

Comprehensive Regional Growth Plan for the Fort Bragg Region

Assessment and Recommendations



Chapter 2 Education (K-12)

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This report is intended as an aid to planners, managers, elected officials, and other decision makers in the Fort Bragg region. Our aim is not to dictate what should be done, but to assist in ongoing efforts to achieve goals and objectives identified and valued by the residents of the region. The recommendations presented in this report are suggestions for how the region could work towards those goals and objectives, based on best available information and current understandings.

The information, projections and estimates in this report are based upon publicly available data and have been prepared using generally accepted methodologies and formulas. The projections and needs presented in this report are based upon best estimates using the available data. It is important to note that currently available information and understandings are incomplete and cannot account for the inevitable, but unpredictable, impacts of unexpected global, national, state, and/or local events. Actual results and needs may differ significantly from the projections of this report due to such unforeseen factors and conditions, as well as inaccuracy of available data, and/or factors and conditions not within the scope of this project. Persons using this information to make business and financial decisions are cautioned to examine the available data for themselves and not to rely solely on this report.

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Chapter 2: Education (K–12)

Between the 2006-2007 and 2013-2014 school years, the school systems located in the Tier I counties—whose 2007-08 K-12 enrollment is 131,337—will experience an estimated military-related growth of 6,674 students. Approximately \$260 million in operating funds over eight years will be needed in the region in order to maintain the current level of education services for the additional military-related growth. Inasmuch as \$274 million will be needed for new school construction, securing funding for capital improvements and operating costs have become a major priority.

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School systems nationwide are facing difficult planning challenges arising from increasing student populations, aging school infrastructures, and increasing complexity in pupil assignments. These challenges are shared by the school districts in our region, which must fund building and renovation projects based not only on normal population growth but also on the expected growth that will occur as a result of the military expansion at Fort Bragg.

A. Current Conditions

K-12 enrollment for the seven Tier I counties in the 2007-08 school year was 131,337¹. These seven school districts jointly have 224 schools and 16,782 employees, including 576 administrators, 8,451 teachers, 2,979 teacher assistants and 4,776 support staff.

As part of this assessment, a detailed out-of-capacity analysis of each school in the district was completed. Enrollment projections were developed based on

1. North Carolina Department of Public Instruction, 2007-2008 Average Daily Membership (ADM), Month-Two Report.

historical trends and the expected impact of military expansion. These projections were compared to the existing permanent capacity of each school and capacity gaps or surpluses were determined. Estimates for the 2008-2009 school year suggest that region-wide there is a current system-wide capacity surplus of about 11,300 students; the majority of this surplus (9,250 students) is in Robeson County². Harnett County presently has the largest capacity gap - over 1,600 students. However, all districts have specific schools that are presently overcrowded and many of these schools are expected to receive significant military-related impact.

The cost to educate a student ranges from \$7,663 in Cumberland County to \$8,315 in Robeson County. There are administrative and operations costs, such as salaries, instructional supplies, utilities, maintenance, transportation, etc. All of the region's school districts operate with money from local, state, and federal sources. Public schools are funded largely through tax dollars. The State provides the overwhelming majority of school funding, with the federal government providing the least. Moore County pays the most from local funds (25 percent) and Robeson County pays the least from local funds (12 percent). (**Table 1**)

2. Richmond County capacity information was not available and was not included in the capacity analysis.

Table 1. Sources of Operating and Administrative Funds

County	Percentage Federal Funds	Percentage State Funds	Percentage Local Funds	Per Pupil Expenditure 2007-08
Cumberland	14%	66%	20%	\$7,663
Harnett	13%	72%	15%	\$7,695
Hoke	14%	73%	13%	\$8,247
Lee	11%	67%	22%	\$7,627
Moore	9%	66%	25%	\$7,717
Richmond	11%	74%	15%	\$8,047
Robeson	16%	72%	12%	\$8,315

B. Future Conditions

1. Geographic Distribution of Growth

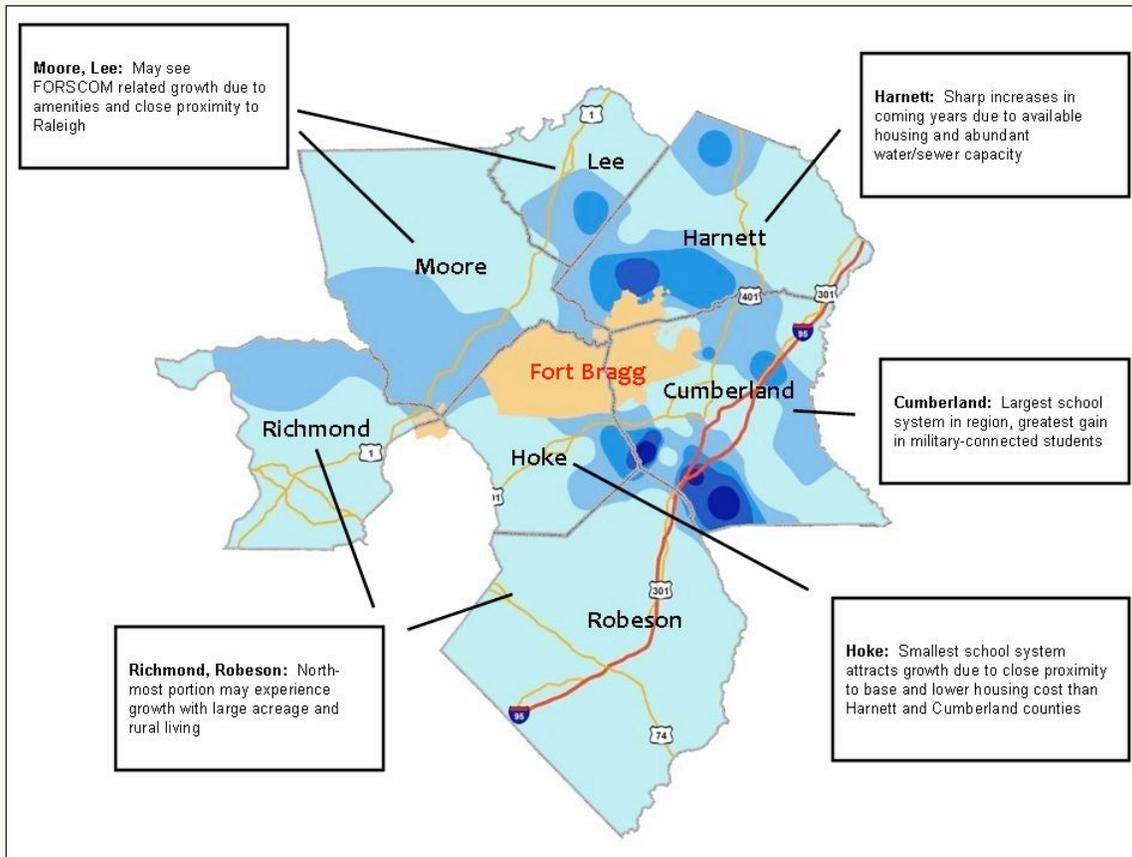
Military-related growth is expected to add 6,674 school-aged children to the schools in the Tier 1 counties. Projections suggest that 2,500 of these military-connected students will attend Cumberland County Schools; Harnett County will receive approximately 1,800 students and Moore County will receive about 760 students. Refer to Appendix A for information on other counties. The 6,674 increase is equivalent to:

- 3,300 K-5 graders
- 1,500 6-8 graders
- 1,800 9-12 graders

These additional students will need five elementary schools, two middle schools and two high schools; this estimate is in addition to the existing needs to absorb the county’s normal growth.

Figure 1 shows the geographic distribution of the potential growth in the region’s K-12 student population. This map is derived from GIS analyses of where current students live, where military personnel live, and where land parcels available for development are located, as well as from interviews about land use conducted with a wide range of knowledgeable stakeholders. Both information sources are important; strong residential growth does not necessarily correlate with increasing student population, and expert local knowledge is required to identify likely patterns. The resultant map reveals strong residential growth trends, indicative of a future increase in the number of school-aged children in the Western Harnett and Overhills high school attendance area, especially the area bisected by Hwy 210, Hwy 27, and Hwy 87. This area offers direct access to Fort Bragg via Hwy 210 and Hwy 24/87, and is favored by families with school-age children due to the quality of its schools.

Figure 1. Growth potential for K-12 student population in Harnett County. Darker blue indicates areas where the number of school-aged children is expected to grow the most.



2. Projected Growth and Facilities Capacity

Region-Wide Impact: Enrollment projections were developed for all schools in the district³. Projections were based on historical school enrollment records as well as available data about the number of newborn babies in each school district. The analysis determined cohort survival ratios, defined as the proportion of students enrolled in one grade in a specific school year relative to the number of students enrolled in the next grade level and school year. These ratios, in turn, were used to develop a system-wide, enrollment forecast, which was then compared with estimates of school capacity in order to project capacity shortfalls in 2013. The total anticipated growth⁴ in school enrollments between the 2008-09 and 2013-14 school years is approximately 8,073 students (includes 6,674 students resulting from military-related growth).

3. At the time of this analysis, actual 20 day ADM numbers were not available. Estimates were used based on available data.

4. Includes normal growth plus the expected military-related growth.

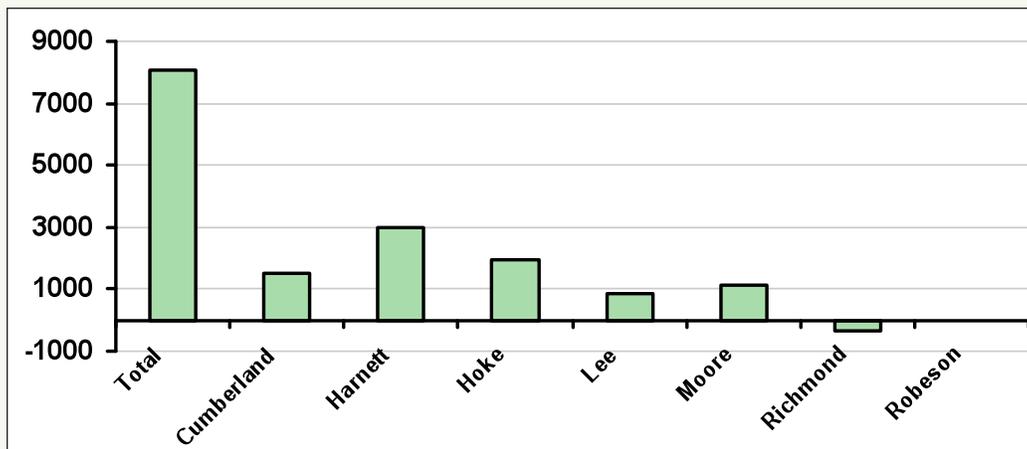
Figure 2 details the projected school enrollments.

Projections for the 2013-2014 school year suggest that, region-wide, the permanent facilities capacity surplus will be reduced to 2,841 students. Harnett County however, will likely experience a system-wide capacity gap of 900 students. Hoke, Lee and Moore will also experience gaps in facility capacity, although to a lesser extent.

3. Military-Impacted School Clusters

In order to assess the impact of pending school construction projects on capacity gaps and to provide guidance on the siting of future schools, military-impacted school clusters were identified in selected school systems in the region. Clusters include the individual school attendance areas - at the elementary, middle and/or high school levels - expected to receive the largest military impact. Once specific

Figure 2: Projected Growth in Student Enrollment (2008-09 to 2013-14)



clusters were identified, the out-of-capacity analysis was redone at the cluster levels to take into account planned school construction and to illustrate year-by-year capacity gaps. Highlights of the outcomes of the cluster analysis include:

Harnett County Schools

- Current elementary school in the area has capacity gap of 700. Overhills Elementary opens in 2009 will not sufficiently relieve overcrowding
- Middle schools capacity gap in the military impacted areas (Western Harnett and Overhills) will approach 1,500 in 2013
- High schools capacity gap in the military impacted areas (Western Harnett, and Overhills, Central) will exceed 1,100 in 2013

Cumberland County Schools

- Gray’s Creek ES is projected to be over capacity by more than 160 students. Gray’s Creek HS is project to be over capacity by 250
- Stoney Point ES is projected to be over capacity by near 200 students
- John Griffin MS is projected to be more than 250 students over capacity
- Jack Britt HS is projected to be over capacity by 250

Hoke County Schools

- Rockfish Hoke, Upchurch and Sandy Grove elementary areas are the most impacted by military growth
- Don Steed Elementary opened this year will provide temporally relief to the military impacted area till 2012

Lee County Schools

- Ingram, Edward and Greenwood elementary schools expect to see most growth from BRAC and all three schools will be over-capacity in next two years
- Current elementary school capacity gap of less than 100 will increase to about 600 in 2013 in the military impacted area

C. Gaps

As mentioned, approximately 6,674 additional students will enroll in the region's schools as a result of military-related growth.⁵ This assessment suggests that the several additional schools will be needed within the next five years to accommodate the region's normal growth plus the expected military-related growth. These schools are in addition to those that have already been planned or are already under construction⁶.

- Harnett County - one elementary school, one middle school and one high school
- Cumberland County - two elementary schools, one middle school, and one high school
- Hoke County - one elementary school, one middle school and one high school.
- Moore County - one high school
- Lee County - one elementary school

There is an estimated \$274 million in construction costs needed to build new schools⁷ (Appendix B). This estimate is based on a per pupil cost and is not based on the out-of-capacity results. The additional administrative and operations costs required in order to achieve the same level of educational services for eight years⁸ is approximately \$260 million; approximately \$48 million of this cost will be borne by the local school systems (Appendix C).

5. Compares the 2006-07 enrollment to the projected 2013-14 enrollment.

6. A comprehensive Harnett County schools analysis is complete. Other county assessments were preliminary and require further study to validate the results.

7. Using the county-wide out-of-capacity analysis and 2008-2009 enrollment projections, the proportion of students attending elementary schools, middle schools, and high schools was determined. This distribution was used to project which school level military-connected students would attend. The average cost per student to construct a school was obtained from Smith Sinnett Architects and assumes a 5-year construction inflation cost and a \$20K per acre land cost. The estimate is \$35,784 for an elementary school, \$40,388 for a middle school and \$48,429 for a high school.

8. From the 2006-07 through 2013-14 school years

D. Recommended Actions

Critical Action 1: Identify potential funding sources for the construction and operation of the additional school capacity

Description: Current funding sources will not provide sufficient funding to fill the capital and operating needs of the region’s schools. Each school system - that is expecting growth - should form a committee to identify potential sources for additional funding. Potential funding sources include: (1) a higher level of Federal Impact Aid, which is supposed to compensate local educational agencies for “substantial and continuing financial burden” resulting from federal activities such as the enrollments of children of military parents who live or work on federal land; and (2) traditional funding sources, such as general obligation bonds and raising property or sales taxes, which would need a focused effort to build public support since they require voter approval. In addition, the committee should explore the possibilities for obtaining special funding from the Department of Defense to deal with the special burden imposed on local schools by the BRAC process. Legislation, such as the Military Children’s School Investment Act recently introduced in Congress by Congressman Robin Hayes, should be supported.

Because military-related school-aged children are a significant part of many of the schools, the school systems should continue to actively engage the Department of Public Instruction in enrollment forecasting. Even though DPI forecasting is conducted many months prior to the school opening when the exact number of military-related students is still unknown, the school systems should be able to provide relevant data that will support a joint effort to plan funding for new teachers and staff.

Responsible Parties: The exploratory committee should be formed by the BRAC Regional Task Force in partnership with Harnett County Schools and Harnett County government.

Critical Action 2: Identify short-term strategies for accommodating expected enrollment increases in the next few years.

Description: Counties expecting significant increases in student numbers over the next few years should consider convening an ad hoc group of policy makers and school staff to consider available short-term strategies for dealing with these increases, such as:

- Mobile classroom or modular classroom facilities
- Temporary capping of enrollment at overcrowded schools plus temporary busing of students to under-utilized schools
- Alternative-calendar schools

- Rental of off-site, swing-space buildings to accommodate students over the short term

Responsible Parties: The BRAC Regional Task Force will work with the school systems to identify solutions.

Critical Action 3: Update out-of-capacity analysis using actual 2008-09 enrollment numbers and conduct military-impacted cluster analyses in several counties.

Description: A comprehensive military-impacted cluster analysis was completed for Harnett County schools as a part of this assessment. All schools systems expecting growth would benefit from a similarly comprehensive assessment. The out-of-capacity analyses developed for all counties were based on estimated enrollments for the 2008-09 school year. The actual enrollment numbers – based on the 20-day ADM - are now available. These additional assessments will verify the need for the additional elementary, middle and high schools recommended in this assessment. An update may also impact the optimal location of each of the schools recommended.

Responsible Parties: The BRAC Regional Task Force will work with the schools to ensure that the most up-to-date information is used in any future assessments.

Important Action 4: Promote local government and school system collaboration in locating schools, houses, and neighborhoods

Description: Because the projected school capacity gap in each county is not evenly distributed across the county, efficient use of limited capital improvement funds will require strategic distribution of new facilities. Local school systems and local governments should consider adopting Smart Growth principles whereby school facility planning and local government planning efforts are integrated so as to reach multiple community goals—educational, economic, social, and fiscal. Collaborative decisions regarding the location of schools, houses, and neighborhoods will promote policies that are consistent across governmental and functional boundaries. The availability and price of land is obviously an important factor in siting schools. GIS-driven technology – such as the technology used to determine optimal school site in this assessment - is available that will assist in correlating school decision-making with projected land use trends.

Responsible Parties: The integration of a collaborative model of decision making is recommended for all counties in the region. The BRAC Regional Task Force is well positioned to provide regional access to expert technologies and organizations.

E. Appendix A – Military Related Impact on Local School Districts (number of students)

	2006	2007	2008	2009	2010	2011	2012	2013	Total
Cumberland	108	300	908	483	-13	285	242	189	2502
Hoke	184	11	182	96	5	91	57	47	673
Harnett	378	117	419	240	75	265	183	142	1820
Lee	137	28	143	75	9	91	50	42	578
Moore	185	34	191	101	11	118	66	56	761
Richmond	18	3	18	10	1	11	6	5	74
Robeson	79	-1	75	40	1	32	22	18	266
Region Total	1090	492	1937	1044	89	894	628	500	6674

F. Appendix B - Additional Construction Costs Needed to Educate Military-Connected Students

LEA	BRAC Expected Growth	0.47 K-5	0.24 6-8	0.29 9-12	\$ 35,784 Elem	\$ 40,388 Midd	\$ 48,429 High	LEA Total
Cumberland	2502	1176	600	726	\$ 42,079,310	\$ 24,252,343	\$ 35,138,779	\$101,470,432
Harnett	1820	677	346	418	\$ 24,218,308	\$ 13,958,183	\$ 38,626,602	\$ 76,803,093
Hoke	673	316	162	195	\$ 11,318,695	\$ 6,523,512	\$ 9,451,798	\$ 27,294,005
Lee	578	272	139	168	\$ 9,720,960	\$ 5,602,660	\$ 8,117,592	\$ 23,441,211
Moore	761	358	183	221	\$ 12,798,703	\$ 7,376,512	\$ 10,687,694	\$ 30,862,909
Richmond	74	35	18	21	\$ 1,244,552	\$ 717,296	\$ 1,039,276	\$ 3,001,124
Robeson	266	125	64	77	\$ 4,473,660	\$ 2,578,387	\$ 3,735,777	\$ 10,787,824
	6674							\$273,660,598

G. Appendix C - Additional Operating Costs Needed to Educate Military-Connected Students

Administrative and Operations Costs									
Based on actual growth for Cumberland in 2006 and 2007									
	2006	2007	2008	2009	2010	2011	2012	2013	Cumulative Sum
Cumberland	\$ 169,363	\$ 638,992	\$ 2,059,590	\$ 2,814,525	\$ 2,794,866	\$ 3,241,353	\$ 3,619,202	\$ 3,914,439	\$ 19,252,329
Harnett	\$ 435,193	\$ 569,566	\$ 1,051,666	\$ 1,328,054	\$ 1,413,960	\$ 1,718,465	\$ 1,929,464	\$ 2,093,304	\$ 10,539,671
Hoke	\$ 202,141	\$ 213,946	\$ 412,940	\$ 518,084	\$ 524,003	\$ 623,632	\$ 686,439	\$ 737,933	\$ 3,919,119
Lee	\$ 225,011	\$ 271,187	\$ 505,806	\$ 629,247	\$ 643,765	\$ 793,477	\$ 876,116	\$ 945,644	\$ 4,890,254
Moore	\$ 354,686	\$ 419,293	\$ 785,877	\$ 978,873	\$ 999,794	\$ 1,226,174	\$ 1,353,288	\$ 1,459,862	\$ 7,577,847
Richmond	\$ 20,999	\$ 24,935	\$ 46,682	\$ 58,130	\$ 59,395	\$ 72,928	\$ 80,496	\$ 86,847	\$ 450,411
Robeson	\$ 79,436	\$ 78,509	\$ 154,499	\$ 194,739	\$ 195,729	\$ 228,341	\$ 250,878	\$ 269,057	\$ 1,451,189
Cumulative local gap by year									\$ 48,080,820
	2006	2007	2008	2009	2010	2011	2012	2013	Cumulative Sum
Cumberland	\$ 545,922	\$ 2,059,718	\$ 6,638,857	\$ 9,072,306	\$ 9,008,936	\$ 10,448,137	\$ 11,666,090	\$ 12,617,756	\$ 62,057,721
Harnett	\$ 2,009,263	\$ 2,629,654	\$ 4,855,484	\$ 6,131,552	\$ 6,528,175	\$ 7,934,059	\$ 8,908,229	\$ 9,664,670	\$ 48,661,086
Hoke	\$ 1,114,422	\$ 1,179,507	\$ 2,276,580	\$ 2,856,249	\$ 2,888,877	\$ 3,438,144	\$ 3,784,403	\$ 4,068,296	\$ 21,606,479
Lee	\$ 706,921	\$ 851,992	\$ 1,589,099	\$ 1,976,916	\$ 2,022,527	\$ 2,492,879	\$ 2,752,509	\$ 2,970,946	\$ 15,363,790
Moore	\$ 935,696	\$ 1,106,135	\$ 2,073,221	\$ 2,582,362	\$ 2,637,554	\$ 3,234,767	\$ 3,570,106	\$ 3,851,259	\$ 19,991,099
Richmond	\$ 105,991	\$ 125,856	\$ 235,625	\$ 293,406	\$ 299,792	\$ 368,097	\$ 406,298	\$ 438,352	\$ 2,273,416
Robeson	\$ 468,478	\$ 463,011	\$ 911,167	\$ 1,148,485	\$ 1,154,321	\$ 1,346,654	\$ 1,479,566	\$ 1,586,777	\$ 8,558,458
Cumulative state fund by year									\$ 178,512,050
	2006	2007	2008	2009	2010	2011	2012	2013	Cumulative Sum
Cumberland	\$ 114,382	\$ 431,554	\$ 1,390,979	\$ 1,900,837	\$ 1,887,560	\$ 2,189,102	\$ 2,444,289	\$ 2,643,683	\$ 13,002,386
Harnett	\$ 354,046	\$ 463,363	\$ 855,570	\$ 1,080,422	\$ 1,150,310	\$ 1,398,037	\$ 1,569,692	\$ 1,702,982	\$ 8,574,424
Hoke	\$ 204,834	\$ 216,797	\$ 418,443	\$ 524,988	\$ 530,985	\$ 631,942	\$ 695,585	\$ 747,766	\$ 3,971,338
Lee	\$ 115,975	\$ 139,775	\$ 260,703	\$ 324,327	\$ 331,809	\$ 408,974	\$ 451,568	\$ 487,404	\$ 2,520,535
Moore	\$ 135,947	\$ 160,710	\$ 301,217	\$ 375,190	\$ 383,209	\$ 469,978	\$ 518,699	\$ 559,547	\$ 2,904,497
Richmond	\$ 16,181	\$ 19,214	\$ 35,972	\$ 44,793	\$ 45,768	\$ 56,196	\$ 62,027	\$ 66,921	\$ 347,071
Robeson	\$ 105,439	\$ 104,208	\$ 205,073	\$ 258,486	\$ 259,799	\$ 303,087	\$ 333,001	\$ 357,131	\$ 1,926,224
Cumulative federal fund by year									\$ 33,246,475
	2006	2007	2008	2009	2010	2011	2012	2013	Cumulative Sum
Cumberland	\$ 829,666	\$ 3,130,263	\$ 10,089,426	\$ 13,787,668	\$ 13,691,362	\$ 15,878,592	\$ 17,729,581	\$ 19,175,878	\$ 94,312,436
Harnett	\$ 2,798,502	\$ 3,662,583	\$ 6,762,721	\$ 8,540,029	\$ 9,092,445	\$ 11,050,561	\$ 12,407,386	\$ 13,460,956	\$ 67,775,182
Hoke	\$ 1,521,398	\$ 1,610,251	\$ 3,107,964	\$ 3,899,321	\$ 3,943,864	\$ 4,693,718	\$ 5,166,427	\$ 5,553,994	\$ 29,496,936
Lee	\$ 1,047,907	\$ 1,262,954	\$ 2,355,608	\$ 2,930,490	\$ 2,998,102	\$ 3,695,329	\$ 4,080,194	\$ 4,403,995	\$ 22,774,579
Moore	\$ 1,426,328	\$ 1,686,137	\$ 3,160,316	\$ 3,936,425	\$ 4,020,556	\$ 4,930,920	\$ 5,442,092	\$ 5,870,669	\$ 30,473,443
Richmond	\$ 143,171	\$ 170,004	\$ 318,278	\$ 396,328	\$ 404,954	\$ 497,220	\$ 548,821	\$ 592,119	\$ 3,070,898
Robeson	\$ 653,353	\$ 645,728	\$ 1,270,739	\$ 1,601,710	\$ 1,609,849	\$ 1,878,082	\$ 2,063,445	\$ 2,212,965	\$ 11,935,871
Cumulative total gap by year									\$ 259,839,345