

Buffalo Literacy Campaign Needs Assessment

Buffalo Reads

PREPARED BY

Center for Governmental Research Inc.

FOR

Good Schools for All

April 2006





*Research to drive informed decisions.
Expertise to create effective solutions.*

City of Buffalo

Literacy Needs Assessment

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Executive Summary

In 2005, Good Schools for All, a component program of the Community Foundation for Greater Buffalo, and Buffalo Reads, a literacy coalition of more than 40 organizations, created an extensive planning process to bring about fundamental, systemic changes in the way literacy services are provided in the City of Buffalo. To inform this process, the Center for Governmental Research Inc. (CGR) was hired to conduct a needs assessment and analysis to help the coalition develop recommendations and strategies for a citywide plan.

This needs assessment includes detailed sections on demographic trends in the City of Buffalo and Erie County; a demographic profile of the City of Buffalo and its Planning Communities, and a focus on child, youth, and adult literacy, including data on factors associated with school readiness, educational attainment, and literacy.

City of Buffalo and Erie County Demographic highlights:

- ❖ Erie County's overall population declined during the 1990s particularly in the City of Buffalo. The population of the County is aging, with a particularly large decline over the past decade in the number of adults aged 18 to 44.
- ❖ There were more single parent families in Erie County in 2000 than in 1990, with the greatest concentration in the City of Buffalo.
- ❖ The City of Buffalo remains far more racially and ethnically diverse than the rest of the County, with significant African-American and Hispanic populations in many parts of the City.
- ❖ Educational attainment among adults rose substantially for both City and non-City residents from 1990 to 2000. However, Buffalo residents still lag their counterparts in the rest of the County in high school graduation and other measures of basic education.
- ❖ Median household and per capita incomes are increasing, although Buffalo residents lag the County average in both total income and income growth. A significant percentage of City households had incomes below \$25,000 in 1999.

City of Buffalo Planning Communities—Demographic Highlights

- ❖ About half of the City's 12 planning communities are now predominantly or substantially African-American, and several have considerable Hispanic populations. This underscores the importance of developing literacy strategies and programs that are culturally appropriate.
- ❖ Buffalo is home to a large number of foreign-born residents and refugees, who typically have lower levels of English language proficiency than native-born residents.

- ❖ Nearly 7,000 children and adults in the City do not speak English well or at all, according to the 2000 Census. The number and percentage of these individuals is greatest in, but certainly not limited to, those planning communities with large concentrations of Hispanic residents.
- ❖ A significant percentage of adults in the City of Buffalo have less than a high school education (25%). Of greatest concern, perhaps, is the fact that 10 to 15% of residents in six planning communities across the City have only a 0-8th grade education, the strongest predictor of low literacy levels among adults.
- ❖ Low educational attainment appears to be most prevalent in the Hispanic and, to a lesser degree, African-American communities. Black residents are more likely than whites to have not completed high school, and Hispanic residents are by far most likely to have only a 0-8th grade education. When combined with the fact that those planning communities with large numbers of poor or non-English speaking residents often contain substantial Hispanic populations, these findings strongly suggest that the Hispanic community has the largest proportion of individuals at risk of low literacy levels.
- ❖ Research indicates a particularly strong correlation between educational achievement, economic status, and literacy level. This assessment is underscored in data from the City of Buffalo. Those planning communities in the City with the greatest proportion of low household incomes also tend to have the most residents with low levels of educational attainment. And both of these factors, especially limited educational attainment, are closely associated with poor literacy skills.

Pre-School Children:

- ❖ The Brigance® Assessment tool indicates that in fall 2004 one-quarter (24%) of the Buffalo City School District pre-school children screened needed some additional instruction and 29% needed intensive instruction to rise to grade level performance. By spring 2005, nearly three-quarters (73%) of children screened were at grade level (instruction not indicated), but 27% still needed additional help, with 6% requiring intensive instruction.
- ❖ Applying Brigance results to the total number of children under 5, an estimated 5,000 to 10,000 Buffalo City children under age 5 could be at risk of low literacy skills.
- ❖ Based on the number of children born to mothers with less than a high school diploma, approximately 1,000 babies born each year in the City of Buffalo are at future risk of low literacy.

School-Age Children and Youth:

- ❖ In 10 City of Buffalo schools, more than 10% of students are designated as English Language Learners (ELL), with the proportion approaching half or more of the students in some schools.
- ❖ According to the 2000 Census, 1,180 school-age children speak English “not well” or “not at all.”
- ❖ The majority of students in City of Buffalo schools are not meeting the statewide standards for English Language Arts (ELA) in either 4th or 8th grade. More than 60% did not meet the standard in 4th grade (over 1,400 children), and 74% did not meet the 8th grade standard (over 2,200 children). Students in Charter Schools are performing only slightly better, on average.
- ❖ Among the 13 Buffalo City School District (BCSD) high schools for which data were available, six have graduation rates below 60% (Emerson, South Park, Grover Cleveland, Burgard, Bennett, and Riverside).

Adults:

- ❖ Data from the National Assessment of Adult Literacy (NAAL) indicate that in New York State between 40% and 60% of adults have only basic or below basic mastery of core literacy skills, depending on the literacy skill measured.
 - Rates of literacy are substantially lower among the African-American and Hispanic populations compared to the white and Asian populations.
 - Persons who spoke a language other than English before starting school, and persons with lower educational attainment had substantially lower literacy rates.
- ❖ Adult literacy rates estimated from 1990 Census data and 1992 National Adult Literacy Survey data indicate that Buffalo residents’ mean literacy score is below those in Albany, Rochester, Syracuse, Yonkers and NYC, and is below the mean New York State score as well.
- ❖ Census 2000 indicates that 5,574 adults speak English “not well” or “not at all.”
- ❖ It is estimated that over 130,000 adults in the City of Buffalo have low literacy levels (basic or below basic).
- ❖ The fastest growing occupations in Western New York are in the social service and health fields, while the top occupations with the most anticipated openings by 2012 are cashiers, retail salespersons, waiters, and registered nurses. Even among low-skill level jobs, such as

cashiers, retail, and waiters, employers have a preference for applicants with a high school diploma.

- ❖ The NYS Education Department Office of Workforce Preparation and Continuing Education is a funder for five literacy programs that serve the City of Buffalo. They provided data on four of the programs to CGR: the Buffalo Adult Learning Center, Everywoman Opportunity Center, Erie 1 BOCES, and Erie 2 BOCES. Racial/ethnic minorities comprise a disproportionate share of those participating in these programs. Only 20% of program participants are employed, one-third receive public assistance, and most are low-income.

The Citywide Literacy Campaign may wish to focus resources directed at improving literacy rates among children, youth, and adults in the City of Buffalo on those neighborhoods, schools, and population sub-groups that appear to be most at risk based on the data compiled in this needs assessment.

We identified planning communities which are likely to have a high proportion of individuals with low literacy based on risk factors including (1) low education, (2) low income, (3) high foreign-born population, and a high number of (4) youth or (5) adults who do not speak English or speak it poorly. Among the twelve planning communities, the five neighborhoods that appear to be most at risk are West Side, Ellicott, Riverside, East Side, and Central. Each of these neighborhoods is at or near the top of the list on two or more of these risk factors.

Elementary and middle schools that appear to be performing well below their peers on the ELA 4th and 8th grade test scores include the following, listed by neighborhood, with the percentage not meeting the 4th or 8th grade ELA standard:

- Central: School 76 (88%)
- East Delavan: School 84 (80%), School 82 (78%), School 171 (87%)
- East Side: School 97 (88%)
- Ellicott: School 31-4th grade (78%); School 31-8th grade (95%)
- Elmwood: School 17 (76%)
- Masten: School 37 (78%); School 74 (93%)
- North East: School 61 (79%)
- Riverside: School 94 (94%)
- West Side: School 38 (89%); School 18 (87%)

High Schools with particularly low graduation rates include the following:

- Central: Emerson School of Hospitality (57%)
- North East: Bennett HS (55%), Burgard HS (59%)

- Riverside: Riverside Institute of Technology (57%)
- South Buffalo: School 206 South Park HS (46%)
- West Side: School 202 Grover Cleveland HS (44%)

Certain population groups are at higher risk of low literacy levels, based on high school graduation rates by sub-group, as well as on the NYS SAAL.

- ***Race:*** In the schools, black and Hispanic youth are much less likely to graduate in four years as compared to their white or Asian counterparts. Black and Hispanic youth are also more likely to test below the standard on the 4th and 8th grade ELA test. Similarly, on the SAAL, black and Hispanic adults are much more likely to test at the lower literacy levels, “below basic” or “basic” as compared to adults who are white or Asian.
- ***English Proficiency:*** In the schools, students with limited English proficiency are substantially less likely than those who are English proficient to graduate in four years. They are also more likely to test below the state standard on the 4th and 8th grade ELA assessment. The NYS SAAL indicates that persons whose first language was not English are much more likely to test at lower literacy levels than those whose first language was English.
- ***Education:*** Adults with lower education levels, particularly those with less than a high school degree or with a GED are much more likely than those with higher levels of education to test at low literacy levels on the SAAL.
- ***Gender:*** In the BCSD, males are less likely to graduate from high school in four years compared to females, and are more likely to test below the state standard on the 4th and 8th grade ELA assessment.
- ***Economic Status:*** Economically disadvantaged students are more likely to test below the state standard on the 4th and 8th grade ELA assessment. Adults utilizing selected literacy programs in Buffalo are highly likely to be low-income and to be out of work.

Literacy services are present citywide, but targeted programs may need to be added in selected areas. As the maps demonstrate, agencies providing literacy services are present throughout the city, but with fewer agencies on the east and south sides of the city. However, a particular need may exist for GED programs and adult services in the north side of the city, and for youth programs in the southeast.

With the extensive system of literacy programs in Buffalo, many of these individuals can be reached—children and youth through the schools and the community centers, and adults through the many programs available in their communities. Clearly opportunities exist to reach persons at risk of low literacy, and improve their opportunities for future success.

Table of Contents

Section I: Introduction and Overview	1
Context and Background	1
Definitions	1
Factors Associated with Literacy	3
Elements of the Needs Assessment	5
Section II: Demographic Trends in the City of Buffalo and Erie County, NY	6
Highlights	6
Population	7
Age of Population	7
Household Types	8
Race/Ethnicity	9
Educational Attainment	10
Income	12
Poverty	13
Section III: Demographic Profile of the City of Buffalo and its Planning Communities	16
Race/Ethnicity	17
Income	18
Educational Attainment	19
Residency/English Proficiency	22
Summary	24
Section IV: Focus on Children and Adults – Measuring Literacy Levels	25
Pre-School Children	25
School Age Children and Youth	28
Adult Literacy Rates	43
Estimates of Adult Literacy	50
Workforce Participation	51
Employer-Sought Skills	56
Literacy Program Service Utilization	57
Conclusion	59
Appendix	60

City of Buffalo – Literacy Needs Assessment

March 2006

SECTION I: INTRODUCTION AND OVERVIEW

Context and Background

In 2005, Good Schools for All, a component program of the Community Foundation for Greater Buffalo, and Buffalo Reads, a literacy coalition of more than 40 organizations, created an extensive planning process to bring about fundamental, systemic changes in the way literacy services are provided in the City of Buffalo. To inform this process, the Center for Governmental Research Inc. (CGR) was hired to conduct a needs assessment and analysis to help the coalition develop recommendations and strategies for a citywide plan. Good Schools for All provided excellent leadership and direction to the Buffalo Reads coalition, its Task Forces, and the consultants who aided in this process. What follows is a quantitative needs analysis that presents data on factors that influence or are associated with literacy levels for children (school readiness), youth (school commitment), and adults. The needs assessment is enhanced and supported by several other components including:

- ❖ Focus groups and a qualitative needs analysis conducted by CGR.
- ❖ Funding analysis conducted by Buffalo State College.
- ❖ An inventory of literacy services and programs serving the citizens of Buffalo conducted by Buffalo State College.

Definitions

Literacy is surrounded by definitional ambiguity and changing and evolutionary approaches to measurement. In the past, literacy was defined simply as reading skill and was measured by grade level equivalents. An adult's literacy skill was described as an equivalent to reading at grade levels from kindergarten to 12th grade. As our society has become more technical and sophisticated, so have the demands on children, youth and adults to develop higher levels of basic skills to function effectively in school, work and life. The definition of literacy has accordingly become more complex, and addresses an individual's performance on diverse tasks. The National Literacy Act of 1991 defined literacy as

“an individual’s ability to read, write, speak in English and compute and solve problems at levels of proficiency necessary to function on the job and in society, to achieve one’s goals, and to develop one’s knowledge and potential”.

Similarly, the Workforce Investment Act of 1998 defines literacy as

“an individual’s ability to read, write, speak in English, compute and solve problems at levels of proficiency necessary to function on the job, in the family of the individual, and in society”.

The current definitions recognize adulthood as a time of continued learning with a range of skills necessary to meet the expectations of the workplace; understand and carry out activities needed to run a household; understand basic information to access and use services; and speak, comprehend and function in an English-speaking environment. Our success as a nation depends on achieving basic literacy skills of all adults and ensuring the next generation possesses the skills to keep our nation strong.

The best current measure of adult literacy in the United States is the National Assessment of Adult Literacy (NAAL), conducted by the U.S. Department of Education in 2003 and the most comprehensive measure of adult literacy since the 1992 National Adult Literacy Survey (NALS). (See Appendix for a rank list of all countries by literacy rate). Both surveys used the following definition of literacy: “using printed and written information to function in society, to achieve one’s goals and to develop one’s knowledge and potential”. This definition goes beyond “simply decoding and comprehending text” to include a broad array of information-processing skills that adults need in accomplishing the range of tasks associated with home, work, and community contexts, ranging from basic skills (such as recognizing and interpreting words) to higher-level skills (such as drawing appropriate inferences from continuous text).

Both the NAAL and NALS measure literacy along three dimensions: **prose**, **document**, and **quantitative** literacy. For the 2003 NAAL, four performance levels were created that were intended to correspond to four policy-relevant categories of adults, including those most in need of basic literacy services. Adults at the **below basic** level can perform no more than the most simple and concrete literacy skills. These individuals tend to be at a great disadvantage in our society and do not have the range of economic and social options available to Americans at the higher literacy levels. Those at the **basic** level can perform fairly simple and everyday literacy activities, such as reading food labels or reviewing a checkbook, while individuals with an **intermediate** ranking can perform moderately challenging literacy activities. Finally, those with a **proficient** designation can perform complex and challenging literacy activities involving higher-level reading and problem-solving skills.

Factors Associated with Literacy

A literature review revealed factors or indicators commonly associated with literacy. While there is no definitive evaluation of the literacy needs of children, youth, and adults, these factors helped to frame the needs assessment and data that follows.

- ❖ **Literacy for children and youth** is generally viewed within the context of their parents and adult family members. Key consideration to a child's achievement is given to maternal education. Research indicates that the education level of the mother affects both pre-school children and school age children. Children of mothers who complete high school do better in school and on national achievement tests than those whose mothers did not graduate from high school. The higher the mother's education level, the better the child performs. Other factors that influence school readiness and school success are level of adult literacy or English language proficiency and income level in the household. Research indicates that children do better in school when their parents take an active role in their education, read frequently to them, expose them to books, exhibit a positive attitude toward school, and provide encouragement.
- ❖ **Literacy for adults** is best understood through the results of the 2003 National Assessment of Adult Literacy, discussed later in the report. Data from the NAAL provides information on those factors or conditions related to low literacy levels. Adults with fewer years of education typically perform at lower literacy levels than those who completed high school or received some type of postsecondary education. There is also a strong correlation between educational achievement, economic status, and literacy level. NAAL data indicates that adults in the lowest literacy levels are often immigrants, just learning to speak and understand English or with low levels of educational attainment. Other correlates of literacy for adults include employment status, health and mental health impairments, older age, and incarceration.

The table below highlights factors associated with literacy levels, as defined by numerous sources.

Table 1: Selected Factors Associated with Literacy

Age Group	Selected Factors Associated with Literacy	Sources
Children birth to school age	<ul style="list-style-type: none"> • Educational level of mother • Family income • Proficiency in English • English spoken as the primary language in the home • Parents reading to their children • Spoken language—talking and listening • Preschool experience 	<p>Santa Clara County Partnership for School Readiness, “Ready for School?” www.uwsv.org.</p> <p>National Center for Family Literacy, “All About Families: Facts & Figures from the NCFL Research Department”, Issue No.2, January 27, 2003. www.famlit.org/resources.</p> <p>RMC Research Corporation, “A Child Becomes a Reader: Kindergarten Through Grade 3,” www.nifl.gov/partnershipforreading/publications/pdf/low_res_child_reader_B-K.pdf.</p> <p>Hard/Risley, <u>Meaningful Differences in the Everyday Experience of Young American Children</u>, Sept 2004.</p>
School-age children and youth	<ul style="list-style-type: none"> • Educational level of mother • Family income • Parents reading to their children • Spoken language—talking and listening • Prior achievement • Minority status • Father’s occupation • Reading for fun 	<p>National Center for Family Literacy, www.famlit.org/resources</p> <p>RMC Research Corporation, “A Child Becomes a Reader: Kindergarten Through Grade 3,” www.nifl.gov/partnershipforreading/publications/pdf/low_res_child_reader_K-3.pdf</p> <p>National Institute for Literacy, “Literacy Fact Sheets Overview.” www.nifl.gov/nifl/facts/facts_overview.html</p> <p>Rhode Island Department of Elementary and Secondary Education “Information Works” www.infoworks.ride.uri.edu.</p>
Adults	<ul style="list-style-type: none"> • Less than high school education • Unemployed/not in labor force • Low income level • Mental, physical, health conditions • Visual difficulties affecting ability to read print • Age 65 years or older • Hispanic, Black, American Indian/Alaskan Native, Asian/Pacific Islander • Foreign born • Incarceration 	<p>National Center for Educational Statistics-National Adult Literacy Survey nces.ed.gov/naal/resources/execsumm.asp</p>

Elements of the Needs Assessment

The needs assessment is organized into the following sections:

Section II: Demographic Trends in the City of Buffalo and Erie County, New York – describes the varied and changing face of the City of Buffalo and Erie County from 1990 to 2000, highlighting the County’s population, ethnic/racial makeup, household types, educational attainment, and income distribution.

Section III: Demographic Profile of the City of Buffalo and its Planning Communities – takes a closer look at the City and its 12 planning communities, presenting data on race and ethnicity, household income, educational attainment, English proficiency, and citizenship.

Section IV: Focus on Children and Adult Literacy – highlights data on young children, the school age population, and adults, addressing factors associated with school readiness, educational attainment, and literacy.

SECTION II: DEMOGRAPHIC TRENDS IN THE CITY OF BUFFALO AND ERIE COUNTY, NY

This section of the report describes the varied and changing face of Erie County and the City of Buffalo. The discussion draws on data from the 1990 and 2000 Census to describe the County's population, ethnic/racial makeup, household types, educational attainment, and income distribution. Unlike section III, which more closely examines selected demographic factors associated with literacy by planning communities in the City of Buffalo, this demographic overview is primarily meant to give the reader a deeper understanding of Erie County. In particular, it depicts the County both currently and over the past decade, and compares the City of Buffalo to the rest of the County (suburbs) or the County as a whole to underscore interesting trends and geographic disparities in the data.

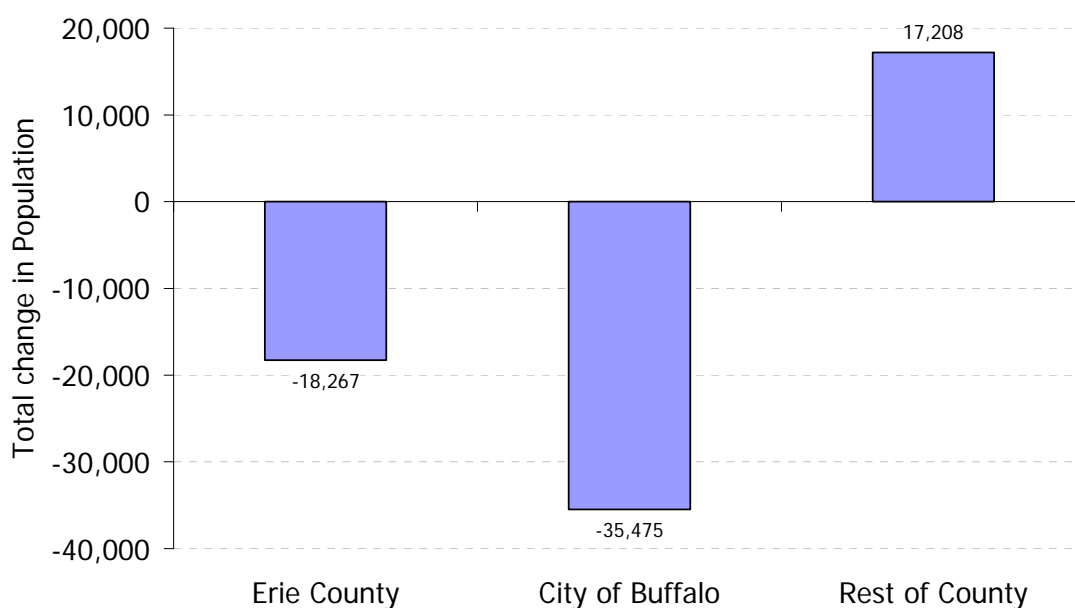
Highlights

- ❖ Erie County's overall population declined during the 1990s due to large decreases in the City of Buffalo, even as the rest of the County's population grew.
- ❖ The population of the County is aging, with a particularly large decline over the past decade in the number of younger adults aged 18 to 44.
- ❖ There were more single parent families in Erie County in 2000 than in 1990. Although such families are still concentrated in the City of Buffalo, the rate of growth in single parent households during the decade was greatest in the suburbs. Single parent families tend to have lower incomes, higher rates of poverty, and lower levels of educational attainment than other family types, all factors linked to reduced literacy rates.
- ❖ Although Erie County's population is still primarily white, the County and its suburbs in particular are seeing increases in both African-American and Asian populations. Buffalo remains far more racially and ethnically diverse than the rest of the County, with significant African-American and Hispanic populations in many parts of the City.
- ❖ Educational attainment among adults rose substantially for both City and non-City residents from 1990 to 2000. However, Buffalo residents still lag their counterparts in the rest of the County in high school graduation and other measures of basic education. In addition, non-City residents have increased their attainment of post-secondary degrees at a higher rate than their urban counterparts.
- ❖ Median household and per capita incomes are increasing, although Buffalo residents lag the County average in both total income and income growth. A significant percentage of City households had incomes below \$25,000 in 1999.

Population

Erie County had 950,265 inhabitants in 2000, of whom 292,648 – nearly a third – resided in the City of Buffalo. As with many urban counties, the traditional core city has been losing population to the suburbs, but the County as a whole also lost population despite some growth in areas outside the City. Figure 1 shows the change in total population for the whole County, the City of Buffalo, and the rest of the County.

Figure 1. Change in Population: Total County, City of Buffalo, Rest of County, 1990-2000



Source: U.S. Census Bureau

Age of Population

About a quarter of the County's population is under the age of 18. As Table 2 shows, despite a slight increase in the number of school-age children over the past decade, the overall trend has been toward an aging of the population, particularly in the suburbs. There are far fewer young adults (18 to 24 years) in particular, and the number of adults 25-44 years is also declining countywide. At the same time, the number of adults 45-64 years is on the rise. Interestingly, the population ages 65 to 84 dropped by over one-fifth in the city, but grew by nearly 10 percent in the suburbs. Finally, the number of people 85 and over increased by over 50 percent in the suburbs, with a slight decline in the city.

Table 2. Population by Age

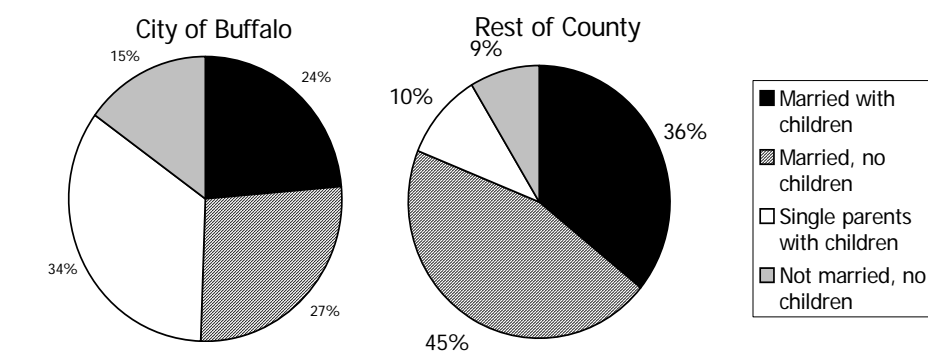
	1990			2000			Percent Change		
	Erie County	City of Buffalo	Rest of County	Erie County	City of Buffalo	Rest of County	Erie County	City of Buffalo	Rest of County
Under 5 years	66,512	25,541	40,971	57,837	20,768	37,069	-13.0%	-18.7%	-9.5
5 to 17 years	158,955	53,996	104,959	172,713	56,189	116,524	8.7	4.1	11.0
18 to 24 years	103,741	41,671	62,070	82,668	33,029	49,639	-20.3	-20.7	-20.0
25 to 44 years	298,564	102,979	195,585	269,666	85,891	183,775	-9.7	-16.6	-6.0
45 to 64 years	193,677	55,233	138,444	216,123	57,444	158,679	11.6	4.0	14.6
65 to 84 years	133,415	43,620	89,795	132,733	34,319	98,414	-0.5	-21.3	9.6
85 years and over	13,668	5,083	8,585	18,525	5,008	13,517	35.5	-1.5	57.4

Source: U.S. Census Bureau, Census 1990 and Census 2000 SF1.

Household Types

In 2000, 64% of Erie County households consisted of families.¹ As Figure 2 illustrates, there is a significant difference in the mix of family types between the City of Buffalo and the rest of the County: in Buffalo, one-third of families are single parent families, while only 24 percent are married couples with children. In the rest of the County, however, only 10 percent of families are headed by single parents.

Figure 2. Family Composition, City of Buffalo vs. Rest of County, 2000

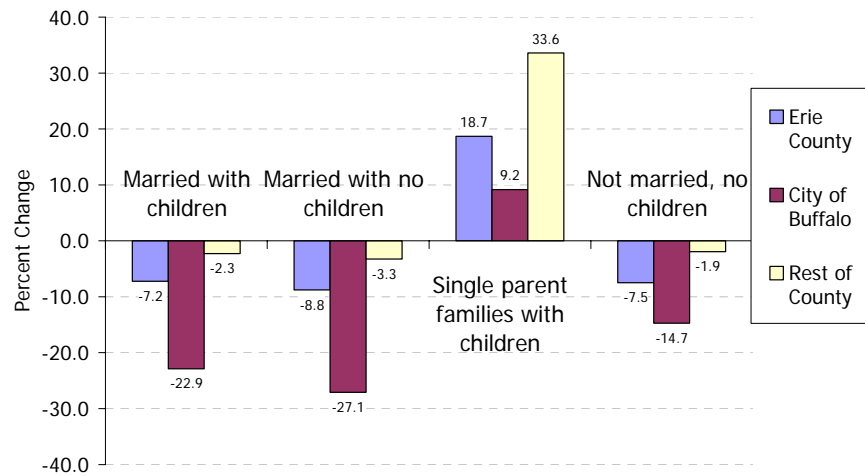


Source: U.S. Census Bureau

¹ The Census defines a family as: "A group of two or more people who reside together and who are related by birth, marriage, or adoption." In this discussion and the figures, the following definitions apply: "Married with children" are families with a married householder and at least one related child under the age of 18. "Married, no children" are families with a married householder and no related children under the age of 18. "Single parents with children" includes Male householder, no wife present, with related children under 18 years, and Female householder, no husband present, with own children under 18 years. This could include grandparent/grandchild families, or other family combinations with an unmarried head of household and at least one related child. "Not married, no children" includes any variation of relatives living together not otherwise categorized above, i.e., a grown child living with an unmarried parent, cousins or siblings sharing a household, etc.

The County has seen a rise in single-parent families over the past decade (Figure 3). The number of single-parent families grew 9 percent in Buffalo, while the rest of the County had 34 percent growth. In fact, this was the *only* type of family growth at all – all other types declined, both inside and outside the City.

Figure 3. Percent Change in Family Types, 1990-2000

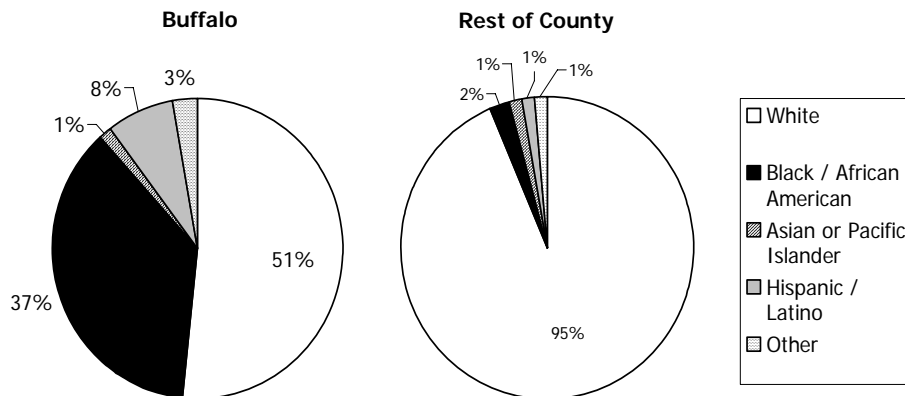


Source: U.S. Census Bureau

Race/Ethnicity

In 2000, Erie County was 81% white, but there was a major disparity between the City of Buffalo, which is far more diverse – 51 percent white and 37 percent African American – and the rest of the County, which remains predominantly white (Figure 4).

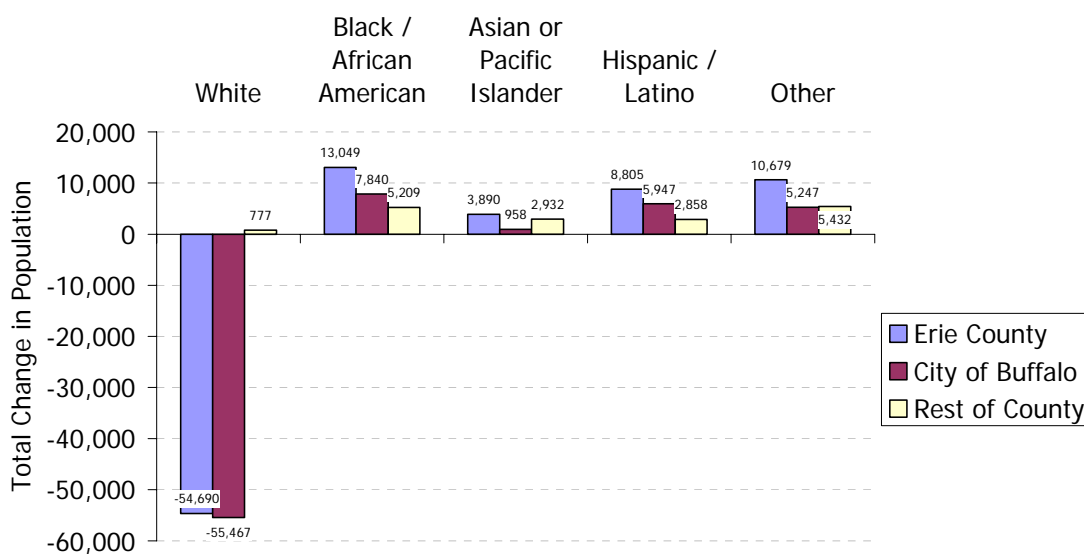
Figure 4. Race / Ethnicity, Buffalo vs. Rest of County, 2000



Source: U.S. Census Bureau

Figure 5 shows the change in racial and ethnic makeup of the County from 1990 to 2000. The African American, Hispanic, and Asian populations have all grown both in the City of Buffalo and the rest of the County, while the County's white population shrunk overall due to the departure of over 50,000 white residents from the City.²

Figure 5. Total Change in Population by Major Race / Ethnicity Groups, Erie County, 1990-2000



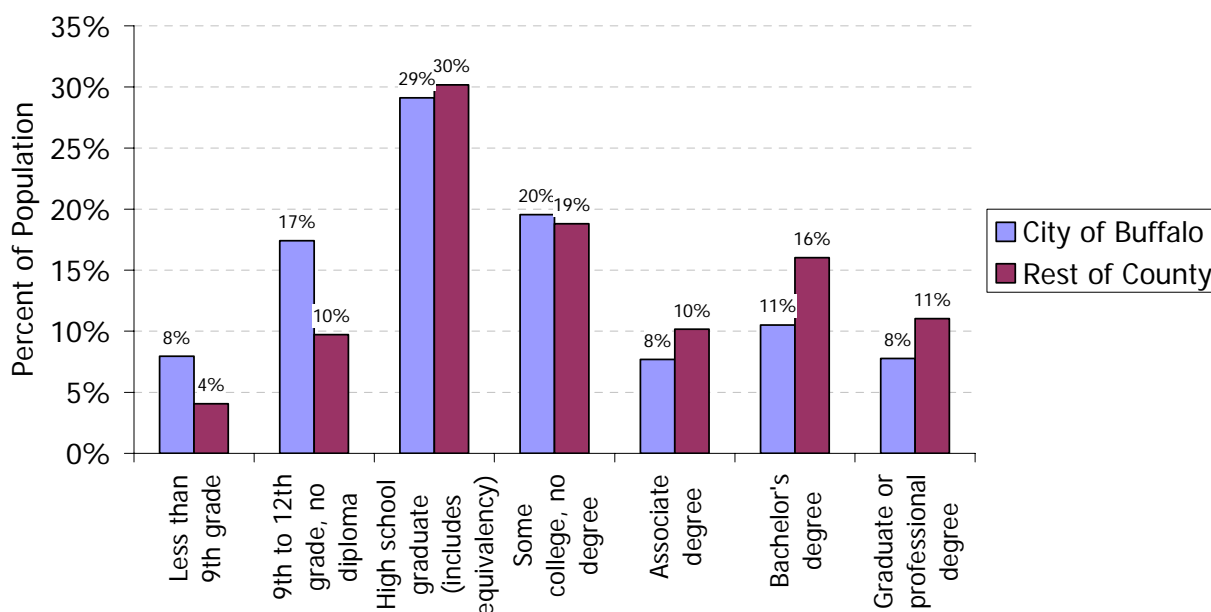
Source: U.S. Census Bureau

Educational Attainment

As Figure 6 shows, while most of Erie County's residents aged 25 and over have at least a high school diploma and some college experience, many have less than a high school degree. As with many of these demographic indicators, there is a striking difference between Buffalo and the rest of the County, especially at the low end of the scale: 8% of Buffalo's residents aged 25 and over have less than a 9th grade education, double the rate in the rest of the County, and another 17% of the City's population attended but never graduated from high school, compared with 10% for the rest of the County.

² The Census added a category of "two or more races" in 2000, making a comparison between 1990 and 2000 imprecise.

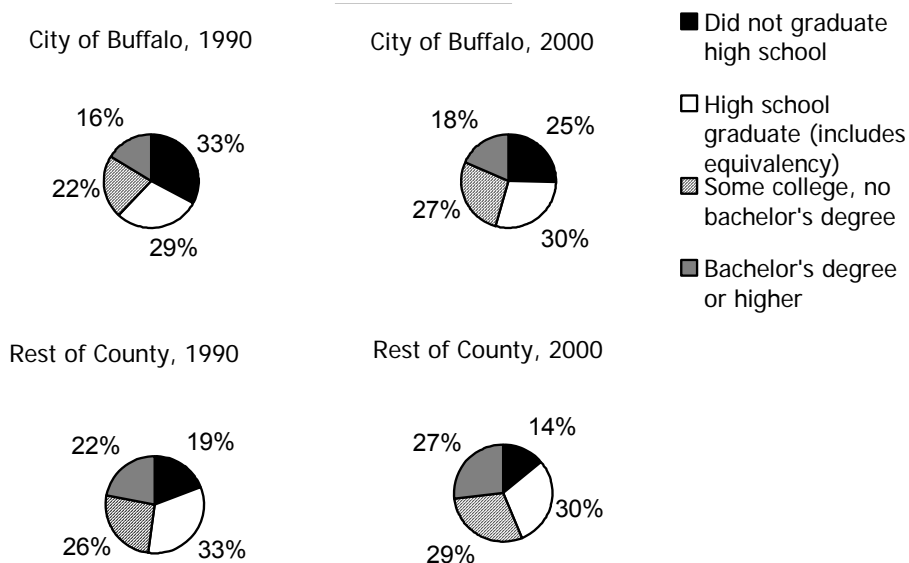
Figure 6. Educational Attainment, Buffalo vs. Rest of County, 2000



Source: U.S. Census Bureau

Still, the overall trend has been an increase in educational attainment, including in the City of Buffalo. Figure 7 compares relative educational attainment for the City with the rest of Erie County in 1990 and 2000. The percentage of people with less than a high school diploma declined considerably in Buffalo (from 33% to 25%), an encouraging development for basic literacy levels in the City, while the percentage of those with some college education increased. The percent of those outside Buffalo with a bachelor's degree or higher grew noticeably as well (22% to 27%).

Figure 7. Educational Attainment, City vs. Rest of County, 1990 and 2000

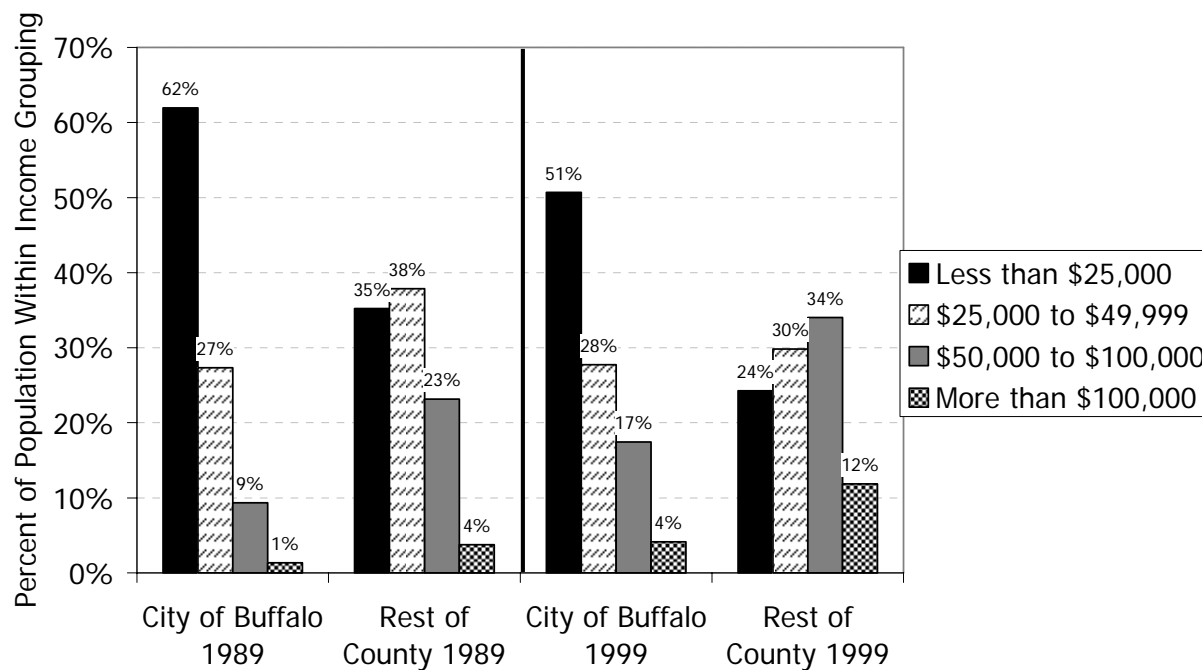


Source: U.S. Census Bureau

Income

In 1999, median household income in Erie County was \$38,567, and per capita income was \$20,357. Buffalo residents' incomes were much lower at \$24,536 and \$14,991, respectively.³ Figure 8 reveals the disparity in the distribution of household incomes between the City and the rest of the County. In 1999, approximately *half* of Buffalo households had incomes under \$25,000, compared to fewer than one quarter of non-City households. The majority of households with incomes over \$50,000 were located outside the City.

Figure 8. Household Income Groupings,
City of Buffalo vs. Rest of County, 1989 and 1999



Source: U.S. Census Bureau

Figure 8 also shows the changes in income groupings between 1989 and 1999. These data have not been adjusted for inflation, so comparisons between categories do not reflect the amount of real improvement in incomes, but they do reveal the distribution of growth in income categories

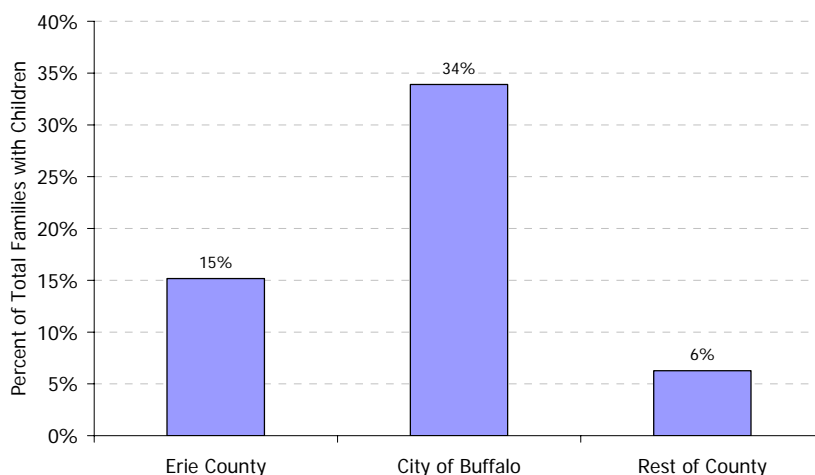
³ Due to the nature of median income and per capita income, both calculated by the U.S. Census Bureau, it is not possible to calculate a number for the Rest of County, so these comparisons are between the City and the County as a whole. Household income groupings, however, have been calculated for the Rest of County.

between the City and the rest of the County. Although the number of families at the low end has declined and the number at the top end has increased in both cases, these changes have been much more pronounced outside the City of Buffalo. Families earning under \$25,000 in Buffalo still outnumber those earning more, and nearly 80 percent of City households have income of less than \$50,000. Outside the City, however, families earning \$50,000 to \$99,999 bypassed those at the two lower categories as the most common category. In addition, the percentage of non-City families earning over \$100,000 tripled over this period.

Poverty

As Figure 9 indicates, 15 percent of the County's families with children were living in poverty in 1999, with a large disparity between the high poverty rates in the City of Buffalo (34 percent) and the rest of the County (6 percent).⁴

Figure 9. Percent of Families with Children under 18 Years Living Below 100% of Poverty Level, 1999

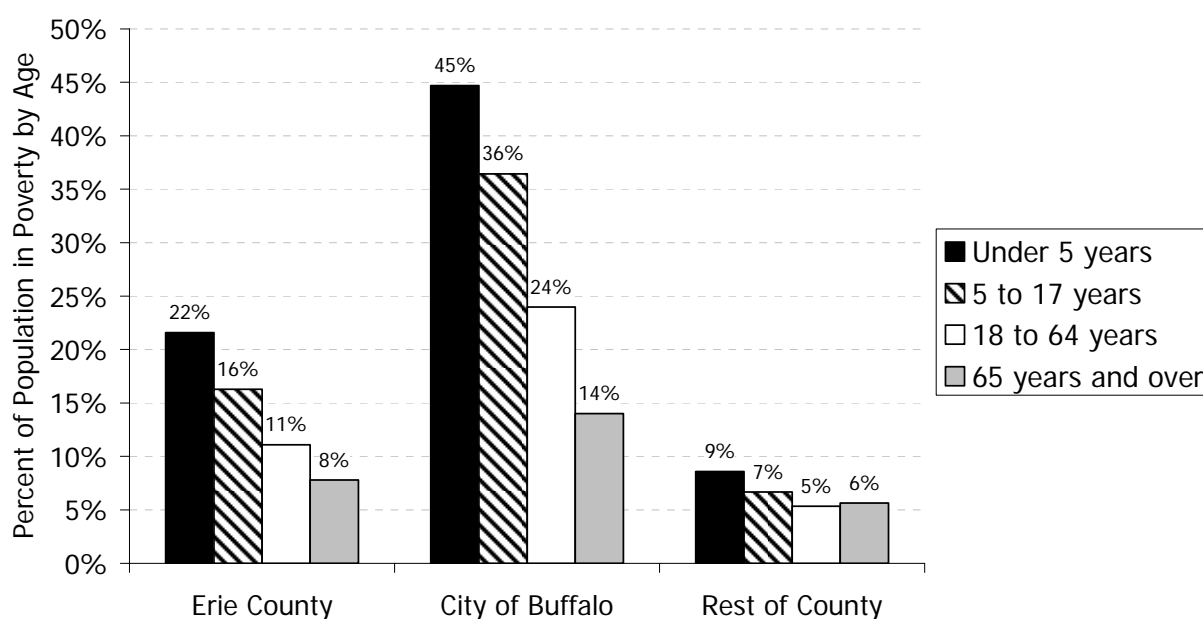


Source: U.S. Census Bureau

⁴ Following the Office of Management and Budget's (OMB's) Directive 14, the Census Bureau uses a set of money income thresholds that vary by family size and composition to designate who is poor. If the total income for a family or unrelated individual falls below the relevant poverty threshold, then the family or unrelated individual is classified as being "below the poverty level."

Figure 10 shows the percent of people in poverty by age grouping – under 5, 5-17, 18-64 and 65 and over. The greatest prevalence of poverty is among children under five, with the second highest prevalence among school-age children. More noticeably, poverty – and especially child poverty – is far higher in the City of Buffalo than in the rest of the County, as is the disparity between child and adult poverty. In 1999, *45 percent of all children in Buffalo under the age of five were living in poverty*, compared with 9 percent in the rest of the County. Poverty rates are closely associated with levels of school readiness and school success (especially among younger children), and thus basic literacy levels.

Figure 10. Percent of Population Living in Households Below 100% of Federal Poverty Level, by Age, 1999



Source: U.S. Census Bureau

To compare Buffalo to other cities on selected socio-economic factors, see Table 3. The data show that Buffalo is in the middle of the pack in proportion of adults ages 25 and older who do not have a high school education. Among these selected cities, Buffalo is second only to Hartford on the proportion of families with children under 18 who are in poverty. As far as single parent families, Buffalo is also somewhere in the middle, and has very similar rates to other upstate New York cities.

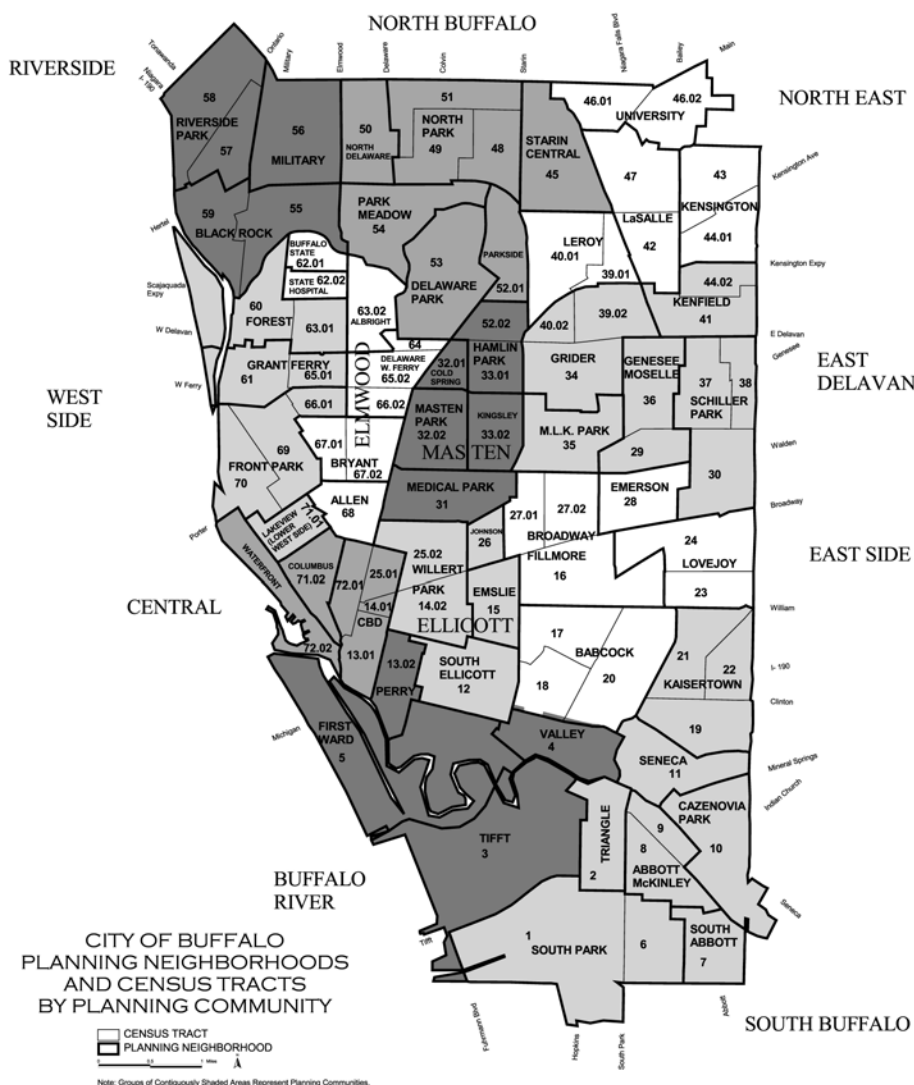
Table 3: Demographics in Selected Cities, 2000						
	Persons 25+ Without a High School Degree		Families with Related Children <18 Below Poverty Level		Single Parent Families with Own Children < 18	
	Number	% of all over 25	Number	% of all families with related children <18	Number	% of all families with own children <18
Albany	10,957	18.8%	2,593	26.0%	5,149	55.2%
Buffalo	46,373	25.4%	13,264	33.9%	20,520	57.3%
New York	1,462,690	27.7%	266,616	25.8%	363,663	39.5%
Rochester	35,796	27.0%	9,910	32.4%	16,568	60.3%
Syracuse	20,508	23.8%	5,706	31.1%	9,196	54.4%
Yonkers	30,659	23.3%	5,176	20.4%	8,690	36.7%
Baltimore, MD	132,699	31.6%	22,106	26.2%	39,715	59.0%
Cleveland, OH	92,069	31.0%	21,624	32.3%	33,829	57.8%
Hartford, CT	27,362	39.2%	6,522	35.8%	10,856	68.3%
Newark, NJ	69,135	42.1%	12,832	32.6%	18,216	55.3%
Pittsburgh, PA	40,982	18.7%	8,682	24.2%	14,982	46.6%

Source: U.S. Census Bureau, Census 2000, SF3

SECTION III: DEMOGRAPHIC PROFILE OF THE CITY OF BUFFALO AND ITS PLANNING COMMUNITIES

As Section II illustrates, the City of Buffalo suffers by comparison with the rest of Erie County on a number of demographic indicators that influence literacy rates. Particularly with regard to income and poverty levels, educational attainment, and family composition, Buffalo residents on average are more likely to be in socio-economic settings and to have educational characteristics that are associated with low literacy or, in the case of school-age children, place them at greater risk of carrying low literacy levels into adulthood. This assessment is underscored when we look more closely at selected demographic indicators within City of Buffalo neighborhoods.

The charts and tables presented in this section are organized according to the 12 “Planning Communities” used by the City of Buffalo’s Department of Planning. These planning communities are used for formulating Community/Neighborhood Plans as part of the development of the “Queen City in the 21st Century: The Buffalo Comprehensive Plan.” The City of Buffalo uses planning communities for a variety of purposes including land use, neighborhood revitalization, economic development, quality public services, and quality of the physical environment. The 12 Planning Communities, comprised from census

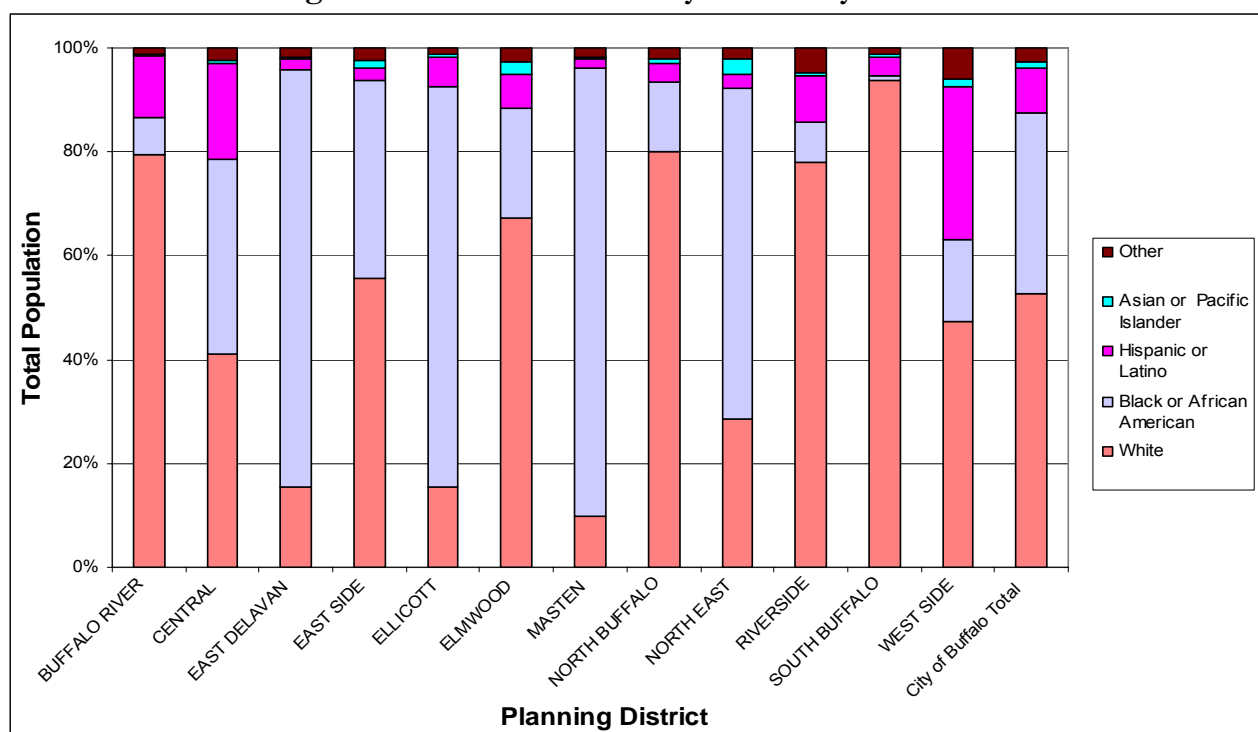


tracts, are Buffalo River, Central, East Delevan, East Side, Ellicott, Elmwood, Masten, North Buffalo, North East, Riverside, South Buffalo, and West Side. The map above represents the 12 Planning Communities in the City of Buffalo and the 54 Neighborhoods, which also follow census tract boundaries.

Race/Ethnicity

Figure 11 reveals the racial and ethnic composition of each planning community within the City of Buffalo. As the graph shows, the mix of groups varies widely across the City. Four communities are now predominantly African-American, reflecting the substantial decline in white residents and growth in black residents since 1990, yet four others retain majority white populations of nearly 80 percent or more. Two communities (Central and East Side) have roughly equal proportions of black and white residents. Several communities also boast significant Hispanic populations, with one – the West Side – nearly 30 percent Hispanic. There are also much smaller but still substantial Asian and other (such as Native American) populations in many of the communities. This figure shows the growing racial and ethnic diversity in the City of Buffalo, as well as the potential importance of tailoring literacy efforts and programs to better reflect varying population groupings and literacy needs in different areas of the City.

Figure 11: Race and Ethnicity in the City of Buffalo



Source: U.S. Census Bureau, Census 2000, SF1.

Income

As discussed earlier, poverty and low income are closely linked with low literacy rates among adults, and are key factors contributing to a lack of school readiness and school success among youth. Both school readiness and success, of course, have a direct impact on children's literacy levels. Table 4 depicts household income groupings by planning community in the City of Buffalo. As the table suggests, many households in the City are in precarious economic circumstances. In five planning communities at least **40 percent** of all households have incomes under \$15,000, and in nine communities more than half of all households have incomes under \$25,000. The great majority of households in most communities have incomes below \$50,000, a rough benchmark for middle-class income status. In only four planning communities do more than 25 percent of households have incomes above \$50,000; one (North East) is predominantly black, while the other three are largely white. None of these communities contains a sizable Hispanic population.

Table 4: Household Income in the City of Buffalo, 1999

PLANNING COMMUNITY	% Households with Income: Less than \$14,999	% Households with Income: \$15,000 to \$24,999	% Households with Income: \$25,000 to \$49,999	% Households with Income: \$50,000 to \$99,999	% Households with Income: \$100,000 and over
BUFFALO RIVER	35%	21%	27%	15%	1%
CENTRAL	42%	21%	21%	9%	7%
EAST DELAVAN	36%	18%	29%	14%	2%
EAST SIDE	43%	19%	26%	10%	1%
ELLICOTT	43%	19%	25%	10%	2%
ELMWOOD	30%	18%	24%	18%	10%
MASTEN	40%	18%	27%	12%	3%
NORTH BUFFALO	21%	15%	30%	26%	8%
NORTH EAST	28%	17%	28%	23%	4%
RIVERSIDE	33%	20%	29%	16%	2%
SOUTH BUFFALO	19%	19%	33%	25%	4%
WEST SIDE	41%	19%	24%	14%	2%
City of Buffalo Total	32.9%	18.3%	27.6%	17.3%	4.0%

Source: U.S. Census Bureau, Census 2000, SF3.

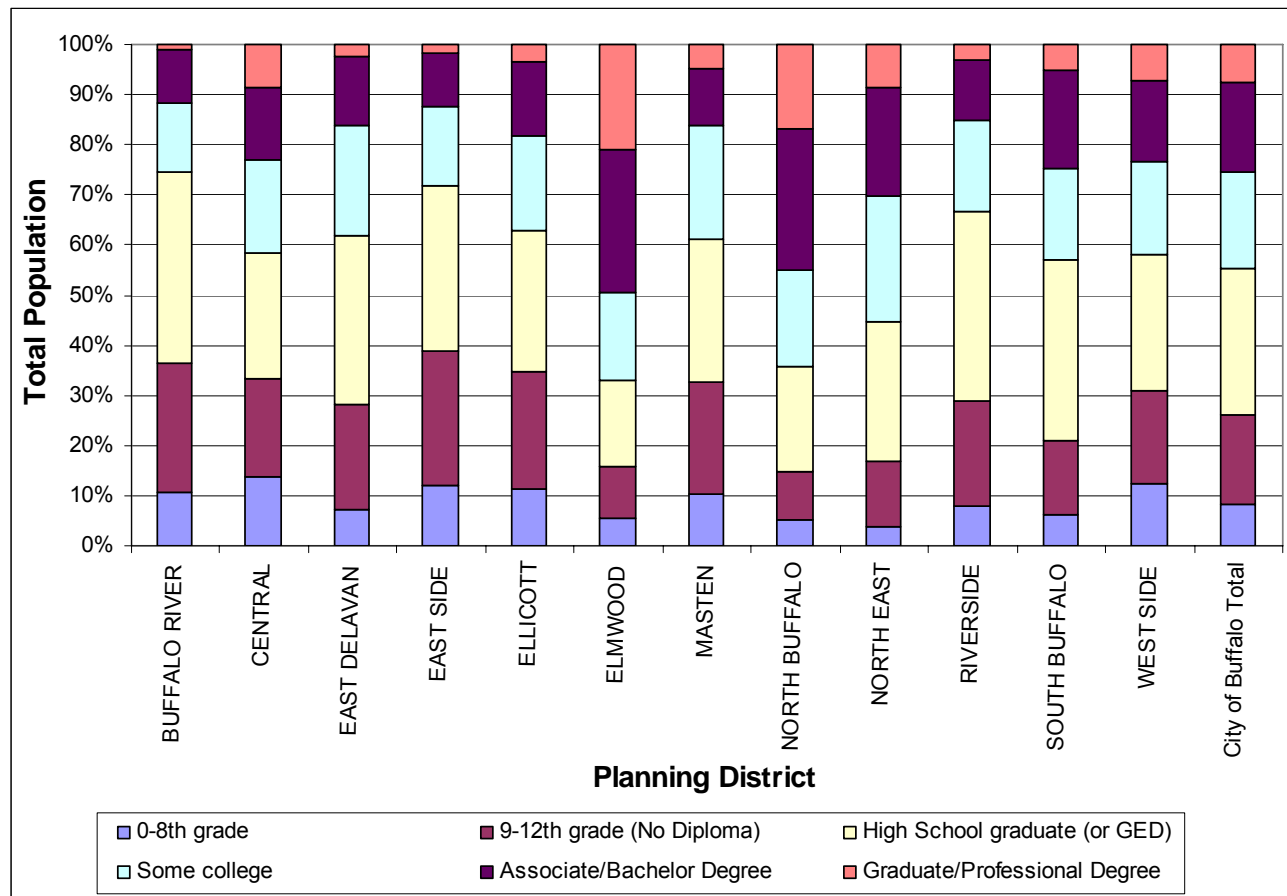
Educational Attainment

For native English speakers, educational attainment is the strongest predictor of literacy levels among adults. Individuals with fewer years of education consistently have more limited literacy skills than those who have completed high school or received some type of postsecondary education. Overcoming this “educational deficit” is a primary objective of most literacy programs for adults.

Figure 12 details educational achievement among adults ages 25 and over in the twelve planning communities in the City of Buffalo. As the figure indicates, educational attainment rates vary widely across the City, but in many communities there is clearly cause for concern. Between 30 and 40 percent of adults in six planning communities have less than a high school education, and in two others that figure approaches 30 percent. In only three communities do more than 80 percent of residents possess at least a high school diploma. Perhaps most disturbingly, 10 to 15 percent of the residents in those same six planning communities have only a 0-8th grade education. The relationship between education and income levels is starkly apparent in the data; in five of these six communities, at least 40 percent of households have incomes below \$15,000 (and around 60 percent have incomes less than \$25,000). On a more positive note, several communities do have high rates of educational attainment; in Elmwood, North Buffalo, and Northeast, well over half of all residents have some college education or more. Not surprisingly,

these communities also have comparatively high household incomes (and thus fewer children and adults living in poverty). Interestingly, these communities also have fairly high percentages of foreign-born residents, as is evident in Table 6.

Figure 12: Educational Attainment, Adults 25+, City of Buffalo



Source: U.S. Census Bureau, Census 2000, SF3.

As mentioned above, low literacy levels are closely correlated with limited educational attainment, particularly for those with an 8th grade education or less. The data that follows focuses on Buffalo residents most educationally “at-risk” of having limited literacy skills, those with less than a high school education. Table 5 presents the number and percentage of residents in each planning community with an 8th grade education or less, and those who attended grades 9-12 but did not receive a diploma. The data is further broken down by race and ethnicity in order to pinpoint differences in educational attainment by major racial and ethnic group in the City.

Table 5: Educational Attainment by Race/Ethnicity in the City of Buffalo

Planning District	Total					White		Black		Hispanic	
	Total Population 25 years+	0-8th grade		9-12th grade, no diploma		0-8th grade	9-12th grade, no diploma	0-8th grade	9-12th grade, no diploma	0-8th grade	9-12th grade, no diploma
South Buffalo	26,204	1,592	6.1%	3,892	14.9%	6.0%	14.5%	NA	NA	NA	NA
Buffalo River	2,948	339	11.5%	802	27.2%	8.7%	25.7%	12.5%	38.5%	NA	NA
Ellicott	7,277	814	11.2%	1,711	23.5%	10.0%	28.7%	10.8%	23.1%	33.2%	21.6%
East Side	16,924	2,024	12.0%	4,527	26.7%	13.2%	25.4%	8.6%	31.0%	NA	NA
East Delavan	21,923	1,590	7.3%	4,563	20.8%	7.8%	15.7%	6.4%	21.8%	NA	NA
North East	17,928	662	3.7%	2,360	13.2%	3.5%	8.2%	3.5%	15.4%	NA	NA
Masten	11,582	1,203	10.4%	2,591	22.4%	0.0%	3.2%	10.2%	22.3%	NA	NA
North Buffalo	22,620	1,186	5.2%	2,195	9.7%	4.9%	9.3%	7.0%	15.8%	NA	NA
Riverside	14,336	1,136	7.9%	2,999	20.9%	7.3%	20.7%	6.5%	19.1%	22.8%	23.8%
West Side	21,278	2,512	11.8%	3,732	17.5%	8.9%	14.9%	5.4%	22.2%	22.1%	22.2%
Elmwood	15,303	843	5.5%	1,586	10.4%	4.2%	6.7%	10.2%	17.3%	NA	NA
Central	4,239	592	14.0%	806	19.0%	4.6%	10.5%	4.2%	20.3%	28.9%	24.6%

Source: U.S. Census Bureau, Census 2000, SF4.

According to Census 2000 data, approximately 14,500 individuals in the City of Buffalo have an 8th grade education or less, while nearly 32,000 residents left high school without obtaining a diploma. There is little difference overall between whites and blacks in terms of the percentage of those with a 0-8th grade education, but in 9 of the 12 planning communities a significantly higher percentage of African-Americans failed to complete high school (although in many of these communities a substantial number of whites also did not receive a diploma). Although data is only available for Hispanics in four planning communities, the figures are startling; between 45 and 55 percent of Hispanics in these communities are not high school graduates, and of this total, more than *half* have an 8th grade education or less.⁵ While not conclusive, this data does strongly suggest that many Hispanic and, to a lesser extent, African-American and white residents lack the basic educational prerequisites that contribute to sound literacy skills.

⁵ Data for Census Tracts in several Planning Communities is suppressed by the Census Bureau due to small sample sizes.

Residency/English Proficiency

Proficiency in English is, of course, a key indicator of literacy skills among adults. And English proficiency is generally higher among the native population than among those who are foreign-born. NAAL data indicates that adults in the lowest literacy levels are typically immigrants, just learning to speak and understand English or with low levels of educational attainment. Erie County and the City of Buffalo have substantial immigrant populations. Census 2000 data shows that nearly 14,000 Buffalo residents (or 4 percent) were foreign-born, and in half of the City's Planning Communities at least 5 percent of inhabitants were born outside the United States. Elmwood and the West Side have the highest proportion of foreign-born residents, at 7 percent each (see Table 6). In addition, Erie County remains an attractive destination for refugee groups. Data provided by the NYS Bureau of Refugee and Immigrant Affairs indicates that over the last ten federal fiscal years (1996-2005), nearly 5,000 refugees resettled in the County, ranking Erie 4th among all NYS counties in the number of refugees by county of first resettlement. And it seems probable that a large proportion of these individuals settled in the City of Buffalo.

Table 6: Population by Area of Origin in the City of Buffalo, 2000					
PLANNING COMMUNITY	Total population	Total population: Native	% of Total Population: Native	Total population: Foreign born	% of Total Population: Foreign Born
BUFFALO RIVER	11,482	11,260	98%	222	2%
CENTRAL	6,399	6,168	96%	231	4%
EAST DELAVAN	38,106	37,450	98%	656	2%
EAST SIDE	27,937	26,604	95%	1,333	5%
ELLCOTT	11,466	11,302	99%	164	1%
ELMWOOD	21,548	20,134	93%	1,414	7%
MASTEN	19,215	19,033	99%	182	1%
NORTH BUFFALO	32,274	30,470	94%	1,804	6%
NORTH EAST	32,955	31,135	94%	1,820	6%
RIVERSIDE	22,692	21,290	94%	1,402	6%
SOUTH BUFFALO	38,841	37,714	97%	1,127	3%
WEST SIDE	49,590	46,085	93%	3,505	7%
City of Buffalo (2000)*	292,648	279,792	95.6%	12,856	4.4%
City of Buffalo (1990)*	328,123	313,382	95.5%	14,741	4.5%
<i>Source: U.S. Census Bureau, 2000 Census, SF3. *Planning Community data are based on Census Tracts. As a result, the sum of the Communities is higher than the City of Buffalo figure for 2000, because some Census Tracts cross City boundaries and include persons outside City boundaries..</i>					

Census 2000 indicates that among the foreign-born individuals living in Buffalo, most originate from Europe (4,554), Asia (3,833), or North or South America (3,111). A smaller number (1,300) originate from Africa. Among those from Africa, Nigeria has the largest group of expatriates now living in Buffalo (166). Given the relatively large number of foreign-born inhabitants and refugees in the City of Buffalo, it is important to gauge how many of its residents lack basic fluency in English. Table 7 reveals the number of school-age children and adults who do not speak English well or at all. Based on Census 2000 data, the table shows that 1,180, or nearly 2 percent, of school-age children in the City lack basic mastery of English, while over 5,500 adults fall into the same category. More than 1,000 adults in Buffalo do not speak English at all. When broken down by planning community, the percentage of children who do not speak English well is highest in Ellicott and West Side, while the percentage of non-English speaking adults is highest in Central and West Side. The latter two communities have the largest proportions of Hispanic residents in the City (see Figure 11). The West Side has by far the largest number of non-English speakers, with nearly 3,000 children and adults who do not speak English well or at all (almost half the total for the entire City). But most other communities, especially Riverside, also contain a significant number of non-English speaking children and/or adults. And these individuals, as noted above, are generally at the lowest levels of basic literacy.

Table 7: Ability to Speak English in the City of Buffalo Planning Communities, 2000

PLANNING COMMUNITY	Pop. age 5 to 17 - Speak English not well or not at all	% Total Pop. age 5 to 17 - Speak English not well or not at all	Pop. 18 years and over - Speak English not well	Pop. 18 years and over - Speak English not at all	Pop. 18 years and over - Speak English not well or not at all	% Total Pop. age 18 and over - Speak English not well or not at all
BUFFALO RIVER	66	2.5%	99	105	204	2.5%
CENTRAL	16	2.0%	213	43	256	4.9%
EAST DELAVAN	24	0.3%	168	14	182	0.7%
EAST SIDE	54	0.9%	404	21	425	2.2%
ELLCOTT	104	4.1%	132	17	149	1.8%
ELMWOOD	16	0.9%	186	39	225	1.2%
MASTEN	13	0.3%	76	8	84	0.6%
NORTH BUFFALO	44	0.9%	332	49	381	1.5%
NORTH EAST	29	0.4%	394	41	435	1.8%
RIVERSIDE	164	3.5%	417	139	556	3.4%
SOUTH BUFFALO	59	0.9%	239	43	282	1.0%
WEST SIDE	591	5.6%	1,843	552	2,395	6.9%
City of Buffalo (2000)*	970	1.7%	4,078	888	4,966	2.3%
City of Buffalo (1990)*	1,113	2.1%	NA	NA	4,672	1.9%

*Source: U.S. Census Bureau, 2000 Census, SF3; 1990 Census, STF3. *Planning Community data are based on Census Tracts. As a result, the sum of the Communities is higher than the City of Buffalo figure for 2000, because some Census Tracts cross City boundaries and include persons outside City boundaries.*

Summary

A number of conclusions about these demographic factors, and their impact on literacy in the City of Buffalo, can be drawn from the data presented in Section III:

- ❖ There is growing racial and ethnic diversity in the City of Buffalo, with particularly large increases since 1990 in the number and percentage of African-American and Hispanic residents. About half the planning communities in the City are now predominantly or substantially African-American, and several have considerable Hispanic populations. These facts underscore the importance of developing literacy

strategies and programs that reflect these demographic trends and are culturally appropriate.

- ❖ Buffalo contains a large number of foreign-born residents and refugees, who typically have lower levels of English language proficiency than native-born residents.
- ❖ Proficiency in English is a key indicator of literacy skills among adults. Nearly 7,000 children and adults in the City do not speak English well or at all. The number and percentage of these individuals is greatest in, but certainly not limited to, those planning communities with large concentrations of Hispanic residents.
- ❖ A significant percentage of adults in the City of Buffalo have less than a high school education. Of greatest concern, perhaps, is the fact that 10 to 15% of residents in six planning communities across the City have only a 0-8th grade education, the strongest predictor of low literacy levels among adults.
- ❖ Low educational attainment appears to be most prevalent in the Hispanic and, to a lesser degree, African-American communities. Black residents are more likely than whites to have not completed high school, and available data indicates that Hispanic residents are by far most likely to have only a 0-8th grade education. When combined with the fact that those planning communities with large numbers of poor or non-English speaking residents often contain substantial Hispanic populations, these findings strongly suggest that the Hispanic community has the largest proportion of individuals at risk of having low or very low literacy levels.
- ❖ Research indicates that there is a particularly strong correlation between educational achievement, economic status, and literacy level. This assessment seems to be underscored in data from the City of Buffalo. Those planning communities in the City with the greatest proportion of low household incomes also tend to have the most residents with low levels of educational attainment. And both of these factors, especially limited educational attainment, are closely associated with poor literacy skills. In short, literacy is directly related to educational success, and is a key contributing factor in (a lack of) economic self-sufficiency.

SECTION IV: FOCUS ON CHILDREN AND ADULTS – MEASURING LITERACY LEVELS

Pre-School Children

Table 8: Buffalo Prekindergarten Brigance Assessment
Student Percentages by Instructional Need Level
Fall 2004-Spring 2005 Comparison

	Fall 2004			Spring 2005		
	Instruction Not Indicated	Instruction Needed	Intensive Instruction Needed	Instruction Not Indicated	Instruction Needed	Intensive Instruction Needed
Overall	49%	25%	26%	94%	6%	1%
Mathematics	36%	32%	32%	87%	10%	4%
Literacy/Language	47%	24%	29%	73%	21%	6%
Motor Skills	42%	23%	35%	99%	1%	1%
Visual Discrimination	45%	29%	26%	92%	6%	2%

Source: Buffalo City School District. Note: Sum of categories may exceed total due to rounding.

city residents, Census data from the year 2000 indicates approximately 20,000 children under the age of 5 reside in the City of Buffalo. Many of these children are in day care or pre-school settings for at least part of their day. The Head Start program serves 2,100 children,⁶ and New York State licenses 20,593 day care slots in family care settings and child care centers in the City of Buffalo, plus an additional 6,638 school-age child care slots (note—not all licensed slots are filled with children, and many day care slots are in the informal, or unlicensed sector).⁷

The Brigance® Assessment tool is designed to screen children of various ages for key developmental and early academic skills. The City of Buffalo School District uses the assessment to screen children when they enter pre-kindergarten in the fall and again when they complete the school year, to evaluate the level of need for additional instruction in mathematics, literacy/language skills, motor skills, and visual discrimination. Table 8 shows that in Fall 2004, more than half the children screened needed additional instruction in literacy/language skills (53%). One-quarter (24%) needed some additional instruction and 29% needed intensive instruction to rise to grade level performance. By spring, nearly three-quarters (73%) of children screened were at grade level (instruction not indicated), but 27% still needed additional help, with 6% of those requiring intensive instruction. Based on this assessment, more than one-quarter of children are behind in their literacy/language skills by the end of pre-school.

⁶ Personal Communication, Phyllis McBride, Community Action Organization, February 14, 2006.

⁷ Personal Communication, Child Care Resources Network, February 24, 2006.

The City School District serves about 1,900 pre-schoolers.⁸ If between 27% and 53% of pre-schoolers need additional instruction in literacy and language skills during the school year, this affects approximately 500 to 1,000 children. If we apply the Brigance results to the full population of children under age 5, we estimate that between 5,000 and 10,000 children under the age of 5 could be at risk for low literacy in the City of Buffalo.

Further, many young children in the City of Buffalo are at risk of low literacy because they were born to mothers with less than a high school diploma. In 2003, 1,083 babies were born to mothers with less than a high school diploma in the City of Buffalo (26.3% of all births, which compares to 19.4% of births in NYS in 2002).⁹ So each year as many as 1,000 newly born City of Buffalo residents could face the future risk of low literacy.

Map 1 in the Appendix shows neighborhoods (Census Tracts) where a high number of children under age 5 reside in the City of Buffalo. The map also shows the location of literacy providers (data provided by Center for Excellence in Urban and Rural Education (CEURE) at Buffalo State College¹⁰) who provide literacy services to preschool children, as well as providers who do not have such services. The map shows that several providers with pre-school literacy services are located in North Buffalo and the West Side, both areas where a high concentration of young people live. However there are fewer providers in East Delavan, East Side, and South Buffalo, where the population of young children is substantial. A number of providers are also located in close proximity to Main St., which is not a highly residential neighborhood.

⁸ New York State District Report Card Comprehensive Information Report
<http://www.emsc.nysed.gov/repcrd2004/cir/140600010000.pdf>

⁹ Personal communication, Erie County Health Department, February 23, 2006; and Kids Count Data Book,
<http://www.aecf.org/cgi-bin/rs.cgi?action=profile&area=New+York..>

¹⁰ 167 providers were included in the analysis; 158 were geo-codable for mapping purposes.

School Age Children and Youth

For school age children and youth, success in school literacy skills development are affected by a host of factors, ranging from family socioeconomic status to parental attitudes and engagement to involvement in substance abuse and delinquent behavior. Table 9 presents data for all City of Buffalo schools by planning community on a select number of available indices that have a definite impact on (or are indicative of) school commitment and success. The first column shows the percentage of students who received free or reduced lunches during the 2004-05 school year. As the table indicates, a substantial proportion of children in City of Buffalo public schools participate in this program. In more than half of Buffalo schools at least 70% of students receive free or reduced lunches, and in over one-third of the schools more than 80% of the students receive such assistance. In certain schools the rate approaches or exceeds 90%. This data provides another useful glimpse of socioeconomic status, especially the percentage of children in or near poverty, and underscores the findings earlier in this assessment of the precarious economic circumstances facing many Buffalo children and families.

Commitment to school is another contributing factor to academic performance, and thus advancing literacy levels, as well as to other positive outcomes for youth, including reduced delinquent behavior. Table 8 displays attendance and suspension figures for Buffalo City schools during the 2004-05 school year. An encouraging sign is that the overwhelming majority of Buffalo City schools maintain fairly high attendance rates, at or above 90 percent. Fewer than one-fifth have attendance rates below 90 percent, and only two (high) schools have rates under 80 percent.¹¹ However, student discipline does appear to be a significant problem, with approximately half of the City's schools having suspension rates of at least 20 percent and one-quarter having rates that exceed 50 percent. Suspension rates also vary widely, from 0 to over 100 percent.¹² School suspensions provide an important indicator of at-risk, troubled youth, and for some can be grounds for entry into the juvenile justice system. Students who are (repeatedly) suspended are more likely to struggle in school and fall behind their peers, perhaps further exacerbating underlying cognitive development issues and delaying the attainment of more advanced literacy skills.

¹¹ School attendance rates are calculated by dividing the total number of possible student days of attendance each month by the total number of student absences for that month. The monthly totals are then combined to arrive at a percentage for the entire school year. As a result, these attendance figures reflect composite totals for each school, and do not provide a picture of attendance rates or patterns at the individual, class, or grade level.

¹² The suspension rate equals the total number of children in the school divided by the total number of suspensions (formal and informal combined). If a rate exceeds 100%, it indicates that the total number of suspensions exceeds the total number of children. However, this could reflect a relatively small cohort being suspended multiple times. The suspension rate can also be affected by the size of the student body, variations in suspension policies (and severity), and other factors, so these rates should be interpreted with some caution. Nevertheless, a very high suspension rate is likely indicative of serious discipline issues for a sizable number of children, if not the majority of the student body.

Table 9: Student Population Characteristics in Buffalo City Schools

School # and Name	Planning Community	% F/R Lunch 04-05	% ELL 04-05	% Attendance 04-05	Suspension Rate 04-05
033 Bilingual Center	Buffalo River	83.3	43.3	90.8	17.5
076 Herman Badillo Bilingual	Central	88.5	51.6	91.6	48.7
095 Waterfront Elementary	Central	69.4	5.1	93.5	36.3
302 Emerson School of Hospitality	Central	54	≤.01	91.4	34
304 Hutchinson Central Technical	Central	31.5	0.01	93.7	8.1
335 Middle College	Central			82.8	3
011 Poplar ECC	East Delavan	87.8	0	88.5	148.9
059 Dr. Charles R. Drew Science Magnet 2-6 Museum Site	East Delavan	71.3	0	92.8	44.3
082 ECC	East Delavan	74.4	0	92.08	2
084 Erie County Health Care Center for Children	East Delavan	85	5.1	86.5	7
089 Dr. Lydia T. Wright	East Delavan	64.4	<.01	93.3	23
090 Dr. Charles R. Drew Science Magnet PK-1	East Delavan	79.5	0	90.8	0
091 BUILD Academy	East Delavan	81.5	0	93.6	80.1
171 Opportunity Ctr HS	East Delavan				
306 Seneca HS	East Delavan	33	0	83.8	68.7
307 East HS	East Delavan				
006 Buffalo Elementary School of Technology	East Side	89.7	3.1	90.6	148.9
043 School	East Side	83.1	0	90.4	100
097 Harvey Austin	East Side	88.4	0	91.2	142
031 Harriet Ross Tubman	Ellicott	84.7	0	90	29.5
032 Bennett Park Montessori	Ellicott	62	0.01	91	17.7
187 Buffalo Academy for Visual & Performing Arts	Ellicott	41.4	≤.01%	92.7	17.1
332 Opportunity Center at Fulton Gr 7-8 & Bilingual	Ellicott	N/A	N/A	N/A	N/A
017 ECC	Elmwood	82.4	0	91.8	11.5
036 Bilingual ECC	Elmwood	93	59.5	89.5	0.01
056 Olmsted 5-8 Building	Elmwood	46.4	<.01	94.6	12.7
037 Futures Academy	Masten	81.8	0	91.6	10.6
039 MLK Multicultural Institute	Masten	84.3	0	92.5	4.9
053 Community School	Masten	73.6	0	90.9	34.8
074 Hamlin Park	Masten	92.6	0	89.7	70.4
099 Stanley Makowski ECC	Masten	84.9	8.7	93.1	5.4
195 City Honors at Fosdick Masten School	Masten	11.1	0	94.5	4.1
054 Dr. George Blackman ECC	North Buffalo	57.9	0	92.9	5
059 Dr. Charles R. Drew Science Magnet 7-8 Zoo Site	North Buffalo	71.3	0	92.8	44.3

School # and Name	Planning Community	% F/R Lunch 04-05	% ELL 04-05	% Attendance 04-05	Suspension Rate 04-05
064 Olmsted PK-4 Building	North Buffalo	30.6	<.01	94.6	12.7
066 North Park Middle	North Buffalo	67.6	0	92	54.6
081 School	North Buffalo	58	0	92.8	16
061 ECC	North East				
078 Montessori	North East	76	0	91.4	14.5
080 Highgate Heights	North East	72.3	0	91.5	25.7
142 Occupational Training Center Sped HS	North East	N/A	N/A	N/A	N/A
200 Bennett HS	North East	53.6	≤.01%	83.7	50.6
301 Burgard HS	North East	76.1	3.8	80.9	95.9
065 Roosevelt ECC	Riverside	83	0	90.8	5
079 Pfc. William J. Grabiarz	Riverside	83.7	0	92.5	113
094 West Hertel Academy	Riverside	91	11.4	89.2	31.1
205 Riverside Institute of Technology	Riverside	50.2	2.1	84.1	15.4
305 McKinley HS	Riverside	53.4	2	88.3	21.3
027 Hillery Park	South Buffalo	79.2	0	90.8	6.7
067 Discovery School	South Buffalo	35.7	0	93.6	2.8
069 Houghton Academy	South Buffalo	70.3	0	90.3	40.2
072 Lorraine Elementary	South Buffalo	51.2	7	93.1	50.3
093 Southside Elementary	South Buffalo	73.3	6.2	91.5	60.8
206 South Park HS	South Buffalo	49.5	1.2	78.9	149
003 D'Youville Porter	West Side	80	21.2	91	17.7
018 Dr. Antonia Pantoja School	West Side	93.8	31.6	89.9	40.3
019 Native American Magnet	West Side	83.3	15.3	90.6	25.3
038 Frank A. Sedita	West Side	91	38.7	89.4	82.8
045 International School	West Side	87.5	41.4	92.9	36.6
077 ECC	West Side	90.5	33.9	91.8	53
096 Campus West	West Side	66	0.01	93	20.2
202 Grover Cleveland HS	West Side	63.9	0.29	75	17.2
204 Lafayette HS	West Side	64	4	84.1	104
212 Leonardo daVinci HS	West Side	38.7	1.4	95.1	6

Source: Special request through Buffalo City School District.

Finally, Table 9 shows the percentage of students in each school who are designated English Language Learners (ELL). These are pupils with limited English proficiency who, by reason of foreign birth or ancestry, speak a language other than English and (1) either understand and speak little or no English; or (2) score below a state-designated level of proficiency on the Language Assessment Battery-Revised (LAB-R) or the New York State English as a Second Language Achievement Test (NYSESLAT). Once assessed and determined by the school system as being ELL or Limited English Proficient (LEP) eligible, a student has three to five years to qualify for ESL teacher assistance.

As the table indicates, only about 10 City of Buffalo schools have significant percentages of ELL students, but in most of these schools one-third or more of the students are so designated. Many of these schools are located in the West Side planning community, which contains a substantial Hispanic population, while the others are bilingual schools. Research indicates that it takes anywhere from 5-7 years for a student (without other limiting factors) to successfully acquire cognitive academic language proficiency, which is essential to school success and developing sufficient literacy skills and is quite different from basic interpersonal communicative skills. This fact highlights the critical importance of making ongoing English-language and literacy services available to this student population.

Table 10 shows selected demographics of SUNY-Authorized Charter Schools. Two of the school are predominantly African-American, while two are predominantly white. All have lower proportions of students with disabilities than the Buffalo City School District, and while two have similar or higher rates of students in the free lunch program, two have substantially lower rates.

Table 10: Demographics of Selected Buffalo Charter Schools, Compared to City School District, 2004						
	African American	Hispanic	Asian/ Other	White	Students with Disabilities	Free Lunch Program
Buffalo City School District	58.0%	12.4%	2.7%	26.9%	17.6%	63.1%
Buffalo United	Data not available					
King Center	96.1%	0	0	4%	8.8%	73.5%
South Buffalo	16.7%	5.2%	2.9%	75.2%	15.1%	39.4%
Stepping Stone	99.7%	0%	0%	0.3%	9.6%	64.8%
Tapestry	21.4%	6.1%	5.3%	67.2%	9.6%	16.8%
<i>Source: Charter Schools Institute: State University of New York, 2004 State ELA Test Results: Buffalo, June 3, 2004. http://www.newyorkcharters.org/resource/State_Test_Scores.html</i>						

One measure of academic success is performance on standardized statewide tests. The tables that follow display results for students in Buffalo schools on the New York State Grade 4 and Grade 8 English Language Arts (ELA) and Grade 8 Mathematics standardized tests. Each table shows the percentage of students in each school scoring in Level 1 and Level 2 on these tests (as well as the combined percentage of students in both levels), or those who are “not meeting the standards” necessary to pass the state Regents examination in that area. Students scoring in

Level 1 are deemed to have serious academic difficulties. Those in Level 2 need extra help to meet the relevant standards and pass the appropriate Regents exam. Data is presented first for all public schools in the City of Buffalo, including averages for the entire school district over the past three years. Scores for charter schools located in the City of Buffalo, or that serve a substantial number of students from the City, are then provided.

Table 11: ELA 4 Test Scores in Buffalo City Schools

School	Planning Community	Year	# Tested	Level 1	Level 2	Not Meeting Standard
District		2004-05	2328	17%	44%	61%
District		2003-04	2726	16%	50%	66%
District		2002-03	3050	16%	49%	66%
33	Buffalo River	2004-05	30	17%	43%	60%
76	Central	2004-05	29	14%	48%	62%
95	Central	2004-05	85	20%	39%	59%
84	East Delavan	2004-05	5	40%	40%	80%
82	East Delavan	2004-05	77	25%	53%	78%
11	East Delavan	2004-05	58	9%	64%	72%
91	East Delavan	2004-05	73	11%	48%	59%
89	East Delavan	2004-05	68	9%	44%	53%
6	East Side	2004-05	69	16%	45%	61%
43	East Side	2004-05	56	16%	43%	59%
31	Ellicott	2004-05	45	27%	51%	78%
32	Ellicott	2004-05	47	13%	36%	49%
17	Elmwood	2004-05	133	26%	50%	76%
56	Elmwood	2004-05	94	1%	5%	6%
37	Masten	2004-05	68	28%	49%	78%
53	Masten	2004-05	53	17%	56%	72%
99	Masten	2004-05	145	12%	57%	70%
39	Masten	2004-05	92	15%	50%	65%
74	Masten	2004-05	28	18%	46%	64%
59	North Buffalo	2004-05	94	11%	57%	68%
54	North Buffalo	2004-05	67	19%	41%	60%
81	North Buffalo	2004-05	66	15%	24%	39%
61	North East	2004-05	62	36%	44%	79%
80	North East	2004-05	56	29%	48%	77%
78	North East	2004-05	10	10%	60%	70%
94	Riverside	2004-05	grade chg	grade chg	grade chg	grade chg
65	Riverside	2004-05	79	11%	41%	52%
27	South Buffalo	2004-05	55	27%	36%	64%
93	South Buffalo	2004-05	100	7%	45%	52%
69	South Buffalo	2004-05	37	11%	41%	51%

School	Planning Community	Year	# Tested	Level 1	Level 2	Not Meeting Standard
72	South Buffalo	2004-05	49	10%	41%	51%
18	West Side	2003-04	40	20%	48%	68%
19	West Side	2004-05	38	13%	50%	63%
45	West Side	2004-05	43	14%	44%	58%
96	West Side	2004-05	87	19%	35%	55%
18	West Side	2004-05	35	26%	29%	54%
3	West Side	2004-05	47	6%	40%	47%
77	West Side	2004-05	54	7%	37%	44%
44	Now closed	2004-05	19	58%	32%	90%
71	Now closed	2004-05	49	27%	53%	80%
98	(#67)Discovery	2004-05	26	7%	26%	33%

Source: Special request through Buffalo City School District

Table 12: ELA 8 Test Scores in Buffalo City Schools

School	Planning Community	Year	# Tested	Level 1	Level 2	Not Meeting Standard
District		2004-05	2982	17%	57%	74%
District		2003-04	3369	15%	59%	74%
District		2002-03	3317	22%	56%	78%
33	Buffalo River	2004-05	41	12%	59%	71%
76	Central	2004-05	83	24%	64%	88%
95	Central	2004-05	91	9%	58%	67%
171	East Delavan	2004-05	68	32%	54%	87%
89	East Delavan	2004-05	74	11%	65%	76%
84	East Delavan	2004-05	8	38%	38%	75%
91	East Delavan	2004-05	68	13%	62%	75%
97(#171& #192)	East Side	2004-05	157	33%	56%	88%
43	East Side	2004-05	48	13%	63%	75%
31	Ellicott	2004-05	102	19%	77%	95%
6	Ellicott	2004-05	116	13%	64%	77%
187	Ellicott	2004-05	86	9%	45%	55%
32	Ellicott	2004-05	29	10%	38%	48%
56	Elmwood	2004-05	58	7%	26%	33%
74	Masten	2004-05	44	23%	71%	93%
53	Masten	2004-05	52	19%	64%	83%
39	Masten	2004-05	69	15%	64%	78%
37	Masten	2004-05	77	18%	60%	78%
195	Masten	2004-05	135	2%	6%	7%
59	North Buffalo	2004-05	94	25%	56%	81%
66	North Buffalo	2004-05	85	6%	67%	73%

School	Planning Community	Year	# Tested	Level 1	Level 2	Not Meeting Standard
81	North Buffalo	2004-05	72	0%	36%	36%
80	North East	2004-05	70	19%	56%	74%
94	Riverside	2004-05	171	21%	73%	94%
79	Riverside	2004-05	206	12%	68%	79%
93	South Buffalo	2004-05	150	25%	53%	78%
69	South Buffalo	2004-05	67	13%	63%	76%
72	South Buffalo	2004-05	71	9%	49%	58%
38	West Side	2004-05	122	34%	56%	89%
18	West Side	2004-05	53	8%	79%	87%
45	West Side	2004-05	107	17%	56%	73%
19	West Side	2004-05	64	19%	53%	72%
96	West Side	2004-05	95	17%	55%	72%
3	West Side	2004-05	50	2%	64%	66%
28	Now closed	2004-05	95	15%	60%	75%
44	Now closed	2004-05	72	36%	63%	99%
192	Now closed	2004-05	89	33%	57%	90%

Source: Special request through Buffalo City School District

While there has been some encouraging improvement in ELA 4 and ELA 8 scores district-wide over the past three years, the majority of students in City of Buffalo schools are not meeting the statewide standards for either test. Approximately 60 percent of 4th graders did not meet the ELA standard in 2004-2005. Of equal concern, a greater proportion (nearly 75 percent) of 8th graders failed to meet the state target, indicating a lack of commensurate improvement in listening, reading, and writing skills for many students during the intervening three grades. Although there is significant variability in the test scores for both grade levels, in only 6 schools (15 percent) did more than half the 4th graders meet the state standard; this was true of only 3 schools on the 8th grade ELA. In fact, more than four out of five of the 8th grade students in eleven schools scored below the state standard. And in both grades nearly 20 percent of students scored in Level 1, indicating serious educational deficiencies. A sizeable number of students in the City of Buffalo need to improve their literacy skills, often substantially, and therefore considerable need exists for student language literacy programs both inside and outside the schools.

Table 13: Math 8 Test Scores in Buffalo City Schools

School	Planning Community	Year	# Tested	Level 1	Level 2	Not Meeting Standard
District		2004-05	2328	17%	44%	61%
District		2003-04	2726	16%	50%	66%
District		2002-03	3050	16%	49%	66%
33	Buffalo River	2004-05	30	17%	43%	60%
76	Central	2004-05	29	14%	48%	62%
95	Central	2004-05	85	20%	39%	59%
84	East Delavan	2004-05	5	40%	40%	80%
82	East Delavan	2004-05	77	25%	53%	78%
11	East Delavan	2004-05	58	9%	64%	72%
91	East Delavan	2004-05	73	11%	48%	59%
89	East Delavan	2004-05	68	9%	44%	53%
6	East Side	2004-05	69	16%	45%	61%
43	East Side	2004-05	56	16%	43%	59%
31	Ellicott	2004-05	45	27%	51%	78%
32	Ellicott	2004-05	47	13%	36%	49%
17	Elmwood	2004-05	133	26%	50%	76%
56	Elmwood	2004-05	94	1%	5%	6%
37	Masten	2004-05	68	28%	49%	78%
53	Masten	2004-05	53	17%	56%	72%
99	Masten	2004-05	145	12%	57%	70%
39	Masten	2004-05	92	15%	50%	65%
74	Masten	2004-05	28	18%	46%	64%
59	North Buffalo	2004-05	94	11%	57%	68%
54	North Buffalo	2004-05	67	19%	41%	60%
81	North Buffalo	2004-05	66	15%	24%	39%
61	North East	2004-05	62	36%	44%	79%
80	North East	2004-05	56	29%	48%	77%
78	North East	2004-05	10	10%	60%	70%
65	Riverside	2004-05	79	11%	41%	52%
27	South Buffalo	2004-05	55	27%	36%	64%
93	South Buffalo	2004-05	100	7%	45%	52%
69	South Buffalo	2004-05	37	11%	41%	51%
72	South Buffalo	2004-05	49	10%	41%	51%
18	West Side	2003-04	40	20%	48%	68%
19	West Side	2004-05	38	13%	50%	63%
45	West Side	2004-05	43	14%	44%	58%
96	West Side	2004-05	87	19%	35%	55%
18	West Side	2004-05	35	26%	29%	54%
3	West Side	2004-05	47	6%	40%	47%
77	West Side	2004-05	54	7%	37%	44%
44	Now closed	2004-05	19	58%	32%	90%
71	Now closed	2004-05	49	27%	53%	80%
98	Now # 67Discovery	2004-05	26	7%	26%	33%

Source: Special request through Buffalo City School District.

The same appears to hold true with regards to numerical literacy. Table 13 displays Math 8 test scores for City of Buffalo schools. While there has been some improvement in the district-wide figures since 2002, over 60 percent of 8th graders still are not meeting the state standard for mathematics. At least 70 percent of students failed to meet the state standard in about one-third of the City's schools and, once again, nearly 20 percent of students scored in Level 1, indicating serious deficiencies. And, as is also true of ELA scores, the problem is not confined to one part of Buffalo or only a handful of planning communities; the majority of students in schools *across* the City are not meeting the state standard.

How are students in the City's charter schools faring by comparison? Fifteen charter schools with an enrollment of approximately 5,500 students serve families in the City of Buffalo. To better understand their school success we again look at performance on ELA and Math tests for fourth and eighth grade, as presented in the following tables.

Table 14: ELA 4 Test Scores in Buffalo Area Charter Schools

School	Planning Community	Year	# Tested	Level 1	Level 2	Not Meeting Standard
Pinnacle	Ellicott	2004-05	38	32%	50%	82%
Stepping Stone	East Delavan	2004-05	44	39%	41%	80%
Community	North East	2004-05	43	26%	42%	68%
Enterprise	Central	2004-05	46	13%	50%	63%
Westminster	North East	2004-05	55	4%	44%	48%
Applied Technology	Riverside	2004-05	103	6%	38%	44%
King Center	East Side	2004-05	17	6%	35%	41%
South Buffalo	South Buffalo	2004-05	79	4%	37%	41%
Buffalo United	North Buffalo	2004-05	50	2%	30%	32%
Tapestry	Elmwood	2004-05	24	0%	17%	17%
Total		2004-05	499	12%	39%	51%

Source: Special request from NYSED.

Table 15: ELA 8 Test Scores in Buffalo Area Charter Schools

School	Planning Community	Year	# Tested	Level 1	Level 2	Not Meeting Standard
Buffalo Acad. - Sci.	North Buffalo	2004-05	66	13%	73%	86%
Enterprise	Central	2004-05	49	20%	63%	83%
Stepping Stone	East Delavan	2004-05	45	11%	69%	80%
Applied Technology	Riverside	2004-05	110	7%	66%	73%
South Buffalo	South Buffalo	2004-05	49	0	57%	57%
Westminster	North East	2004-05	53	0%	49%	49%
Total		2004-05	372	9%	63%	72%

Source: Special request from NYSED.

Overall, students in Buffalo area charter schools are performing slightly better on the state ELA tests than their public school counterparts, although once again there is significant variance in scores across schools. For the 2004-05 school year, a smaller percentage of charter school students scored in Level 1 in both grade levels, and approximately 10 percent fewer did not meet the state standard in Grade 4. Nevertheless, a majority of 4th grade students in Buffalo charter schools still failed to reach the state ELA target. Even more troubling, a significantly larger percentage (over 70%) of 8th grade students failed to meet the state standard. More than **80 percent** of the students in half of the charter schools testing at this grade level did not meet the state target. Although the percentage of charter school students scoring in Level 1 was actually lower in 8th grade than in 4th grade, a positive sign, nearly two-thirds of 8th graders scored in Level 2 (compared to 39 percent for 4th graders), indicating a need for additional assistance to enhance their literacy skills.

Table 16: Math 8 Test Scores in Buffalo Area Charter Schools

School	Planning Community	Year	# Tested	Level 1	Level 2	Not Meeting Standard
Enterprise	Central	2004-05	48	50%	42%	92%
Buffalo Acad. - Sci.	North Buffalo	2004-05	61	21%	64%	85%
Stepping Stone	East Delavan	2004-05	44	27%	48%	75%
Applied Technology	Riverside	2004-05	103	7%	53%	60%
South Buffalo	South Buffalo	2004-05	49	8%	37%	45%
Westminster	North East	2004-05	53	2%	34%	36%
Total		2004-05	358	17%	48%	65%

Source: Special request from NYSED.

With regard to numerical literacy, there appears to be little difference in performance between Buffalo charter school and Buffalo City school students. In fact, a slightly *higher* percentage of 8th grade charter school students overall failed to meet the state test standard for mathematics

during the 2004-05 school year. In one school (Enterprise) over 90 percent of the students did not reach the Math 8 target, with fully half of those students scoring in Level 1 (Table 16). In short, regardless of where children are being educated, a majority of Buffalo students clearly need to bolster their reading, language, and numerical literacy skills to satisfy state testing requirements and thrive academically.

Buffalo students in various subgroups perform differently on the 4th and 8th grade ELA, as is shown in Table 17. For example, black and Hispanic students are more likely to fail to meet the standard in both 4th and 8th grade when compared to their fellow students. General education students are more likely than those with disabilities to meet the standard, as well.

Table 17:
4th and 8th Grade Students Not Meeting Standard* on ELA Scores,
2003-2004, 2004-2005 by Student Subgroup, BCSD

	4th Grade ELA		8th Grade ELA	
	Not Meeting Standard 03-04	Not Meeting Standard 04-05	Not Meeting Standard 03-04	Not Meeting Standard 04-05
Total	66%	61%	74%	74%
Race/Ethnicity				
American Indian/ Alaskan Native	60%	63%	74%	55%
Black	72%	68%	81%	82%
Hispanic	66%	55%	75%	77%
Asian/Pacific Islander	37%	39%	57%	53%
White	51%	45%	60%	56%
Disability Status				
General education	59%	53%	68%	68%
Students with disabilities	87%	85%	95%	94%
Gender				
Male	68%	66%	78%	77%
Female	63%	56%	70%	71%
English Proficiency Status				
English Proficient	65%	61%	74%	73%
Limited English Proficient	80%	74%	96%	100%
Income Level				
Economically disadvantaged	70%	70%	79%	80%
Not disadvantaged	48%	48%	58%	57%

Source: Overview of District Performance for Buffalo City School District, May 2005;
<http://www.emsc.nysed.gov/reprcd2004/overview-analysis/140600010000.pdf>

*Not meeting standard includes those scoring a "1" or "2" on a scale of 4.

Table 18 shows that Buffalo city school children are least likely to meet the standard on the 4th grade ELA of students in all the large NYS cities. However, Buffalo students don't lose as much ground between 4th and 8th grade as students in some other cities. By 8th grade 74% of Buffalo students do not meet the ELA standard, but Albany, Rochester, and Syracuse have even higher proportions of students failing to meet the standard.

Table 18: 4th and 8th Graders Not Meeting Standard on ELA (Scoring 1 or 2), 2004-2005, Selected NYS Cities		
	4th Grade	8th Grade
Albany	47%	81%
Buffalo	61%	74%
NYC	40%	67%
Rochester	43%	82%
Syracuse	49%	78%
Yonkers	24%	70%

*Source: NYSED Overviews of District Performance, May 2006,
<http://www.emsc.nysed.gov>*

Map 2 in the Appendix shows the location of children ages 5 to 14 in the City of Buffalo by Census Tract, as well as the location of literacy providers who provide literacy services to school-age children. These services appear to be relatively well distributed throughout the city, with a noticeable exception of South Buffalo.

Finally, Table 19 displays the 2004-05 graduation rates for all high schools in the Buffalo City School District. The majority of high schools have graduation rates approaching or exceeding 90 percent, and four schools have graduation rates of 95 percent or higher. However, four schools have graduation rates below 80 percent, with three of these schools (Emerson, South Park, and Grover Cleveland) exhibiting rates below 70 percent. Although not a precise proxy for drop-out rates, this data does suggest that a considerable number of students in these schools drop out, are held back, or otherwise fail to complete their studies in order to graduate with their classmates. Those who do not graduate high school tend to have higher rates of unemployment, lower income levels, and diminished earning power, and are more likely to fall into poverty and criminal behavior. They also tend to have significantly lower literacy levels, making them prime candidates for targeted literacy enrichment programs to enhance both their immediate and longer-term personal and economic prospects.

Table 19: Graduation Rates in Buffalo City High Schools

School # and Name	Planning Community	04-05 HS Graduation Rate	Graduation Rate of 1999 9 th grade cohort, as of 8/2003	Graduation Rate of 2000 9 th grade cohort, as of 8/2004
304 Hutchinson Central Technical	Central	95.5%	95%	95%
335 Middle College	Central	89.5%	NA	NA
302 Emerson School of Hospitality	Central	63.9%	57%	67%
306 Seneca HS	East Delavan	93.9%	76%	71%
187 Buffalo Academy for Visual & Performing Arts	Ellicott	86%	86%	78%
195 City Honors at Fosdick Masten School	Masten	98.2%	99%	99%
301 Burgard HS	North East	95.2%	59%	57%
200 Bennett HS	North East	91.7%	55%	61%
305 McKinley HS	Riverside	85.8%	79%	76%
205 Riverside Institute of Technology	Riverside	78%	57%	51%
206 South Park HS	South Buffalo	67.1%	46%	48%
204 Lafayette HS	West Side	96.2%	62%	52%
212 Leonardo daVinci HS	West Side	93.4%	90%	93%
202 Grover Cleveland HS	West Side	67.2%	44%	41%
Buffalo City School District			64%	62%
<i>Sources: City of Buffalo School District; NYSED Overviews of School Performance, May 2005, May 2006 (www.emsc.nysed.gov/repcrd2004/links/d_140600.shtml); www.emsc.nysed.gov/repcrd2005/links/d_140600.shtml</i>				

To compare Buffalo city school graduation rates to other upstate cities, see Table 20. Overall, more Buffalo students entering ninth grade in the fall of 2000 graduated by summer 2004 than in Syracuse or Rochester. Buffalo's graduation rate was the same as Albany's and lower than Yonkers'. However, with only two in three students completing high school in a four year period, substantial room for improvement exists. Graduation rates were substantially lower among Hispanics, students with disabilities, males, and those with limited English proficiency. Interestingly, those with economic disadvantages graduated at only slightly lower rates than those who do not face that challenge.

Table 20
Graduation Rates of 2000 9th Grade Cohort, as of August 31, 2004

	Buffalo					
	1999 Cohort	2000 Cohort	Syracuse	Rochester	Albany	Yonkers
Total	64%	62%	59%	52%	62%	66%
Race/Ethnicity						
American Indian/Alaska Native	69%	56%	44%	NA	NA	NA
Black	62%	59%	54%	52%	49%	59%
Hispanic	51%	52%	49%	41%	52%	63%
Asian/Pacific Islander	82%	85%	52%	NA	NA	NA
White	70%	69%	67%	64%	83%	76%
Disability Status						
General-education students	71%	71%	64%	58%	66%	69%
Students with disabilities	22%	26%	37%	21%	35%	41%
Gender						
Female	72%	68%	66%	59%	67%	72%
Male	56%	55%	53%	44%	56%	60%
English Proficiency Status						
English proficient	65%	63%	60%	52%	62%	68%
Limited English proficient	47%	22%	49%	12%	57%	50%
Income Level						
Economically disadvantaged	64%	64%	66%	52%	60%	84%
Not disadvantaged	64%	58%	55%	52%	63%	46%
Source: NYSED, <i>Overviews of District Performance, February-May 2005</i> ; http://www.emsc.nysed.gov/repcrd2004/links/nydist.shtml						

Students who drop out don't necessarily find employment. In fact, it is estimated that 9% of youth ages 16 to 19 both nationwide and in New York State are neither in school nor employed, and are therefore categorized as "idle youth."¹³ With a population of 8,272 males and 8,488 females ages 16 to 19 in the City of Buffalo, this would indicate an estimated 1,500 idle youth.

Map 3 in the Appendix shows the location of youth ages 15 to 19, as well as the location of literacy service agencies that provide services to school age children. As was mentioned earlier in the discussion of children ages 5 to 14, the services to school aged children appear to be well spread throughout the city, with the exception of South Buffalo.

¹³ The Annie E. Casey Foundation. (2005). *KIDS COUNT 2005 data book online*.

Adult Literacy Rates

As discussed in Section I, the 2003 National Assessment of Adult Literacy (NAAL) is the nation's most comprehensive measure of adult literacy since the 1992 National Adult Literacy Survey (NALS). Sponsored by the National Center for Education Statistics, the NAAL is a nationally representative assessment of English literacy among American adults age 16 and older. Over 19,000 individuals participated in the national and state-level assessments in 2003, representing the entire population of U.S. adults across the 50 states and the District of Columbia. By comparing results from 1992 and 2003, NAAL provides the first indicator in a decade of the nation's progress in adult literacy.¹⁴ Six states, including New York, conducted a State Assessment of Adult Literacy (SAAL) in conjunction with the national assessment in 2003.¹⁵ The tables and accompanying analysis that follow are based on results from the 2003 NAAL and New York SAAL.

The NAAL measures three categories of literacy: “prose,” or reading an article in a newspaper; “document,” or finding something in a job application or bus schedule; and “quantitative,” or conducting fairly simple calculations like the cost per ounce of two cans of soup. The NAAL places adults into one of four levels for each category, based on their assessment score. **Below basic** indicates that the adult can complete the most simple, concrete literacy skills, such as adding amounts on a bank slip, or determining where to sign a form. **Basic** literacy means an adult is able to perform simple, everyday literacy activities, such as comparing ticket prices for two events, or reading an information pamphlet to determine how jurors were selected. Adults with **intermediate** literacy can perform moderately challenging literacy activities such as finding a specific location on a map, or looking through reference documents to determine what foods contain a particular vitamin. Finally, persons who are **proficient** can perform more complex and challenging literacy activities, such as comparing viewpoints in two articles or computing the cost per ounce of food items (NAAL Report Outline 010206).¹⁶

On the whole, the news is encouraging with regard to basic literacy rates in the U.S. Table 21 presents the percentage of adults nationwide scoring in each literacy level (by category) in 1992 and 2003, as well as the percentage of adults in NYS scoring in each literacy level in 2003. As

¹⁴ Although NAAL used the same sampling and data collection procedures as NALS to ensure that participants are similar to those surveyed in 1992, the 2003 NAAL performance levels are different from the five literacy levels used to report NALS results. Therefore, in order to make valid comparisons across years, the national 1992 data were re-analyzed using the four new 2003 NAAL performance levels.

¹⁵ SAAL sampling was conducted using the same approach as NAAL's four-stage sample design. Within each participating state, the sample was drawn to yield approximately 1,000 respondents. In the 2003 SAAL, a state's sample size was augmented by the portion of the national sample drawn from within that state, which allows for more in-depth analysis of the participating states.

¹⁶ www.nces.ed.gov/NAAL

the table indicates, the percentage of adults nationally with below basic literacy skills declined in both the document and quantitative categories. There was a corresponding increase in the percentage of those with basic and especially intermediate level literacy skills, again mainly in the document and quantitative areas. However individuals with high-level literacy skills decreased, as the percentage of those scoring proficient fell in two of the three categories.

Overall, the 2003 NAAL suggests a trend toward increasing functional literacy in the United States. Yet it remains true that a significant number of Americans (from 34 to 55 percent depending on the literacy area) have only basic or below basic mastery of the skills essential to personal and economic success in contemporary society. And New York State is faring somewhat worse. Depending on the area, approximately 40 to 60 percent of New Yorkers currently have only basic or below basic mastery of core literacy skills. The percentages of adults in New York with intermediate and (especially) proficient literacy skills are consequently smaller than the nation as a whole. Of perhaps greatest concern, the State has higher than average percentages of adults with *below basic* competency in all three literacy categories, especially prose literacy. New York State data for 1992 is available only in a five-category format, which is not directly comparable to the four categories shown below.¹⁷

Table 21: Percentage of Adults Nationally and in NYS in Each Literacy Level: 1992 and 2003¹⁸

	% <i>Below Basic</i>		% <i>Basic</i>		% <i>Intermediate</i>		% <i>Proficient</i>	
	1992	2003	1992	2003	1992	2003	1992	2003
U.S.								
Prose	14	14	28	29	43	44	15	13*
Document	14	12*	22	22	49	53*	15	13*
Quantitative	26	22*	32	33	30	33*	13	13
NYS								
Prose	-	19	-	31	-	40	-	11
Document	-	13	-	26	-	52	-	9
Quantitative	-	24	-	35	-	31	-	11

Source: Highlights from the 2003 New York State Assessment of Adult Literacy. U.S. Department of Education, National Center for Education Statistics, www.air.org/NAAL.

There is similar reason for both optimism and concern when examining literacy rates by race and ethnicity. For whites, blacks, and Asians, there was a significant drop in the percentage of

¹⁷ Jenkins and Kirsch, Executive Summary from Adult Literacy in New York, Educational Testing Service, May 1994. In 1992, 25%-28% of New Yorkers were in Level 1, 26%-29% in Level 2, 28%-30% in Level 3, 13%-15% in Level 4, 3%-5% in Level 5, depending on the proficiency area.

¹⁸ Note: * indicates a statistically significant difference between the 1992 and 2003 results. Totals may not equal 100 percent due to rounding. Adults who could not be interviewed due to language spoken or cognitive or mental difficulties (3 percent in 2003 and 4 percent in 2004) are excluded from this and all subsequent tables.

those performing at below basic literacy levels and a corresponding jump in those with intermediate level literacy skills nationwide. It appears, however, that New York State did not fully share in these gains. Nearly one-third of blacks in the State lack basic prose literacy skills and fully half have below basic quantitative literacy,¹⁹ compared to less than 10 and 12 percent respectively for whites, suggesting that considerable work remains to be done in enhancing the literacy skills of African-Americans and narrowing the gaps between racial and ethnic groups. The percentages of Asians with below basic literacy skills are also considerably higher in NYS than in the nation as a whole.²⁰

But of greatest concern, perhaps, are the results for Hispanics. Bucking the general trend toward rising literacy and the gains made by other groups, the percentage of functionally illiterate (below basic) Hispanic Americans increased markedly nationwide from 1992 to 2003, from 35% to 44%. This trend is apparently mirrored in NYS. Nearly half of Hispanics in the Empire State possess below basic prose interpretation skills, and 55 percent have below basic numerical competency. These troubling findings confirm that the Hispanic community now has the largest proportion of individuals at-risk of having low and very low literacy, further underscoring the importance of targeted initiatives aimed directly at improving the literacy skills of Hispanic Americans.

¹⁹ Both of these percentages were slightly higher than the national average for African-Americans.

²⁰ Nationwide, 14 percent of Asians had below basic prose scores, 11 percent had below basic document scores, and 19 percent had below basic quantitative skills, all considerably lower than the comparable NYS figures.

Table 22: Percentage of Adults in NYS in Each Literacy Level, by Race and Ethnicity: 2003²¹

		<i>Below Basic</i>	<i>Basic</i>	<i>Intermediate</i>	<i>Proficient</i>
Prose	White	9	27	48	16
	Black	30	45	25	1
	Hispanic	45	34	19	2
	Asian/Pac. Islander	31	37	30	3
Document	White	8	21	58	14
	Black	22	36	41	1
	Hispanic	29	38	31	1
	Asian/Pac. Islander	23	25	44	8
Quantitative	White	12	33	40	15
	Black	50	38	11	1
	Hispanic	55	33	12	1
	Asian/Pac. Islander	28	42	28	3

Source: *Highlights from the 2003 New York State Assessment of Adult Literacy*. U.S. Department of Education, National Center for Education Statistics, www.air.org/NAAL.

The latter conclusion is reinforced when we look at the primary languages spoken by survey participants. Proficiency in English is, as noted earlier, a key indicator of literacy skills among adults. This finding is driven home by the results of the 2003 NYS SAAL. Those who speak only English before starting school are most likely to possess intermediate or proficient literacy skills (as well as less likely to have below basic language and numerical literacy), followed by those who speak English in combination with some other language (see Table 23).

The results are far different, however, for those who enter school speaking a language other than English. Depending on the category, from one-third to one-half of these adults in New York State have below basic literacy skills, and roughly 70 to 90 percent possess no more than basic literacy. A large proportion of these individuals, both nationwide and in NYS, are of Hispanic origin. And it appears that those who speak only Spanish upon entering school are particularly likely to have literacy problems as adults. NAAL data indicates that the percentages of Spanish speakers at below basic levels of literacy *increased* nationwide between 1992 and 2003 from 52% to 61%. It also shows that the percentages of Spanish-speaking individuals with very low literacy skills were substantially higher than the equivalent totals for those who spoke some other language besides English or Spanish upon entering school (26% at “below basic” level in 2003). With a rapidly growing Hispanic population in New York State, as well as in the City of Buffalo, these findings highlight the significant challenges facing educators and literacy providers in helping many Hispanics and other Spanish speakers acquire the core literacy skills they need to flourish in today’s world.

²¹ Note: Totals may not equal 100 percent due to rounding. All adults of Hispanic origin are classified as Hispanic, regardless of race. The Asian/Pacific Islander category includes Native Hawaiians.

Table 23: Percentage of Adults in NYS in Each Literacy Level, by Language Spoken Before Starting School: 2003²²

	Language Spoken Before Starting School	<i>Below Basic</i>	<i>Basic</i>	<i>Intermediate</i>	<i>Proficient</i>
Prose	English only	11	30	47	13
	English & other language	19	36	37	8
	Other language	47	32	19	2
Document	English only	9	22	57	12
	English & other language	15	31	52	2
	Other language	33	35	31	2
Quantitative	English only	18	34	36	13
	English & other language	29	36	26	9
	Other language	50	37	13	1

Source: *Highlights from the 2003 New York State Assessment of Adult Literacy*. U.S. Department of Education, National Center for Education Statistics, www.air.org/NAAL.

Map 4 in the Appendix shows the location of persons ages 5 and older who speak English less than “very well” based on Census 2000 data. The map also shows the location of literacy service agencies who provide adult literacy services. Adult literacy services appear to be clustered towards the middle of the city, with a small number of outliers. These services may need to be distributed more widely, particularly in the West Side, Riverside, and North East neighborhoods where a high number of non-English speakers reside. Similarly, Map 5 shows the location of foreign-born residents based on Census 2000 data. Again, these City of Buffalo residents are clustered both in the West Side, Riverside, and North Buffalo neighborhoods. While a number of literacy providers are located in these areas, not all offer adult literacy services.

Finally, a link between literacy and educational attainment is apparent. As Table 24 illustrates, individuals with fewer years of education consistently have more limited literacy skills than those who have completed high school or received some type of postsecondary education. Approximately half of those without a high school diploma in New York State lack basic language literacy skills, and two-thirds are not numerically literate. Depending on the category, these individuals are two to four times more likely than high school graduates to have very low literacy.²³ Perhaps the most striking finding, however, is the lack of literacy proficiency among

²² Note: Totals may not equal 100 percent due to rounding.

²³ As the NAAL website highlights, 55 percent of adults with below basic prose literacy skills nationwide did not graduate from high school, compared to 15 percent of adults in the general population. NAAL data also indicates that the proportion of non-high school graduates with below basic language literacy skills has grown since 1992, with a corresponding drop in the percentage of those with basic or intermediate level prose skills.

people with college or postgraduate degrees. Less than 30 percent of college graduates in NYS now possess language or numerical proficiency. Equally troubling, **10 percent** of college graduates in the State lack even basic prose and quantitative literacy skills, and the percentage of those with postsecondary degrees at only basic literacy levels appears to be on the rise.²⁴ In sum, while the relationship between educational attainment and rising literacy remains strong, a college education is no longer a guarantee of high or even intermediate level literacy rates.

Map 6 shows the location of adults ages 25 and older who have not achieved a high school diploma or a GED. This data theme is overlaid with the location of literacy service providers, including those who offer GED services. These services are somewhat spread throughout the city, but are apparently not available in Riverside, North Buffalo, or South Buffalo.

²⁴ Meanwhile, the percentage of high school and GED graduates with intermediate level prose and document skills also fell nationwide. It is likely that these trends held in New York State.

Table 24: Percentage of Adults in NYS in Each Literacy Level, by Educational Attainment: 2003²⁵

	Educational Attainment	% <i>Below Basic</i>	% <i>Basic</i>	% <i>Intermediate</i>	% <i>Proficient</i>
Prose	Less than/some high school	58	31	11	0
	GED/high school equivalency	17	57	26	0
	High school graduate	16	44	38	3
	Vocational/trade/ business school	26	29	40	5
	Some college	8	31	53	8
	Associate's/2-year degree	12	25	46	18
	College graduate	10	19	45	27
	Graduate studies/degree	2	13	57	28
Document	Less than/some high school	42	36	22	0
	GED/high school equivalency	14	38	47	1
	High school graduate	16	30	50	4
	Vocational/trade/ business school	28	32	36	4
	Some college	8	22	61	8
	Associate's/2-year degree	5	20	63	11
	College graduate	4	16	59	21
	Graduate studies/degree	1	8	67	24
Quantitative	Less than/some high school	67	26	6	0
	GED/high school equivalency	33	40	23	4
	High school graduate	26	43	28	4
	Vocational/trade/ business school	30	39	25	6
	Some college	13	41	39	8
	Associate's/2-year degree	15	40	36	9
	College graduate	10	23	39	28
	Graduate studies/degree	2	21	48	30

Source: *Highlights from the 2003 New York State Assessment of Adult Literacy*. U.S. Department of Education, National Center for Education Statistics, www.air.org/NAAL.

While NYS SAAL data for literacy level by income is not available, national data show that median weekly earnings are \$432 for an adult with a below basic prose literacy level, \$558 for an

²⁵ Note: Totals may not equal 100 percent due to rounding.

adult with basic prose literacy, \$714 for those with intermediate prose literacy, and are substantially higher at \$975 for those with proficient prose literacy levels.²⁶

Estimates of Adult Literacy

How do Erie County and the City of Buffalo compare to other similar geographic areas in New York State on adult literacy levels? Using synthetic estimates developed by Dr. Stephen Reder of Portland State University, Table 25 presents data on adult literacy estimates (an overall literacy proficiency measure, calculated as the average of prose, document and quantitative scores) for selected cities and New York State. These estimates are derived from information from the 1992 National Adult Literacy Survey and the 1990 U.S. Census. The synthetic estimation process relies on a model that predicts literacy proficiencies from variables such as level of education, ability to speak English and other demographic characteristics. Although less accurate than survey results for geographic areas, the predictions appear to be reasonably reliable.

**Table 25: Adult Literacy Level Estimates in Selected Cities,
Based on 1992 NAAL**

City	2000 Census Adult Population	Mean Literacy Proficiency	% Level I	# Level 1	% Level 1 or 2	# Level 1 or 2
United States*	281,421,906	NA	22%	61,912,819	48.5%	136,489,624
New York State	14,286,350	267	24%	3,428,724	50%	7,143,175
Albany	76,573	277	21%	16,080	45%	34,458
Buffalo	215,691	253	30%	64,707	61%	131,572
NYC	6,068,009	267	24%	1,456,322	50%	3,034,005
Rochester	158,038	257	29%	45,831	57%	90,082
Syracuse	110,521	268	24%	26,525	51%	56,366
Yonkers	148,372	262	26%	38,577	53%	78,637
Baltimore, MD	489,801	237	38%	186,124	73%	357,555
Cleveland, OH	342,000	240	38%	129,960	72%	246,240
Hartford, CT	85,010	233	41%	34,854	73%	62,057
Newark, NJ	197,127	208	52%	102,506	89%	175,443
Pittsburgh, PA	268,055	264	26%	69,694	55%	147,430
<i>http://www.casas.org/lit/litcode/. *Level 1 is 21%-23%; Level 2 is 25% to 28% (www.nifl.gov/nifl/facts/NALS.html)</i>						

As the table indicates, the City of Buffalo has the lowest mean literacy proficiency estimate for any of the selected metropolitan areas in New York State, though it is higher than in Baltimore,

²⁶ <http://nces.ed.gov/naal/>; U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2003 National Assessment of Adult Literacy.

Cleveland, Hartford, or Newark, cities often used as comparisons for upstate NY cities. Among New York State cities, Buffalo also has the highest percentage of residents scoring in Level 1, i.e. those who lack basic prose, document, and quantitative literacy skills, as well as the highest percentage scoring in Levels 1 or 2, indicating low or moderate levels of functional literacy. Applying these literacy level estimates to data on the adult population from the 2000 Census, we estimate that nearly 65,000 adults in the City of Buffalo are at a below basic literacy level, and nearly the same number are at a basic level, for a total of over 130,000 adults who face serious literacy challenges.

Workforce Participation

Most high status and well-paying employment opportunities require higher levels of prose and numerical literacy (or both). Due to growing complexity and changing occupational demands, even many formerly labor-intensive positions that required less education, such as automobile repair, health service provision, production and manufacturing, and administrative support increasingly call for specialized skills and greater levels of literacy. The following section discusses changing occupational trends in Western New York (including Erie County and Buffalo) and projected employment opportunities in the region, all within the context of evolving literacy needs.

Based on Census 2000 data, the tables below depict key occupational and industry sectors in Erie County and the City of Buffalo. As Table 26 indicates, management/professional and sales/office are the two largest occupational categories in both Erie County and Buffalo, although they constitute a somewhat smaller proportion of total employment in the City than in the County overall. More than 20 percent of jobs in Buffalo are in services, a noticeably higher percentage than in the rest of Erie County, while there is also a higher percentage of production and transportation occupations in the City than the County as a whole. Educational, health, and social services make up the largest industry sector in both Erie County and Buffalo, constituting more than a quarter of total employment, followed by manufacturing and retail trade. Together these three sectors account for more than half of employment opportunities in both Erie County and the City of Buffalo (see Table 27).

Table 26:
Occupation for the Employed Civilian Worker Age 16+, 2000

	<u>Erie County</u>		<u>City of Buffalo</u>	
Total	431,174	100.0%	114,062	100.0%
Management, professional, and related occupations	149,727	34.7%	33,287	29.2%
Sales and office occupations	121,262	28.1%	30,775	27.0%
Service occupations	67,285	15.6%	24,049	21.1%
Production, transportation, and material moving occupations	62,793	14.6%	19,563	17.2%
Construction, extraction, and maintenance occupations	29,391	6.8%	6,245	5.5%
Farming, fishing, and forestry occupations	716	0.2%	143	0.1%

Source: Census 2000, SF3

Table 27: Industry for the Employed Civilian Worker Age 16+, 2000

	<u>Erie County</u>		<u>City of Buffalo</u>	
Total	431,174	100.0%	114,062	100.0%
Educational, health and social services	110,315	25.6%	32,384	28.4%
Manufacturing	62,253	14.4%	14,906	13.1%
Retail trade	50,932	11.8%	12,172	10.7%
Professional, scientific, management, administrative, and waste management services	34,656	8.0%	9,774	8.6%
Arts, entertainment, recreation, accommodation and food services	32,343	7.5%	9,487	8.3%
Finance, insurance, real estate and rental and leasing	28,687	6.7%	6,509	5.7%
Transportation and warehousing, and utilities	22,211	5.2%	6,223	5.5%
Public administration	20,642	4.8%	6,012	5.3%
Other services (except public administration)	19,547	4.5%	5,498	4.8%
Construction	19,178	4.4%	3,694	3.2%
Wholesale trade	18,677	4.3%	4,257	3.7%
Information	10,234	2.4%	2,974	2.6%
Agriculture, forestry, fishing and hunting, and mining	1,499	0.3%	172	0.2%

Source: 2000 Census, SF3

Tables 26 and 27 depict current occupational and employment patterns in Erie County. Equally important, however, is understanding *future* employment trends in the area. Table 28 shows the top 25 projected fastest growing occupations in the Western New York region (data for Erie County alone is not available). Eight of the top ten fastest growing jobs will be in the medical and human service professions, particularly the home health industry, which is also one of the largest employers in the region. Sizeable demand is expected for various construction/maintenance/installation workers, as well as for preschool teachers, software engineers, and public health workers. Needless to say, many of these positions, including those in the service and industrial sectors, require at least basic and often more advanced education and training. This is especially true of those in the health care, teaching, and business fields. In

short, individuals lacking core literacy skills will stand little chance of gaining or retaining these types of job opportunities.

However, when we look at the top 25 occupational job openings in Western New York, it appears that many of the vocations employing the largest number of individuals and with the highest number of annual openings (such as cashiers, retail salespersons, and fast food workers) are fairly low-skilled jobs requiring only basic literacy levels. As Table 29 also suggests, there is often substantial turnover in these generally low-paying and often part-time or temporary positions. Nevertheless, these jobs are an essential economic resource for many people. They can also serve as a stepping-stone to better and more permanent employment opportunities, especially for those who possess suitable reading and numerical literacy skills. Helping individuals acquire or augment such employment-relevant literacy skills therefore should be a key priority of adult literacy programs in the City of Buffalo.

Table 28: Top 25 Fastest Growing Occupations Western New York Region (Allegany, Cattaraugus, Chautauqua, Erie, and Niagara counties)			
Occupational Title	Employment		Percent Change
	2002	2012	
Social and Human Service Assistants	2,600	3,520	35.4
Medical Assistants	1,180	1,580	33.9
Respiratory Therapy Technicians	60	80	33.3
Personal and Home Care Aides	3,930	5,220	32.8
Home Health Aides	7,410	9,680	30.6
Physical Therapist Assistants	360	470	30.6
Physical Therapist Aides	230	300	30.4
Mental Health and Substance Abuse Social Workers	500	650	30
Rehabilitation Counselors	610	790	29.5
Database Administrators	340	440	29.4
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	1,470	1,900	29.3
Physician Assistants	310	400	29
Medical Records and Health Information Technicians	590	760	28.8
Drywall and Ceiling Tile Installers	730	940	28.8
Septic Tank Servicers and Sewer Pipe Cleaners	70	90	28.6
Network Systems and Data Communications Analysts	640	810	26.6
Paving, Surfacing, and Tamping Equipment Operators	190	240	26.3
Structural Iron and Steel Workers	310	390	25.8
Cement Masons and Concrete Finishers	390	490	25.6
Helpers--Electricians	200	250	25
Dental Laboratory Technicians	240	300	25
Computer Software Engineers, Systems Software	780	970	24.4
Medical and Public Health Social Workers	710	880	23.9
Preschool Teachers, Except Special Education	2,840	3,520	23.9
Mental Health Counselors	480	590	22.9

Source: NYS Department of Labor, <http://www.labor.state.ny.us/workforceindustrydata/apps.asp?reg=wny&app=fastest>

**Table 29: Top 25 Occupational Job Openings
Western New York Region
(Allegany, Cattaraugus, Chautauqua, Erie, and Niagara counties)**

Occupational Title	<u>Employment</u>		Total Annual Average Openings
	2002	2012	
Cashiers	20,540	21,710	1,120
Retail Salespersons	18,400	19,050	730
Waiters and Waitresses	11,110	12,260	690
Registered Nurses	13,020	14,770	450
Workers, Including Fast Food	7,370	8,480	430
Customer Service Representatives	11,950	14,090	390
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	14,220	15,330	380
Office Clerks, General	14,720	14,960	350
Teacher Assistants	12,160	13,210	340
Food Preparation Workers	7,020	7,820	330
Movers, Hand	10,200	9,730	330
Home Health Aides	7,410	9,680	320
Special and Vocational Education	6,610	6,860	300
Stock Clerks and Order Fillers	7,830	6,860	290
Manufacturing, Except Technical and	8,850	9,250	270
Special Education	7,420	7,680	260
Receptionists and Information Clerks	6,510	7,430	250
Security Guards	4,900	5,990	220
Nursing Aides, Orderlies, and Attendants	7,440	8,520	210
Executive	10,950	9,850	210
Concession, and Coffee Shop	2,850	2,980	200
Maintenance and Repair Workers, General	7,300	7,910	200
Office and Administrative Support	9,160	9,080	200
Child Care Workers	5,450	5,900	190
Personal and Home Care Aides	3,930	5,220	190
Clerks	10,210	10,050	190
Sales Workers	7,810	8,310	190
<i>Source: NYS Department of Labor, http://www.labor.state.ny.us/workforceindustrydata/apps.asp?reg=wny&app=most </i>			

Figure 13 shows the skills needed for the top six occupations expected to have the most openings in the western New York region through 2012. Persons applying for all occupations except for fast food workers are expected to have at least a high school diploma, with higher educational requirements for nurses and customer service representatives. Many of these occupations require good spelling, basic math skills, and good communication skills. All require good soft skills as well, such as dealing with customers with tact and patience.

Figure 13: Top 6 Occupational Job Openings, Training and Qualifications Needed	
Cashiers	<ul style="list-style-type: none"> *Preference for applicants with high school diploma. *Able to do repetitious work accurately, good manual dexterity. *Basic mathematical skills. *Able to deal tactfully with customers. *Possibly typing, selling, or money handling experience.
Retail Salespersons	<ul style="list-style-type: none"> *Preference for applicants with high school diploma. *Able to deal tactfully and patiently with customers. *Interest in sales work. *Neat appearance. *Ability to communicate clearly and effectively. *Ability to speak more than one language may be helpful.
Waiters and Waitresses	<ul style="list-style-type: none"> *Preference for applicants with high school diploma. *Neat, clean appearance, well-spoken manner. *Good memory *Comfortable using computers to place orders/generate bills. *Quick at arithmetic to total bills manually *Knowledge of a foreign language helpful.
Registered Nurse	<ul style="list-style-type: none"> *Graduate from an approved nursing program (bachelors of science in nursing, associate degree in nursing, or diploma program). *Pass national licensing examination.
Fast Food Workers	<ul style="list-style-type: none"> *On the job training, including on-line or video training. *Positions often held by young or part-time workers. *Often a first job for a high school student.
Customer Service Representatives	<ul style="list-style-type: none"> *Typically requires a high school diploma. *Some positions require associate or bachelor's degree. *Basic to intermediate computer knowledge. *Good interpersonal skills *Communication and problem-solving skills, typing, spelling.

Source: Bureau of Labor Statistics Occupational Outlook Handbook, www.bls.gov/oco.

Employer-Sought Skills

Are employers in Western New York experiencing difficulty finding employees with appropriate skills and experience? The Buffalo-Niagara Partnership's "WNY Works Skills Survey" provides important insight into this question. The fourth WNY Works survey was administered in May 2003 to 14,146 employers located in Erie and Niagara counties. The survey generated 1,000 responses with a confidence rating of 95%. Survey results indicated that many positions, both

**Table 30: WNY Works Survey Results:
Employers Reporting Vacancies are Difficult to Fill, by
Occupation**

	Current Openings	Employers Reporting Vacancy is Difficult to Fill
Health Service	103	84%
Health/Diagnosing Tech.	243	81%
Production/Machinists	133	70%
Engineers/Programmers/Scientists	129	69%
Executive/Managerial	100	68%
Administrative Support	150	51%
Retail	176	43%

<http://www.thepartnership.org/programsandservices/economicgrowth/regionaldevelopment/documents/surveysummary-finalforboard-9-15-03.doc>

current and projected, appear "difficult to fill." Findings for those occupations with the highest percentage of employers reporting difficulty in filling vacancies are presented in Table 30.

As the table indicates, more than two-thirds of employers in five of these occupational areas reported difficulty in filling job openings, with over 80 percent of health diagnostic and health service

employers highlighting this problem. Respondents stated that the most common reasons for this difficulty were because there are "not enough suitably skilled people locally" (53% of respondents) and because "applicants lack the qualifications we want" (52% of respondents). Many of these occupations call for high levels of literacy and specialized training, and all those with high percentages of difficult to fill openings require individuals with at least basic literacy. The fact that so many employers in Erie County report difficulty in hiring such employees only underscores the need to strengthen the skills of the County's workforce, including its basic and more advanced literacy skills.

Literacy Program Service Utilization

Through its Adult, Family and Alternative Education Team, the State Education Department's Office of Workforce Preparation and Continuing Education is the primary funder for literacy programs offered through community centers, BOCES, job development centers, Literacy Volunteers of America, and a variety of community based organizations. The Office of Workforce Preparation and Continuing Education also compiles information on service utilization and profiles of participants in adult literacy programs across the State. There are five major providers in the City of Buffalo (or that serve its residents) who received significant resources from SED for adult literacy programs. Selected data on participants in literacy programs offered by four of these providers is provided in Table 31. Although this data does not detail the actual extent of *need* or *demand* for literacy services in the City of Buffalo, it does provide a portrait of those currently utilizing these services.

Table 31: Profile of Participants in Selected Buffalo Area Literacy Programs

Participant Race/Ethnicity	Buffalo Adult Learning Center	Everywoman Opportunity Center	Erie 1 BOCES	Erie 2 BOCES*
Black	2,616	4	141	305
White	1,409	0	172	679
Hispanic	770	52	45	278
Asian	239	5	100	38
Other	72	0	2	60
Total	5,106	61	460	1,360
Participant Status on Entering Program**				
Disabled	640	0	45	256
Employed	848	12	190	348
Unemployed	2,883	49	211	785
Not in the Labor Force	1,375	0	59	227
On Public Assistance	1,617	49	217	731
Living in Rural Areas***	0	0	4	539
Institutional Programs				
In Correctional Facilities	227	0	0	51
In Community Correctional Programs	134	0	0	51
In Other Institutional Settings	20	0	0	20
Secondary Status Measures**				
Low Income	0	57	200	921
Displaced Homemaker	135	20	27	10
Single Parent	1,702	24	62	295
Dislocated Worker	433	0	4	15
Learning Disabled Adults	345	0	30	183
<i>Source: New York State Education Department, special run upon request by ALIES (Adult Literacy Information and Evaluation System) Literacy Assistance Center (www.alies.com).</i>				

* Erie 2 BOCES also serves residents of Chautauqua and Cattaraugus counties.

**Individuals may fall into multiple categories

***Rural areas are places of less than 2,500 inhabitants and outside urbanized areas.

As the table suggests, minorities comprise a substantial, indeed disproportionate, share of those participating in Buffalo area adult literacy programs. More than half of the participants in programs sponsored by the Buffalo Area Learning Center are African-American, and blacks make up over 40 percent of those attending literacy programs offered by all four providers. Many African-Americans in the City of Buffalo, as highlighted earlier, face significant economic and educational challenges that place them at greater risk of possessing limited literacy skills. Hispanics make up over 16 percent of the participants in Buffalo literacy programs, double their percentage of the City's total population. This finding comports with the comparatively low education rates, significant number of residents with limited English proficiency, and low income levels in those planning districts with large Hispanic populations – and further underlines the importance of literacy programs designed to meet the particular (and growing)

needs of the Hispanic community. By contrast, whites constitute approximately one-third of all program participants, compared to roughly half of Buffalo's total population and 95 percent of the population in the rest of Erie County. Still, nearly 2,300 white residents are involved in these selected local literacy programs, illustrating that the social and economic risk factors associated with low literacy – as well as the need to bolster language and quantitative skills – cut across racial and ethnic lines.

The link between economic status and literacy is also strongly underscored in this data. Only 20 percent of the participants in Buffalo literacy programs are employed. More than half are out of work, and nearly 85 percent are either unemployed or out of the labor force. A significant percentage (about one-third) receives public assistance. In addition, the majority of those participating in literacy programs offered by the two BOCES and Everywoman Opportunity Center identified themselves as low income. Finally, almost one-third of the participants voluntarily identified themselves as single parents (with the actual number likely being somewhat higher).

While based on a sample of all persons using literacy program services, this utilization data accentuates that those lacking basic literacy skills are often on the lower rungs of the economic ladder struggling to move forward, or in socio-economic circumstances that make advancement more difficult. For these individuals in particular, as well as those with disabilities and other special needs, the value of literacy programs in equipping people with the skills they need to enhance their personal prospects and economic standing is especially great.

CONCLUSION

Clearly, barriers exist to reforming the literacy system in the City of Buffalo. One of the biggest challenges is the sheer number of children, youth, and adults with low literacy levels, or at risk of developing low literacy levels. With approximately 46,000 adults in the City of Buffalo with no high school degree, and an estimated 130,000 City of Buffalo adults possessing no more than a basic level of literacy, a large population is effectively prohibited from pursuing many employment opportunities and from achieving the skills needed in our increasingly complex society.

Similarly, many young children and youth are at risk in the City of Buffalo. One thousand children are born each year to mothers who do not have a high school degree. One-quarter to one-half of the city's 1,900 pre-schoolers face literacy/language deficiencies, which affects 450 to 900 children. Nearly two-thirds of 4th graders do not meet the ELA standard; with an enrollment of approximately 2,800, this affects approximately 1,700 children in that grade level alone. By 8th grade, 75% are not meeting the standard; with eight grade enrollment at approximately 3,400, this affects as many as 2,550 students in that grade. To project these results

onto all grade levels, it is likely that an average of approximately 2,000 students at each grade level face literacy deficiencies in the City of Buffalo, for a grand total of as many as 25,000 students in the K-12 system.

With literacy so strongly linked to the home environment, the literacy system faces a significant challenge in accessing young children directly and in generating interaction with families. Further, the increasingly racially and ethnically diverse population presents potential barriers in terms of cultural and language differences. A struggling economy and the high prevalence of low-income and single-parent households only add to the challenges facing families and the education system.

Nonetheless, room for optimism exists. The Buffalo Reads coalition and Good Schools for All, in their Citywide Literacy Campaign have engaged service providers, parents, students, and other community members to participate in a strategic planning process to design a targeted approach to improving literacy. That process will result in a series of specific planned actions and activities. As a result of analysis of the data contained in this needs assessment, CGR below identifies areas of opportunity for improvements in literacy. These are areas in which the Literacy Campaign may wish to focus resources directed at improving literacy rates among children, youth, and adults in the City of Buffalo.

- ❖ *Which Planning Communities?* We examined planning communities which are likely to have a high proportion of individuals with low literacy based on risk factors including (1) low education, (2) low income, (3) high foreign-born population, and a high number of (4) youth or (5) adults who do not speak English or speak it poorly. Among the twelve planning communities, the five neighborhoods that appear to be most at risk are **West Side, Ellicott, Riverside, East Side, and Central**. Each of these neighborhoods is at or near the top of the list on two or more of these risk factors.
- ❖ *Which schools?* When looking at specific schools that appear to be performing well below their peers on the ELA 4th and 8th grade scores, or among high schools, those with low graduation rates, the following stand out:
 - 4th grade ELA not meeting standard (75% or higher not meeting standard):
 - East Delavan: School 84 (80%), School 82 (78%)
 - Ellicott: School 31 (78%)
 - Elmwood: School 17 (76%)
 - Masten: School 37 (78%)
 - North East: School 61 (79%)
 - 8th grade ELA not meeting standard: (85% or higher not meeting standard):
 - Central: School 76 (88%)

- East Delavan: School 171 (87%)
 - East Side: School 97 (88%)
 - Ellicott: School 31 (95%)
 - Masten: School 74 (93%)
 - Riverside: School 94 (94%)
 - West Side: School 38 (89%); School 18 (87%)
- High Schools with particularly low graduation rates:
 - West Side: School 202 Grover Cleveland HS (44%)
 - South Buffalo: School 206 South Park HS (46%)
 - Central: Emerson School of Hospitality (57%)
 - Riverside: Riverside Institute of Technology (57%)
 - North East: Bennett HS (55%), Burgard HS (59%)
- ❖ *Which sub-populations?* Certain population groups are at higher risk of low literacy levels, and should be considered for more targeted intervention.
 - ***Race:*** In the schools, black and Hispanic youth are much less likely to graduate in four years as compared to their white or Asian counterparts. Black and Hispanic youth are also more likely to test below the standard on the 4th and 8th grade ELA test. Similarly, on the SAAL, black and Hispanic adults are much more likely to test at the lower literacy levels, “below basic” or “basic” as compared to adults who are white or Asian.
 - ***English Proficiency:*** In the schools, students with limited English proficiency are substantially less likely than those who are English proficient to graduate in four years. They are also more likely to test below the state standard on the 4th and 8th grade ELA assessment. The NYS SAAL indicates that persons whose first language was not English are much more likely to test at lower literacy levels than those whose first language was English.
 - ***Education:*** Adults with lower education levels, particularly those with less than a high school degree or with a GED are much more likely than those with higher levels of education to test at low literacy levels on the SAAL.
 - ***Gender:*** In the BCSD, males are less likely to graduate from high school in four years compared to females, and are more likely to test below the state standard on the 4th and 8th grade ELA assessment.

- ***Economic Status:*** Economically disadvantaged students are more likely to test below the state standard on the 4th and 8th grade ELA assessment. Adults utilizing selected literacy programs in Buffalo are highly likely to be low-income and to be out of work.
- ❖ *Access to services.* As the maps demonstrate, agencies providing literacy services are present throughout the city, but with fewer agencies on the east and south sides of the city. However, a particular need may exist for GED programs and adult services in the north side of the city, and for youth programs in the southeast.

With the extensive system of literacy programs in Buffalo, many of these individuals can be reached—children and youth through the schools and the community centers, and adults through the many programs available in their communities. Clearly opportunities exist to reach persons at risk of low literacy and improve their opportunities for future success.

APPENDIX

- **Literacy Rates by Country**
- **Maps of Literacy Service Providers**

List of countries by literacy rate, as included in the United Nations Development Programme Report 2005^[1].

<u>Rank</u>	<u>Country</u>	<u>Literacy rate</u>
1	Australia	99.9
1	Austria	99.9
1	Belgium	99.9
1	Canada	99.9
1	Czech Republic	99.9
1	Denmark	99.9
1	Finland	99.9
1	France	99.9
1	Georgia	99.9
1	Germany	99.9
1	Iceland	99.9
1	Ireland	99.9
1	Japan	99.9
1	Luxembourg	99.9
1	Netherlands	99.9
1	New Zealand	99.9
1	Norway	99.9
1	Sweden	99.9
1	Switzerland	99.9
1	United Kingdom	99.9
1	United States	99.9[2]
22	Estonia	99.8
23	Barbados	99.7
23	Latvia	99.7
23	Poland	99.7
23	Slovenia	99.7
27	Belarus	99.6
27	Lithuania	99.6
27	Slovakia	99.6
30	Kazakhstan	99.5
30	Tajikistan	99.5
32	Armenia	99.4
32	Russian Federation	99.4
32	Ukraine	99.4
35	Hungary	99.3
35	Uzbekistan	99.3
37	Tonga	98.9
38	Azerbaijan	98.8
38	Turkmenistan	98.8
40	Albania	98.7
40	Kyrgyzstan	98.7
40	Samoa	98.7
43	Italy	98.5
43	Trinidad and Tobago	98.5
45	Bulgaria	98.2
46	Croatia	98.1
47	South Korea	97.9
48	Mongolia	97.8
48	Saint Kitts and Nevis	97.8
50	Spain	97.7
50	Uruguay	97.7
52	Romania	97.3

53	Argentina	97.2
53	Maldives	97.2
55	Cuba	96.9
55	Israel	96.9
57	Cyprus	96.8
58	Guyana	96.5
59	Moldova	96.2
60	Republic of Macedonia	96.1
61	Grenada	96.0
62	Costa Rica	95.8
63	Chile	95.7
64	Bahamas	95.5
65	Bosnia and Herzegovina	94.6
66	Colombia	94.2
67	Hong Kong S.A.R. of the People's Republic	93.5
68	Venezuela	93.0
69	Fiji	92.9
70	Brunei	92.7
71	Philippines	92.6
71	Thailand	92.6
73	Portugal	92.5
73	Singapore	92.5
75	Palestinian territories	91.9
75	Panama	91.9
75	Seychelles	91.9
78	Paraguay	91.6
79	Ecuador	91.0
79	Greece	91.0
81	People's Republic of China (mainland only)	90.9
82	Sri Lanka	90.4
83	Mexico	90.3
83	Vietnam	90.3
85	Saint Lucia	90.1
86	Zimbabwe	90.0
87	Jordan	89.9
88	Myanmar	89.7
89	Qatar	89.2
90	Malaysia	88.7
91	Brazil	88.4
92	Turkey	88.3
93	Saint Vincent and the Grenadines	88.1
94	Dominica	88.0
94	Suriname	88.0
96	Indonesia	87.9
96	Malta	87.9
98	Bahrain	87.7
99	Dominican Republic	87.7
100	Peru	87.7
101	Jamaica	87.6
102	Bolivia	86.5
102	Lebanon	86.5
104	Antigua and Barbuda	85.8
105	Namibia	85.0
106	Mauritius	84.3
107	Equatorial Guinea	84.2
108	São Tomé and Príncipe	83.1

109	Kuwait	82.9
109	Syria	82.9
111	Congo	82.8
112	South Africa	82.4
113	Libya	81.7
114	Lesotho	81.4
115	Honduras	80.0
116	El Salvador	79.7
117	Saudi Arabia	79.4
118	Swaziland	79.2
119	Botswana	78.9
120	United Arab Emirates	77.3
121	Iran	77.0
122	Belize	76.9
123	Nicaragua	76.7
124	Solomon Islands	76.6
125	Cape Verde	75.7
126	Oman	74.4
127	Tunisia	74.3
128	Vanuatu	74.0
129	Cambodia	73.6
129	Kenya	73.6
131	Gabon	71.0
132	Madagascar	70.6
133	Algeria	69.8
134	Tanzania	69.4
135	Guatemala	69.1
136	Uganda	68.9
137	Laos	68.7
138	Cameroon	67.9
138	Zambia	67.9
140	Angola	66.8
140	Nigeria	66.8
142	Djibouti	65.5
143	Democratic Republic of Congo	65.3
144	Malawi	64.1
145	Rwanda	64.0
146	India	61.0
147	Sudan	59.0
148	Burundi	58.9
149	Timor-Leste	58.6
150	Papua New Guinea	57.3
151	Eritrea	56.7
152	Comoros	56.2
153	Egypt	55.6
154	Ghana	54.1
155	Togo	53.0
156	Haiti	51.9
157	Mauritania	51.2
158	Morocco	50.7
159	Yemen	49.0
160	Pakistan	48.7
161	Central African Republic	48.6
161	Nepal	48.6
163	Côte d'Ivoire	48.1
164	Bhutan	47.0

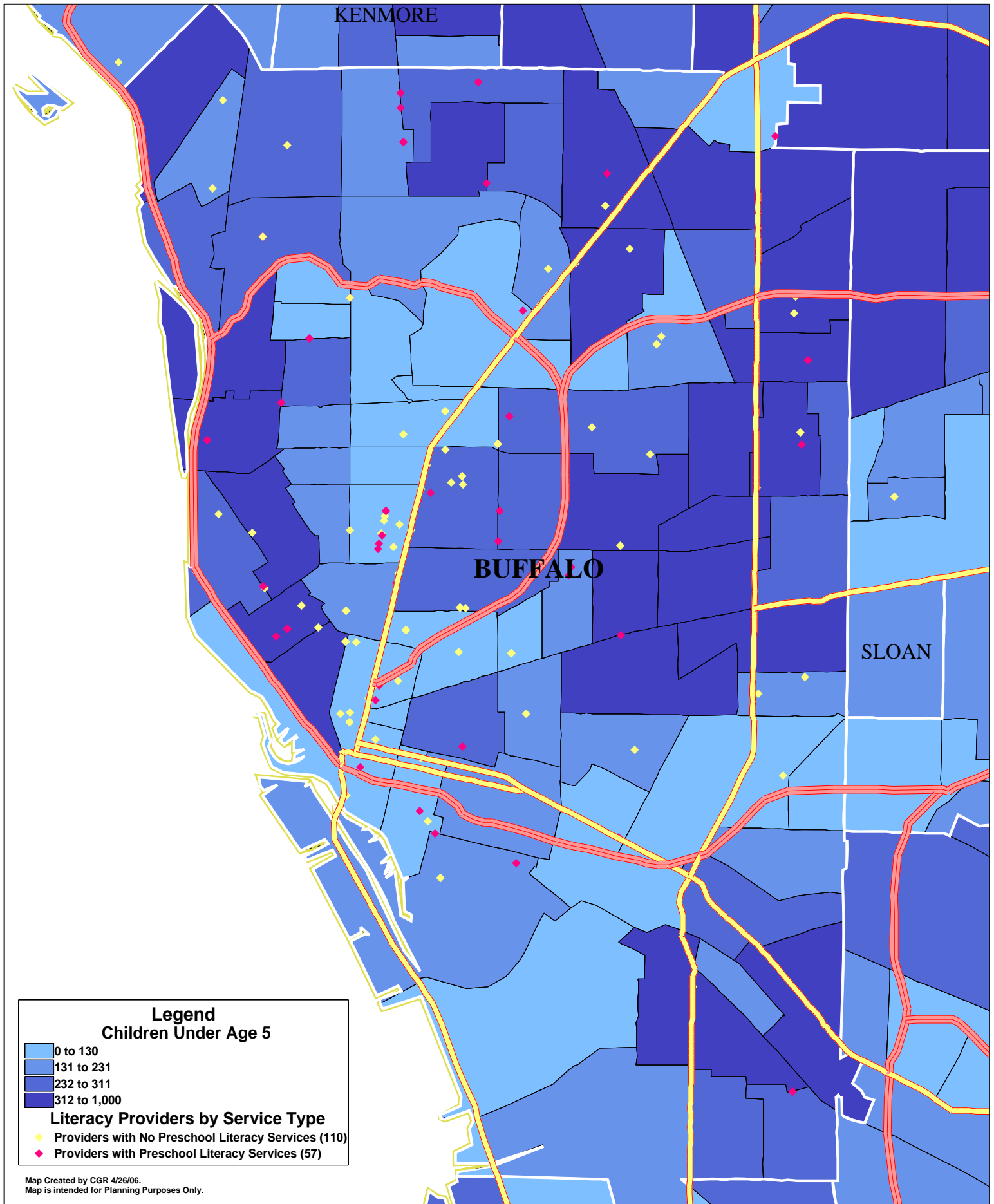
165	Mozambique	46.5
166	Ethiopia	41.5
167	Bangladesh	41.1
168	Guinea	41.0
169	Guinea-Bissau	39.6
170	Senegal	39.3
171	Gambia	37.8
172	Benin	33.6
173	Sierra Leone	29.6
174	Chad	25.5
175	Mali	19.0
176	Niger	14.4
177	Burkina Faso	12.8

1. United Nations Development Programme Report 2005.

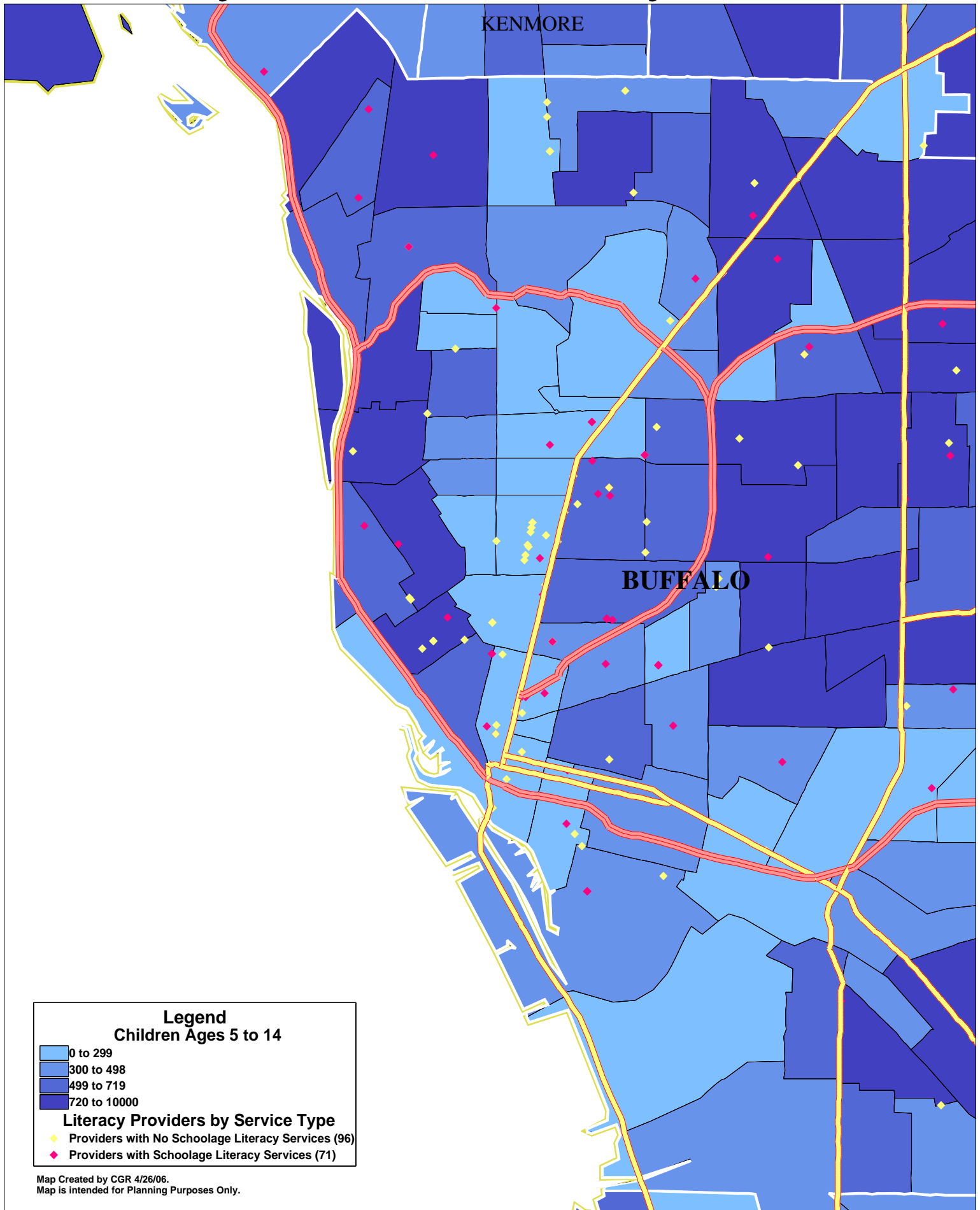
2. According to the CIA World Factbook, literacy rate in USA is 97% (cia.gov). In 1992 the USA conducted a big *National Adult Literacy Survey*. According to the National Institute of Literacy between 21 and 23 percent of the adult population, or approximately 44 million people scored in Level 1 which means that they "can read a little but not well enough to fill out an application, read a food label, or read a simple story to a child".

Note: Because definitions and data collection methods vary across countries, literacy estimates should be used with caution.

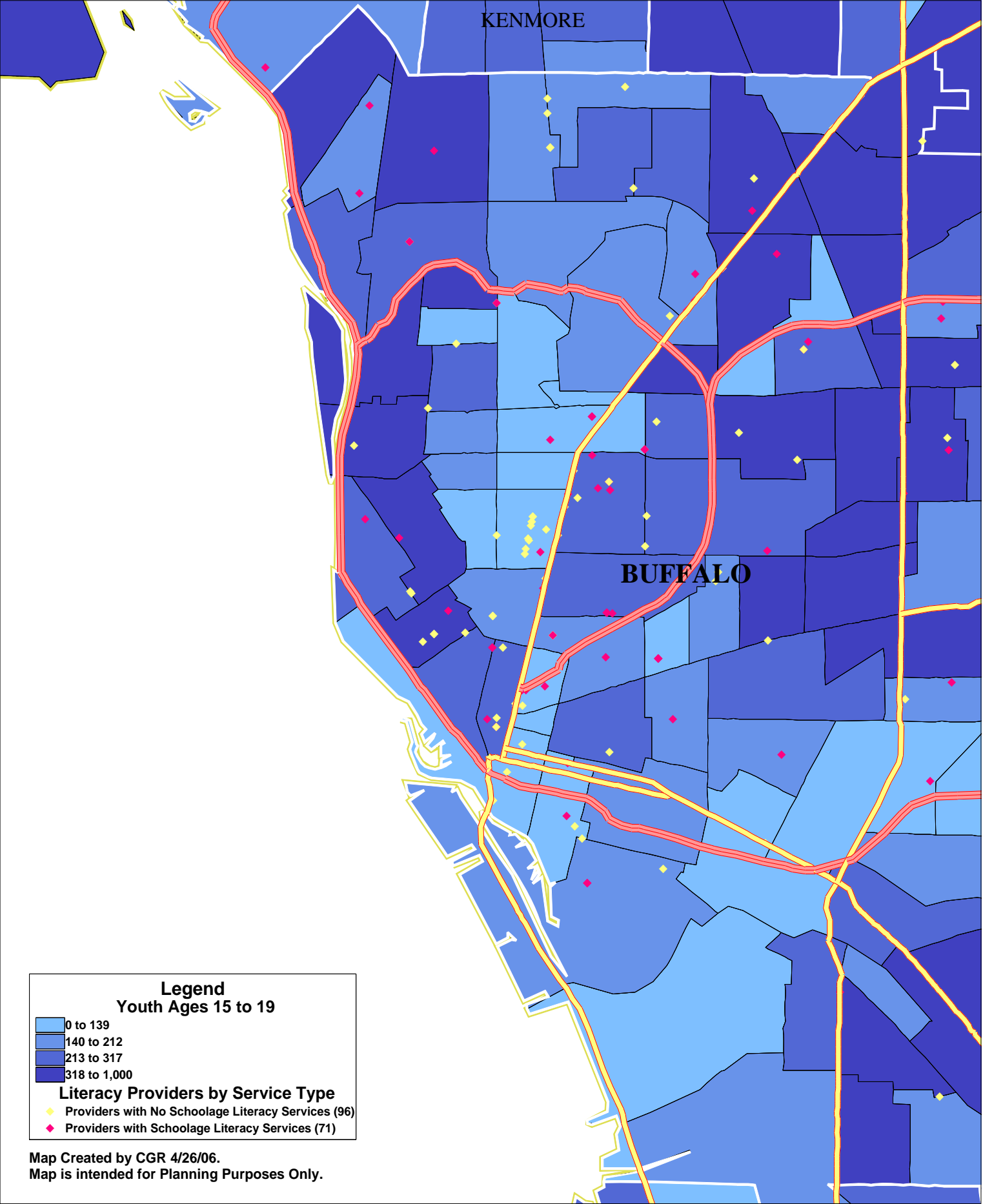
Map 1: Children Under Age 5, by Census Tract, City of Buffalo, 2000, and Literacy Providers



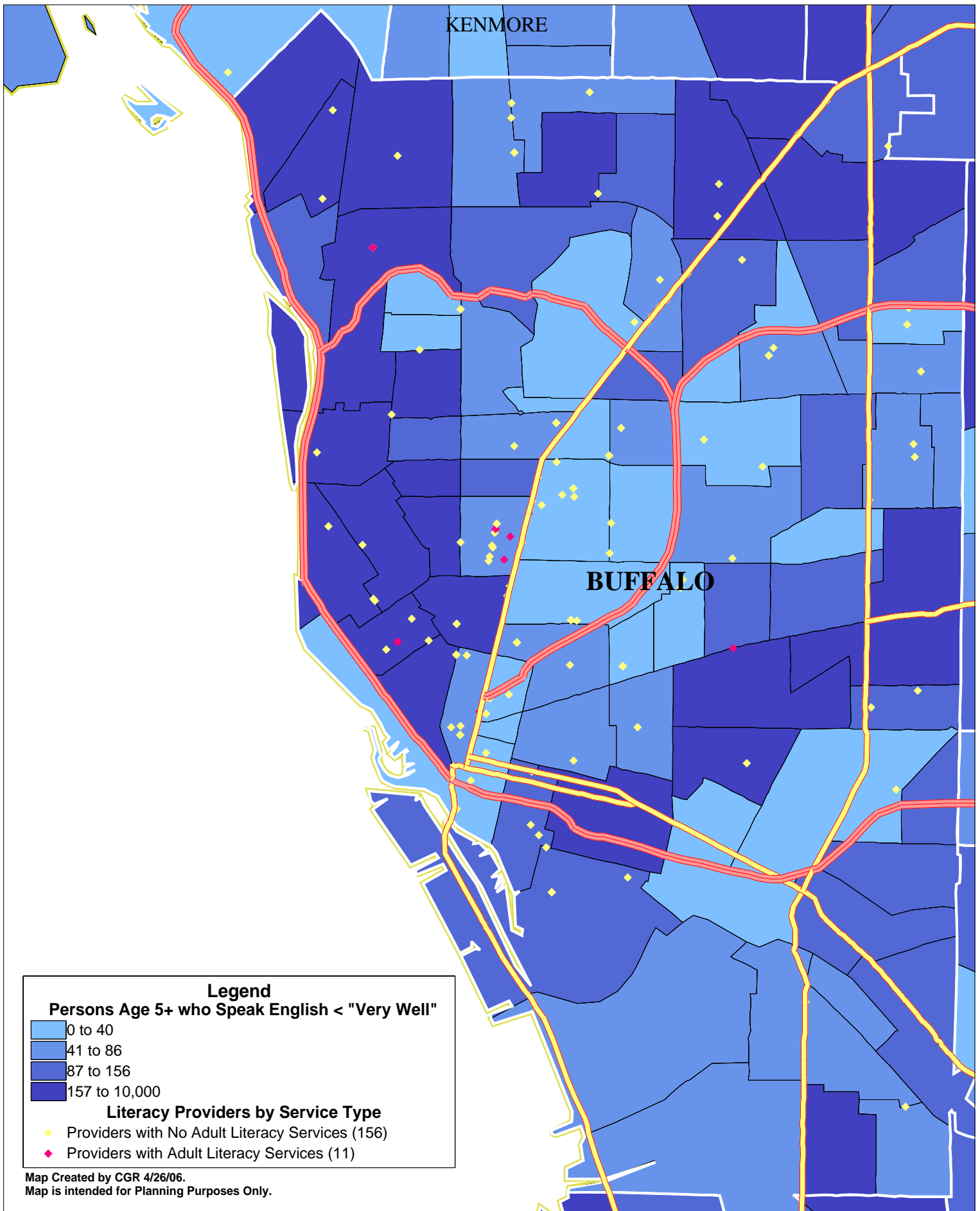
**Map 2: Children Ages 5 to 14, by Census Tract,
City of Buffalo, 2000, and Literacy Providers**



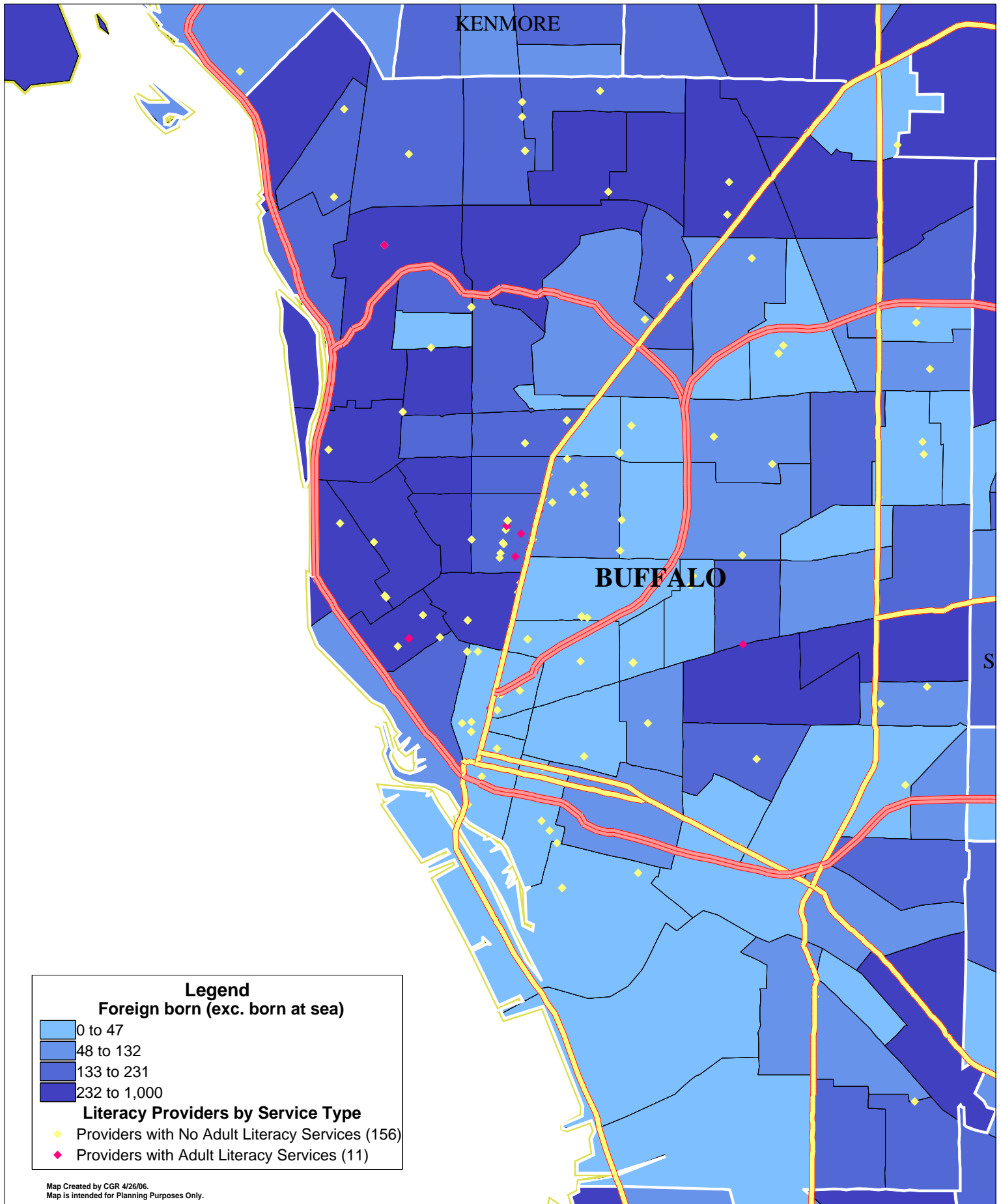
Map 3: Youth Ages 15 to 19, by Census Tract, City of Buffalo, 2000, and Literacy Providers



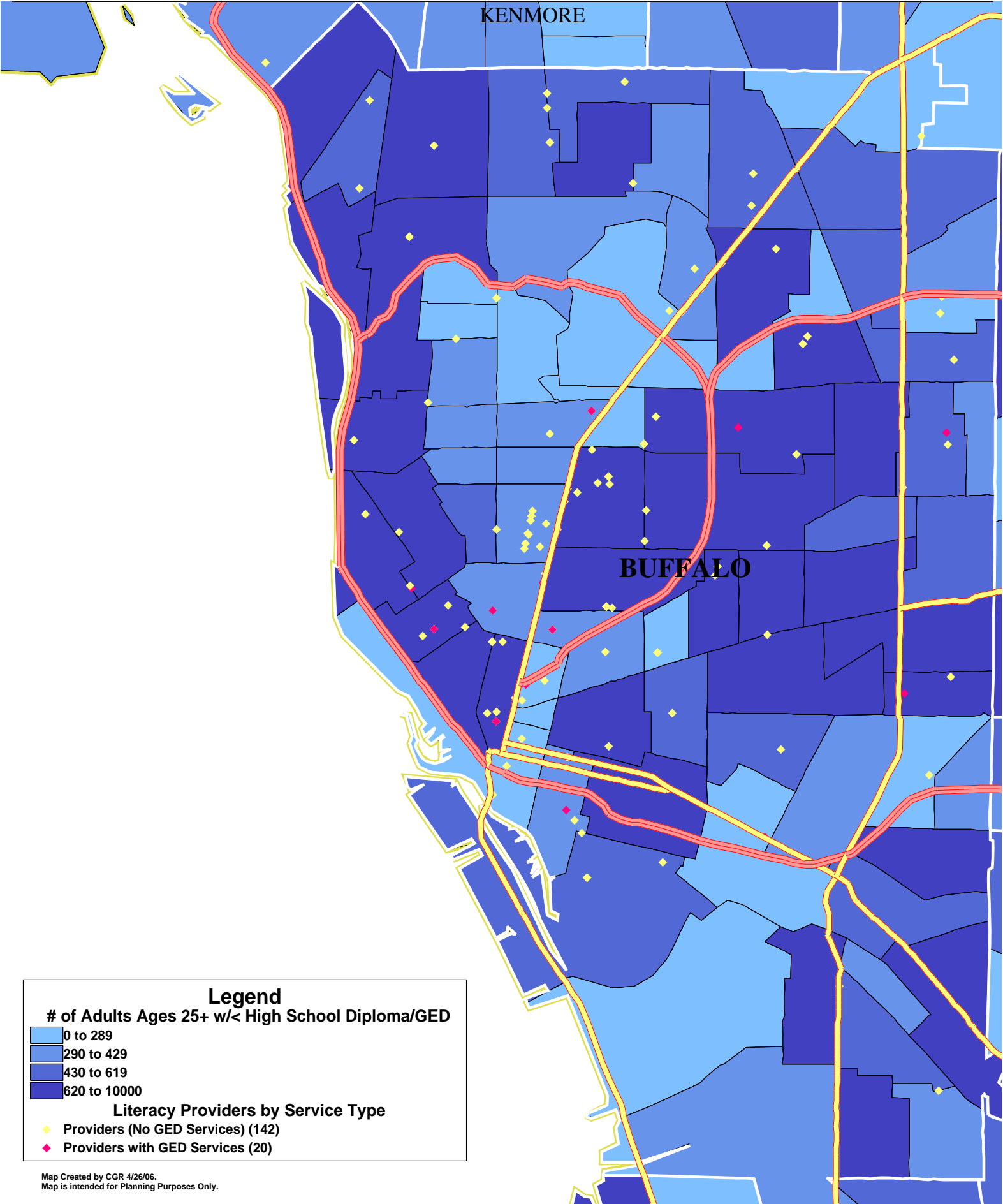
**Map 4: Persons Ages 5+ Who Speak English Less Than "Very Well",
by Census Tract, City of Buffalo, 2000, and Literacy Providers**



Map 5: Foreign Born Persons by Census Tract, City of Buffalo, 2000, and Literacy Providers



Map 6: Adults Ages 25+ Without a High School Diploma/GED by Census Tract, City of Buffalo, 2000, and Literacy Providers



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