

DCN: 6892



DEPARTMENT OF THE ARMY
OFFICE OF ECONOMIC & MANPOWER ANALYSIS
UNITED STATES MILITARY ACADEMY
WEST POINT, NY 10996

REPLY TO
ATTENTION OF

MADN-OEMA

3 June 2004

MEMORANDUM FOR RECORD

SUBJECT: BRAC Data Certification

1. FACTORS: Installation Local Labor Supply Attribute
2. DESCRIPTION: This metric represents the available labor supply of individuals ages 25 and older within a 50 mile radius of each installation by education category (high school drop-outs, high school graduates, some college, college graduates, and post college degrees) and weighted by cost of living adjusted median annual earnings by education category.
3. DATA SOURCES: There were three primary data sources used to calculate this attribute.
 - a. GeoLytics Data: GeoLytics stratifies the U.S. Census 2000 Long Form data into finely graded geographical regions. We use this to determine the number of people ages 25 and older by education category who live within a 50 mile radius of each installation. The Total Army Basing Study provided the longitude and latitude used for each location. See www.geolytics.com for more information on the data. Note, Puerto Rico is not contained in this data. Therefore, we used 2000 Census data to determine population by education category for Fort Buchanan. Since approximately 70 percent of the island's population lives within 50 miles of Fort Buchanan, we impute populations as 70 percent of the island total within each education category.
 - b. 2000 Census Data: GeoLytic data does not contain median earnings by education category, so we use the 2000 U.S. Census data to determine median earnings by education category for each state. See www.census.gov/hhes/income/earnings for more information. Note, median earnings by education category is not available in the 2000 Census Data for Puerto Rico. Therefore, we impute median earnings by education category using median earnings by occupation category for Fort Buchanan.
 - c. Missouri Economic Research and Information Center (MERIC) Data: Since there is no widely accepted state-level cost of living adjustment factor, we use the MERIC Data because it focuses on state-level comparisons and incorporates a wide range of goods and services: groceries, utilities, healthcare, housing, transportation, and other miscellaneous items for 2003. See www.ded.mo.gov/business/researchandplanning/indicators/cost_of_living/index for more information.
4. METHODOLOGY: Ascertaining available labor supply in a region involves a measure of both quality and quantity. We assess quantity by determining populations within a 50 mile radius of each installation by the five education categories listed above using the Geolytic Geographical 2000 Census data. We capture quality by matching cost of living adjusted state-level annual median earnings by education category to each installation. To create a comparable index for each installation, we use a four step process illustrated below by Fort Monmouth, New Jersey.

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	Population	Median Earnings	COLA
High School Drop-outs	2,482,522	\$24,329	111.6
High School Graduates	2,959,063	\$32,389	111.6
Some College	2,431,979	\$38,429	111.6
College Graduates	1,980,290	\$51,657	111.6
Post College Degrees	1,366,125	\$69,597	111.6

a. Step 1. We normalize median annual earnings within states by high school graduate median annual earnings. For example, Fort Monmouth has median annual earnings of \$24,329 for high school drop-outs and \$32,389 for high school graduates. Therefore, we divide both by \$32,389 to get a high school normalized earnings index of .7511 for high school drop-outs and 1.0 for high school graduates.

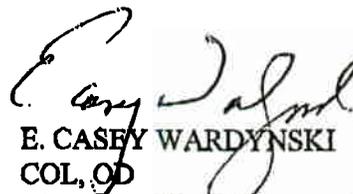
b. Step 2. We adjust this factor so that earnings are comparable across states by dividing by the state level cost of living (COLA) index, which we normalize by the State of Texas. An example of how we normalized the COLA is as follows. Since Texas has a COLA index of 90.3 and New Jersey has a COLA index of 111.6, we divide both by 90.3 and get a Texas normalized index of 1.0 for Texas and 1.236 for New Jersey. Therefore, a high school drop-out at Fort Monmouth has a COLA adjusted weight of .6078 (.7511/1.236).

c. Step 3. We multiply the COLA adjusted state-level median annual earnings index for each education category by the population in each education category and sum them for each installation to create a comparable measure of available labor supply within a 50 mile radius of each post. High school drop-outs at Fort Monmouth contribute 1,508,841 to the total Fort Monmouth labor supply metric of 11,168,696.

d. Step 4. We normalize the labor supply measures by the installation with the largest labor supply (Fort Monmouth) so that each installation has a labor supply measure that ranges from zero to one. A one denotes the installation with the largest labor supply.

5. The data used in this analysis is found in the accompanying excel file: BRAC-output-oema-v2.0.

6. I certify that the information supplied is accurate and complete to the best of my knowledge and belief.



E. CASEY WARDYNSKI
COL, OD

Director, Office of Economic & Manpower Analysis