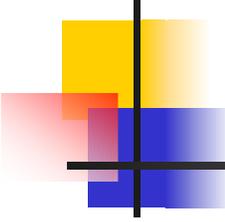


Assessing Literacy Needs in Cuyahoga County – Preliminary Analysis

Claudia Coulton, Ph.D.
Kristen Mikelbank, MA
Lisa Nelson, MPA
Sarah Lickfelt, MBA

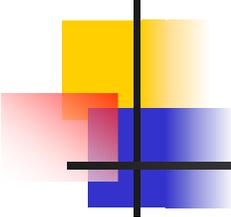
Center on Urban Poverty and Social Change
Mandel School of Applied Social Sciences
Case Western Reserve University

September 28, 2004



Topics Covered

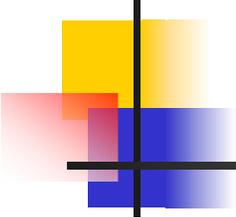
- I. Background
- II. Adult Literacy Estimates
- III. Estimates of Children at Risk for Future Literacy Problems
- IV. Comparisons between the Distribution of Literacy Services and Selected Literacy Predictors
- V. Preliminary Findings and Recommendations



I. Background: Literacy Definition

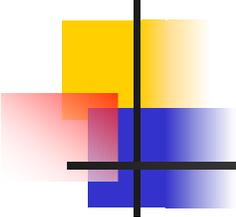
- From the 1991 National Literacy Act, as defined by the U.S. Congress:

“...an individual’s ability to read, write, and 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.”



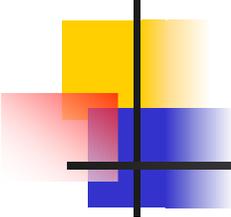
I. Background: Examples of Literacy Levels and Tasks

- Tasks People with Level 1 Literacy Usually Can Perform:
 - Locate 1 piece of information from a short article;
 - Read current net pay from a pay stub;
 - Add 2 numbers on a bank deposit form.
- Tasks People with Level 2 Literacy Usually Can Perform:
 - Follow instructions for returning items needing repair work;
 - Read the gross pay year-to-date from a pay stub;
 - Calculate total costs from items on an order form.



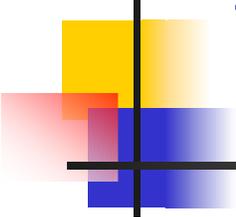
I. Background: Examples of Literacy Levels and Tasks

- Tasks People with Level 3 Literacy Usually Can Perform:
 - Integrate multiple pieces of information from lengthy text;
 - Read a chart to determine what grade of sandpaper you should purchase to sand wood;
 - Determine the appropriate arithmetic operation and perform it on 2 numbers.
- Tasks People with Level 4 Literacy Usually Can Perform:
 - Make complex inferences from multiple pieces of information in lengthy text;
 - Read a bus schedule and determine how long you would have to wait if you missed a bus;
 - Determine the cost of 3 items from a menu and calculate a 15% tip.



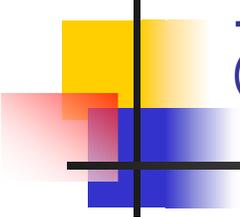
II. Adult Literacy Estimates: Method

- A statistical model was developed by Stephen Reder (1997) to provide literacy estimates for counties, Congressional districts, and selected cities.
- Reder's statistical model was derived from the National Adult Literacy Survey (NALS), which was conducted nationwide in 1992 .
- Reder's model used demographic correlates from the 1990 U.S. Census; we updated Reder's model with Census 2000 data.



II. Adult Literacy: Reader's Factors for Estimating Literacy

- Educational Attainment
- Race
- Work Disability
- English Proficiency
- Recent Immigrants
- Weeks Worked in Previous Year
- Occupation
- Employment Status

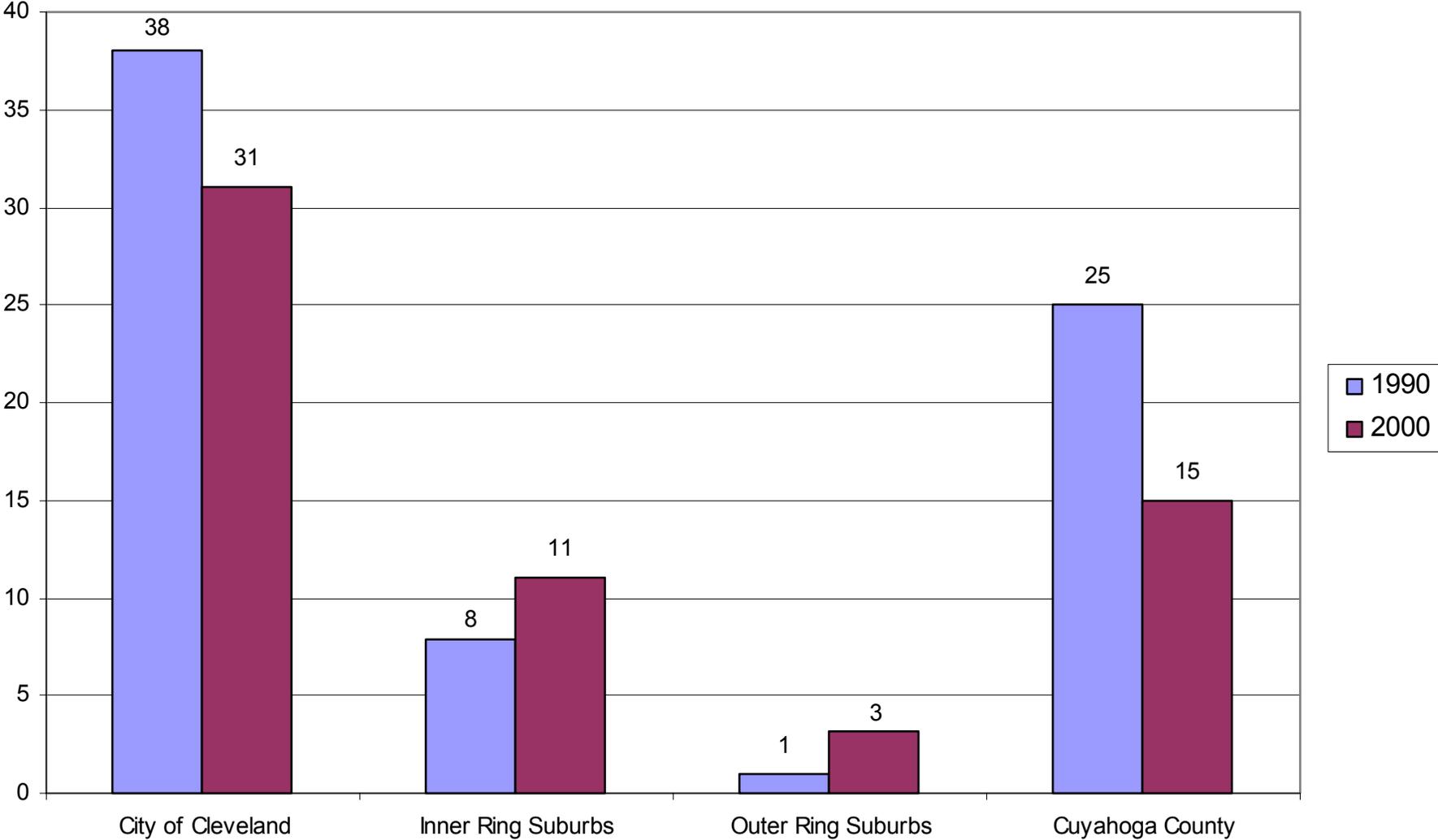


II. Adult Literacy: Level 1 Estimates

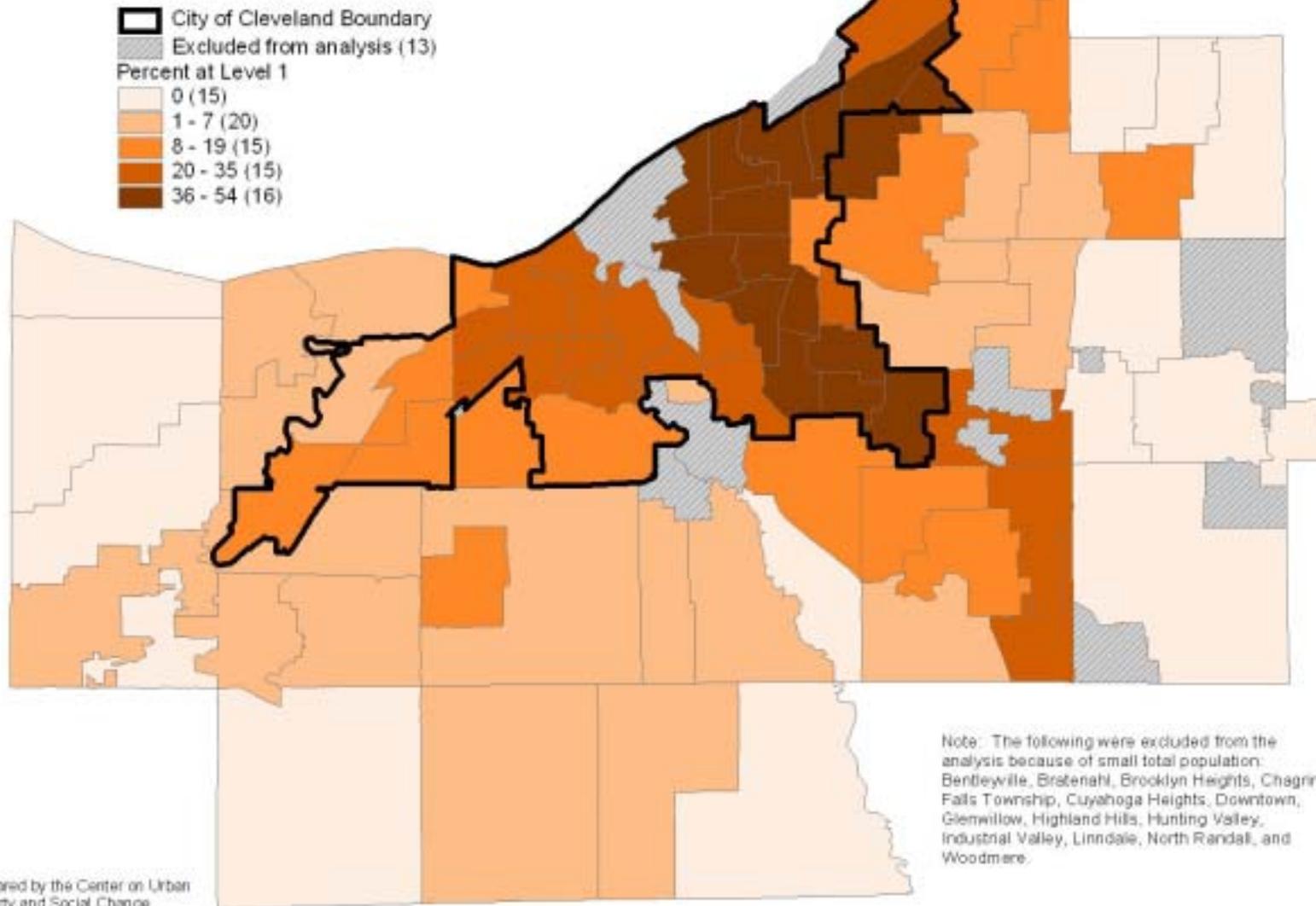
(from Reder Model)

- Cuyahoga County (1990):
 - 25% of the population aged 16 and over, approximately 277,290 people
- Cuyahoga County (2000):
 - 15% of the population aged 16 and over, approximately 162,530 people
- Finding:
 - Statistically smaller percentages of the population with Level 1 literacy in 2000 than in 1990 county wide.
- Census variables that changed between 1990 and 2000 that influenced the Reder Model:
 - Educational Attainment, Occupation, Weeks Worked, and Labor Force Status

Estimates for the Percent at Level 1 Literacy, 1990 vs. 2000



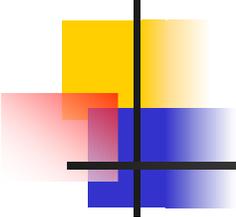
Estimates for the Percent at Level 1 Literacy, 2000



Estimates of the Population Aged 16 and Older at Level 1 Literacy, 2000

Neighborhood/Municipality	Percent at Level 1	Number at Level 1
Kinsman	54	1,885
Fairfax	53	2,883
Hough	53	6,245
Central	50	3,794
Glenville	49	8,119
Union-Miles	49	5,229
Woodland Hills	49	3,810
Goodrich-Kirtland Park	48	1,627
Forest Hills	47	5,275
Corlett	46	5,148
East Cleveland	45	8,988
Mt. Pleasant	45	7,557
St. Clair-Superior	45	3,412
Lee-Miles	44	5,583
Euclid-Green	37	1,765
South Collinwood	36	3,616
Clark-Fulton	34	3,163
Warrensville Heights	34	4,041
Buckeye-Shaker	33	4,098
North Broadway	33	2,059
Ohio City	32	2,268
Detroit-Shoreway	30	3,780
Stockyards	30	1,792
Tremont	28	1,654
North Collinwood	27	4,147
Bedford Heights	26	2,392
Oakwood	26	749
Cudell	25	1,937
Brooklyn Centre	23	1,502
South Broadway	20	3,167
West Boulevard	20	2,528
University	19	1,651
Maple Heights	18	3,621
Puritas-Longmead	18	2,089
Euclid	16	6,753
Richmond Heights	13	1,180

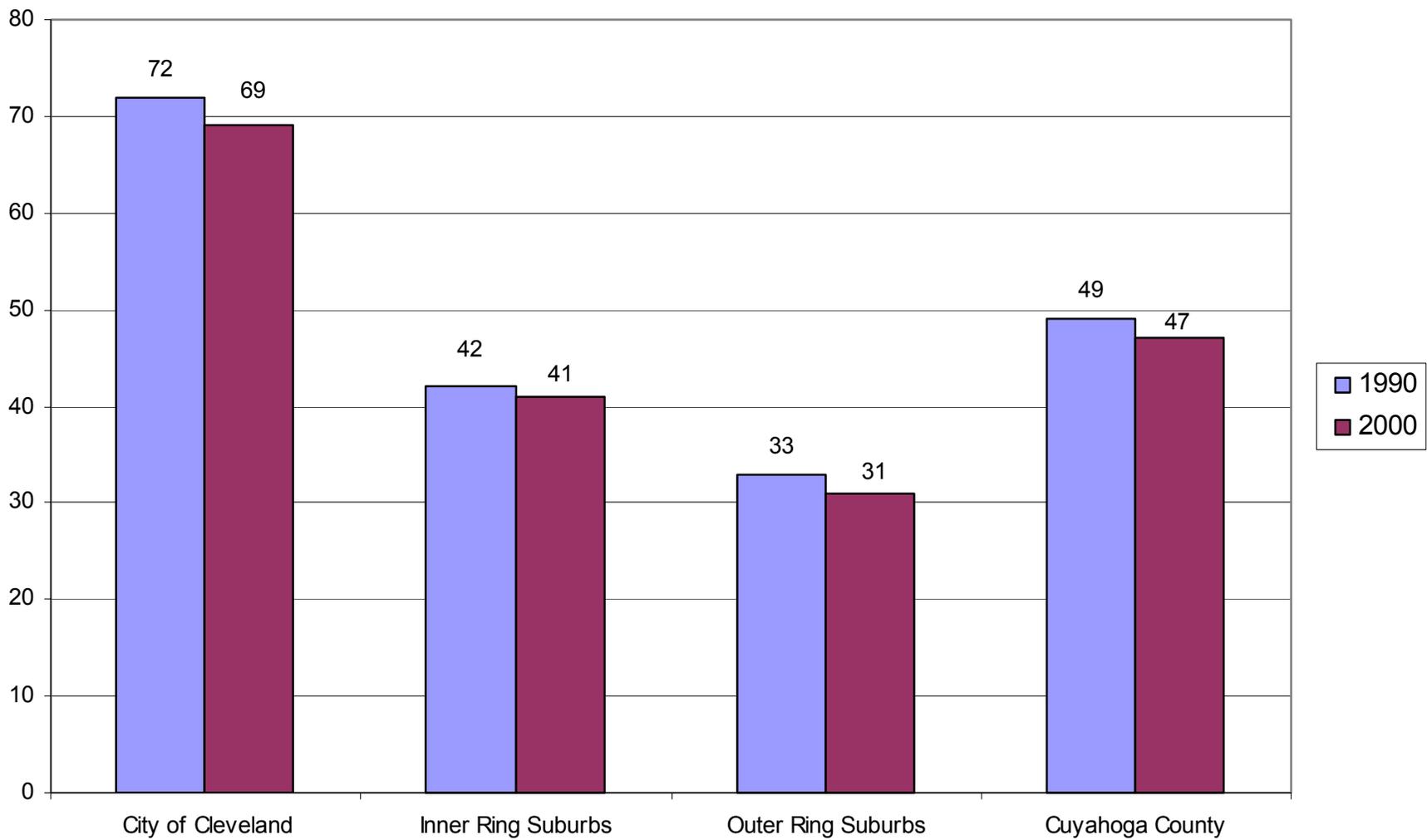
80% of the Cuyahoga County population with Level 1 Literacy can be found in these 36 neighborhoods and municipalities.



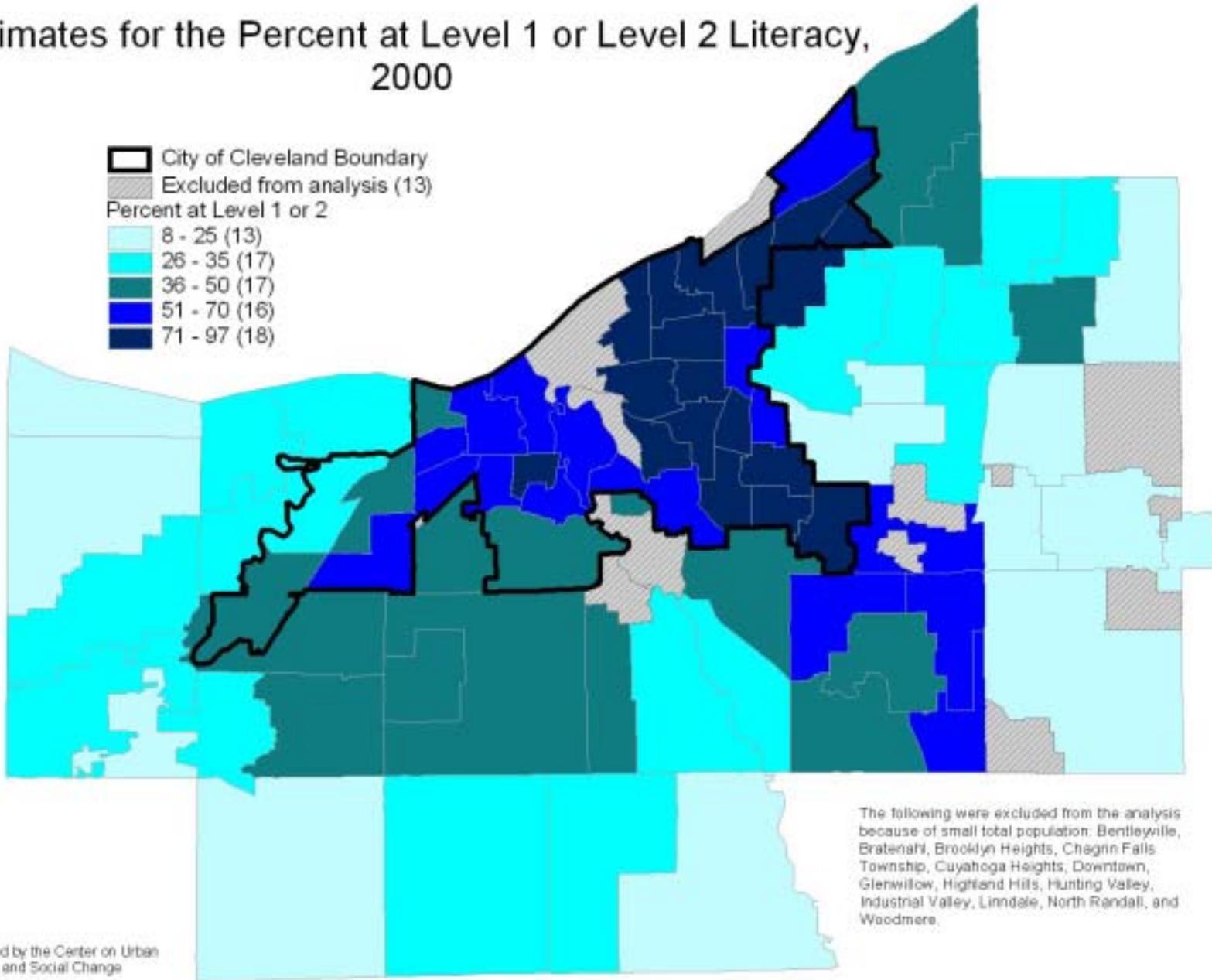
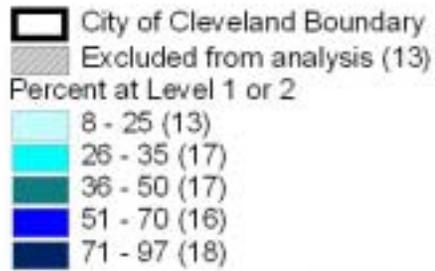
II. Adult Literacy: Level 1 or Level 2 Estimates

- Cuyahoga County (1990):
 - 49% of the population aged 16 and over, approximately 543,480 people
- Cuyahoga County (2000):
 - 47% of the population aged 16 and over, approximately 509,260 people
- Finding: There was no statistical difference in the proportion of people with literacy at Level 1 or Level 2 between 1990 and 2000 in Cuyahoga County.

Percent at Level 1 or Level 2 Literacy, 1990 vs. 2000



Estimates for the Percent at Level 1 or Level 2 Literacy, 2000



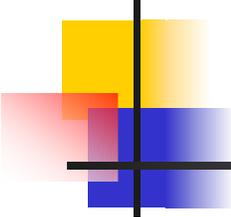
The following were excluded from the analysis because of small total population: Bentleyville, Bratenahl, Brooklyn Heights, Chagrin Falls Township, Cuyahoga Heights, Downtown, Glenwillow, Highland Hills, Hunting Valley, Industrial Valley, Linndale, North Randall, and Woodmere.

Prepared by the Center on Urban Poverty and Social Change

Estimates of the Population Aged 16 and Older at Level 1 or Level 2 Literacy, 2000

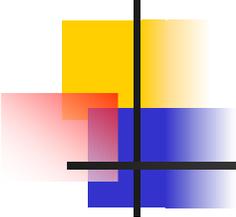
Neighborhood/Municipality	Percent at Level 1 or 2	Number at Level 1 or 2	Neighborhood/Municipality	Percent at Level 1 or 2	Number at Level 1 or 2
Kinsman	97	3,386	South Broadway	59	9,341
Hough	95	11,194	Bedford Heights	58	5,335
Central	94	7,133	West Boulevard	56	7,077
Fairfax	93	5,058	Puritas-Longmead	55	6,382
Union-Miles	92	9,818	University	55	4,780
Woodland Hills	90	6,998	Maple Heights	53	10,660
Glenville	89	14,747	Euclid	50	21,104
Forest Hills	88	9,876	Garfield Heights	48	11,532
Corlett	86	9,625	Jefferson	47	7,303
Mt. Pleasant	85	14,275	Riverside	47	1,677
St. Clair-Superior	85	6,445	Brooklyn	45	4,349
East Cleveland	83	16,578	Bedford	44	5,075
Goodrich-Kirtland Park	82	2,780	Mayfield Heights	44	7,329
Lee-Miles	82	10,404	Newburgh Heights	44	840
North Broadway	76	4,741	Old Brooklyn	44	11,970
Euclid-Green	75	3,577	Parma Heights	44	7,938
South Collinwood	75	7,534	Brookpark	42	7,152
Clark-Fulton	72	6,699	Richmond Heights	41	3,722
Stockyards	70	4,182	Edgewater	40	2,929
Warrensville Heights	69	8,200	Parma	40	27,507
Buckeye-Shaker	68	8,445	Seven Hills	39	3,953
Detroit-Shoreway	68	8,569	Middleburg Heights	37	4,870
Ohio City	68	4,818	Walton Hills	36	741
Tremont	64	3,781	Kamms Corners	35	5,499
Cudell	63	4,881	Olmsted Township	35	2,968
North Collinwood	63	9,676	South Euclid	34	6,212
Brooklyn Centre	61	3,984	Cleveland Heights	33	13,011
Oakwood	61	1,756			

80% of the Cuyahoga County population with Level 1 or Level 2 Literacy can be found in these 55 neighborhoods and municipalities.



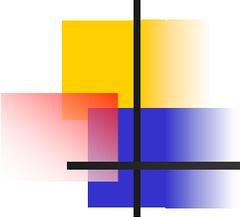
II. Adult Literacy: Limitations

- Estimates for 2000 are based on a national model that used 1990 data:
 - Is the national model applicable to Cuyahoga County?
 - Do the relationships between literacy and the predictor variables from 1990 still apply in 2000?
- Literacy estimates are based on demographic indicators using a formula from the Reder (1997) model; they do not directly measure literacy or how it may have changed over time.



III. Child Literacy: Background

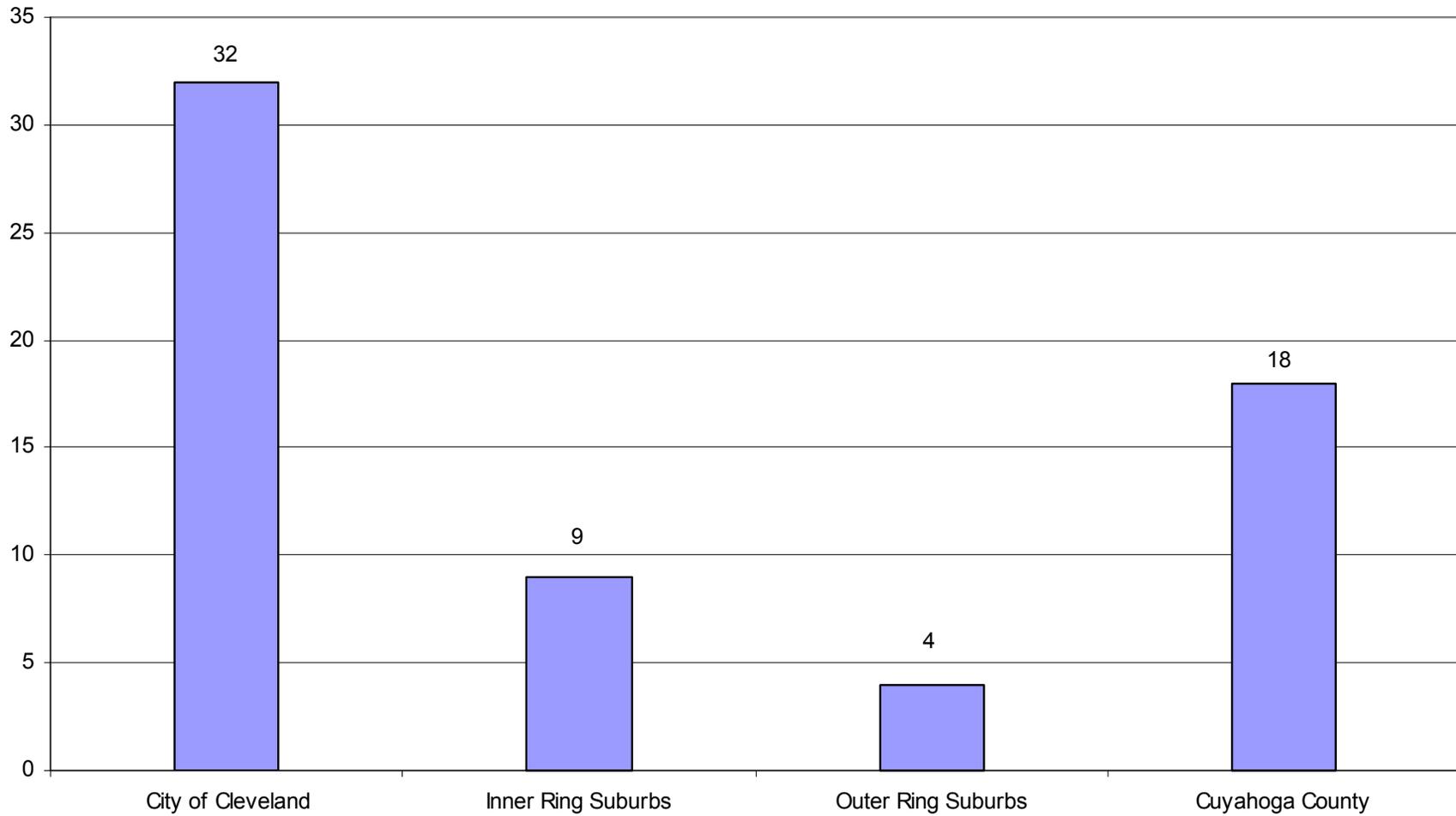
- No model to update as with the adult literacy estimates
- Focus on different age groups:
 - Early Childhood Population
 - School-Age Children
 - Youth Population Aged 16 - 19



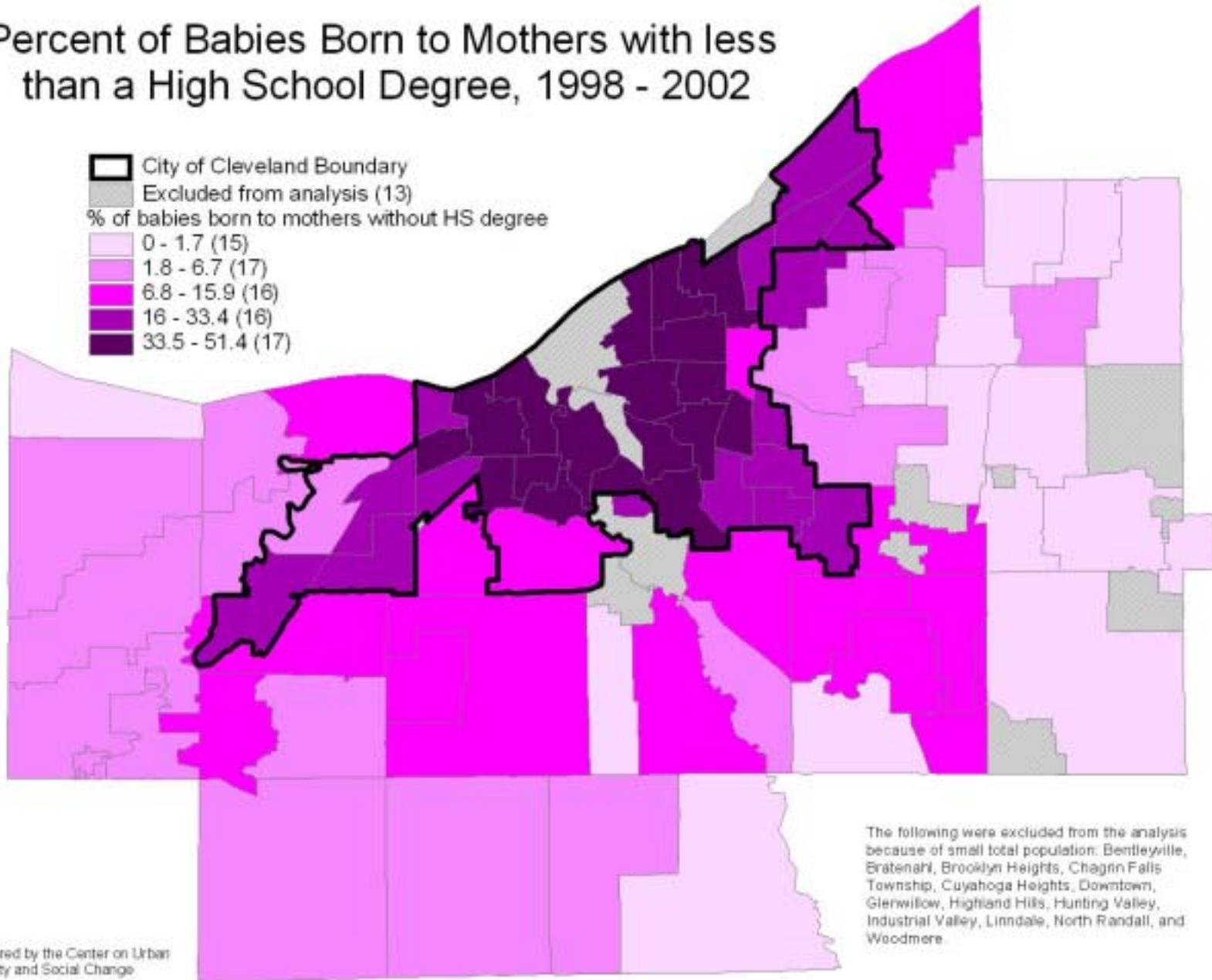
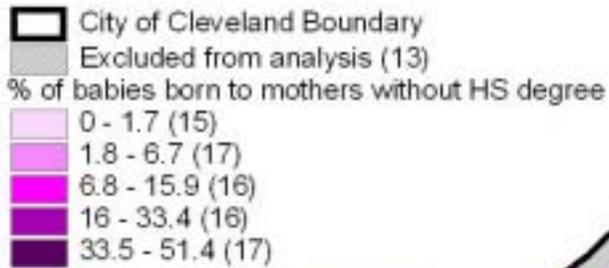
III. Child Literacy: Mother's Educational Attainment

- Cuyahoga County, 1998 – 2002:
 - 16,593 babies born, or 18% of the births, were to mothers with less than a high school degree.

Percent of Births to Mothers with Less than A High School Degree, 1998 - 2002



Percent of Babies Born to Mothers with less than a High School Degree, 1998 - 2002



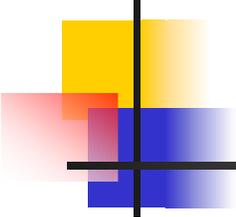
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Prepared by the Center on Urban Poverty and Social Change

Distribution of Births to Mothers Who Did Not Have A High School Degree, 1998 - 2002

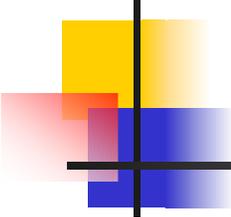
Neighborhood/Municipality	Percent without High School Degree	Number without High School Degree	Neighborhood/Municipality	Percent without High School Degree	Number without High School Degree
Stockyards	51	387	Puritas-Longmead	25	266
Kinsman	50	387	Euclid-Green	24	129
Central	49	541	Buckeye-Shaker	23	236
Detroit-Shoreway	48	741	Riverside	22	85
Tremont	47	325	Lee-Miles	21	179
North Broadway	46	303	Newburgh Heights	21	29
Ohio City	45	320	Edgewater	20	101
St. Clair-Superior	45	420	Jefferson	19	277
Goodrich-Kirtland Park	45	125	North Collinwood	18	215
Clark-Fulton	44	518	Warrensville Heights	16	146
Fairfax	43	218	Old Brooklyn	14	348
Brooklyn Centre	39	310	University	14	39
South Broadway	38	601	Independence	14	41
Hough	38	469	Oakwood	13	20
Glenville	38	666	Garfield Heights	11	197
Cudell	37	322	Brookpark	10	98
Woodland Hills	34	344	Lakewood	10	332
Forest Hills	33	392	Maple Heights	9	132
West Boulevard	33	452	Berea	8	68
Union-Miles	32	359	Euclid	8	235
East Cleveland	32	584	Bedford Heights	7	43
Mt. Pleasant	32	492	Parma Heights	7	77
South Collinwood	30	293	Bedford	7	56
Corlett	27	275	Brooklyn	7	40

80% of the births to mothers without a high school degree in Cuyahoga County were in these 48 neighborhoods and municipalities.



III. Child Literacy: School-Age Children

- Proficiency Data from the Ohio Department of Education:
 - Passage rate for 4th grade reading by school building, 2003-2004 school year;
 - Passage rate for 9th grade reading by school building, 2002-2003 school year.
- Compare School Building Performance against the State Requirement of 75% Proficient



III. Child Literacy: School-Age Children

- No way of measuring the number of children at risk – only have the proficiency passage rates.
- Number of Cuyahoga County public schools not meeting state requirement of 75% for 4th grade reading proficiency = 119 out of 193
 - 72 of 119 are in the Cleveland Municipal School District.
- Number of Cuyahoga County public schools not meeting state requirement of 75% for 9th grade reading proficiency = 6 out of 54
 - 5 of 6 are in the Cleveland Municipal School District.

Percent Passing 4th Grade Reading by School Building in the Cleveland Municipal School District, 2003 - 2004

% Passing

 17 - 42 (18)

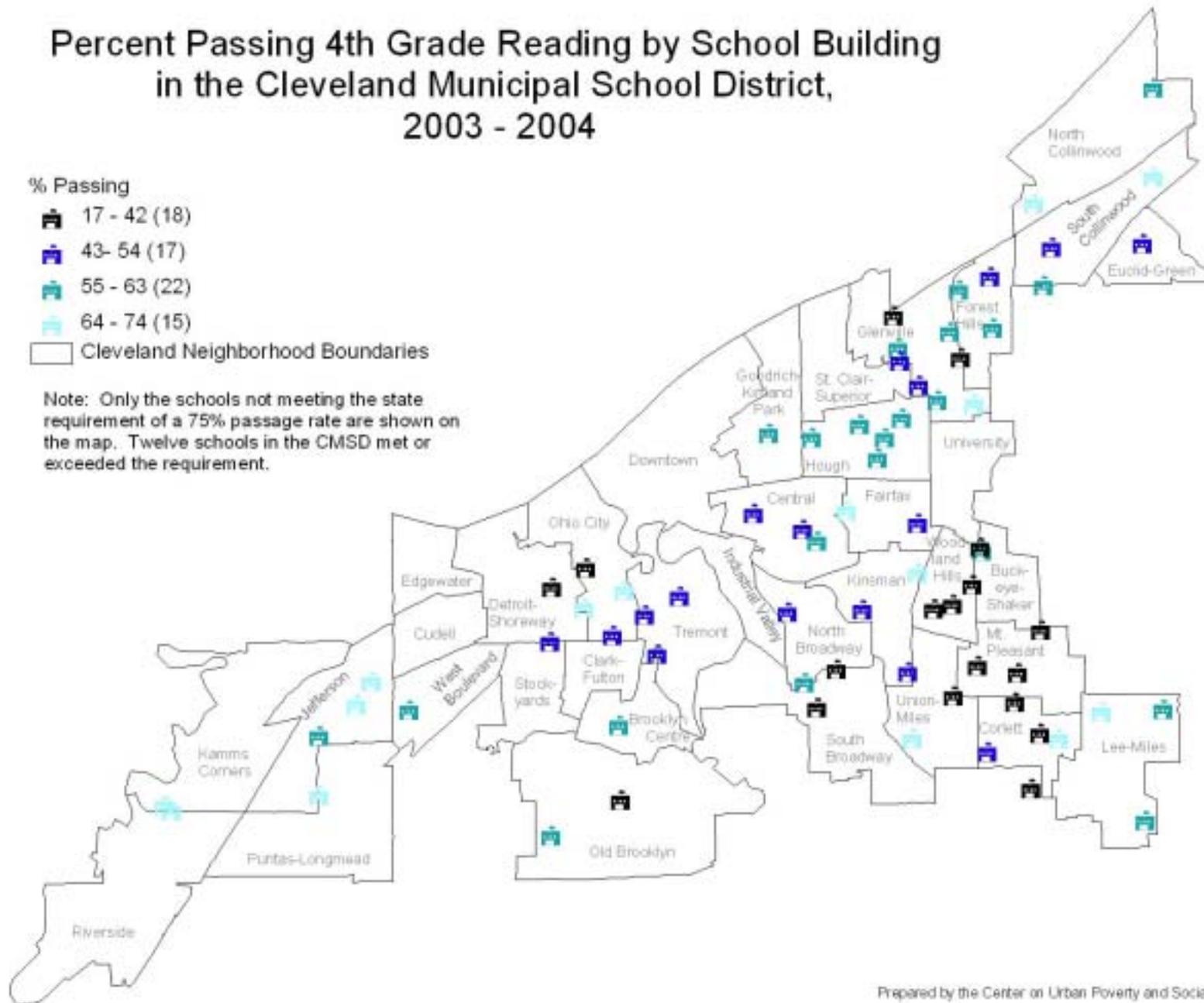
 43 - 54 (17)

 55 - 63 (22)

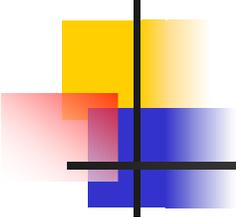
 64 - 74 (15)

 Cleveland Neighborhood Boundaries

Note: Only the schools not meeting the state requirement of a 75% passage rate are shown on the map. Twelve schools in the CMSD met or exceeded the requirement.

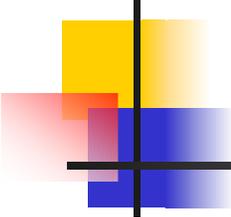


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III. Child Literacy: School Age Children

- Six Schools not Meeting State Requirement (75%) for 9th Grade Reading Proficiency:
 - Jesse Owens Academy High School, Cleveland – Buckeye-Shaker (65.0%)
 - Max S. Hayes Vocational School, Cleveland – Detroit-Shoreway (67.6%)
 - Nathaniel Hawthorne, Cleveland -- Hough (69.3%)
 - Halle High School, Cleveland -- West Boulevard (72.0%)
 - Lincoln-West High School, Cleveland – Clark-Fulton (73.9%)
 - Shaw High School, East Cleveland (74.6%)



III. Child Literacy: School Age Children

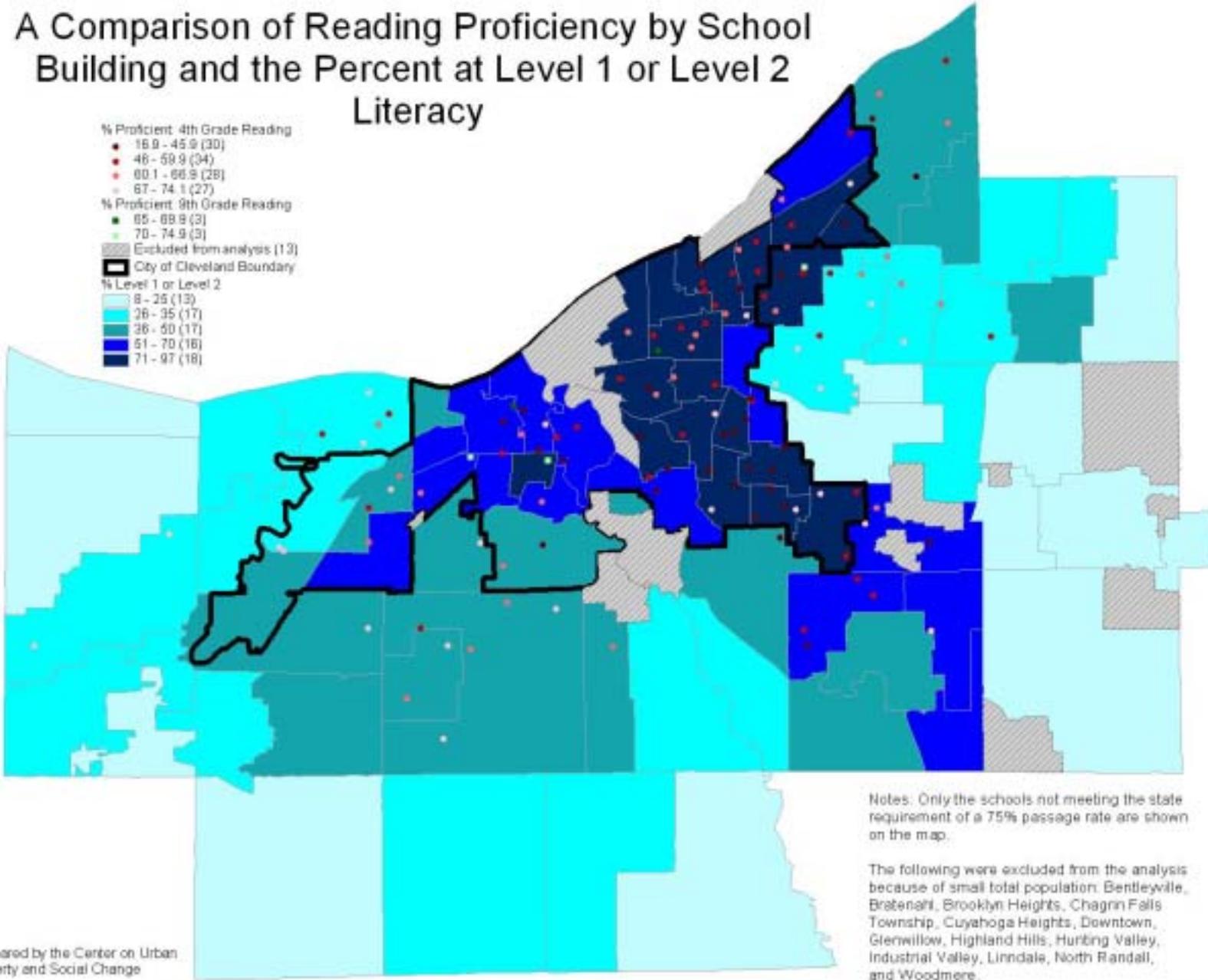
Distribution of Schools Exceeding State Requirements

Percent Passing	4th Grade Reading	9th Grade Reading
75.0 - 79.9%	20	8
80.0 - 89.9%	37	13
90.0 - 99.4%	17	27

- Even in schools that meet the state requirement, there are still children who are not proficient and might be at-risk of future literacy problems.

A Comparison of Reading Proficiency by School Building and the Percent at Level 1 or Level 2 Literacy

- % Proficient: 4th Grade Reading
 - 18.9 - 45.9 (30)
 - 46 - 59.9 (34)
 - 60.1 - 66.9 (28)
 - 67 - 74.1 (27)
- % Proficient: 9th Grade Reading
 - 65 - 69.9 (3)
 - 70 - 74.9 (3)
- ▨ Excluded from analysis (13)
- ▭ City of Cleveland Boundary
- % Level 1 or Level 2
 - 8 - 25 (13)
 - 26 - 35 (17)
 - 36 - 50 (17)
 - 51 - 70 (18)
 - 71 - 97 (18)

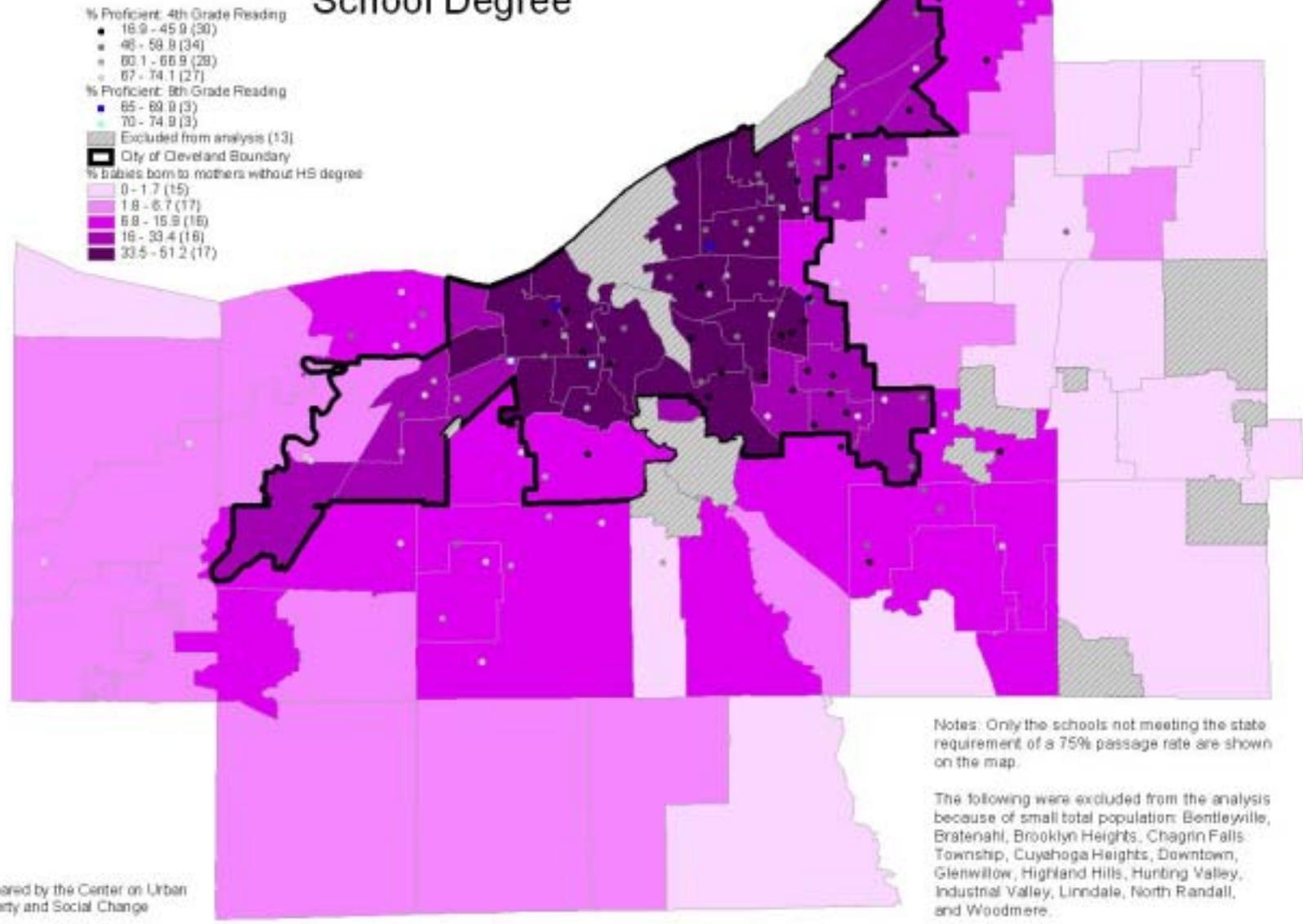


Notes: Only the schools not meeting the state requirement of a 75% passage rate are shown on the map.

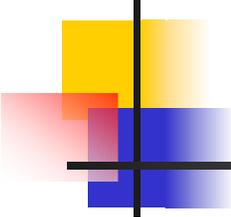
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Prepared by the Center on Urban Poverty and Social Change

A Comparison between Reading Proficiency by School Building and Births to Mothers without a High School Degree



Prepared by the Center on Urban Poverty and Social Change

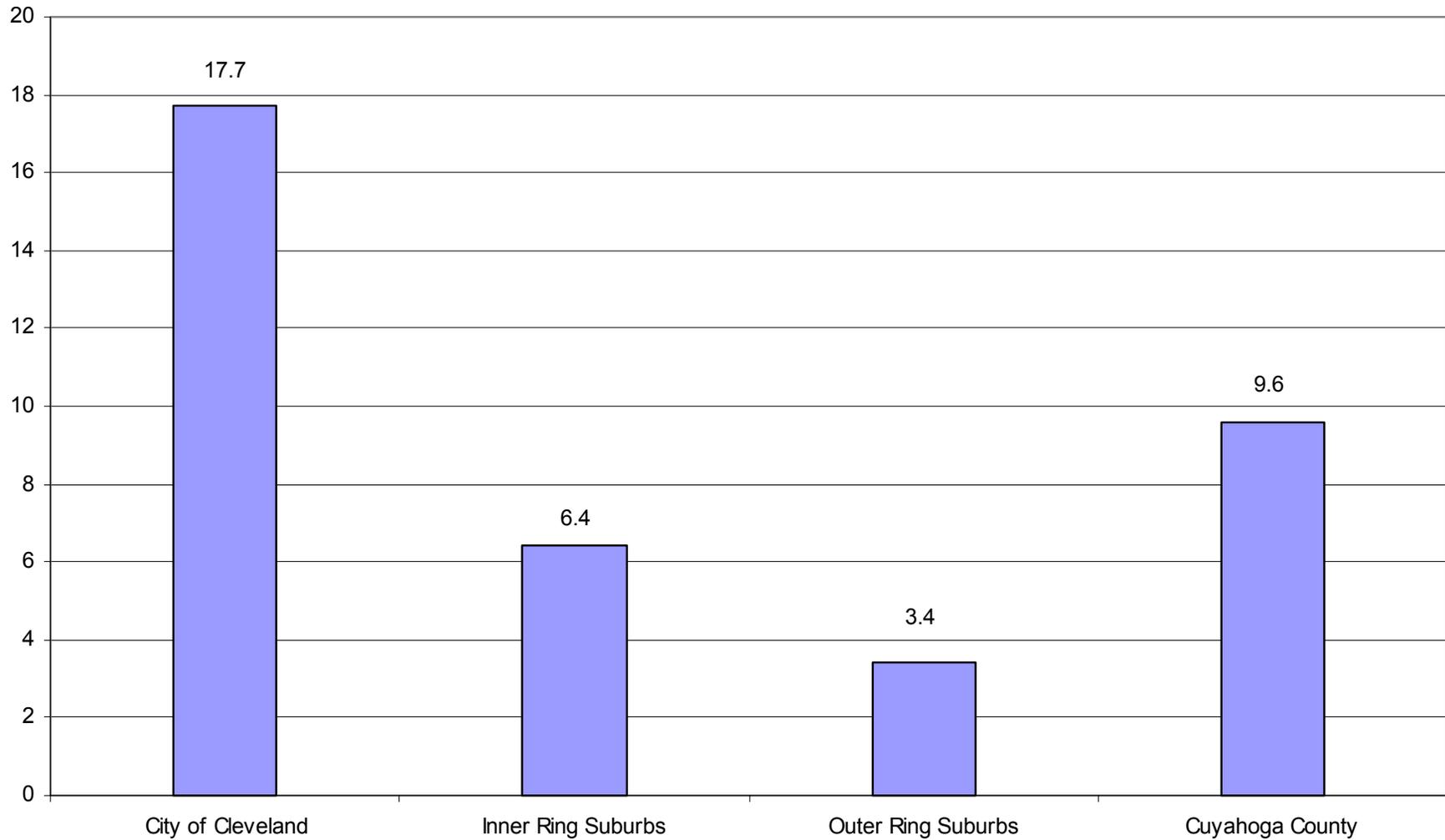


III. Child Literacy: Youth Population Aged 16-19

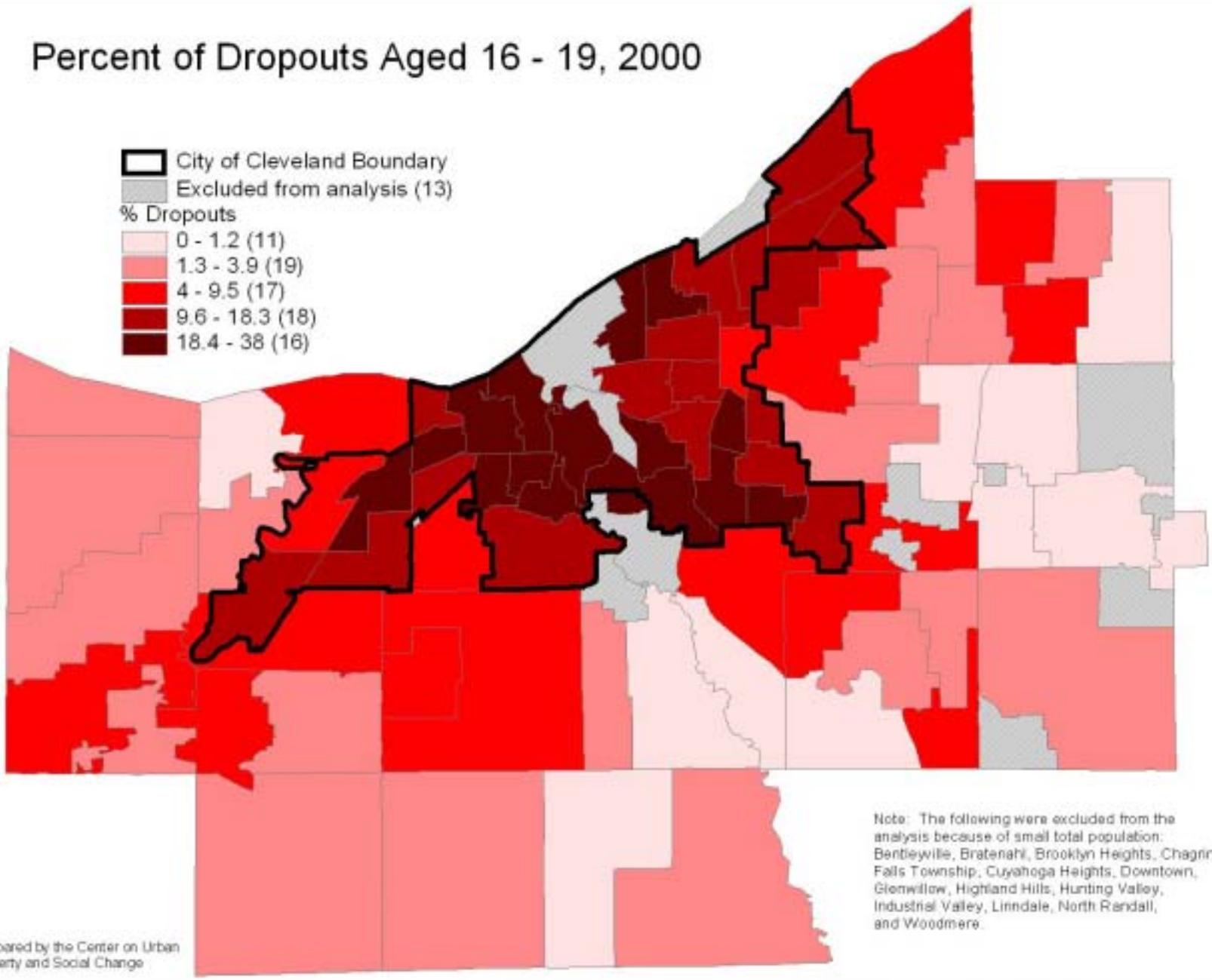
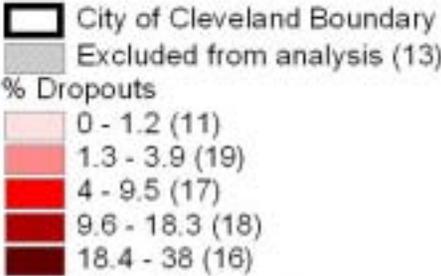
- Dropouts:
 - Youth Aged 16 – 19 Not Enrolled in School and Not a High School Graduate

- Cuyahoga County, 2000:
 - Over 70,000 youth aged 16 – 19;
 - 9.6% (6,700) were dropouts.

Percent of Dropouts, 2000

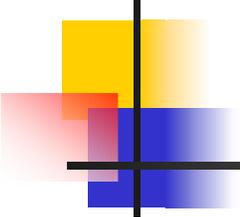


Percent of Dropouts Aged 16 - 19, 2000



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Prepared by the Center on Urban Poverty and Social Change

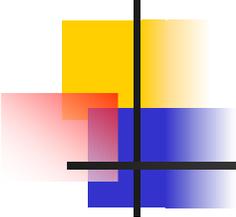


III. Child Literacy: Preliminary Findings

- Similar relationships between the children's data and the literacy estimates by geography, i.e. Cleveland, Inner Ring Suburb, and Outer Ring Suburb.
- Schools with the smallest percentages of students proficient in reading were generally located in neighborhoods with:
 - higher estimated proportions of people at the lowest literacy levels;
 - higher percentages of babies born to mothers without a high school degree;
 - higher percentages of high school dropouts.

Number of Adults and Children with Possible Literacy Risks

Neighborhood/Municipality	Percent at Level 1 Literacy	Number at Level 1 Literacy	Number of Births to Mothers without a HS Degree	Number of Dropouts	Number of Schools Not Meeting Reading Proficiency State Requirement
Kinsman	54	1,885	387	35	3
Fairfax	53	2,883	218	86	2
Hough	53	6,245	469	111	6
Central	50	3,794	541	103	3
Glenville	49	8,119	666	223	8
Union-Miles	49	5,229	359	187	2
Woodland Hills	49	3,810	344	130	3
Goodrich-Kirtland Park	48	1,627	125	70	1
Forest Hills	47	5,275	392	145	3
Corlett	46	5,148	275	171	4
East Cleveland	45	8,988	584	172	5
Mt. Pleasant	45	7,557	492	232	3
St. Clair-Superior	45	3,412	420	189	0
Lee-Miles	44	5,583	179	66	3
Euclid-Green	37	1,765	129	54	1
South Collinwood	36	3,616	293	130	3
Clark-Fulton	34	3,163	518	255	1
Warrensville Heights	34	4,041	146	79	3
Buckeye-Shaker	33	4,098	236	67	3
North Broadway	33	2,059	303	117	2
Ohio City	32	2,268	320	208	4
Detroit-Shoreway	30	3,780	741	175	3
Stockyards	30	1,792	387	184	0
Tremont	28	1,654	325	89	2
North Collinwood	27	4,147	215	82	2
Bedford Heights	26	2,392	43	17	1
Oakwood	26	749	20	8	0
Cudell	25	1,937	322	155	0
Brooklyn Centre	23	1,502	310	112	2
South Broadway	20	3,167	601	251	2
West Boulevard	20	2,528	452	139	2
University	19	1,651	39	120	0
Maple Heights	18	3,621	132	54	4
Puritas-Longmead	18	2,089	266	108	1
Euclid	16	6,753	235	209	5
Richmond Heights	13	1,180	15	14	0

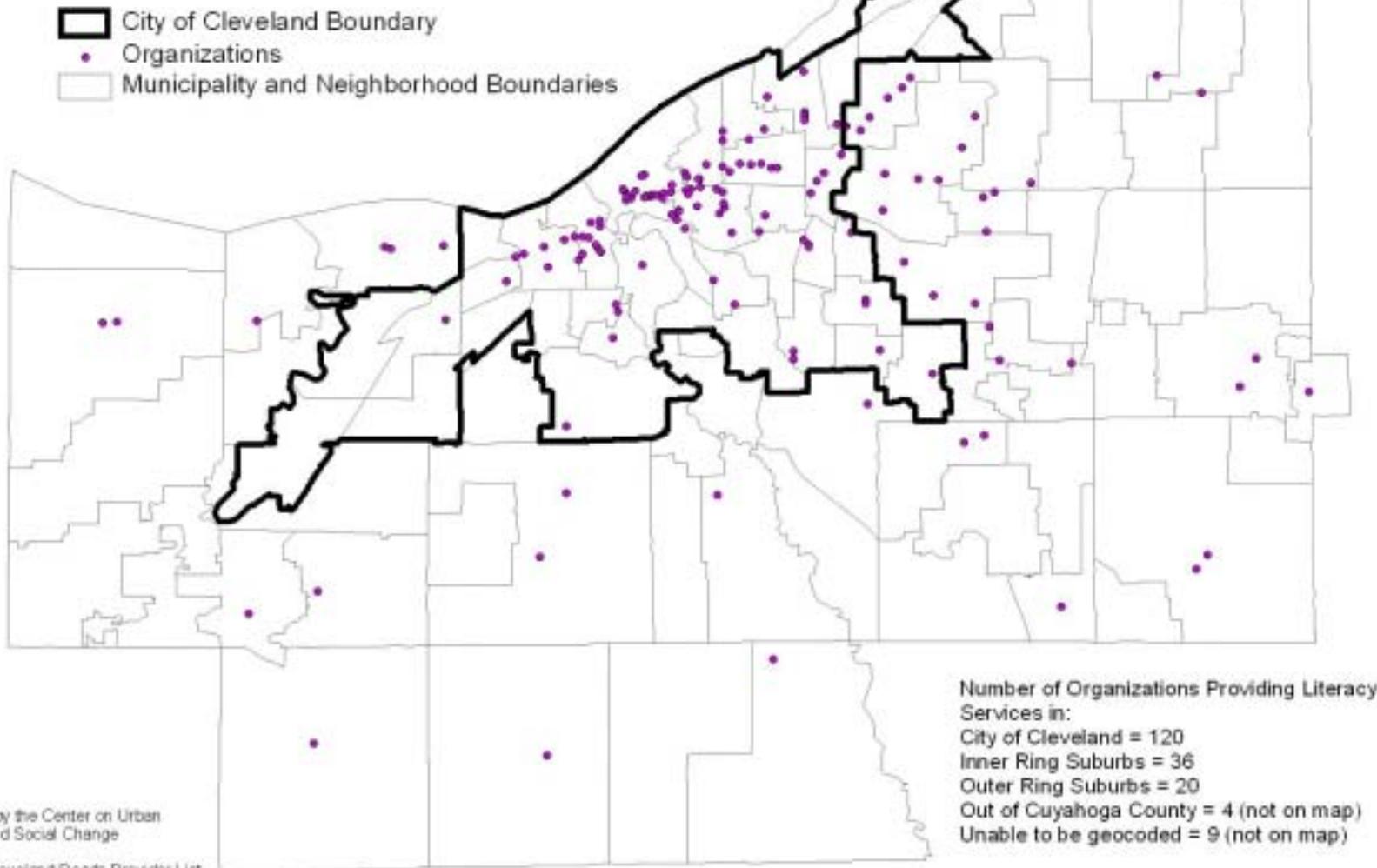


IV. Literacy Services: Distribution

- 189 Different Organizations Located as follows:
 - 120 in the City of Cleveland
 - 36 in Inner Ring Suburbs
 - 20 in Outer Ring Suburbs

Note: 4 are located outside Cuyahoga County, and 9 were not able to be located.

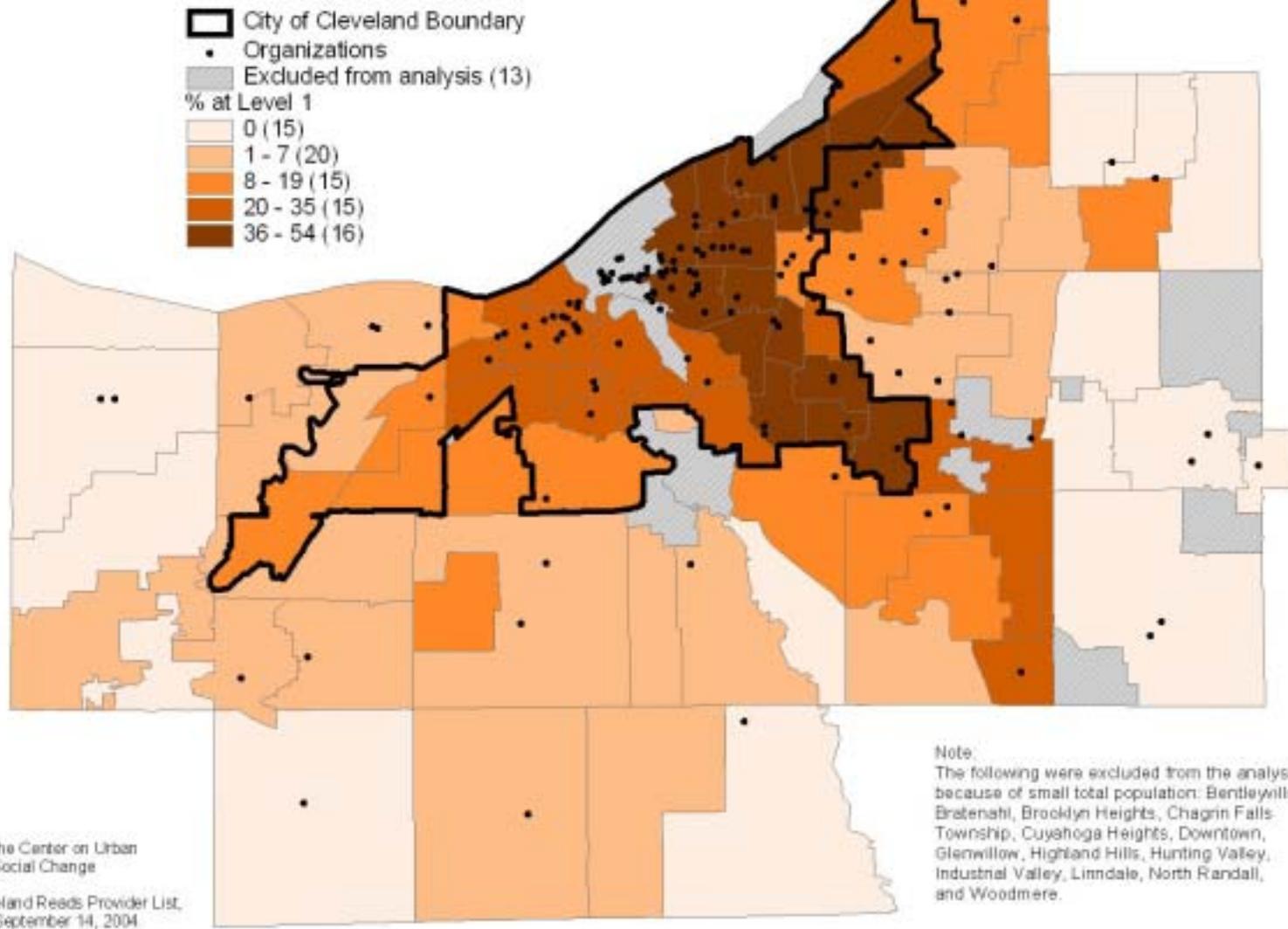
Organizations Providing Literacy Services in Cuyahoga County, 2004



Prepared by the Center on Urban
Poverty and Social Change

Source: Cleveland Reads Provider List,
last updated September 14, 2004.

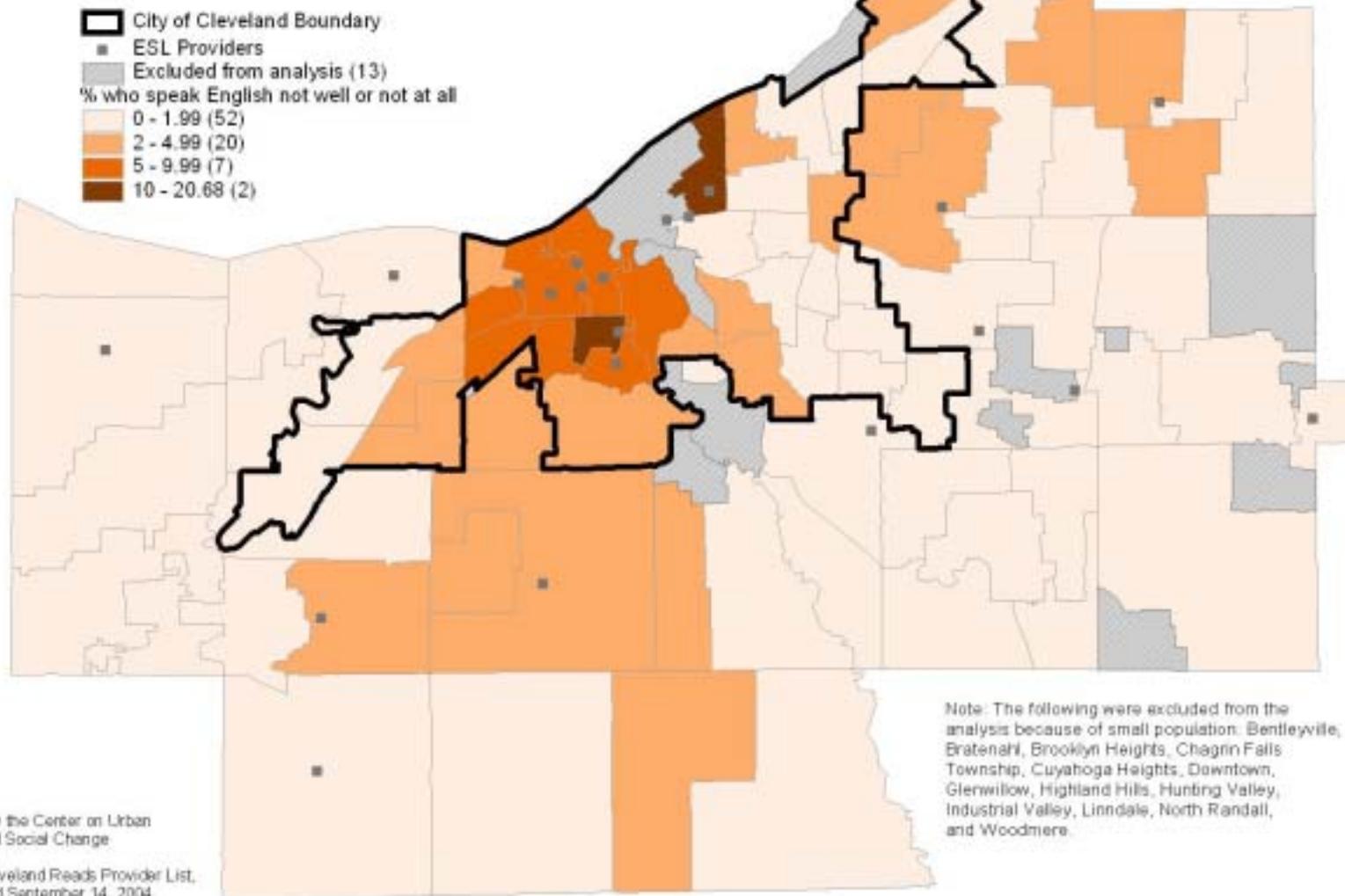
Distribution of Organizations Providing Literacy Services Compared to the Percent at Level 1 Literacy



Prepared by the Center on Urban Poverty and Social Change

Source: Cleveland Reads Provider List, last updated September 14, 2004

A Comparison of the Percent of the Population who Speak English Not Well or Not at All and Literacy Organizations Providing English as a Second Language Services

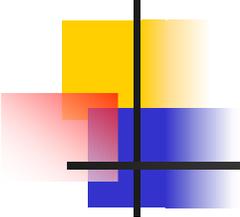


Prepared by the Center on Urban Poverty and Social Change

Source: Cleveland Reads Provider List, last updated September 14, 2004

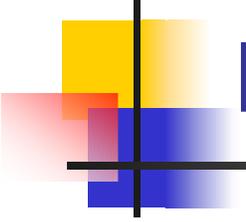
Estimates of the Population Aged 16 and Older at Level 1 Literacy Compared to the Distribution of Literacy Service Providers

Neighborhood/Municipality	Number at Level 1	In the Neighborhood	Number of Providers	
			Within 1 Mile of the Neighborhood Centroid	Within 2 Miles of the Neighborhood Centroid
East Cleveland	8,988	6	4	12
Glenville	8,119	6	6	20
Mt. Pleasant	7,557	3	3	10
Euclid	6,753	6	3	5
Hough	6,245	8	10	41
Lee-Miles	5,583	1	2	9
Forest Hills	5,275	1	2	14
Union-Miles	5,229	2	2	9
Corlett	5,148	1	1	9
Cleveland Heights	4,731	6	3	15
North Collinwood	4,147	1	1	2
Parma	4,126	3	1	2
Buckeye-Shaker	4,098	2	2	14
Warrensville Heights	4,041	2	1	8
Woodland Hills	3,810	3	4	16
Central	3,794	16	19	57
Detroit-Shoreway	3,780	10	12	24
Maple Heights	3,621	2	0	1
South Collinwood	3,616	0	1	4
St. Clair-Superior	3,412	3	5	21
South Broadway	3,167	0	1	4
Clark-Fulton	3,163	1	3	21



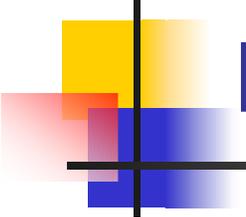
V. Preliminary Findings and Recommendations

- Preliminary Findings:
 - The 2000 update of the Reder model yielded the most significant changes for the estimates of the proportion at Level 1 Literacy.
 - The distribution of the literacy variables was similar to other factors, such as birth mother's education, 4th grade reading proficiency, and number of high school dropouts.
 - Organizations providing literacy services are not always located in the neighborhoods where the need for them is the greatest.



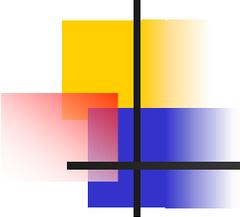
V. Preliminary Findings and Recommendations

- Preliminary Recommendations – Adult Literacy:
 - The Reder model represents a starting point.
 - A demographically driven model will not be very useful at tracking efforts made to improve literacy.
 - More direct measures, such as a survey, would be more helpful.



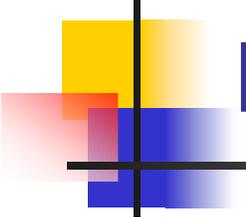
V. Preliminary Findings and Recommendations

- Preliminary Recommendations – Child Literacy:
 - Use programs associated with the Early Childhood Initiative (ECI) as access points to introduce literacy services to children under age 6 and their families.
 - Between July 1999 and December 2002, 53,321 children under age 6 were served by Welcome Home, Early Start, Early Intervention, Family Child Care Homes, and Special Needs Child Care Programs.



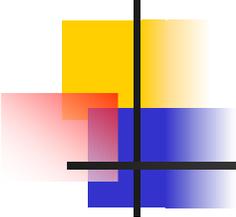
V. Preliminary Findings and Recommendations

- Preliminary Recommendations – Child Literacy:
 - Evaluate literacy skills of the early childhood population before Kindergarten.
 - From the School Proficiency data, get a better sense of the *number* of children proficient at each grade.



V. Preliminary Findings and Recommendations

- Preliminary Recommendations – Literacy Providers
 - Continue gathering data about organizations providing literacy services.
 - Use data gathered from both the literacy organizations and the survey to ensure that the appropriate literacy services are getting to those who need them.



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