	2,087	1,256	554	1,810	30.6%

Source: Superintendent, Oscoda Area Schools; Office of Education, U.S. Department of Health, Education, and Welfare; and Hammer, Siler, George Associates.

Private School Enrollment (AFERN 4.3.3.2 WAFB)

In addition to public school enrollment there are two parochial schools in the area which serve a total of 386 students. Only two Wurtsmith AFB dependents attend these schools.

Public School Funding (AFERN 4.3.3.8 WAFB)

Primary and secondary education funding sources include local ad valorem property assessments supplemented by federal, state and Public Law PL 81-874 Federal Impact Aid funds.

The Oscoda Area School District received \$902,730 in PL 874 funds based on the Average Daily Attendance (ADA) of AFB dependents. Tawas schools received \$13,060 in PL 874 funds. Section 3(e) of the law provides for 90 percent funding of school districts in which there has been a decrease in federal activities, in which total ADA was under 90 percent of the previous year's ADA and in which the ADA of federal dependents equalled at least 10 children and 10 percent of the total enrollment.

Under these criteria, the PL 874 payments to the Tawas Area School District would be discontinued, resulting in an estimated revenue loss of \$13,060. Only the Oscoda Area School District would be eligible for continued federal aid at a reduced rate. PL 874 impact aid funds would continue at 90 percent of each previous fiscal year until 1978, when the current law expires unless it is extended by Congress. If extended, aid would continue for the three years following implementation of the proposed action. When federal impact aid is discontinued, the Oscoda Area School District will experience a revenue loss of \$902,730.

Additional revenue losses would occur as state aid was reduced. It is estimated that Oscoda would lose \$1,416,765 in state aid -- and would lose total state aid membership eligibility.

Losses from PL 874 sources and state aid would total \$2.3 million in Oscoda and at least \$13,060 in Tawas.

Table W-19. ESTIMATES OF FUNDING AND EMPLOYMENT LOSSES TO PUBLIC SCHOOLS, WURTSMITH AIR FORCE BASE

	<u>Estimated PL-874 Funds Loss</u>	<u>Estimated State Aid Loss</u>	<u>Total Estimated Fund Loss</u>	<u>Estimated Teachers/Support Staff Employees</u>
Oscoda Area	\$902,730	\$1,416,765	\$2,319,495	487/58
Tawas Area	<u>13,060</u>	<u>N/A.</u>	<u>13,060</u>	<u>4/2</u>
Total	\$915,790	\$1,416,765	\$2,332,555	91/60

N.A.: Data not available.

Source: Office of Education, U.S. Department of Health, Education, and Welfare; Superintendent of Oscoda Area Schools; and Hammer, Siler, George Associates.

Insofar as a school district's operating expenses consist of both fixed and variable costs, and operating expenses are unlikely to be reduced proportionately to enrollment losses, it is likely that the Oscoda school district may be required to request increased tax mill rates as a compensatory measure. The superintendent has estimated that the increase could as high as 10.5 mills.

As a result of the projected enrollment decrease, the teaching and support staff of the school district would be reduced. The Superintendent of the Oscoda Area School District anticipates significant employment reductions and estimates that 145 teachers and support personnel would become unemployed. As fourteen of those would be Wurtsmith AFB spouses, a net maximum of 131 people could become unemployed. According to Michigan statute, the school district would be responsible for all of the unemployment insurance costs, which could be as high as \$362,000.

In the Tawas school system, a total of four people, two of whom would be teachers would probably become unemployed. If enrollments in Oscoda schools were to decline by about 45 percent, the Superintendent estimates that they would close four elemen-

Higher Education (AFERN 4.3.3.5 WAFB)

Currently, Central Michigan University, Park College and Alpena Community College provide higher education through Wurtsmith facilities and maintain an extension office on base. The program employs an average of 40 part-time college instructors each semester and two full-time office staff personnel. Last year ACC had 1,812 registrations in 119 college level classes with 725 people. Of the 725 students, 61 percent were military, 13 percent dependents, and 26 percent civilians. If the proposed base closure actions were implemented, the 188 civilian students probably would have to commute to ACC facilities in Alpena.

Medical (AFERN 4.3.4 WAFB)

Iosco County is served by District Health Department No. 2. This is a combined four-county organization, along with Ogemaw, Alcona, and Oscoda Counties. Iosco County also receives health services through this organization. Public health personnel include a registered nurse, a licensed sanitarian, a clerk and part-time personnel for special programs. The County is also served by an Act 54 Mental Health Board Program employing one psychologist and one counsellor.

Iosco County has one acute care hospital, the 62-bed Tawas-St. Joseph Hospital and one extended care unit, the 64-bed Iosco County Medical Facility, also located in Tawas City. The hospital at Wurtsmith in Oscoda has approximately 20 beds with 15 doctors serving military personnel. Services include internal medicine, general surgery, pediatrics and obstetrics/gynecology.

The St. Joseph hospital has a medical/surgical ward, an obstetrical ward and a coronary care unit. The Iosco Medical Care Facility provides intensive care and nursing care for the county. For any treatment not offered at these two units, patients may utilize larger more comprehensive medical facilities in Bay City, Saginaw, Flint, or Detroit.

St. Joseph's Hospital is in the planning stage of a \$600,000 expansion program designed for early cancer detection. This facility will house a new nuclear medicine section. The hospital on Wurtsmith AFB is also planning an expansion. Under the plan, square footage is to be doubled over a three year period to allow the hospital to meet new health planning criteria.

At the present time, the Wurtsmith AFB hospital holds the records for 600 retirees and dependents. If the base hospital is closed these people would have to obtain medical treatment at the community facilities which now service a population of over 25,000. Providing service to this number of additional people should not impact heavily on the present medical facilities. In general, the community facilities in the Primary Impact Area are considered adequate for the resident population.

Community Services and Facilities (AFERN 4.3.5 WAFB)

The Wurtsmith AFB Security Police have no formal agreements or informal arrangements with local police authorities. Therefore, should the base be closed no adjustment in the local police protection would be necessary.

Local fire protection facilities are adequate at the present time. Wurtsmith AFB has a mutual aid agreement with the Oscoda and Au Sable Township and Tawas and East Tawas fire departments. This is a standard mutual aid agreement in accordance with AFR 92-2. Several members of the base fire department are members of the local volunteer fire departments and they would have to be replaced from the local community if the base is closed.

The local community provides a broad range of social services ranging from a crisis intervention office to a community mental health service. Many of these services utilize volunteers extensively and some of these volunteers are base personnel. According to Iosco County Social Service representatives, however, base participation in most of the local social service programs is minimal.

Base personnel support many of the local cultural programs both by active participation as performers and by their attendance at local cultural events. If the base should close it is likely that some of these programs would not have enough support to continue.

The list of clubs in the local area is extensive and typical of most communities of its size. All of these organizations have members who are stationed at the base and to a greater or lesser extent all will suffer some loss of membership as a result of the base closing.

Iosco County is part of the Huron National Forest and has no shortage of outdoor recreational facilities. Only the base baseball diamonds now used by the local Little League would have to be replaced in the local community if the base is closed. Base indoor recreational facilities are not open to the general public so their closing would not create a shortage.

There are two major banking institutions in the Wurtsmith Primary Impact Area. Together they have approximately \$52,000,000 in deposits, over \$5,000,000 of which are deposits of base military and civilian employees. This is approximately 10 percent of total deposits. Closing the base would cost the banks these deposits.

In addition, indirect job losses and the depressed state of the local economy may affect these institutions in other ways. Indirect job losses and reductions in total personal income will further impact deposit levels at these institutions. Financially troubled households may encounter difficulties in meeting the payments on personal, home improvement and mortgage loans made by these institutions. Delinquency and default rates may increase accordingly.

Military Retirees (AFERN 4.3.5.7 WAFB)

There are approximately 700 military retirees from all the services residing in Iosco County at the present time. In addition, many other military retirees who live outside of Iosco County also make use of the facilities at Wurtsmith AFB on a regular basis. These retirees and their dependents are authorized to use the commissary, the exchange and the medical facilities at the base, and they also have access to many of the administrative services and recreational facilities on the base. If Wurtsmith is closed, retirees will be forced to find other military installations where they can take full advantage of their retirement benefits. Because of its relatively isolated location, Wurtsmith is more than 150 miles from any other major military facility which can provide these services. Medical services could be obtained in the area at civilian hospitals utilizing the CHAMPUS program, however, use of alternative commissary, exchange and other base services would require a long commute.

II.B. IMPACT ANALYSIS: BLYTHEVILLE AFB

IMPACT ANALYSIS: BLYTHEVILLE AFB

Definition of the Region (AFERN 4.2.1 BAFB)

Blytheville Air Force Base is located in the northeastern corner of the State of Arkansas, six miles from the Missouri line and eight miles west of the Mississippi River. Memphis, Tennessee, is approximately 70 miles to the south while the Arkansas State Capital, Little Rock, lies roughly 200 miles to the southwest.

The principal highway in the area is Interstate 55 which serves as a major connecting link between New Orleans and Chicago. The base itself is located within the City of Blytheville near Interstate 55. Along with Osceola to the south, Blytheville serves as one of the twin county seats for Mississippi County. In addition to its local government and military orientation, the City of Blytheville serves as a major trade and services node for the surrounding hinterland.

As illustrated in the table below, slightly less than half of the combined military and civilian personnel assigned to the base reside in base housing. A slight majority reside in off-base housing within the surrounding communities.

Table B-1. ON-BASE AND OFF-BASE RESIDENCE PATTERNS OF CIVILIAN AND MILITARY PERSONNEL, BLYTHEVILLE AIR FORCE BASE, MARCH 31, 1976

	<u>Total Personnel</u>	
	<u>Number</u>	<u>Percent</u>
On-Base Residence	1,674	48.6%
Off-Base Residence	1,773	51.4
Total	3,447	100.0%

Source: Headquarters, Strategic Air Command, Directorate of Housing; and United States Air Force Headquarters, Programs and Resources, Bases and Units Division.

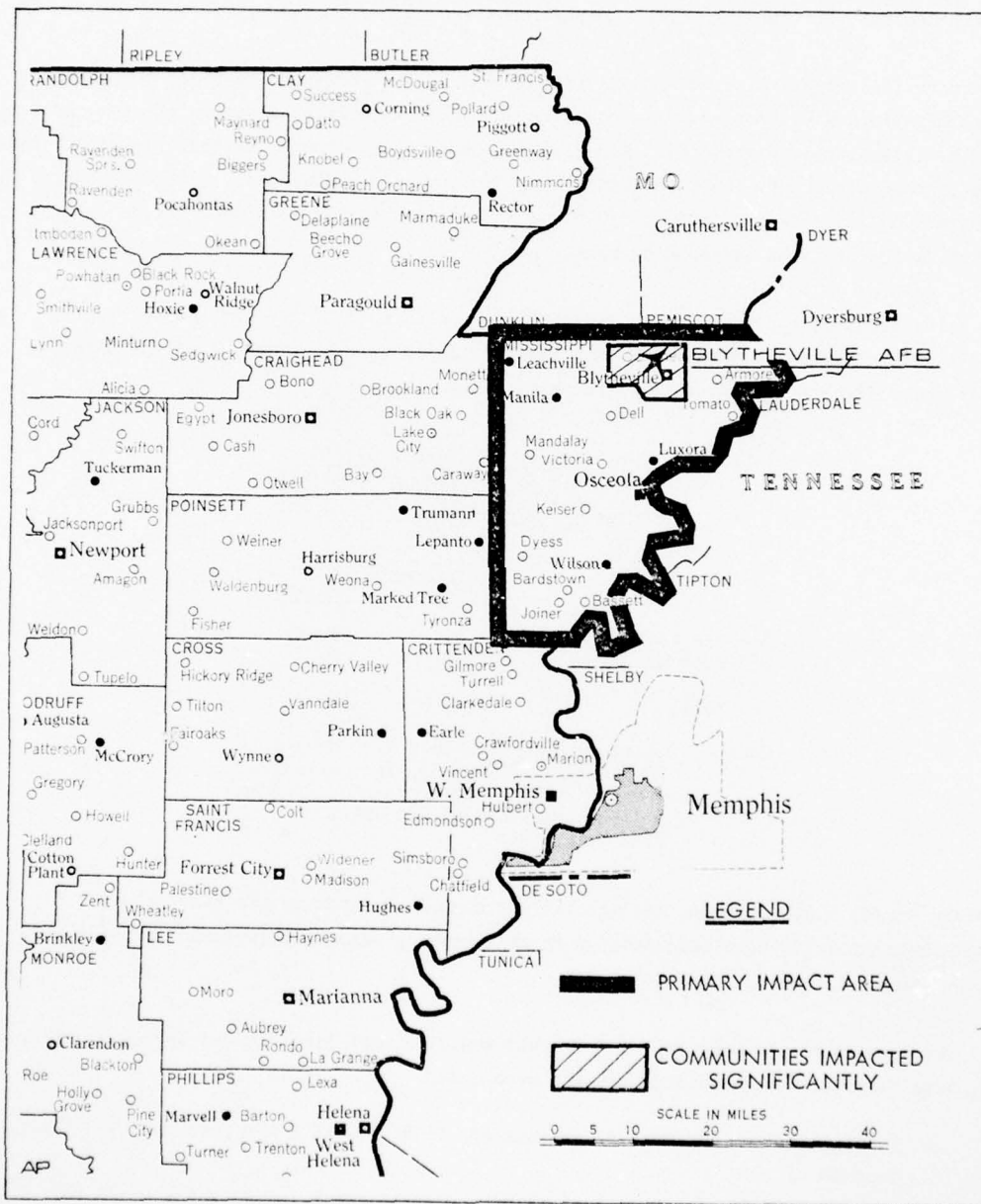
Of the nearly 3,500 civilian and military personnel assigned to the base on March 31, 1976, roughly 1,700 were accommodated in base housing while nearly 1,800 occupied off-base housing in the civilian community.

In determining the Primary Impact Area that would be most directly and severely affected by base closure, the following criteria were used:

- o That it include at least 90 percent of all Blytheville AFB personnel and their dependents;
- o That it be defined in terms of major political subdivisions which would be fiscally impacted and for which comparable and standardized secondary data are available; and
- o That it correspond insofar as possible with the Labor Market Area delineated by the U.S. Department of Commerce, Bureau of Economic Analysis.

REGIONAL LOCATION OF BLYTHEVILLE AFB

MISSISSIPPI COUNTY, ARKANSAS



Based on this evaluation, Mississippi County was designated as the Primary Impact Area. Nearly 99 percent of all base personnel and their dependents live within Mississippi County and this jurisdiction would bear the brunt of economic and fiscal impacts stemming from base closure. Moreover, Mississippi County has been designated as the Labor Market Area for the region in which the base is located.

An unusually high concentration of base personnel and their dependents live in two municipalities immediately adjacent to the base: Blytheville and Gosnell. Fully 95 percent of those living in off-base housing reside within these two communities. Population estimates for the Blytheville/Gosnell area, Mississippi County as a whole and other potentially impacted areas are presented in the table along with estimates of base-related population residing within these jurisdictions.

Table B-2. BLYTHEVILLE AIR FCRCE BASE IMPACT AREAS

	<u>Estimated 1976 Population</u>	<u>Base Personnel and Dependents Residing in Area</u>	
		<u>Number</u>	<u>Percent of Total Population</u>
<u>Primary Impact Area:</u>			
<u>Mississippi County</u>			
Blytheville/Gosnell	27,100	8,420	31.1%
Blytheville AFB	(3,870)	(3,870)	(100.0)
Balance of Area	<u>(23,230)</u>	<u>(4,550)</u>	(19.6)
Subtotal	27,100	8,420	31.1
Balance of Mississippi County	33,400	130	0.4
<u>TOTAL PRIMARY IMPACT AREA</u>	<u>60,500</u>	<u>8,550</u>	<u>14.1%</u>
<u>Other Impact Areas:</u>			
<u>Pemiscot County</u>			
Pemiscot County	26,900	120	0.5%
<u>TOTAL OTHER IMPACT AREAS</u>	<u>26,900</u>	<u>120</u>	<u>0.5%</u>

Source: Hammer, Siler, George Associates

Because the postal zip code delivery area for both Blytheville and Gosnell is the same, it was not possible to differentiate the base-related population residing within each. As a consequence, both municipalities are treated jointly in the analysis of population and housing presented in the remainder of this report. The 4,550 base-related population residing within these two municipalities in off-base housing accounted for approximately 20 percent of the combined off-base population. When those accommodated in on-base housing are included, base personnel and their dependents account for nearly a third of the 27,100 total population.

Throughout the balance of Mississippi County, the 130 base-related persons account for less than one percent of the total population. As clearly indicated by the data,

Blytheville and Gosnell would be the two most severely impacted jurisdictions within Mississippi County. While somewhat over 100 base personnel and their dependents live within the adjacent Pemiscot County portion of Missouri, they account for less than one percent of the county's total population.

Throughout the analysis which follows, the Primary Impact Area as a whole and the Blytheville/Gosnell communities will be the focus for the analysis. As appropriate, impacts affecting Pemiscot County, Missouri, will be addressed.

Population (AFERN 4.1.1 BAFB)

Due largely to economic expansion in the civilian sector, population in the Blytheville/Gosnell urban area continued to grow over the past decade and a half. From a 1960 level of approximately 20,800, the population in the area has increased by nearly a third to its estimated present level of 27,100. Population changes over the 1960-76 period for Blytheville/Gosnell, the balance of Mississippi County and Pemiscot County, Missouri are presented in the table below. Because the reporting periods over the 16 year span are not equivalent, percentage rates of change have been expressed on an average annual basis.

Table B-3. POPULATION TRENDS, BLYTHEVILLE AIR FORCE
BASE IMPACT AREAS, 1960, 1970 AND 1976

	<u>Population</u>		<u>Average Annual Rate of Change</u>		
	<u>1960</u>	<u>1970</u>	<u>1976</u>	<u>1960-70</u>	<u>1970-76</u>
<u>Primary Impact Area:</u>					
<u>Mississippi County</u>					
Blytheville/Gosnell	20,797	26,138	27,100	2.3%	0.6%
Balance of County	49,377	35,922	33,400	-3.1	-1.2
<u>TOTAL PRIMARY IMPACT AREA</u>	<u>70,174</u>	<u>62,060</u>	<u>60,500</u>	<u>-1.2%</u>	<u>-0.4%</u>
<u>Other Impact Areas:</u>					
<u>Pemiscot County</u>					
Pemiscot County	38,095	26,373	26,900	-3.6%	0.3%
<u>TOTAL OTHER IMPACT AREAS</u>	<u>38,095</u>	<u>26,373</u>	<u>26,900</u>	<u>-3.6%</u>	<u>0.3%</u>

Source: U.S. Census of Population, 1960 and 1970;
and Hammer, Siler, George Associates

As illustrated, 1960-70 population growth in the Blytheville/Gosnell area contrasts sharply with population losses in the balance of Mississippi County and in Pemiscot County. Out-migration over the decade resulted in an average annual loss approximating three percent. Since 1970, these population losses have been stemmed. In Pemiscot County, total population increased slightly over the last six years while the population loss in Mississippi County slowed considerably.

Population Change by Location (AFERN 4.1.1.1 BAFB)

If the Blytheville alternative closure action is implemented, population losses throughout the Primary Impact Area but particularly in the Blytheville/Gosnell area can be anticipated. As a direct result of base closure, approximately 2,800 military households would be transferred to other installations and depart from Mississippi County. It is more difficult to predict the behavior of base civilian employees terminated by the closure action.

Some Civil Service employees nearing retirement age may take early retirement and remain in the area. Other employees may be secondary wage earners whose spouses retain their jobs in the civilian sector; some such households may forego the secondary wage earner's income and remain in the area sustained only by the spouse's income. Some civilian employees with strong roots and family ties in the area may remain when their jobs are terminated and collect unemployment compensation until new employment opportunities are found or unemployment benefits run out. Still others may decide to move and seek employment in other Arkansas counties or be placed by the Civil Service in positions elsewhere in the country.

It is virtually impossible to predict with certainty the decisions among civilian employees to remain in the community or relocate to other areas. Based on studies at Air Force Bases following closure or reduction actions since 1964, 62 percent of Appropriated Fund civilian personnel relocated from the impact area and moved to find employment elsewhere; 15 percent of the terminated Appropriated Fund civilian personnel retired. With this actual experience from other Air Force Base actions, household and population losses directly attributable to closure of Blytheville AFB can at least be approximated. The same cannot be said for secondary employment losses and population impacts.

As the economic impact of the base closure reverberates through the local economy, indirect population losses will undoubtedly occur. As noted in the following section on employment measures, approximately 1,400 jobs in the civilian sector of the economy will be lost as an indirect result of the base closure. Employees laid off as an indirect result of base closure will likewise face the decision whether to remain in the community collecting unemployment benefits and seeking alternative employment opportunities or move with their families to seek jobs elsewhere. With no previously documented experience upon which to base estimates, indirect population losses can certainly be anticipated but the quantitative magnitudes cannot be predicted with any reasonable degree of certainty. Therefore, for purposes of this analysis, only direct population losses have been computed.

Based on previous experience at other Air Force Base installations, the following assumptions have been made:

- o All military personnel and their dependents would leave the Primary Impact Area;

- o Sixty-two percent of Appropriated Fund personnel and their dependents would leave the area and relocate in other jurisdictions outside the Primary Impact Area;
- o Fifteen percent of the Appropriated Fund personnel would retire and remain in the community;
- o The residual 23 percent of the Appropriated Fund personnel terminated would remain in the community along with their dependents for as long as they receive unemployment benefits or until they secure alternative employment;
- o All Non-appropriated Fund civilian personnel, which have no Civil Service Protection, would remain in the community and join the unemployment rolls.

In applying these assumptions, the combined Blytheville/Gosnell area would lose approximately 28 percent of its 1976 baseline population as a direct result of Air Force Base closure. Estimated direct population losses for all the impact areas are presented in the table below.

Table B-4. ESTIMATED DIRECT POPULATION LOSS, BLYTHEVILLE AIR FORCE BASE IMPACT AREAS

<u>Primary Impact Area:</u>	<u>1976 Baseline Population</u>	<u>Estimated Direct Population Loss</u>	
<u>Mississippi County</u>		<u>Number</u>	<u>Percent</u>
Blytheville/Gosnell	27,100	7,610	28.1%
Blytheville AFB	(3,870)	(3,870)	(100.0)
Balance of Area	(23,230)	(3,740)	(16.1)
Subtotal	27,100	7,610	28.1%
Balance of County	33,400	70	0.2
<u>TOTAL PRIMARY IMPACT AREA</u>	<u>60,500</u>	<u>7,680</u>	<u>12.7%</u>
<u>Other Impact Areas:</u>			
<u>Pemiscot County</u>			
Pemiscot County	26,900	80	0.3%
<u>TOTAL OTHER IMPACT AREAS</u>	<u>26,900</u>	<u>80</u>	<u>0.3%</u>

Source: Hammer, Siler, George Associates

As illustrated in the table, the departure of nearly 7,700 personnel and their dependents would result in a total population loss of 12.7 percent for Mississippi County as a whole. These losses would be concentrated in the Blytheville/Gosnell area. In percentage terms, the combined area would lose nearly 30 percent of its current population. While the Air Force Base itself accounts for somewhat over half the losses, the departure of 3,740 off-base personnel and their dependents would result in a 16 percent reduction in total off-base population.

Even in measuring only the direct population loss associated with closure of Blytheville Air Force Base, the action would severely impact Mississippi County and its major urban center. The impact on population would be compounded significantly by indirect population losses but these cannot be reliably estimated or quantified.

Employment (AFERN 4.2.2 BAFB)

According to the Arkansas Employment Security Division, the Blytheville Labor Area (Mississippi County, Arkansas) contained approximately 21,775 jobs in March 1976. These jobs were well distributed among the Agricultural, Manufacturing, Trade, Services and Government sectors. A distribution of civilian employment in the Blytheville Primary Impact Area is presented in the following table:

Table B-5. CIVILIAN EMPLOYMENT PROFILE, BLYTHEVILLE
AFB PRIMARY IMPACT AREA, MARCH 1976

<u>Sector</u>	<u>Employment</u>	<u>Percent of Total</u>
Agriculture	2,950	13.5%
Construction	1,150	5.3
Manufacturing	6,025	27.7
T.C.U. ^{1/}	675	3.1
Trade	3,350	15.4
F.I.R.E. ^{2/}	450	2.1
Services ^{3/}	4,225	19.4
Government	<u>2,950</u>	13.5
Total	21,775	100.0%

^{1/} Transportation, Communications, Utilities

^{2/} Finance, Insurance, Real Estate

^{3/} Includes 'Other Non-Agricultural'

Source: Research and Statistics Section,
Arkansas Employment Security Division

In addition to having a major employment concentration in the Government sector, Blytheville is characterized by strong agricultural and manufacturing sectors. In terms of agriculture, the Mississippi County area represents one of the largest cotton-producing and soybean-producing counties in the country. Manufacturing employment is also diverse and accounts for 27.7 percent of total employment. The predominance of this employment is in the non-durable category and is largely related to the food processing and apparel-related industries.

As the tenth largest city in the State of Arkansas, Blytheville boasts of several manufacturing concerns. Among these are the Blytheville Canning Company (canned vegetables); the Randall Company (automotive and appliance aluminum and stainless trim); Myers Bakery (bakery products); Nibco (gray iron castings); Osceola Shoe (footwear); American Greetings Corporation (greeting cards, gift wrap); Crumpton Osceola (fabric); and Union Carbide Films, Packaging Division (cellulosic food casing and membranes).

Because of its economic diversity, Blytheville has recently enjoyed an unemployment rate lower than that of the nation. However, its unemployment rate remains slightly higher than the state average.

On-Base Employment (AFERN 4.2.2.2 BAFB)

As of March 31, 1976, the Blytheville Air Force Base contained approximately 3,447 personnel. Of this number, 2,830 were assigned military personnel and 617 were assigned civilian personnel. The civilian personnel total consists of 417 Department of the Air Force Appropriated Civil Service and Wage Board personnel and 200 Non-appropriated Fund personnel. A profile of on-base employment is presented in the following table.

Table B-6. ON-BASE EMPLOYMENT PROFILE,
BLYTHEVILLE AFB, MARCH 31, 1976

	<u>Number of</u> <u>Personnel</u>
<u>Assigned Military</u>	
Officers	454
Airmen	2,376
Subtotal	(2,830)
<u>Assigned Civilian</u>	
DAF Appropriated	417
Non-appropriated Fund ^{1/}	200
Subtotal	(617)
Total	3,447

^{1/} Includes the full-time equivalent for part-time AAFES personnel.

Source: Headquarters, United States Air Force, Programs and Resources, Bases and Units Division.

As an alternative to the closure of Kincheloe Air Force Base, Michigan, the Blytheville Air Force Base would be closed and totally inactivated. This would result in the direct loss of 2,830 military personnel and 617 civilian personnel that were employed on the base as of March 31, 1976.

Table B-7. SUMMARY OF PROPOSED PERSONNEL REALIGNMENT
AT BLYTHEVILLE AIR FORCE BASE, ARKANSAS

	<u>Military</u>		<u>Total</u>	<u>Civilian</u>		<u>Total</u>	<u>Total Personnel</u>
	<u>Officers</u>	<u>Airmen</u>		<u>DAF</u>	<u>NAF</u>		
Assigned As Of 3-31-76	454	2,376	2,830	417	200	617	3,447
Number To Be Reduced	<u>454</u>	<u>2,376</u>	<u>2,830</u>	<u>417</u>	<u>200</u>	<u>617</u>	<u>3,447</u>
Residual After Action	0	0	0	0	0	0	0

Source: Description of Proposed Action and Alternatives, Headquarters, Strategic Air Command, Directorate of Bases and Units

Employment Loss

The proposed action at Blytheville Air Force Base would result in both direct and indirect employment losses. Transferred or terminated military and civilian personnel assigned to the base represent the direct employment losses. The elimination of these jobs and the termination of other base influences such as procurements and other purchases in the local economy would reverberate and have secondary job loss effects. These indirect job losses would occur in several ways.

Both civilian and military personnel at the base eat in local restaurants, buy clothing and other goods from local retail establishments and purchase at least some grocery items from local supermarkets. With the departure of base personnel and their dependents, retail sales will diminish and local retailers may be forced to reduce employment levels.

Similarly, the termination of base procurement and construction awards to local firms may also affect employment levels at these establishments. Utility companies, public school systems, local governments and other employers in the area may likewise be forced to lay off employees because of diminished activity resulting from base closure. Some small businesses and others only marginally profitable may be forced to liquidate and go out of business entirely. These impacts will continue to ripple throughout the local economy in a variety of subtle ways and have a total cumulative impact on total employment in the civilian sector.

In order to measure the magnitude of these indirect losses, employment multipliers were developed for the Blytheville AFB Primary Impact Area. The specific methodology for development of these multipliers is discussed in the introductory section of this report on the research approach. Two separate multipliers have been derived: a civilian multiplier and a military multiplier.

The civilian multiplier represents the mathematical relationship between civilian personnel working on the base and total employment in the civilian sector of the

local economy as a whole. Reflecting their incomes and expenditure patterns within the local civilian sector, the multiplier derived for the Blytheville Primary Impact Area suggests that for every one civilian employee at the base another .56 jobs in the civilian sector are attributable to civilian employment on the base.

Because of on-base housing, PX and commissary privileges, the average military man spends less in the civilian sector of the economy. The military multiplier developed for the Blytheville Primary Impact Area indicates that for every uniformed military person assigned to the base, .36 jobs in the civilian sector are attributable to military personnel levels at Kincheloe.

It is estimated that the 3,447 direct job losses to be experienced by the closure of Blytheville Air Force Base would generate an additional 1,365 indirect job losses. Those losses were estimated by using the net multiplier of .56 for each direct civilian job loss and a net multiplier of .36 for every direct military job loss associated with the proposed realignment. Taken together, the 4,812 job losses to be experienced due to the closure of Blytheville Air Force Base will represent a loss of 19.5 percent of total employment. (Note: See Appendix for multiplier calculation.)

Table B-8. SUMMARY OF DIRECT AND INDIRECT EMPLOYMENT LOSSES IN THE BLYTHEVILLE AFB PRIMARY IMPACT AREA

	<u>Number of Jobs</u>
<u>Direct Employment Loss</u>	
Military	2,830
Civilian	<u>617</u>
Subtotal	3,447
<u>Indirect Employment Loss</u>	
Military (Net multiplier of .36)	1,019
Civilian (Net Multiplier of .56)	<u>346</u>
Subtotal	1,365
<u>Total Employment Loss</u>	4,812
Percent of Total Baseline Employment ^{1/}	19.5%

^{1/} Includes both civilian and military employment.

Source: Description of Proposed Action and Alternatives, Headquarters, Strategic Air Command, Directorate of Bases and Units; and Hammer, Siler, George Associates

These indirect employment losses will be concentrated in the Trade, F.I.R.E., and Services sectors. They will occur among both the 'front-line' employment (i.e., procurement-related) and ancillary employment (i.e., retail clerks) positions. In addition, the T.C.U. sector will experience employment losses among the numerous moving and storage firms which rely heavily upon the base for their support.

Resultant Unemployment

The civilian labor force in the Blytheville Primary Impact Area consisted of approximately 23,475 persons in March 1976. Of this amount, 1,700 persons or 7.2 percent of the total labor force were unemployed. If the proposed action were to occur; the civilian labor force would be reduced to 23,247 persons based on the assumption that approximately 62 percent of the Appropriated Fund Civilian employees living within the Primary Impact Area would relocate. When added to the existing unemployment situation, the job losses experienced by a closure of Blytheville Air Force Base would create a situation in which 3,397 persons or 14.6 percent of the total civilian labor force would be unemployed. Both pre-action and post-action unemployment rates and civilian labor force figures are presented in the following table.

Table B-9. CIVILIAN LABOR FORCE AND UNEMPLOYMENT
IN THE BLYTHEVILLE AFB PRIMARY IMPACT
AREA

March 31, 1976 Baseline

Civilian Labor Force	23,475
Total Unemployed	1,700
Unemployment Rate	7.2%

Post-Action

Civilian Labor Force	23,247
Total Unemployed	3,397
Unemployment Rate	14.6%

Source: Arkansas Employment Security Division;
and Hammer, Siler, George Associates

Because of the residential distribution of these employees, the communities of Blytheville and Gosnell will be most seriously impacted. This loss of employment will have repercussions which will be felt throughout the economies of these two cities.

In addition to impacting the overall economy, the closure of Blytheville AFB would be particularly detrimental to the minority employment situation. Because of their representation in the labor force, it is estimated that approximately 30 percent of those persons becoming unemployed will be minority group members.

Personal Income

Civilian and military payrolls on the base represent an important component in total personal income (TPI) for the Blytheville AFB Primary Impact Area and closure of the base would have a detrimental effect on TPI in the area. As illustrated in the table on the following page, monthly gross payrolls during March 1976 totalled \$2,883,810. On an annual basis, Blytheville AFB payrolls amount to \$34.6 million.

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Table B-10. MONTHLY GROSS PAYROLL,
BLYTHEVILLE AFB, MARCH 1976

Military

Officers	\$ 706,360
Airmen	<u>1,641,200</u>
Subtotal	(\$2,347,560)

Civilian

DAF Appropriated	\$435,520
Non-Appropriated Fund	<u>100,730</u>
Subtotal	(\$536,250)

Total	\$2,883,810
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Source: November 30, 1976 Leave and Earning Statement File (Adjusted), U.S. Air Force Accounting and Finance Center; and Non-appropriated Fund Financial Analysis Office, Blytheville Air Force Base

As illustrated in the table below, base payrolls represented 12.3 percent of total personal income in the county, a sizeable proportion of the total.

Table B-11. BASE PAYROLL CONTRIBUTION TO
TOTAL PERSONAL INCOME IN THE
BLYTHEVILLE AFB PRIMARY IMPACT
AREA

Total Personal Income	\$282,000,000
Annual Base Payrolls	34,606,000
Percent of TPI	12.3%

Note: Values expressed in 1975 constant dollars.

Source: Local Area Personal Income, U.S. Department of Commerce, Bureau of Economic Analysis; and Hammer, Siler, George Associates

If closure of Blytheville AFB were implemented and its payroll contribution to the community terminated, the economy of Mississippi County would experience not only a direct loss of 12.3 percent of its total personal income but an additional decline in income due to indirect job losses. Because on-base pay levels tend to be higher than those in the community at-large, the loss would be disproportionately severe. While other indirect personal income losses would occur, only those directly associated with base payrolls can be estimated with certainty.

Retail Sales

In 1975, the last full year for which comprehensive retail sales data is available, retail sales in Mississippi County totalled \$160.6 million. This figure does not include sales on the Air Force Base itself in the commissary, exchange and clubs.

To determine current spending by base personnel in civilian retail establishments and to estimate the direct impacts of base closure on total retail sales in the civilian sector, the following methodology was used:

- o The total annual retail expenditure potential of civilian and military personnel assigned to the base was derived by applying a retail sales expenditure factor to total base payroll.
- o Actual retail sales at the Blytheville AFB commissary, exchange and clubs was subtracted from the total expenditure potential to indicate the amount spent in civilian sector establishments.
- o It was assumed that the residual expenditure potential available to the civilian sector was in fact spent in Primary Impact Area retail establishments.

This methodology overstates the contribution of base personnel to civilian retail sales in the area somewhat since some purchases were undoubtedly made in other areas. As a "worst case" methodology, however, it expresses the maximum possible impact of base personnel on local retail sales and the loss that would accompany base closure. The results of the analysis are presented in the table below.

Table B-12. ESTIMATED DIRECT IMPACT OF BLYTHEVILLE PERSONNEL ON RETAIL SALES IN THE PRIMARY IMPACT AREA

<u>Retail Expenditure Potential of Base Personnel</u>	
Annual Base Payroll ^{1/}	\$34,605,720
Retail Sales Expenditure Factor	x .55
Total Expenditure Potential ^{2/}	\$19,033,150
Less: On-Base Retail Sales ^{2/}	-8,578,870
Net Expenditure Potential in Civilian Sector	\$10,454,280
<u>Primary Impact Area Retail Sales</u>	
Total 1975 Retail Sales	\$160,604,000
Maximum Attributable to Base Personnel	\$ 10,454,280
Percent of Total	6.5%

^{1/} Based on March 1976 payroll.

^{2/} Includes Base Exchange, Commissary Sales, and food and beverage sales at on-base clubs.

Source: Bureau of Labor Statistics, U.S. Department of Labor; Survey of Buying Power, 1976; Tab A-1 (revised) BAFB; and Hammer, Siler, George Associates

As illustrated, base personnel accounted for a maximum of \$10.5 million in retail sales at Primary Impact Area establishments, 6.5 percent of total reported sales. If retail sales were to decline 6.5 percent following base closure, it is anticipated that a number of employees would be laid off and that some small businesses, especially those catering to base personnel, would go out of business. The loss of these jobs is accounted for in the multiplier used to express total indirect job losses.

Public Finance (AFERN 4.2.3 BAFB)

If Blytheville AFB were closed, a variety of realignments in public revenues and expenditures would ensue. These impacts would be evident at both the state and local levels.

Because of the formulas often used in the assessment of state and local revenues as well as the variety of complicated formulas used in the apportionment of federal and state funds among constituent jurisdictions, few of the revenue and expenditure impacts can be evaluated in detail. Only one of them can be quantified with any degree of confidence: as reported under AFERN 4.3.3, public school revenue losses from federal and state sources have been estimated.

Apart from these fiscal impacts on local school system revenues, other major sources of state and local revenues will be affected even if the dollar values cannot be quantified with certainty: income and sales taxes, federal revenue sharing, and local ad valorem real property taxes. At the state level, the two major sources of revenue that would be affected are the personal income tax and the sales tax.

Income Taxes (AFERN 4.2.3.1.1 BAFB)

Since many military personnel assume one permanent place of residence for tax purposes throughout their careers, transfer from Blytheville AFB to other bases in the country will not have a major impact on state income tax revenues. The income tax loss from terminated civilian employees and indirect job losses may be more severe even if their numbers are smaller. These impacts cannot, however, be quantified.

Sales Taxes (AFERN 4.2.3.1.3 BAFB)

State sales tax losses attributable to direct impacts of base closure can at least be approximated. Based on the estimated \$10.5 million spent by base personnel at retail establishments in the civilian sector, the state derives approximately \$314,000 annually in sales tax revenues from base personnel at its three percent taxing rate. Even as a "worst case" example, this loss in sales tax revenues represents approximately one-tenth of one percent of total state sales tax collections of \$210 million in 1975.

Unemployment Compensation

A base closure would create both direct and indirect job losses. In most cases, these unemployed personnel would be eligible for unemployment compensation benefits. An unemployment compensation benefit program is actually an insurance program which by design is intended to be wholly supported by the mandated contributions of the private and public sector employers who participate in the state-administered program. Although unemployment benefits are paid through a state program, the funds utilized originated with the employers whose contributions are "banked" until needed. Any overdraw against contributions banked must be repaid to the state in the future.

At this point in time the number of people finding new jobs in the area, increasing their average daily commuting distances to take jobs outside the area, or relocating to other areas cannot be accurately projected. In this analysis, then, a specific unemployment benefit program impact -- or cost -- was not developed. It is anticipated that due to the magnitude of the indirect job losses estimated, the number of people applying for unemployment benefits will increase significantly and the payout will increase accordingly.

Revenue Sources (4.2.3.3 BAFB)

At the local level, the closure action would have a more pronounced impact on fiscal affairs. Federal revenue sharing, state revenue turnback and ad valorem taxes are among the revenue sources that would be affected.

Title I of the State and Local Fiscal Assistance Act of 1972 (Revenue Sharing) provides for the distribution of federal funds to units of local government. The amounts to be distributed to each unit of government are determined by applying a set of formulas to descriptive data pertaining to each unit. These formulas utilize population, per capita income, adjusted taxes and inter-governmental transfer as their basic data elements and are used to determine each government's share of the total amount. The resulting computations distribute available funds among all eligible units of local government on a national basis. While the closure action will undoubtedly alter many of the measures drawn upon in the allocation formula, the Office of Federal Revenue Sharing in the U.S. Treasury Department has stated that no reliable estimates of the impacts on a local government can be made. In part, this is due to the nature of the allocation process: the effect of changes in one local area is dependent upon comparisons with all other eligible units of local government in the U.S. Even estimated direct changes in population are not a reliable indicator since this factor in the formula is important only within certain minimum and maximum thresholds concerning per capita income.

In sum, estimated changes in revenue sharing based on per capita amounts do not reflect the characteristics of the distribution formula and no other reliable method of gauging the impacts is available. While federal revenue sharing funds may diminish, it is impossible in this analysis to predict the amounts or order of magnitude.

Even though this is the case, both the State Revenue Office and the Arkansas Department of Treasury have made estimates of potential revenue losses. According to these sources, Mississippi County would lose approximately \$180,000 in Federal Revenue Sharing and \$34,000 in general revenue turnback appropriations.

In addition to the probable losses of revenues from these sources, both Blytheville and Gosnell would experience losses of other local revenues. In Gosnell, where a major source of revenue is receipts from the water and sewer system, it has been estimated that approximately 50 percent of this revenue would be lost if the base closed. This could cause the Gosnell Water Association to default in its approximately \$630,000 in outstanding sewer revenue bonds. In Blytheville, the present 3.5 mill tax rate -- this

is the only city in the state not taxing at its constitutionally set maximum of 5 mills -- would in all likelihood have to be increased.

Also, most public services and systems are planned using population projections. Therefore, charges for services and systems are computed under the assumption that they will be fully utilized. A reduction in population will result in either underutilization of the services and systems or an increase in charges which again must be assumed by those who remain in the community.

Real Estate Property Taxes (AFERN 4.2.3.1.2 BAFB)

Real estate property taxes are the single largest source of revenue for most units of local government. While real estate values in the market place will undoubtedly diminish, it is not certain that property tax revenues will necessarily decrease. This depends upon local government operating costs and budget requirements, changes in assessed values or the effective tax mill rate.

To some extent, the departure of base personnel and their dependents as well as other indirect population losses may diminish the demand for certain types of public services. However, many operating costs in local government are "fixed" and cannot be readily adjusted to reflect changes in the population level. In continuing to meet operating costs, the same or only slightly diminished amounts of property tax revenues may be required by the local governments most severely impacted by base closure.

In the face of a depressed real estate market and diminished values, local governments have several options in closing the gap between revenue requirements and the value of their real estate tax base: institute new types of taxes, alter the assessment/market value ratio used in levying real estate taxes or raise the real estate tax rate itself. Whatever options they pursue, local government decisions will undoubtedly increase the tax burden on remaining households in one way or another.

Base Procurement (AFERN 4.2.4 BAFB)

In Fiscal Year 1976, Blytheville AFB made approximately \$29 million in non-construction procurement purchases. Of this amount, approximately \$6.1 million or 20.9 percent of total procurements were within the Primary Impact Area. A profile of non-construction procurements made by Blytheville AFB is presented in the following table.

Table B-13. NON-CONSTRUCTION PROCUREMENTS IN THE
PRIMARY IMPACT AREA, BLYTHEVILLE AFB,
FISCAL YEAR 1976

<u>Category</u>	<u>Total Procurements (0000)</u>	<u>Procurements in Primary Impact Area</u>	
		<u>Amount (000)</u>	<u>Percent</u>
Supply	\$ 1,201.3	\$ 288.3	24.0%
Commissary	6,072.0	1,457.3	24.0
Exchange	3,023.0	872.0	28.8
Civil Engineering	1,146.1	275.1	24.0
Contract Maintenance	124.4	29.8	24.0
Medical	163.8	39.3	24.0
NAFI	695.0	147.3	21.2
Miscellaneous Services	392.4	94.2	24.0
COPARS	133.0	31.9	24.0
COCGSS	642.4	154.2	24.0
Travel of Persons	77.2	.7	1.0
Travel of Things	1,166.6	1,166.6	100.0
Utility and Rent	1,010.8	1,010.8	100.0
Communications	221.3	221.3	100.0
POL	12,959.7	287.5	2.2
(JP-4)	(12,672.2)	(0)	(0)
	\$29,029.0	\$ 6,076.3	20.9%

Source: Base Procurement, Supply, Transportation, Exchange, Accounting and Financial Office, Blytheville AFB, Arkansas

As indicated, Blytheville AFB awarded approximately \$6.1 million in non-construction procurement purchases to Primary Impact Area firms. In terms of absolute amounts, commissary purchases represent the largest single category of sales. Most of these procurements consist of purchases made from local food wholesalers. Relatively, the T.C.U. sector attracts the largest aggregate amount of procurements with the "utility," "travel of persons" and "travel of things" categories accounting for approximately \$2.1 million in total procurements.

Because the duration of construction contracts quite frequently extends over a multi-year period, it is helpful to examine construction awards on an annual average basis. This provides the most accurate assessment of the loss in awards which would be experienced if the proposed action were to occur. The following table presents annual construction contracts by the area to which they were awarded for the period from FY 1972 to FY 1976.

Table B-14. ANNUAL CONSTRUCTION AWARDS IN THE PRIMARY IMPACT
AREA, BLYTHEVILLE AFB, FISCAL YEARS 1972-1976

<u>Fiscal Year</u>	<u>Total Construction Awards</u>	<u>Construction Awards In Primary Impact Area</u>
1972	\$1,028,048	\$ 717,787
1973	912,900	147,150
1974	3,034,200	706,800
1975	1,743,203	1,513,153
1976	537,200	400,000
Annual Average	\$1,450,910	\$ 697,058

Source: End of Year Budget Obligation Ledger and Base Procurement Officer, Blytheville AFB, Arkansas.

As indicated, Primary Impact Area firms receive approximately \$700,000 annually in construction awards. If the proposed realignment of Blytheville AFB occurs, the Primary Impact Area will not only lose this income but the approximately \$6.1 million in non-construction procurements as well. This loss of approximately \$6.8 million in basic income on an annual basis will heavily impact the economy of Mississippi County. Because of the basic nature of such procurement and construction income, secondary employment and income losses would be expected. These employment losses are included in the indirect losses calculated by application of the regional employment multiplier. The dollar values are summarized in the table below.

Table B-15. ESTIMATED ANNUAL LOSS IN CONSTRUCTION AND PROCUREMENT AWARDS, BLYTHEVILLE AFB PRIMARY IMPACT AREA

<u>Procurement Type</u>	<u>Amount</u> (0000)
Non-Construction Procurements	\$6,076.3
Average Annual Construction Awards	<u>697.1</u>
Total	\$6,773.4

Source: Hammer, Siler, George Associates

Housing (AFERN 4.2.5 BAFB)

The housing market in Mississippi County is dominated by families and individuals permanently residing in the area. A relatively small portion of the units are devoted to seasonal use or occasional vacation/second home occupancy. To ensure consistency in analysis, however, only those units available for sale or rent have been counted as vacant and computed in the vacancy rate to indicate market conditions.

On the assumption that most year-round units vacant at the time of the April Census but not available for sale or rent represented vacation and second homes, these have been grouped with seasonal units and treated as a market separate from that serving the local population base. The resulting portrayal of the 1970 housing stock within Mississippi County is presented in the table below.

Table B-16. 1970 HOUSING STOCK CHARACTERISTICS IN THE BLYTHEVILLE AIR FORCE BASE PRIMARY IMPACT AREA

	<u>Blytheville/ Gosnell</u>	<u>Balance of Mississippi County</u>	<u>Total Primary Impact Area</u>
<u>Total Housing Units</u>	8,318	11,500	19,818
Seasonal Units	3	164	167
Vacation/Second Homes	171	677	848
Subtotal	<u>174</u>	<u>841</u>	<u>1,015</u>
Percent of Total Stock	2.1%	7.3%	5.1%
<u>Units Intended for Year Round Occupancy</u>	8,144	10,659	18,803
Occupied Year Round Units	7,827	10,465	18,292
Owner-Occupied	(53.9%)	(44.4%)	(48.5%)
Renter-Occupied	(46.1%)	(55.6%)	(51.5%)
Vacant Units for Sale or Rent	317	194	511
Market Vacancy Rate	3.9%	1.8%	2.7%

Source: U.S. Census of Housing, 1970.

Of the nearly 20,000 housing units within Mississippi County, only 5 percent were seasonal units and those intended for occasional vacation or second home use. Of the remaining 18,803 units intended for permanent year-round occupancy, slightly over 500 were available for sale or rent. The market vacancy rate within the county as a whole, then, was only 2.7 percent, a rate which indicated an equilibrium market. In the Blytheville/Gosnell area, the market vacancy rate was only slightly higher than the county-wide average but at 3.9 percent was well within normal tolerance levels.

Closure of Blytheville Air Force Base would have both short-term and long-term effects on the previously healthy housing market in the Primary Impact Area.

Even the announcement that Blytheville may be closed has had an immediate impact. In the atmosphere of uncertainty, developers have cancelled planned projects, financial institutions are reluctant to initiate new mortgage commitments and construction loans while consumers themselves are hesitant to make the financial commitments involved in purchasing a new home. In this current state of uncertainty, the housing market has come to a virtual standstill and the inventory of unsold units on the market continues to mount.

If the Air Force Base is closed, the impact on the community housing market would be severe. Departing military and civilian personnel currently living in off-base housing would place their vacated units on the market and increase the vacancy rates substantially. Though it would have no effect on the market as such, federal assistance would be available to military and civilian employees dislocated as a result of the alternate Blytheville closing.

The Homeowners Assistance Program administered by the Army Corps of Engineers provides assistance to permanent military and civilian employees who own their homes and would be relocated as a result of base closure. If an eligible applicant sells his home on the private market for less than its "prior" appraised fair market value, the program reimburses the employee for 95 percent of the difference between its "prior" value and the actual sales price. If the eligible applicant is unable to sell his home on the private market within one year of the base action, the government will purchase the home and pay the applicant 90 percent of its "prior" appraised fair market value. Having virtually no effect on the local housing market as such, the program simply minimizes the financial loss to Defense Department home-owners affected by the base closure action.

Those losing their jobs as an indirect result of base closure would have no such assistance available to them; they may be confronted with several problems. Home-owners who lose their jobs as an indirect result of base closure may wish to relocate to other areas but have difficulty selling their homes. If they remain in the area and collect unemployment benefits, terminated employees may have difficulty meeting rent and mortgage payments. As a consequence, mortgage delinquency rates may increase and unless the home-owner has substantial equity in the unit, mortgage default rates may likewise increase somewhat.

As a consequence of both direct and indirect impacts, the housing market in the Primary Impact Area will be depressed. Even those who retain their jobs and could afford to buy new housing may be discouraged from doing so by the general uncertainty concerning the future of the area and the general "depression" mentality. If homes are sold at all, prices will undoubtedly be depressed but it is impossible to predict the relative decline in values with any degree of certainty. In the short run, certainly, supply would far exceed demand. To some extent, continued growth in the civilian economy may absorb some of the vacated units but the period until market equilibrium is regained would be protracted.

In measuring the quantifiable effects of base closure on the housing market, only the increase in vacancies attributable to direct civilian and military household losses can be computed. There are several problems in updating 1970 Census data to accurately depict 1976 housing market baseline conditions, however. While mobile homes account for an increasingly important part of the housing stock in such areas, there is no reliable data on the number of mobile homes occupied since 1970. Data on new construction is available for building permit issuing-jurisdictions, but many rural areas do not require permits and reliable indicators of new construction are not available. By the same token, virtually no data is available on current vacancy rates.

Nonetheless, estimates of the baseline 1976 housing stock have been developed using the best available data. These data include building permit activity reported in the C-40 Series of Construction Reports published by the U.S. Department of Commerce, estimates of housing stock losses due to fire, demolition and other causes as well as comments by local members of the real estate industry.

Since 1970, it is estimated that the number of housing units intended for year-round occupancy in Mississippi County increased slightly less than 10 percent. Overall vacancy rates within the county have changed little since 1970 and are estimated to be in the three to four percent range, well within market tolerance levels. These 1976 baseline conditions and estimated direct impacts of base closure are depicted in the table below.

Table B-17. ESTIMATED DIRECT IMPACT OF BLYTHEVILLE AFB CLOSURE ON HOUSING MARKET VACANCIES IN THE PRIMARY IMPACT AREA

<u>Estimated 1976 Housing Market Baseline</u>	<u>Blytheville/ Gosnell</u>	<u>Balance of Mississippi County</u>	<u>Total Primary Impact Area</u>
Units Intended for Year Round Occupancy	8,538	11,966	20,504
Occupied	8,202	11,607	19,812
Vacant for Sale or Rent	333	359	692
Market Vacancy Rate	3.9%	3.0%	3.4%
<u>Direct Base Closure Impact</u>			
Units Vacated by Departing Personnel	1,334	26	1,360
Total Vacant Units for Sale or Rent	1,667	220	2,052
Market Vacancy Rate	19.5%	2.1%	10.0%

Source: Hammer, Siler, George Associates

As a direct result of military and civilian base personnel leaving the Primary Impact Area, it is estimated that over 1,300 owner-occupied and rental units will be placed on the market. This will triple the number of vacant units for sale or rent within the county as a whole and increase the market vacancy rate substantially to approximately 10 percent. The Blytheville/Gosnell area will be particularly impacted. There the number of vacant units on the market will increase five-fold and boost the vacancy rate from a tolerable four percent level to a disastrously high 19.5 percent rate.

While these increases in the market vacancy rate are dramatic, they only represent those attributable to direct household losses and do not begin to account for other indirect job losses and departures from the region. Such secondary impacts will certainly compound the market vacancy rates and add to the severity of depressed housing market conditions, particularly within the Blytheville/Gosnell area.

Education (AFERN 4.3.3 BAFB)

Two school districts in Mississippi County would be impacted if Blytheville AFB were to be closed: the Gosnell School District, which includes the base itself; and the Blytheville School District. These two districts contain the students from 97 percent of Blytheville AFB related households. Base closure would result in enrollment losses, funding losses, employment losses, and under-utilization of facilities.

Public School Enrollment (AFERN 4.3.3.1 BAFB)

Blytheville AFB dependents represent 1,421 students, or 19.6 percent of the total 7,242 students enrolled in the two school districts which would be impacted by the proposed closure action. Of the two, Gosnell contains 80 percent of base-related students. As shown in Table B-17, it is estimated that Gosnell would lose 1,099 or 65.7 percent of its 1,673 students. Blytheville schools are estimated to lose 190 students, or 3.4 percent of their enrollment. The remaining Blytheville AFB dependents are distributed in numerous communities throughout Arkansas, Missouri and Tennessee.

Table B-18. IMPACT ON PUBLIC SCHOOL SYSTEM
ENROLLMENT, BLYTHEVILLE AFB

School District	1975-1976	AFB Dependents			Estimated Loss			Percent of
	Total Membership	Type A	Type B	Total	Type A	Type B	Total	Total Membership
Gosnell	1,673	959	183	1,142	959	140	1,099	65.7%
Blytheville	5,569	0	279	279	0	190	190	3.4%
Total	7,242	959	462	1,421	959	330	1,289	17.8%

Source: Office of Education, U.S. Department of Health, Education and Welfare; Superintendent of Blytheville Public Schools; and Hammer, Siler, George Associates

Public School Funding (AFERN 4.3.3.8)

Primary and secondary educational funding sources include local ad valorem property assessments supplemented by federal, state, and Public Law (PL) 81-874 Federal Impact Aid funds.

The Gosnell School District received \$535,930 in PL 874 funds based on the Average Daily Attendance (ADA) of AFB dependents. Blytheville schools received \$71,170 in PL-874 funds. Section 5(e) of the law provides for 90 percent funding of school districts in which there has been a decrease in federal activities, in which total ADA was under 90 percent of the previous year's ADA and in which the ADA of base dependents equalled at least 10 children and 10 percent of the total enrollment. Under these criteria, only the Gosnell School District would be eligible for continued federal aid at a reduced rate. PL 874 impact aid funds would continue at 90 percent of the previous fiscal year until 1978, when the current law expires unless it is extended by Congress. If extended, aid would continue for the three years following implementation of the proposed action. The PL 874 payments to the Blytheville School District would be discontinued, resulting in an estimated revenue loss of \$71,170.

The Gosnell School District, at the time federal impact aid is discontinued, will experience a revenue loss of \$535,930. Additional revenue losses would occur as state-aid was reduced. It is estimated the Gosnell and Blytheville schools would lose \$441,980 and \$58,695, respectively, in state aid.

Losses from PL-874 sources and state aid would total \$977,910 in Gosnell and \$129,865 in Blytheville.

Table B-19. ESTIMATES OF FUNDING AND EMPLOYMENT LOSSES
TO PUBLIC SCHOOLS, BLYTHEVILLE AIR FORCE BASE

<u>School District</u>	<u>Estimated PL-874 Funds Loss</u>	<u>Estimated State Aid Loss</u>	<u>Total Estimated Fund Loss</u>	<u>Estimated Teachers/Support Staff Loss</u>
Gosnell	\$535,930	\$441,980	\$977,910	72/29
Blytheville	<u>71,170</u>	<u>58,695</u>	<u>129,865</u>	<u>10/7</u>
Total	\$607,100	\$500,675	\$1,107,775	82/36

Source: Office of Education, U.S. Department of Health, Education and Welfare; Superintendents of Gosnell and Blytheville School Districts; and Hammer, Siler, George Associates.

Insofar as a school district's operating expenses consist of both fixed and variable costs, and operating expenses are unlikely to be reduced proportionately to enrollment losses, it is likely that local districts may be required to request increased tax mill rates as a compensatory measure.

As a result of the projected enrollment decrease, the teaching and support staffs of the school district would be reduced. The Superintendent of the Gosnell School

district anticipates employment reductions proportionate to enrollment decline. This means that 101 teachers and support personnel would become unemployed.

In the Blytheville school system, a total of 17 people, 10 of whom would be teachers, would probably become unemployed. However, as 26 teaching positions and 15 support staff positions are held by base connected personnel, it is possible that the district could "re-employ" 24 personnel from the Gosnell schools.

The Gosnell schools, grades K through 12, are located in a campus setting across from the Air Force base. If enrollment were reduced by almost 66 percent, the number of classrooms required would be significantly reduced. Whether or not the physical distribution of grades and classrooms could be altered in order to close one of the buildings has not been resolved.

Higher Education (AFERN 4.3.3.5 BAFB)

Currently, there are two institutions of higher learning in Mississippi County, Arkansas. Both the Cotton Boll Vocational-Technical Institute and the Mississippi County Community College provide and receive valuable support from base-related personnel. For instance, Mississippi County Community College, founded in 1975, is still in an active development role and relies heavily upon base resources. In addition to drawing upon the base for students, instructors and supporting staff, MCCC has plans to initiate a nursing program with help from the Base Hospital. Closing the base would not only jeopardize such programs but seriously cut into overall enrollments as well.

There are also several programs of higher education located on the base itself. These programs range from a branch of the Arkansas State University Graduate School to a program by the Oklahoma State University for FCC license applicants. These programs serve approximately 800 military and civilian personnel. The proposed base closure would also eliminate these programs.

Medical (AFERN 4.3.4 BAFB)

Blytheville area civilian community hospitals presently contain approximately 220 beds. This capacity is being supplemented by a net addition of 170 beds: upon completion of the 220-bed expansion at Chickasawba Hospital, the 50-bed Doctor's Hospital will be closed.

If the proposed closure of Blytheville Air Force Base were to occur, several impacts would be felt in the medical sector. First, the \$12.5 million expansion program currently being undertaken by area hospitals would be seriously jeopardized. This expansion, which is 50 percent complete, is being financed by revenue bonds which were issued on the assumption that Blytheville Air Force Base would continue to provide a major population base and revenue source. With approximately 60 to 65 percent of its current case load coming from Medicare or Medicaid recipients, a base closure would cause the

hospital system to experience considerable difficulty in obtaining the revenues necessary to amortize its debt.

Second, if the base were to close, the system would experience the loss of valuable personnel. Presently, there are approximately 30 military dependents working at Chickasaw Hospital alone. The majority of these persons are in highly skilled positions (i.e., registered and licensed practical nurses) and would be difficult to replace if lost.

Finally, the closure of the base and its medical facilities would undermine a medical situation which is only now being resolved. With the new expansion program underway and the interchange of ideas between civilian and military physicians, Mississippi County is in the process of pulling itself out of the bottom segment (70th out of 75 counties in 1973) of Arkansas counties in terms of the provision of health services. Closing the base would impede progress now being made.

Community Services and Facilities (AFERN 4.3.5 BAFB)

If the proposed closure of Blytheville Air Force Base were to occur, several negative impacts would be experienced in the community services and facilities sector.

First, the several cooperative agreements between the base and local communities with regard to police and fire protection would be effectively terminated. In addition to the various mutual agreements between the Base Security Police and several local and state police departments, the formal mutual aid agreements between the Base Fire Department and the Blytheville and Gosnell Fire Departments would cease. In the case of Gosnell, which has only a volunteer fire department, the proposed closure would result in a serious financial blow which could negatively impact the level of fire protection.

Second, the proposed closure would seriously impact organizations which now depend on Air Force personnel to provide both physical and financial support. Among these organizations are the numerous churches, civic organizations and charities which now operate in Mississippi County.

Within the immediate Blytheville/Gosnell area there are four financial institutions. They are the Farmers Bank and Trust Company, First National Bank, the Blytheville Federal Savings and Loan, and the Blytheville Federal Credit Union. Together, these financial institutions represent approximately \$110 million in total assets. It is estimated that the military personnel of Blytheville AFB alone have approximately \$11.3 million in deposits and \$11.4 million in outstanding loan balances at these institutions.

If Blytheville AFB were to close, several impacts would be felt by these institutions. First, there would be a substantial loss of the deposit base at these institutions. This would be particularly true at the Federal Credit Union where the vast majority of its patrons are base-related personnel. This loss of deposits could possibly cut into

the reserve positions of these institutions and adversely affect their ability to make other loans. Second, in the opinion of local leaders, the proposed closure could result in increased installment loan defaults. Such defaults would lead to increased foreclosures and repossessions which would in turn lead to increasing surpluses of residential and commercial property. Finally, the immediate losses imposed by a base closure plus an extended delay in recovery time due to the 'depression psychology' may result in temporary insolvency.

Military Retirees (AFERN 4.3.5.7 BAFB)

There are estimated to be several hundred military retirees from all the services residing in Mississippi County at the present time who directly utilize base facilities. In addition, many other military retirees who live outside of Mississippi County also make use of the facilities at Blytheville Air Force Base on a regular basis. These retirees and their dependents are authorized to use the commissary, the exchange and the medical facilities at the base, and they have access to many of the administrative services and recreational facilities on the base also. If Blytheville AFB is closed retirees will be forced to find other military installations where they can take full advantage of their retirement benefits. Blytheville is not located relatively close to any other major military facility which now provides these services. Medical services could be obtained in the local area at civilian hospitals utilizing the CHAMPUS program, however, use of alternative commissary, exchange and other base services would require a commute to Memphis, Tennessee or Little Rock, Arkansas.

III. A. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS
OF SOCIOECONOMIC RESOURCES (BY BASE)

III. A. Irreversible and Irretrievable Commitments of Socioeconomic Resources

Kincheloe AFB

If a closure of Kincheloe AFB takes place, certain expenditures of capital, materials, manpower and time which have been made or committed may be irretrievable. Such irreversible and irretrievable expenditures of resources which occurred while Kincheloe AFB was in operation and which represent resources ineffectively utilized or lost to local governments and citizens of the impact region are highlighted below.

Capital investments by the local government for support services and facilities related to the base presence would become under-utilized.

Because of the cooperative agreements in existence between KAFB and the surrounding communities, post-action investments would have to be made by the impacted communities. Such investments would most likely take the form of increased capital outlays for those services directly impacted by the proposed action. Such services include medical service, fire protection and police protection.

Existing development guidance policies (i.e., land use guidance system) may be invalidated. This invalidation will result from drastic changes in the background conditions on which these policies were based.

A loss in personal and business income and investment would result from the proposed action at KAFB as small businesses are forced to close.

These services developed specifically in response to the military presence in the region would be lost through closure or transfer.

Blytheville AFB

The irreversible and irretrievable commitments of socioeconomic resources associated with a closure of BAFB would be similar in nature to those experienced at Kincheloe AFB and therefore will not be discussed separately. Refer to Kincheloe AFB narrative above.

Wurtsmith AFB

The irreversible and irretrievable commitments of socioeconomic resources associated with a closure of WAFB would be similar in nature to those experienced at Kincheloe AFB and therefore will not be discussed separately. Refer to Kincheloe narrative above.

III. B. UNAVOIDABLE ADVERSE EFFECTS AND MITIGATION
POSSIBILITIES (BY BASE)

III.B. UNAVOIDABLE ADVERSE EFFECTS AND MITIGATION
POSSIBILITIES (BY BASE)

In this section of the report, a brief summary of those probable impacts identified in Section II.B. which may be considered adverse and unavoidable is presented. All of these impacts have been estimated based on the "worst possible" case and are summarized by five major functional categories for each of the three Strategic Air Command bases. The general course of the economic repercussions of a base closure in a local economy is traced in the paragraphs below, followed by a detailed discussion of impacts at each base.

Upon closure of a major military installation, the direct loss of jobs, personal income, and procurements will lead to secondary job losses in all sectors of the local economy. As these job losses take place, they will create their own cycle of indirect job losses in a continuing process until the full impact of the action has been felt and the economy stabilizes. Experience with the closure of military installations indicates that this cyclical process takes from six months to one year before it bottoms out. This period varies, of course, depending on the state of the local economy at the time of closure, the time phasing of the action, and the mitigating measures adopted.

As base operations wind down, businesses which provide goods and services to the base, its personnel or dependents, will find that a large portion of their market is gone and some may be forced to close. As more people become unemployed and opportunities for employment in the area decrease, households may begin to leave the area in search of new opportunities. This indirect loss in population would cause a further decrease in demand for services and possibly further unemployment.

In conjunction with the loss of employment, the area would experience a decrease in total personal income. This loss will be directly attributable to the substantial payroll losses experienced with base closure and will be supplemented by income losses associated with the indirect job losses. This decrease in the level of total personal income will have reverberations which will be felt throughout several sectors of the overall economy.

The housing market, already strongly impacted by the high vacancy rate caused as a direct result of the base closure, may be further impacted by additional losses of population in the area. These population losses and the resultant decreases in total personal income could lead to a softening of demand in the overall housing market. Because of the 'depression psychology' which tends to manifest itself after a base closure, it appears that major housing impacts will be felt in the short-term. While this short-term increase in housing vacancy and the potential softening of demand would have an adverse impact, there is a mitigative step that can be taken to help offset the potential financial loss to base personnel. The Department of Defense Homeowners Assistance Program provides a guarantee of 95 percent of the pre-announcement appraised value to those DoD employees who must sell their homes, or a purchase guarantee at 90 percent of the appraised value if not sold privately after one year.

The public financial structure of the Primary Impact Area communities will also be affected by a base closure. It has been stated that in most cases impact area communities will experience a loss of various federal and state revenues which are dependent on several socioeconomic variables. Among these variables are population levels, per capital incomes and taxes. All of these will be impacted to an extent by a base closure. Also, as people leave the impact area, the demand for public services, and therefore user charge revenues, would decline. However, the fixed cost infrastructure will still be present. This could entail deficit spending at the local government level, an increase in user charges for the remaining population, or the cutback of service levels as available funds are diverted for debt service retirement. Another major source of revenue, property taxes, also be affected. If there is a general deterioration in the property values of owner-occupied houses, any subsequent drop in assessed values could precipitate a tax rate increase. Either the federal government, absentee owners, financial institutions, or subsequent buyers of houses would continue to be liable for real estate taxes on payments in lieu of taxes.

Educational facilities would be impacted by the loss in enrollment which leads to reductions in federal and state operating aid funds. This cutback in funds could seriously jeopardize the ability of some systems to function as viable entities.

Cutbacks in both personnel and facilities/services would be likely. Both private institutions and those institutions of higher learning located in the impact areas will also experience losses in revenues and financial resources.

Various community services and facilities will be adversely impacted by a base closure. Numerous cooperative agreements which exist between the bases and surrounding communities for police and fire protection would cease to exist. In addition, the departure of base-related dependents could quite often lead to losses of key professional personnel in both the medical and educational sectors. Such losses could lead to an overall deterioration in the 'quality of life' enjoyed in the impact areas.

In the following paragraphs, a detailed discussion of impacts at each base is presented. This discussion will focus upon the on-base employment losses, reduction of local economic activity and business volumes, reduction of public revenues, disruption of public service patterns and the disruption of real estate markets experienced in the Primary Impact Area of each base.

Kincheloe AFB

On-Base Employment Losses

The direct loss of 3,074 military and 737 civilian personnel would have an immediate direct effect on the local economy and would induce other, indirect employment losses. These 'worst case' employment losses would result in a civilian unemployment rate of approximately 32 percent, a disastrously high rate for a very fragile economy dependent upon government outlays.

Reduction of Local Economic Activity and Business Volumes

The proposed action would precipitate a direct loss of payroll income in the Primary Impact Area. This loss in payroll income would be supplemented by decreases in the overall level of total personal income. The decrease in TPI would have repercussions which would be felt throughout the local economy.

The loss of base procurement awards worth almost _____ to the local economy would adversely impact those businesses which have been specifically developed to serve the military establishment in the region.

Although a large portion of military retail sales are made on-base, local retailers would experience a direct loss in sales due to the departure of KAFB personnel and their families. Many small retailers in the area could be forced out of business by a reduction in retail sales and disposable income. Past experience with base closure has shown that retailers engaged in the sale of shoppers goods are most affected by a large-scale withdrawal.

There would be a loss of bank deposits due to both direct and indirect employment losses. This could reduce the funds available for new mortgages and other economic stimulant loans on the part of local lending institutions. In the worst case it could lead to defaults as bank obligations become due.

Reduction of Public Revenues

Three school districts will experience the loss of both federal and state operating aid. One of these districts, Rudyard, would experience a loss in excess of \$2 million.

A reduction in public utility revenues would occur as a result of a decrease in usage. This reduction could cause an increase in user charges to the remaining population. Reduced user charge revenues may jeopardize payback schedules on any outstanding revenue bonds which were used to finance the construction of public utilities.

There could be a slight change in revenue-sharing funds in Chippewa County due to decreases in population and changes in per capita income.

Disruption of Public Service Patterns

The elimination of certain services which had been cooperatively provided (such as medical, police, fire and air traffic control) could necessitate increased public sector investment to ensure that these services remain available to the local population.

The reduction in demand for public utilities may delay planned extensions of such services to the more remote areas, thereby depriving the local population of services from which they would otherwise have benefitted.

Disruption of Real Estate Markets

There would be an increase in private housing market vacancies, particularly over the short run. This may result in the reduction of housing market values, particularly as supply would far exceed demand in Chippewa County.

Existing transient lodging facilities may experience a decrease in their patronage due to the proposed closure, particularly as a portion of tourism in the area consists directly of visiting families of servicemen.

Wurtsmith AFB

On-Base Direct Employment Losses

The direct loss of 3,103 military and 736 civilian personnel at WAFB would seriously impact the employment base of the Iosco County economy. This type of occurrence would be devastating to any small, non-diversified economy, and could be even more so to Iosco County, which depends on the inflow of federal dollars to support many jobs in other basic and non-basic employment sectors.

Reduction of Local Economic Activity and Business Volumes

A closure of WAFB would reduce the population of Iosco County by almost 30 percent, resulting in reduced demands for retail goods and services, public utilities, housing and public services.

The closing of WAFB would also cause direct payroll losses and indirect losses of personal income.

Concurrent with the direct loss of base payroll would be a direct loss of base procurement awards; concurrent with the indirect loss of personal income would be an indirect loss of personal expenditures.

Deposits at local lending institutions would decrease with the losses of population and businesses.

A number of small and specialized businesses around the WAFB could be severely impacted if not put out of business as a result of a closure action. The direct loss of almost 50 percent of the county employment base would significantly affect retail sales within the county, resulting in some closings and underutilization of retail stores and centers.

Reduction of Public Revenues

The local school district would experience a decline in federal and state operating aid as a result of substantial enrollment decreases.

Public facilities and utilities that generate revenue through user charges would experience reduced revenues as a result of reduced population and demand. Reduced user charge revenues could jeopardize payback schedules on revenue bonds used to finance construction of public facilities.

There could be some impact on Iosco County's annual allocation of federal revenue-sharing funds due to reduced population levels and changes in per capita income.

Disruption of Public Service Patterns

The population and household losses in Iosco County would reduce demands for water, sewerage and power on the local utility agencies or companies. The reduced demand and payment of user charges could jeopardize outstanding revenue bond payback schedules or limit the local area's ability to secure bonds for future utilities expansion.

The utilization of certain public schools in the county would be significantly affected, possibly resulting in capacity underutilization in the short term.

If the base hospital is closed, there would be a measurable impact on the availability of medical services to military retirees in the county.

The various cooperative agreements between the base and surrounding jurisdictions for police and fire protection would cease to exist. This would place increased demands on the limited resources of these jurisdictions and could have adverse impacts on their fiscal capabilities and resources.

Disruption of Real Estate Markets

The relocation of base-related households would have an adverse impact on an otherwise healthy housing market.

The value of owner and renter housing could be expected to be depressed due to the weakening in demand resulting from base closure.

Over the short-term future, the generally depressed economic climate in Iosco County which would be caused by a base closure would probably discourage new private real estate development interest in the residential and commercial sector of the market.

Existing transient lodging facilities may experience a decrease in their patronage due to the proposed closure, particularly as a portion of tourism in the area consists directly of visiting families of servicemen.

Blytheville AFB

On-Base Employment Losses

The direct loss of 2,830 military and 617 civilian personnel would have immediate and direct short-term impacts on the local economy. These losses would induce employment losses throughout the economy as the "multiplier effect" became evident.

Reduction of Local Economic Activity and Business Volumes

A closure action would cause a direct loss of population and payroll income as well as indirect losses of personal income.

The loss of base procurement and construction awards would adversely impact those businesses which have been specifically developed to serve the military establishment in the region. Small specialized firms would be particularly impacted.

The retail sector in Mississippi County would experience a drop in sales largely as a result of the induced decreases in payroll and personal expenditures. Although a significant portion of military retail sales are made on-base, there would also be some direct loss in the local economy attributable to their departure.

There would be a loss of bank deposits due to both direct and indirect employment losses. This loss of deposits could place one or more financial institutions in jeopardy with regard to their solvency.

Reduction of Public Revenues

The Blytheville School District #5 (Gosnell) would experience a 10 percent decline each year in the amount of Federal Impact Aid funds as a result of the decline in military-related enrollees.

A reduction in public utility revenues would result due to a decrease in usage. This reduction could cause an increase in user charges for those persons who remain. Reduced user charge revenues could jeopardize payback schedules on outstanding revenue bonds which were used to finance the construction of public utilities.

There could be a reduction in Federal revenue-sharing funds as a result of decreases in per capita income and population.

Disruption of Public Service Patterns

The decrease in user charge revenues for public utilities could lead to a situation in which the bonding capacity of local utilities is changed. This could adversely affect any planned improvements or modifications to the system.

The elimination of several cooperative functions (i.e., fire protection) could impose an immediate burden upon surrounding communities in that they would have to provide these essential services on a unilateral basis.

Blytheville School District #5 (Gosnell) would increase its share of underutilized facilities and services.

Disruption of Real Estate Markets

There would be increased vacancies in the private market, especially over the short run. Such an increase in vacancies could lead to a series of related social problems (i.e., vandalism).

There would be a decrease in private investor demand over the short run. Whereas speculative development may have contributed significantly to new housing development in the past, it is expected that this source of supply would tighten up. The decrease in private investor interest could serve as a further impediment to the normal process of economic recovery.

Existing transient lodging facilities could experience a downturn in their patronage due to the proposed cutbacks, particularly as a portion of this patronage consists directly of visiting families of base personnel.

AVAILABLE MITIGATIVE ACTIONS

Based upon the preceding analyses of potential adverse impacts anticipated at each base under study, five major impact categories have been identified. These impact categories include:

1. On-Base Employment Losses
2. Reduction of Local Economic Activity and Business Volumes
3. Reduction of Public Revenues
4. Disruption of Public Service Patterns
5. Disruption of Real Estate Markets

Within each of these major categories are a number of more specific impacts, as shown in the mitigation matrix.

A thorough review was undertaken of federal programs available to mitigate these adverse impacts. This was combined with reviews of case histories of communities that have suffered similar types of impacts from military base closings and documents published by and about the President's Economic Adjustment Committee (EAC) outlining courses of action available to impacted communities. A matrix was then developed which outlines basic, well-known programs available to mitigate the adverse impacts of base closings and assist in local economic recovery. In the matrix, the major and specific impacts identified are presented adjacent to the mitigation programs available.

Because of the similarity of the potential adverse actions at each of the bases, this matrix serves as a master matrix for each of the subject bases. With the exception of slight variations in available state and local mitigative techniques, each technique is applicable across-the-board. Although impacts may vary in magnitude, this matrix should serve as the source of all applicable mitigative techniques presently available.

MATRIX OF AVAILABLE MITIGATIVE PROGRAMS/ACTIONS RELATED TO
POTENTIAL UNAVOIDABLE ADVERSE IMPACTS

Community Impact	Level of Program and Nature of Mitigation		
	Federal	State	Local
I. On-Base Employment Losses			
A. Military	<ol style="list-style-type: none"> 1. Staged reductions by DOD 2. Transfer by DOD 3. New facility establishment by DOD 		
B. Civilian	<ol style="list-style-type: none"> 1. Staged reductions by DOD 2. Priority placement program 3. Retirements 		
II. Reduction of Local Economic Activity and Business Volumes			
A. Loss of Employment	<ol style="list-style-type: none"> 1. EDA-Public Works and Econ. Dev. Act of 1965 (PL 89-136) <ul style="list-style-type: none"> - Technical assistance, demonstration grants - Planning grants - Public grants/loans - 50-80% of cost - Private loans/guarantees - up to 65% of cost 2. HUD-Community Development Block Grants 3. SBA-Section 502 loans 4. Community development funds (Sections 105 & 107, "HCDC Act" - 1974) 	<ol style="list-style-type: none"> 1. "Freeport" tax breaks 2. State industrial loans and guaranties 3. State development credit corporations 	<ol style="list-style-type: none"> 1. Establishment of development commission or authority with revenue bonding authority 2. SBIC's-EDA and SBA grants 3. LIDC's-EAC grants 4. Local property tax breaks
B. Loss of Population, Payroll and Income	<ol style="list-style-type: none"> 1. Staged reductions by DOD 2. New facility establishment by DOD 		Chamber of Commerce actions
C. Loss of Personal Expenditures	SBA-Section 502 loans and base closing economic injury loans		Securing private industry to generate greater levels of spending and local procurement
D. Loss of Procurement Expenditures	Determined at national level		Local procurement
E. Retail Trade			Realignment of retail centers and zoning constraints

MATRIX OF AVAILABLE MITIGATIVE PROGRAMS/ACTIONS RELATED TO
POTENTIAL UNAVOIDABLE ADVERSE IMPACTS (cont)

Community Impact	Level of Program and Nature of Mitigation	
	Federal	State
F. Base-Related Services (small business)	SBA-displaced business loans (PL 93-237, Section 37(b)(7)) "base closing economic injury loans"	SBIC's to consolidate and distribute credit to small businesses
G. Bank Deposits and Loans	1. FDIC and FSLIC (insurance only) 2. DOD-homeowners assistance program 3. FHA & VA mortgage forbearance	Bank mortgage forbearance
H. Secondary Employment Reductions AND	1. Public Works and Economic Dev. Act. of 1965 (PL 93-423) (PL 89-136) Title IX "Special economic and adjustment program"	1. Provision of job training and retraining facilities (DHR)
I. Higher Un- and Underemployment	Title X "Anti Recessionary job opportunities program" 2. Manpower Dev. and Training Act of 1962 (Section 204(a) PL 87-415) - National on-the-job training - Manpower revenue sharing 3. Vocational Education Amendments of 1968 (Title I, Part B PL 90-576)	2. University sponsored training programs & Vo-tech. education
J. Loss of Employed Base-Related Dependents	Flexibility of staging and timing of base closing	Local job training and adjustment, where applicable
III. Reduction of Public Revenues (State and Local)		
A. Income Taxes	Not lost	Civilian only lost -- not recoverable
B. Personal Property Taxes	1. DOD Homeowners Assistance Program 2. GSA-release of excess property to community	Not applicable
C. Sales Taxes		Higher assessments of tax rates
D. Gasoline Sales Taxes	Not recoverable	
F. Utilities' User Charges (ability to pay back revenue bonds)	1. EPA cost recovery? 2. EDA and EPA-larger percent federal grants	Higher user charges

MATRIX OF AVAILABLE MITIGATIVE PROGRAMS/ACTIONS RELATED TO
POTENTIAL UNAVOIDABLE ADVERSE IMPACTS (con't)

	Level of Program and Nature of Mitigation		
	Federal	State	Local
F. Revenue-Sharing Funds			Annexation, if possible and practical
G. School System Funds for Children of Base Dependents	PL 81-874-90% of previous level for children of base residents for three succeeding fiscal years		
IV. Disruption of Public Service Patterns		Increased state contribution	Industrial development bonds
A. Existing and Planned Utilities Improvements	<ol style="list-style-type: none"> EDA-Public Works and Economic Dev. Act (1965 PL 93-423) (PL 89-136) Title IX <ul style="list-style-type: none"> Technical assistance, demonstration grants Planning grants EPA-PL 92-500 Title II 		
B. Educational Facilities Utilization	<ol style="list-style-type: none"> See III.G Vocational Education Amendments of 1968 (Title I, Part B, PL 90-576) 100% discount on conveyance of base property to be reused for education (Section 203(k)(1)), Federal Property and Admin. Serv. Act of 1949 		Reuse via sales/lease of excess facilities for other public or private purpose
C. Loss of Health and Medical Facilities	100% discount on conveyance of base property for reuse of hospital/medical facility - Federal Property and Admin. Serv. Act of 1949 (Section 203(k))		Acquisition of base facilities through revenue bonds, if necessary, or grants, if available
D. Loss of Air Service Infrastructure	<ol style="list-style-type: none"> FAA-100% discount on conveyance of base property for general aviation Act of 1944 Same as V.C.(1) 		Acquisition of base facilities through revenue bonds, if necessary, or grants, if available
E. Loss of Public Recreation Facilities	50% discount on conveyance of base property to be reused for parks and recreation - DOI - Surplus Property Act of 1944, Section 15(h)		Acquisition of base facilities through revenue bonds, if necessary, or grants, if available

MATRIX OF AVAILABLE MITIGATIVE PROGRAMS/ACTIONS RELATED TO
POTENTIAL UNAVOIDABLE ADVERSE IMPACTS (con't)

<u>Community Impact</u>	<u>Level of Program and Nature of Mitigation</u>	
	<u>Federal</u>	<u>State</u>
<p>V. Disruption of Real Estate Markets</p> <p>A. Increased Vacancy in Housing Market and Loss of Market Value</p>	<p>1. DOD Homeowners Assistance Program insures at least 90% of market value</p> <p>2. DOD-protection and maintenance contracts</p> <p>3. Staged reductions of base emp.</p> <p>4. HUD funding for public housing</p>	<p>1. Bank mortgage forbearance</p> <p>2. Building moratoria</p> <p>3. Purchase of base housing for public housing - HUD monies via "National Housing Act" 1968 PL 90-448, Sec. 235(j)</p> <p>"U.S. Housing Act of 1937" PL 75-412 (local housing authority)</p>
<p>B. Reduction of Retail Sales</p>	<p>EDA planning grants to evaluate and promote viable tourism or lodging-related industries</p>	<p>1. "Freeport" tax incentives</p>
<p>C. Reduced Motel Occupancies</p>	<p>1. EDA-loans and guarantees to aid businesses to establish where other lenders won't venture (PL 89-136) P.W. & Econ. Dev. Act. of 1965</p>	<p>2. State loan guarantees</p> <p>3. State development credit corporation</p>
<p>D. Reduced Private Investor Interest</p>	<p>2. Same source - public development grants</p>	<p>1. Local industrial development bonds</p> <p>2. "Special" tax bonds on new development</p> <p>3. SBIC's</p>

III.C. UNRESOLVED ISSUES

III. C. UNRESOLVED ISSUES

The issue of the disposition of the base properties for use other than military has not been resolved.

Another issue which remains unresolved is the quantification of the secondary impacts resulting from the proposed closure of the candidate or alternative bases. The Air Force recognizes that the closure of any major installation will have significant adverse secondary impacts on the socioeconomic climate of the surrounding area. The Air Force also recognizes the desirability of making as accurate a prediction of these impacts on the various aspects of the socioeconomic environment as possible. In many instances, these secondary impacts cannot be estimated because they involve complex predictions of human behavior, i.e., how many will leave an area to seek employment elsewhere, how many will retire, etc. While some indirect impacts such as job losses and unemployment can be estimated within a reasonable order of magnitude, total losses in personal income, real estate market values, public revenue, etc., cannot be predicted. While severe, the total cumulative indirect impact of base closure on a local economy and the measures used to describe it cannot be estimated.

CHAPTER IX. DETAILS OF UNRESOLVED ISSUES

Another issue which remains unresolved is the quantification of the secondary impacts resulting from the proposed closure of the candidate or alternative bases. The Air Force recognizes that the closure of any major installation will have significant adverse secondary impacts on the socioeconomic climate of the surrounding area. The Air Force also recognizes the desirability of making as accurate a prediction of these impacts on the various aspects of the socioeconomic environment as possible. In many instances, these secondary impacts can only be estimated by means of statistical prediction of the behavior of people, i.e., how many will leave an area to seek employment elsewhere, how many will retire, etc. By their nature, these predictions are not precise, and equally competent statisticians and analysts will arrive at differing conclusions. Both sets of numbers describe severe impacts, even though absolute accuracy is not attainable.

APPENDIX A: BIBLIOGRAPHIC REFERENCES

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TAB A-1 Environmental Narrative
Blytheville, AFB, Arkansas
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TAB A-1 Environmental Narrative
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TAB A-1 Environmental Narrative
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APPENDIX B: REFERENCE TABLES

Appendix Table B-1 ANNUAL AVERAGE EMPLOYMENT,
UNITED STATES, 1975
(000's)

<u>Sector</u>	<u>Total</u> <u>Employment</u>	<u>Percent</u> <u>Distribution</u>
Agriculture	4,350	5.3%
Construction	3,455	4.2
Mining	745	.9
Manufacturing	18,344	22.6
T.C.U. <u>1/</u>	4,499	5.5
Trade	16,950	20.8
F.I.R.E. <u>2/</u>	4,222	5.2
Services	13,997	17.2
Government	<u>14,771</u>	<u>18.3</u>
Total	81,333	100.0%

1/ Transportation, Communications Utilities.
2/ Finance, Insurance, Real Estate.

Source: Employment and Earnings, January 1976

Appendix Table B-2 LOCATION QUOTIENT CALCULATION, KINCHELOE
AFB PRIMARY IMPACT AREA 1/

<u>Sector</u>		=		=	
Agriculture	$\frac{350}{8,000}$	=	$\frac{.044}{.053}$	=	.83
	$\frac{4,350}{81,333}$				
Construction	$\frac{275}{8,000}$	=	$\frac{.034}{.042}$	=	.81
	$\frac{3,455}{81,333}$				
Manufacturing	$\frac{375}{8,000}$	=	$\frac{.047}{.225}$	=	.21
	$\frac{18,344}{81,333}$				
T.C.U.	$\frac{550}{8,000}$	=	$\frac{.069}{.055}$	=	1.25
	$\frac{4,499}{81,333}$				
Trade	$\frac{1,575}{8,000}$	=	$\frac{.197}{.208}$	=	.95
	$\frac{16,950}{81,333}$				
F.I.R.E.	$\frac{225}{8,000}$	=	$\frac{.028}{.052}$	=	.54
	$\frac{4,222}{81,333}$				
Services	$\frac{975}{8,000}$	=	$\frac{.122}{.172}$	=	.71
	$\frac{13,997}{81,333}$				
Government	$\frac{3,675}{8,000}$	=	$\frac{.459}{.182}$	=	2.52
	$\frac{14,771}{81,333}$				

1/ Chippewa County, Michigan

Source: Michigan Employment Security Commission
and Hammer, Siler, George Associates.

Appendix Table B-3 BASIC/NON-BASIC SHARES, KINCHLOE
AFB PRIMARY IMPACT AREA 1/

<u>Sector</u>	<u>Share</u>	
	<u>Basic</u>	<u>Non-basic</u>
Agriculture	.45	.55
Construction	.45	.55
Manufacturing	.17	.83
T.C.U.	.55	.45
Trade	.49	.51
F.I.R.E.	.35	.65
Services	.41	.59
Government	.72	.28

1/ Chippewa County, Michigan

Source: Hammer, Siler, George Associates.

Appendix Table B-4 BASIC/NON-BASIC EMPLOYMENT, KINCHLOE
AFB PRIMARY IMPACT AREA 1/

<u>Sector</u>	<u>Employment</u>		
	<u>Basic</u>	<u>Non-basic</u>	<u>Total</u>
Agriculture	160	190	350
Construction	120	155	275
Manufacturing	60	310	375
T.C.U.	300	250	550
Trade	770	805	1,575
F.I.R.E.	95	180	275
Services	400	575	975
Government	<u>2,650</u>	<u>1,025</u>	<u>3,675</u>
Total	4,510	3,490	8,000

1/ Chippewa County, Michigan.

Source: Hammer, Siler, George Associates.

Appendix Table B-5 LOCATION QUOTIENT CALCULATION, WURTSMITH
AFB PRIMARY IMPACT AREA 1/

<u>Sector</u>		=		=	
Agriculture	$\frac{335}{8,425}$.053	=	$\frac{.040}{.053}$	=	.73
Construction	$\frac{410}{8,425}$.042	=	$\frac{.049}{.042}$	=	1.17
Manufacturing	$\frac{830}{8,425}$.225	=	$\frac{.099}{.225}$	=	.44
T.C.U.	$\frac{570}{8,425}$.055	=	$\frac{.068}{.055}$	=	1.24
Trade	$\frac{1,990}{8,425}$.208	=	$\frac{.236}{.208}$	=	1.13
F.I.R.E	$\frac{230}{8,425}$.052	=	$\frac{.027}{.052}$	=	.52
Services	$\frac{1,310}{8,425}$.172	=	$\frac{.155}{.172}$	=	.90
Government	$\frac{2,750}{8,425}$.182	=	$\frac{.326}{.182}$	=	1.79

1/ Iosco County, Michigan.

Source: Michigan Employment Security Commission and
 Hammer, Siler, George Associates.

Appendix Table B-6 BASIC/NON-BASIC EMPLOYMENT, WURTSMITH
AFB PRIMARY IMPACT AREA 1/

<u>Sector</u>	<u>Employment</u>		<u>Total</u>
	<u>Basic</u>	<u>Non-basic</u>	
Agriculture	140	195	335
Construction	220	190	410
Manufacturing	260	570	830
T.C.U.	310	260	570
Trade	1,050	940	1,990
F.I.R.E.	80	150	230
Services	620	690	1,310
Government	<u>1,760</u>	<u>990</u>	<u>2,750</u>
Total	4,440	3,985	8,425

1/ Iosco County, Michigan.

Source: Hammer, Siler, George Associates.

Appendix Table B-7 BASIC/NON-BASIC SHARES, WURTSMITH
AFB PRIMARY IMPACT AREA 1/

<u>Sector</u>	<u>Share</u>	
	<u>Basic</u>	<u>Non-basic</u>
Agriculture	.42	.58
Construction	.54	.46
Manufacturing	.31	.69
T.C.U.	.55	.45
Trade	.53	.47
F.I.R.E.	.34	.66
Services	.47	.53
Government	.64	.36

1/ Iosco County, Michigan.

Source: Hammer, Siler, George Associates.

Appendix Table B-8 LOCATION QUOTIENT CALCULATION BLYTHEVILLE
AFB PRIMARY IMPACT AREA 1/

<u>Sector</u>				
Agriculture	$\frac{2,950}{.053}$	=	$\frac{.135}{.053}$	= 2.55
Construction	$\frac{1,125}{.042}$	=	$\frac{.052}{.042}$	= 1.24
Manufacturing	$\frac{6,025}{.225}$	=	$\frac{.277}{.225}$	= 1.23
T.C.U.	$\frac{675}{.055}$	=	$\frac{.031}{.055}$	= .56
Trade	$\frac{3,350}{.208}$	=	$\frac{.154}{.208}$	= .74
F.I.R.E.	$\frac{450}{.052}$	=	$\frac{.021}{.052}$	= .40
Services	$\frac{4,925}{.172}$	=	$\frac{.226}{.172}$	= 1.31
Government	$\frac{2,950}{.182}$	=	$\frac{.135}{.182}$	= .74

1/ Mississippi County, Arkansas

Source: Arkansas Employment Security Division and Hammer, Siler, George Associates.

Appendix Table B-9 BASIC/NON-BASIC SHARES, BLYTHEVILLE
AFB PRIMARY IMPACT AREA 1/

<u>Sector</u>	<u>Share</u>	
	<u>Basic</u>	<u>Non-basic</u>
Agriculture	.72	.28
Construction	.55	.45
Manufacturing	.55	.45
T.C.U.	.36	.64
Trade	.43	.57
F.I.R.E.	.29	.71
Services	.56	.44
Government	.43	.57

1/ Mississippi County, Arkansas.

Source: Hammer, Siler, George Associates.

Appendix Table B-10 BASIC/NON-BASIC EMPLOYMENT, BLYTHEVILLE
AFB PRIMARY IMPACT AREA 1/

<u>Sector</u>	<u>Employment</u>		
	<u>Basic</u>	<u>Non-basic</u>	<u>Total</u>
Agriculture	2,120	830	2,950
Construction	620	505	1,125
Manufacturing	3,310	2,715	6,025
T.C.U.	240	435	675
Trade	1,440	1,910	3,350
F.I.R.E.	130	320	450
Services	2,370	1,855	4,225
Government	<u>1,270</u>	<u>1,680</u>	<u>2,950</u>
Total	12,210	9,565	21,775

1/ Mississippi County, Arkansas.

Source: Hammer, Siler George Associates.