

**The Economic Impact of the Realignment of the
130th Air National Guard Airlift Wing at Yeager
Airport**

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Prepared for:

Yeager Airport



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The Economic Impact of the Realignment of the 130th Air National Guard Airlift Wing at Yeager Airport Executive Summary

An economic impact analysis for the realignment of the Air National Guard 130th Airlift Wing has been contracted for preparation to The Center for Business and Economic Research (CBER) at Marshall University in Huntington, WV. The "Final Selection Criteria, Department of Defense Base Realignment and Closure," include consideration of "the economic impact on existing communities in the vicinity of military installations."

The following report provides that information and reaches the following conclusions. (At the same time, the control tower at Yeager Airport is scheduled for closure by the FAA during late night and early morning hours, creating further economic problems. This closure is also discussed.):

- The 130th Airlift Wing operates from a joint use airport at Yeager, which is located in Charleston, WV. The impact of the reassignment creates two economic impacts:
 1. The loss of base jobs and spending.
 2. Negative effects of the realignment on Yeager Airport's operations. Calculations presented in the BRAC report do not include the second set of impacts and underestimate the first.
- The economy of Charleston, WV/Yeager's air traffic region, along with the entire economy for the State of West Virginia, is depressed:
 1. Poverty rates are higher
 2. Per capita income is much lower
 3. Employment is stagnantThis seriously impedes the ability of the area to absorb the displaced workers or to generate replacement spending.
- While the ANG facility at Yeager will not be closed, but only realigned, the few remaining civilian and military jobs cannot generate the additional spending needed to offset the loss of the 130th Airlift Wing.
- The Realignment of the 130th Airlift Wing will remove from the WV economy:
 1. 814 jobs
 2. \$22 million in annual spending
- The loss of the 130th Airlift Wing will negatively impact Yeager Airport:
 1. Yeager will lose the Fire/Rescue and perimeter security services now provided by the 130th Airlift Wing. Replacing these services will cost Yeager Airport approximately \$1.7 million a year, plus \$7 million in start up costs. These increased costs will quadruple or quintuple landing fees for aircraft using Yeager Airport and threaten the cancellation of flights.

2. The closing of the Yeager tower for late night and early morning hours will affect 26 percent of all Yeager passengers with the possible loss of flights and major inconvenience to travelers.
 3. The tower closing will reduce the potential for further expansion of air cargo traffic that usually flies at night at Yeager.
- Studies done on the base realignments and closures that have indicated that realignments and closures have no adverse economic impacts are not applicable to the 130th Airlift Wing realignment and Yeager Airport.
 1. These studies were not completed for joint use facilities
 2. Most of the realignments and closures were in areas with faster growing economies than the Yeager trade area
 3. There were often other nearby military installations that could absorb the displaced personnel
 4. In virtually every case, substantial readjustment aid was provided by the Federal government. None to date has been offered to Yeager and/or Charleston
 5. In most instances, the base facilities were turned over to the city or a regional development authority to permit airfield industrialization. This does not appear to be the case for Yeager

For these reasons, using studies done elsewhere as evidence of no, or only limited, economic impact from the realignment is not appropriate.

The Center for Business and Economic Research bases the conclusions in this report on:

- A review of previously published studies on base realignments and closures
- Data obtained from Federal governmental sources, from the 130th Airlift Wing and the June 13, 2005, visit of the BRAC team to Charleston, WV. These data have not been independently verified by CBER.
- Use of the IMPLAN Input/Output model to predict the impact of the jobs and spending from the realignment and effects on Yeager Airport for the regional economy.

There are certain limitations to this study, which include:

- The future mission of the ANG facility at Yeager, which has not been clarified. Only limited information regarding the future use of the land and buildings has been made available to CBER by the BRAC. The future uses made of the facility could alter the conclusions in this report. Since civil engineering, security, supply and planning functions appear as if they will remain at Yeager, these have been excluded from the economic impact of the realignment of the 130th Airlift Wing.
- There has been no indication of what Federal assistance, if any, will be made available to offset the economic impact of the realignment. The type, amount and timing of Federal assistance could also alter these conclusions.

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1. Information on Yeager Airport

The airport is three miles northeast of the State capital, Charleston, West Virginia. The City of Charleston is the governmental and economic hub of the state and its largest city with a population of around 50,000. Yeager Airport is located in the South-central part of the state in Kanawha County. West Virginia is the second most sparsely populated state in the nation with most of its area being classified as non-urban or rural.

The National Plan of Integrated Airport Systems (NPIAS) classifies the airport as a “commercial service, primary airport”. This designation applies to airports enplaning 2,500 or more passengers on an annual basis with scheduled passenger service producing at least 0.01 percent of the total US enplaned passengers. Yeager is also designated a “medium haul airport” as its usual flight distances range from 500-1500 miles.

Charleston is served by three major interstate highways: I-64 crosses the state east-west and intersects with I-77 north-south at Charleston. I-79 joins the others running from the northeast. Corridor “G”, a four lane limited access highway, runs southwest from Charleston. Its location on a navigable portion of the Kanawha River allows Charleston to be an intermodal city serving a wide area of West Virginia. Charleston’s location and its status as the seat of government provide the basis for its economy.

The airport’s trade area is designated by geographical and access considerations and the proximity of other commercial facilities. The latest master plan for Yeager (Wilber Smith, 2000) found the air trade area to consist of six counties and portions of 14 others. All of these are served by the major highways described above. These are designated on the attached map at the end of this report.

There are no commercial airports within 20 miles of Yeager, but commercial service is available at Tristate Airport in Huntington, WV which is at 60 miles distance and at Wood County Airport in Parkersburg, WV which is approximately the same distance from Yeager. Tristate has less than half the enplanements as Yeager and Wood County only about one quarter. Air travelers from the border cities of Huntington and Parkersburg make extensive use of major hub airports in Cincinnati and Columbus Ohio (GRA 2003) which are within comfortable driving distance from those cities and are served by low fare carriers. The “leakage” to these major hub airports creates a highly competitive situation for Yeager Airport, particularly for leisure travelers.

Yeager is currently served by six air carriers, five of which are commuter/express affiliates for the major airlines with which they are established. The sixth, Independence Air, has no affiliation and flies only to Dulles Airport in Washington, D.C. The following table provides information on those flights.

**Table 1. AIR SERVICE AT YEAGER AIRPORT
JUNE 2005**

Air Carrier	Number of Daily Flights	Destinations
US Airways	15	Pittsburgh, Philadelphia, Washington DC Reagan, Charlotte
Delta	9	Cincinnati, Atlanta
Northwest	4	Detroit
Continental	5	Cleveland, Houston
United	5	Washington DC Dulles, Chicago
Independence	3	Washington DC Dulles

Yeager airport experienced 247,871 enplanements in 2004 according to the FAA (FAA, 2005). Total operations were 84,949. Both these figures reflect that traffic has not yet returned to pre-9/11 levels. But FAA forecasts see enplanements rising to 308,148 and operations to 91,890 by 2020.

a. Economic Situation in Yeager Air Trade Area

West Virginia is one of the poorest states in the nation. The state ranks 48th in per capita income, with an average of only 70 percent of the nation's per capita income (WV \$23,466-US \$31,472). West Virginia has a poverty rate of 17.7 percent which is 125 percent of the national average. Educational attainment is also well below the national norm.

Economic Distress. The statistics for the area served by Yeager Airport are even more discouraging. As seen from the table below, for the 20 county area, poverty is high above the national average and per capita income is far below. Sixteen of these counties are classified by the Appalachian Regional Commission as "economically distressed". Almost one quarter of the adult population have no high school diploma or GED. Any reductions in economic opportunities, such as closing or realigning the 130th Airlift Wing, are likely to intensify an already distressed situation.

Table 2. Yeager Trade Area Demographics (2000)

Yeager Trade Area	Yeager	United States
Population over 25	664,708	182,211,639
Population over 25, no HS Diploma or GED	164,144	35,715,625
% Pop over 25, no HS Diploma or GED	24.7%	19.6%
Population for whom poverty status was determined	947,443	273,882,232
Population Income below poverty in 1999	167,955	33,899,812
Poverty Rate	17.7%	12.4%
Source: 2000 US Census, Summary Tape File 3		

Population. For almost a quarter of a century the population of the Yeager air trade area has been in decline. As the table below indicates, population has declined by 10 percent, a reflection of the limited employment opportunities in the area. Approximately half of the West Virginia's population resides in this trade area.

Figure 1. Yeager Air Trade Area Population

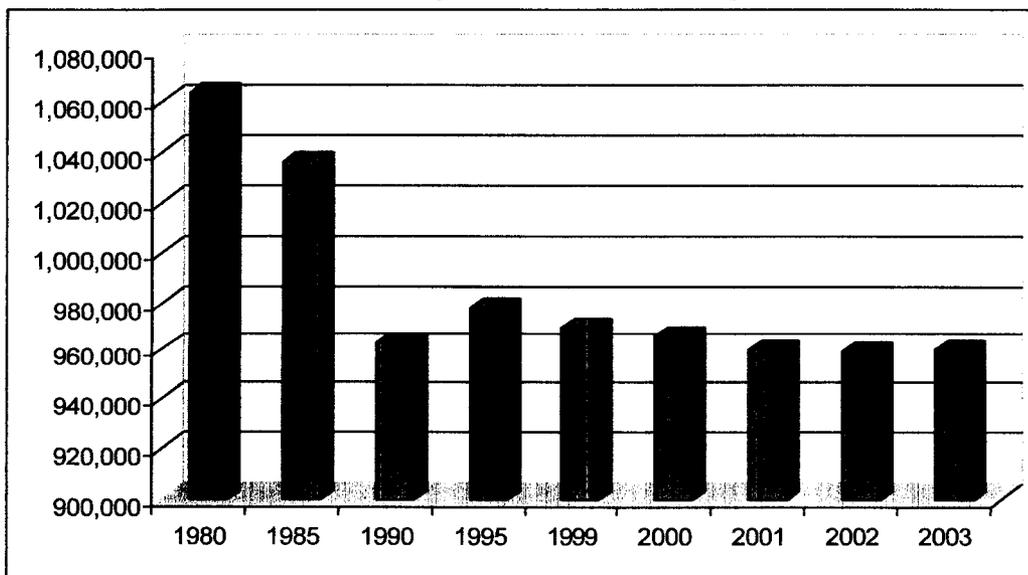


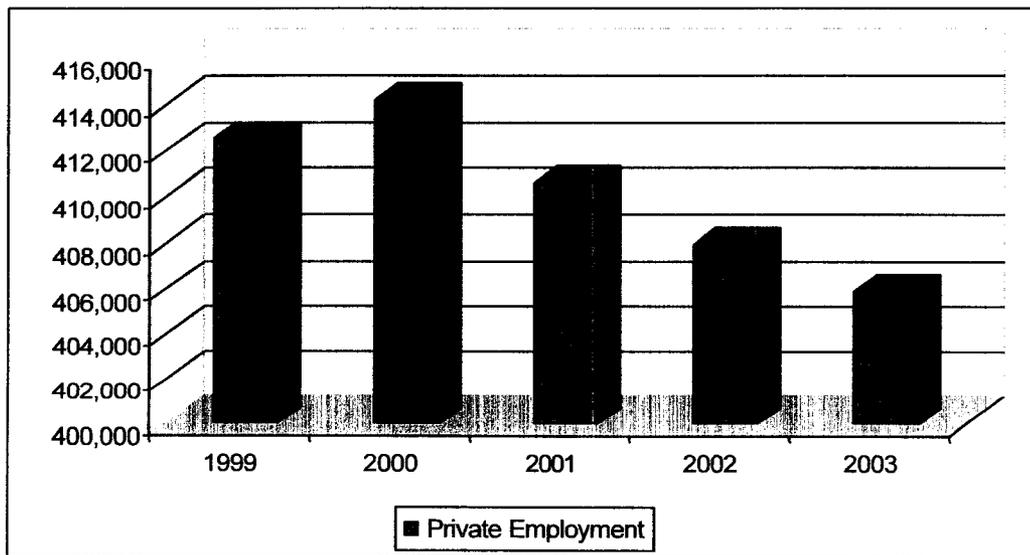
Table 3. Yeager Air Trade Area Population 1980 to 2003

Year	Population	Year	Population
1980	1,063,517	2000	966,154
1985	1,036,487	2001	960,073
1990	962,657	2002	959,540
1995	978,288	2003	959,693
1999	969,669		

Source: Regional Economic Information System
U.S. Bureau of Economic Analysis

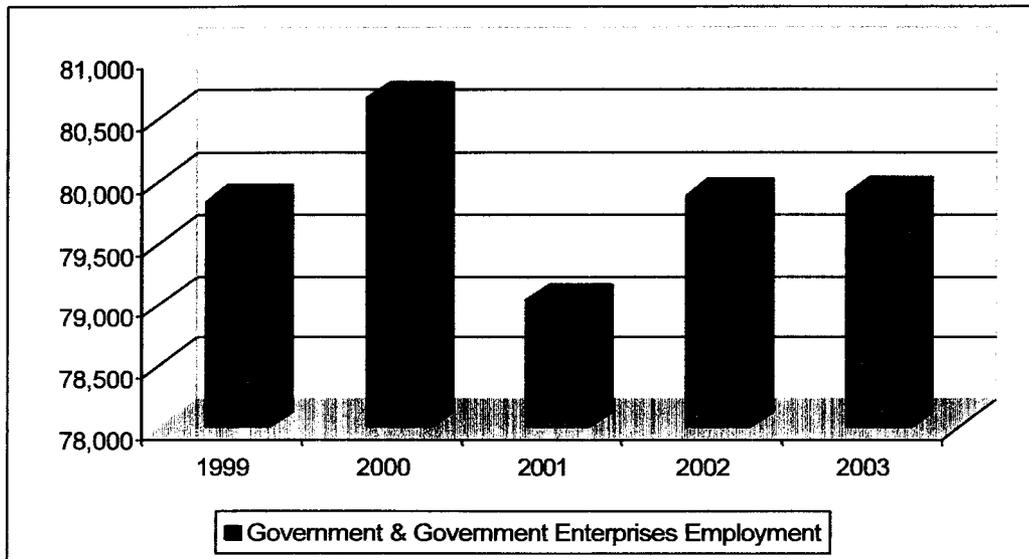
Employment. Private employment in the air trade area for Yeager Airport has declined over the same period. Gains in government employment have just offset the private decline, resulting in a stagnant labor market. This stagnation would make it difficult to accommodate any workers unemployed by the 130th Airlift reassignment.

Figure 2. Yeager Air Trade Area Private Employment, 1999 to 2003



Source: Regional Economic Information System
U.S. Bureau of Economic Analysis

Figure 3.
Yeager Air Trade Area Government Employment, 1999 to 2003



Source: Regional Economic Information System
U.S. Bureau of Economic Analysis

Table 4. Yeager Air Trade Area Employment, 1999 to 2003

	Non-farm Employment	Private Employment	Government Employment
1999	492,350	412,512	79,838
2000	494,829	414,165	80,664
2001	489,665	410,632	79,033
2002	487,849	407,958	79,891
2003	485,845	405,941	79,904
Change	-6,505	-6,571	66
Percent Change	-1.3%	-1.6%	0.1%

Source: Regional Economic Information System
U.S. Bureau of Economic Analysis

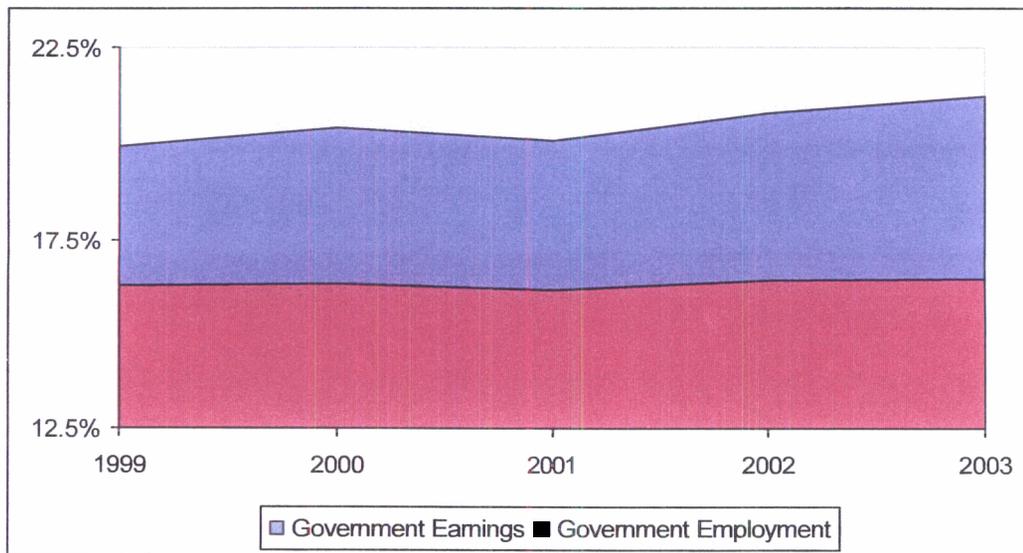
Earnings. Earnings in the air trade area have increased, but at a slower rate than nationwide. What the tables and graphs below indicate is that government earnings have increased significantly faster than have earnings in the private sector. The share of government earnings compared to private sector earnings has increased, demonstrating the lack of vitality in the private sector.

Table 5. Yeager Air Trade Area Earnings, 1999 to 2003

	Average Non-farm Earnings (\$000s)	Average Private Earnings (\$000s)	Average Government Earnings (\$000s)
1999	\$31,410	\$30,014	\$38,622
2000	\$32,417	\$30,825	\$40,590
2001	\$34,204	\$32,592	\$42,576
2002	\$35,181	\$33,320	\$44,681
2003	\$36,184	\$34,104	\$46,749
Change	\$4,773	\$4,090	\$8,127
Percent Change	15.2%	13.6%	21.0%
Percent Change; Adjusted for Inflation	4.3%	2.9%	9.6%

Source: Regional Economic Information System
U.S. Bureau of Economic Analysis

Figure 4. Percent of Government Earnings and Employment To Total Non-Farm Earnings and Employment



Source: Regional Economic Information System
U.S. Bureau of Economic Analysis

of 1988, 1991, 1993 and 1995. Their findings were consistent with other studies that showed the long term effects on employment and income on average to be positive from base closures and realignments.

a. Why can these findings be dismissed as inapplicable to the 130th and Yeager?

1. The case studies only applied to specific unique situations none of which approach the conditions surrounding Yeager.
2. The case studies did not use random sampling techniques in selection of the observed base closings. This may have caused a bias in the results and reduces the validity of using these results for any specific installation.
3. None of the studies focused specifically on Air National Guard bases at joint use airports. At least one study (Hooker and Knetter) found the economic impact of closure of air force installations to be greater than the closure of other military facilities. They did not specifically address situations like Yeager's joint use arrangement.
4. The economic studies provided general conclusions about the total effect of all the closures covered in their research and did not relate to any particular cases. While for all closures taken as a whole the results may be positive, that does not mean that for any single closure that positive outcome can be predicted. As Hooker and Knetter noted, ". . . while the average closure county doesn't suffer much economic harm, some do." (p 585) In one study of three California bases, the report was generally optimistic about the effects of base closure even though one of the case studies showed "consistently negative" impacts (Dardia p.43). By the author's admission, these "averaged" results may not be representative of any one situation and cautions that generalizations of these results to other situations of closure should not be made. The most recent DOD study concluded of the 387 closures and realignments, ". . . roughly one third of these locations (were) adversely impacted." (DOD 2005 p. 7)
5. Most of the closures took place in urban or other areas with strong labor markets that were capable of absorbing the displaced workers (DOD 2005). Again, Hooker and Knetter comment, "The shocks in rural areas are considerably larger. . ." (p. 586). The DOD Office of Economic Adjustment found a similar result noting, ". . . those in rural areas, remain especially hard hit". (DOD 2005, p.16)
6. In many of the cases, the bases represented only a tiny fraction of the economy of the area and did not, therefore, represent a significant economic loss.
7. For the majority of the closures there were one or more military bases or facilities nearby which often were expanded, absorbing at least some of the displaced civilian labor force. These other military facilities also continued to provide services such as BX and health care to military and retirees. These alternatives significantly reduced the impact of closure (Poppert and Herzog, p. 461)
8. In virtually every situation the closure or realignment was accompanied by a turnover of the base facilities at no cost to a local government or other entity to be used to attract new firms and industries (DOD 2005). This was important as many of these closures were in urban or other areas where there was a significant demand for land for development.

9. In addition, the successful cases often were the direct result of the Federal government providing substantial transition financial aid to the affected areas through the Defense Economic Adjustment Program. (DOD 1998 pp. 55-58, DOD 2005 pp. 8-10)
10. For many if not most of the cases investigated in the literature, economic growth in the effected region had been either robust or at least above the national average. Only a few of the areas had experienced the loss of jobs or had poverty rates above the national average at the time of closure or realignment. As noted above, this clearly does not describe the Yeager air trade area.

Most of the studies concluded that it was the turnover of the facilities at no cost and the substantial federal assistance which created the successful outcomes rather than market forces. The latest DOD report also commented, "Complete base redevelopment requires a long term effort, sometimes up to 20 years. . ." (2005 p.7)

The situations elsewhere do not speak to the Yeager situation.

1. There are no other military facilities nearby to absorb the unemployed.
2. West Virginia has one of the lowest per capita incomes in the nation and alternate job opportunities do not abound.
3. The economic growth rate is half the national average creating further problems in coping with the economic impacts of realignment.
4. Charleston is not a major urban center so the loss of what is one of its "major industries" will have a more profound impact than elsewhere.
5. The facilities will not be made available for alternate civilian employment.

Further, Yeager Airport is a shared facility with the 130th Airlift Wing. Loss of the Wing would have direct effects on the operations of the airport that would cause additional economic damage. No studies were found that have directly looked at the negative economic impact on civilian air travel when a joint use base is closed or realigned.

Finally, there has been no indication that the facilities will be turned over to Yeager, the City of Charleston, or some other entity at little or no cost to develop. The current plan is for the "reassignment" and not closure that would make the facilities unavailable for alternate use. This transfer could, as it has elsewhere, at least in part mitigated the problems.

Nor has there been any discussion of who will bear the cost of conversion of the Air Guard facilities for industrial use should the transfer take place. There also has not been any discussion, much less guarantees, that the federal assistance that was so vital to the successful transitions following closings elsewhere will be forthcoming.

3. Economic Evaluation of 130th Airlift Wing Reassignment

While it is impossible to predict the future results of reassignment of the 130th Airlift Wing, it is possible to take two approaches to investigating what this might mean.

Analytical Approach. This approach has been used in most of the early study reports that have been prepared for the Department of Defense and state governments. (Dardia et. al. 1966, US Department of Defense 1994, California Military base Reuse Task Force, 1994 and Innes et. al. 1994). It evaluates the relative importance of the base to the entire economy of the region. The approach focuses on changes that result from reductions in population, changes that are transmitted through declines in employment, and changes due to a reduction in housing demand.

These studies are all longitudinal looking at changes over a period of time after the closure. For proposed base closures or realignments, they offer few insights unless the cases are essentially similar to the base being considered for closure or reassignment. As noted above, none of the longitudinal studies reviewed approached similarity with the 130th Airlift Wing and Yeager situation.

Input Output Analysis. This analysis takes into account the full economic impact of the wages paid and spending made by the Charleston based 130th Airlift Wing. Salary and spending levels for bases such as the 130th Air Wing are dependent on military activity. For traditional guard members, salaries varied considerably between 2001, which represented a peacetime level of mobilization, and 2003, which represented a wartime level of mobilization. For this analysis, annual average wages for the FY 2001 to FY 2005 (estimated; actual as of May 2005) time period were used. These relative proportions were also used to estimate annual variation in related lodging expenses as explained in item #2 below.

In FY 2004 for example, the Base paid salaries of \$55 million and had expenditures of \$17.7 million. The negative impact to the state of West Virginia is the portion of wages and expenditures that are made locally. The majority of the impact of the realignment will be manifested as reductions in income to state residents. The remainder is from base spending. It is estimated that approximately 10% of base expenditures are made to West Virginia businesses. The speed by which the current holders of the realigned positions can find new jobs will determine the length of the impact.

The full economy-wide impact is estimated via calculation of industry and household spending multipliers. All multipliers are calculated using the IMPLAN regional input-output simulation model (IMPLAN Professional Version 2.0.1025).

1. Loss of Income

The 130th Airlift Wing currently has 1,250 full and part-time positions. Realignment of the Wing is expected to result in the direct loss of 163 full-time personnel, 138 of which are civilian and 25 of which are military. These numbers are an adjustment to

the DOD, Base Closure and Realignment Report following the June 13 visit by the BRAC to the Charleston ANG base. Of the part-time traditional guardsmen that are members of the Wing, 447 are currently expected to lose their positions.

Information supplied by the ANG indicates that all 163 of the full-time jobs, and 90% of the traditional Guard positions, are held by individuals who currently reside in West Virginia. The impact of these jobs is \$21.2 million in salaries, which is equivalent to about \$15.3 million in disposable income (post-tax) spending.

The traditional guardsmen whose positions are not realigned will remain in the civil engineering and headquarters operation. It is presumed that most of the traditional guardsmen have regular jobs that complement their Guard duty pay and will retain those jobs. The loss of Guard-duty income is a loss of supplementary income to the economy.

Utilizing input-output analysis to estimate the economy-wide impacts of spending on behalf of these individuals adds an additional \$4.2 million to the annual disposable income impact, for a total of \$19.5 million in household spending. This is a multiplier effect of 1.28 (see Table below).

The impact of the proposed transfer of 25 firefighters to Martinsburg WV is not included in the total impacts due to a zero net change in state employment. However, the loss of these workers will impact the Yeager trade area. The estimated annual impact of these workers salaries is \$875,000 in disposable income, which translates into \$1.2 million in spending in the Yeager trade area.

2. Reduced Spending in the Local Economy

In addition to reductions in personnel, the realignment will necessarily be accompanied by reduced spending in support of base operations. The impacts of \$1.6 million in local spending per year are accounted for in this analysis and are concentrated in the construction and lodging industries. These estimates do not include any spending impacts of the base BX operation, which had sales in excess of \$500,000 in 2004, and is expected to remain open following the realignment. It is likely that most purchases to stock BX supplies are made outside West Virginia.

- a. Construction and Maintenance Receipts: SRM (Sustainment, Restoration, and Modernization) construction receipts constitute the bulk of the 130th's spending in the local economy. This spending creates the most significant per dollar impact to the economy because of the large multiplier impact that this sector induces. Construction receipts induce additional local spending of 1.7 times the direct spending. It is uncertain what portion of these expenditures will continue following realignment. Local spending in FY 04 was approximately \$1.1 million. Average annual spending is estimated at \$890,000.

4. Impact on Yeager Airport Operations

There are additional negative consequences to the economy of the area from the realignment of the 130th Airlift Wing other than those which result from the direct impacts due to the loss of employment and jobs. These concern the impact on Yeager Airport operations. In the review of the studies on the impacts of base closings and realignments elsewhere, there were none at facilities that were joint use operations.

1. Closure of Tower

The current plan calls for the closure of the tower from 10 p.m. to 7 a.m. Yeager is a feeder airport in the spoke and hub operations of the air carriers which serve it. Such early flights out and late flights in are essential as passengers make connections to other flights. Twenty six percent (26%) of all Yeager passenger traffic flies either in or out during the hours the tower is proposed to be closed.

It is likely that at least some of these flights will be cancelled. Two air carriers have expressed concern about the tower closure. This is due to safety concerns about operations without a tower in less than desirable weather conditions and at night. Having tower services continuously available has been found to be a major factor in airport success (Weisbrod et.al. 1993). While it is impossible to indicate the loss of passenger traffic due to the flight reductions caused by tower closure, loss will occur. This is particularly true for leisure passengers who can choose to use alternative airports when the convenience of the early and late flights is reduced.

There exists in the Yeager area potential for the further development of air cargo (Colography Group 1998). This analysis found a realistic estimate that air cargo in the future could support three B-727F cargo only flights each day in domestic service and one weekly DC-8F flight in international service. Most air cargo flies at night. Closure of the tower would mean that Yeager would become less competitive in attracting these flights and Charleston less attractive in securing the businesses which would avail themselves of air cargo shipping.

In addition, the late flights terminate at Yeager and the crews stay in the Charleston area. This impetus to the area economy will also be lost. The expenditures for landing fees and for servicing of the aircraft will also be lost.

2. Increased Landing Fees

Yeager airport will be forced to increase its landing fees due to the loss of services provided the Airport by the 130th Airlift Wing. These include the Fire/Rescue service and potentially the perimeter security services. The increased cost to Yeager Airport of the Fire/Rescue service is estimated by the airport to be \$1.7 million per year with a start up cost of \$7 million. For airport security, three additional officers would have to be hired at \$43,000 a year for salary and benefits.

The current landing fees at Yeager are \$1.20 per thousand pounds. The formula used to calculate landing fees indicates a one cent (\$0.01) increase in landing fees for every \$5,000 in additional airport costs. The annual cost (not including the \$7 million in start up costs for the fire/rescue operation over a ten year period) would total an additional \$3.66 per 1,000 lbs. A typical regional jet weighs 48,500 lbs. The landing fee for that aircraft would increase from \$58.20 to \$233.61, more than quadrupling the expense to the air carrier. Adding the fire service start-up costs could increase fees by as much as \$4.88 per 1,000 lbs, to \$295 for a typical aircraft, a five-fold increase in landing fees.

This increase in landing fees will reduce the competitiveness of Yeager Airport. How many of the current flights would be cancelled can not be determined. But considering that passenger loadings on many of the flights are currently only producing marginal if any profits per flight, some will be cancelled. There is a possibility that two current air carriers would cancel at least some flights if such a fee increase were enacted.

While Yeager airport might, as an alternative, try to absorb some of the additional costs rather than passing them on to the air carriers, the availability of hub airports within feasible driving distance creates a competitive environment that would significantly reduce their ability to do so. Yeager is currently not highly profitable having assumed significant debt to finance new parking areas and terminal improvements.

Summary

There is significant damage to the economy of the Yeager Airport air trade area from the reassignment of the 130th Airlift Wing. While a civil engineering and headquarters presence will remain, most of the civilian and military jobs will be transferred with a loss of 610 direct jobs and an additional 204 indirect jobs due to the reduced level of spending.

The State will lose some \$22 million in total spending, both direct and induced. Most of this loss will incur in the Charleston, WV region. This region is currently experiencing rates of poverty above the national average and per capita income well below. Employment is essentially static. It will be difficult, if not impossible, to compensate for either the loss of spending or jobs.

Since the 130th Airlift Wing is located on a joint use airport at Yeager, there will be a second set of impacts to the economy of the region from the reassignment. The closing of the tower will place in jeopardy the current night and early flights out of Yeager. This amounts to over one quarter of the Yeager passenger traffic. The potential for development of air cargo will also be reduced.

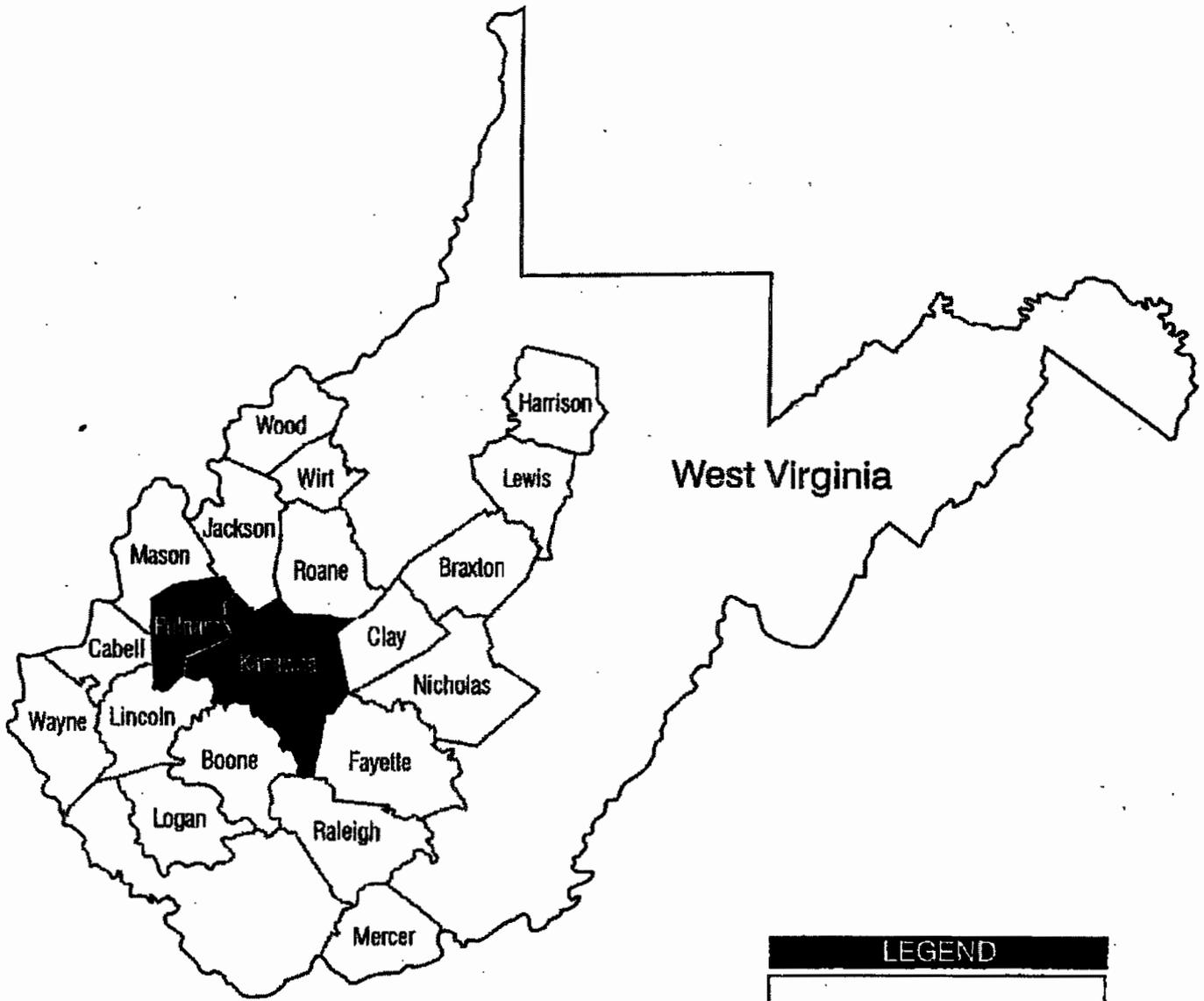
Additional costs will be placed on Yeager. Since the 130th Airlift Wing furnishes Fire/Rescue services to the airport, these would become Yeager's responsibility. The resulting costs will be reflected in increased landing fees that will erode Yeager's competitive position. The possibility of reduced flights due to the increased fees is a distinct possibility. Although security services are currently expected to continue to be provided by the Air Guard, loss of these services is considered a potential outcome that is not fully evaluated here.

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LEGEND

- Primary Base
- Secondary Base