

Chapter 2. Demographic and Market Analysis

Demographic Analysis

Population

The U.S. Bureau of the Census figures for the year 2000 showed an overall net regional population increase of 1.0% over the 40-year period from 1960 – 2000. Despite the slight population increase, the population of Cleveland and Cuyahoga County have continually been decreasing as a result of out-migration from the urban core. The population of the five counties is still 7% lower than its peak in the 1970 Census. Detailed analysis of this data shows that natural increase in population due to births and deaths is negated by net out-migration from the region. The flat growth over 40 years (0.025% annually) indicates that increases and decreases of population within jurisdictions do not denote regional growth or decline, but instead, a shifting of population from community to community.

Figure 2.1: Regional population by county, 1960-2000 *SOURCE: U.S. Bureau of the Census, 2000*

REGIONAL POPULATION, 1960-2000					
	1960	1970	1980	1990	2000
<i>City of Cleveland</i>	876,050	750,903	573,822	505,616	478,403
Cuyahoga	1,647,895	1,720,835	1,498,400	1,412,140	1,393,978
Geauga	47,573	62,977	74,474	81,129	90,895
Lake	148,700	197,200	212,801	215,499	227,511
Lorain	217,500	256,843	274,909	271,126	284,664
Medina	65,315	82,717	113,150	122,354	151,095
5-County Total	2,126,983	2,320,572	2,173,734	2,102,248	2,148,143

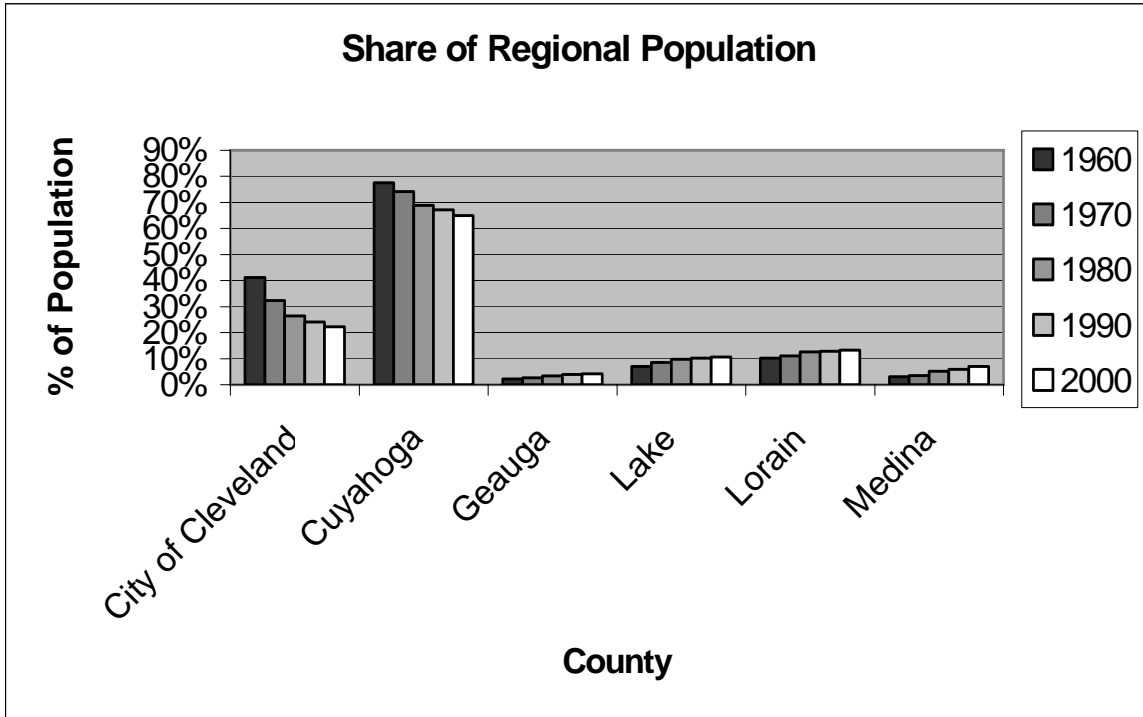
The City of Cleveland and Cuyahoga County's loss of population, coupled with the gain in the surrounding counties, reveals this regional shifting of population. Comparing the 1960 Census with the 2000 Census, Cleveland's share of the regional population (and overall population) has been reduced by almost half, while Cuyahoga County's share has witnessed a 12.6% decrease. This significant share of the regional population has been redistributed to the other four counties in the region, with Medina County gaining more than half of the total growth. Every county except Cuyahoga has had a higher share of the regional population with each successive Census since 1960. The City of Cleveland has also witnessed a dramatic population loss over the same time period.

Despite the significant population loss from the City of Cleveland and much of Cuyahoga County, the population of GCRTA's service area has remained relatively constant over the past 20 years. Studies have shown that population leaving RTA's service area has tended to locate in counties adjacent Cuyahoga County. Coupled with this trend, is the ever-increasing amount of inter-county and suburb-to-suburb travel. The amount of

traffic to and from major employment centers on the urban fringe have resulted in trip patterns that are much different from the suburb to downtown traffic from 40 years ago.

Figure 2.2: Cleveland/Cuyahoga share of regional population, 1960-2000

SOURCE: U.S. Bureau of the Census, 2000



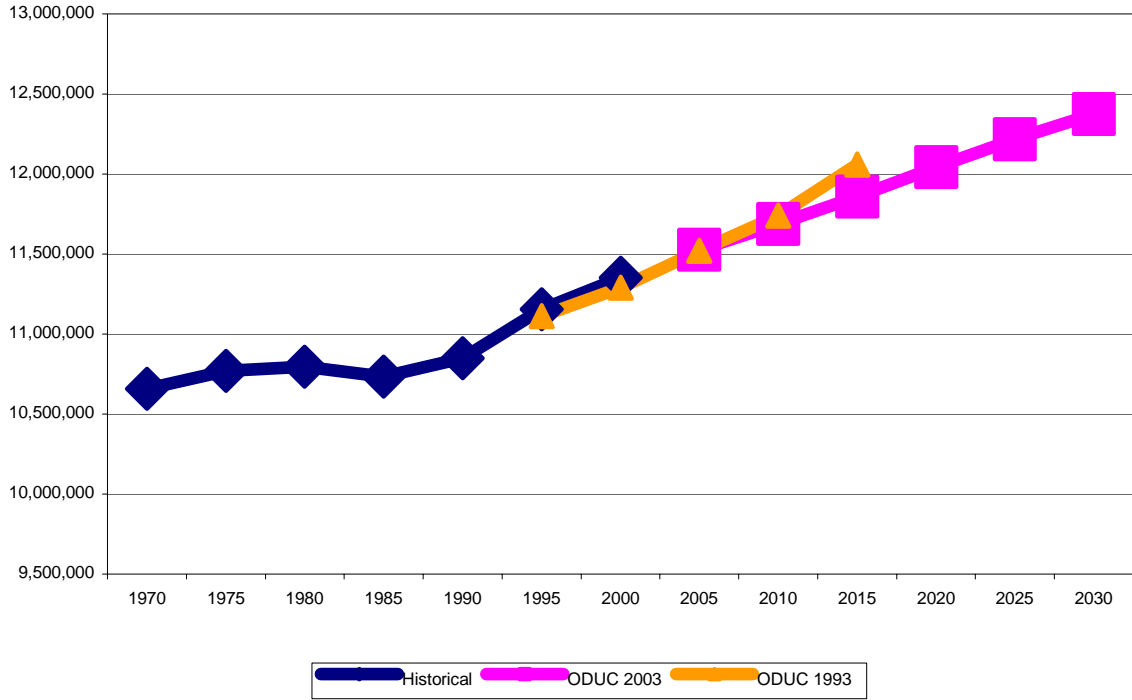
Population Projections

Recent projections by the Ohio Data Users Center and NOACA, based on Census data, suggest a continued increase in Ohio population. This increase is results mostly from people moving to Ohio from elsewhere. The following six charts provided by NOACA illustrate trends and projections at the state, region, and county level. While the Northeast Ohio region’s population will slightly increase to reflect state-level projections by 2030, Cuyahoga County’s share of the regional population will continue its historical decline.

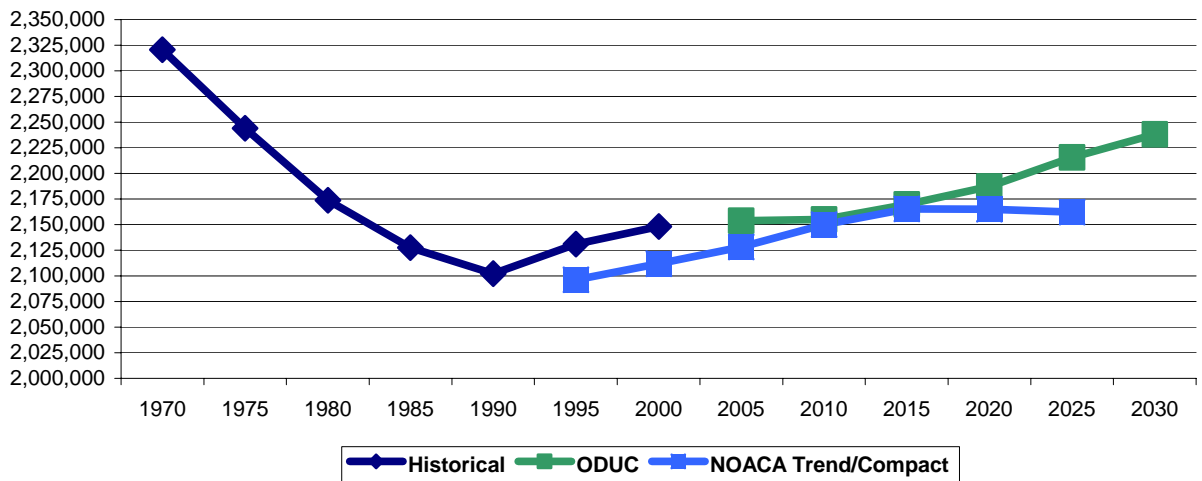
In the first two graphs, Ohio Population and NOACA Population, there are multiple trend projection lines. These reflect earlier and more current projections by the Ohio Data User’s Center (ODUC). They also reflect the NOACA compact future land use projection assumptions, meaning that NOACA anticipates future growth will be more concentrated in the region’s core, including along the Euclid Corridor. The NOACA population projections tend to be more conservative than ODUK’s.

The pie charts show another representation of Cuyahoga County’s population share of the region, and how it is expected to approach 61% by 2030.

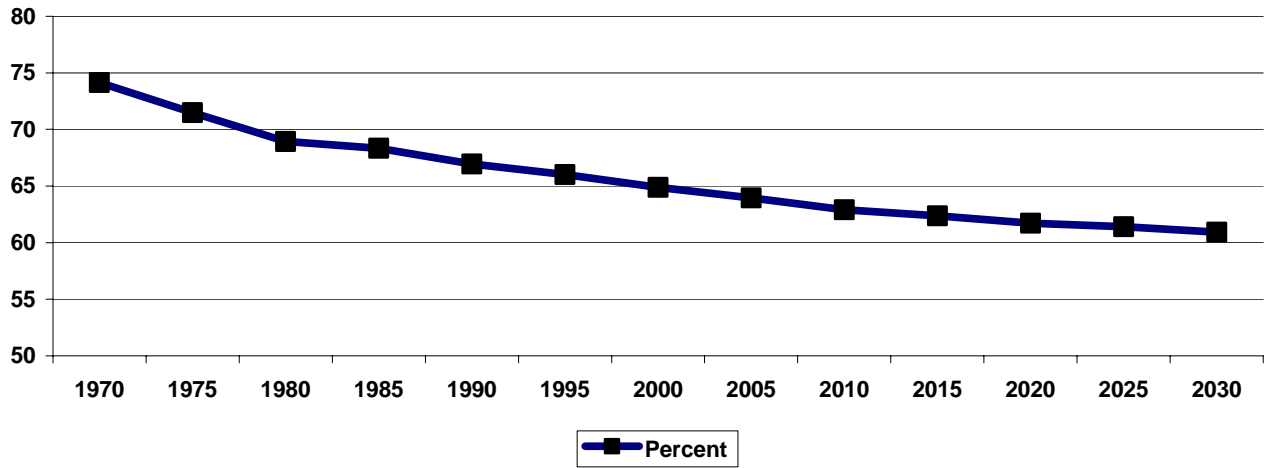
Ohio Population



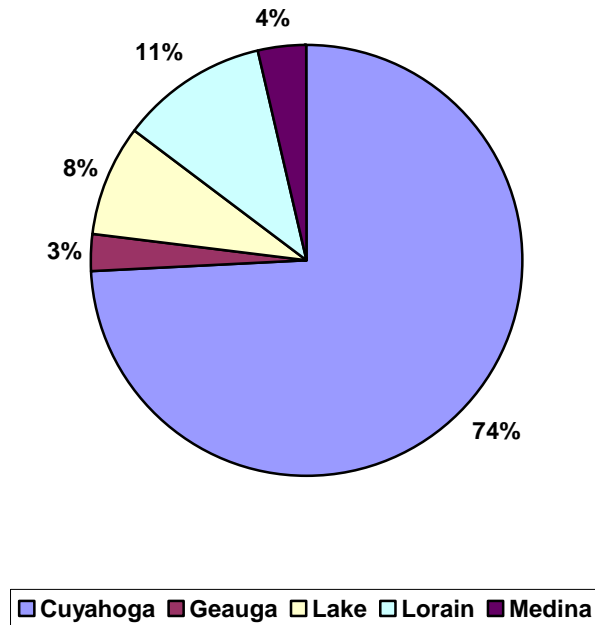
NOACA Population



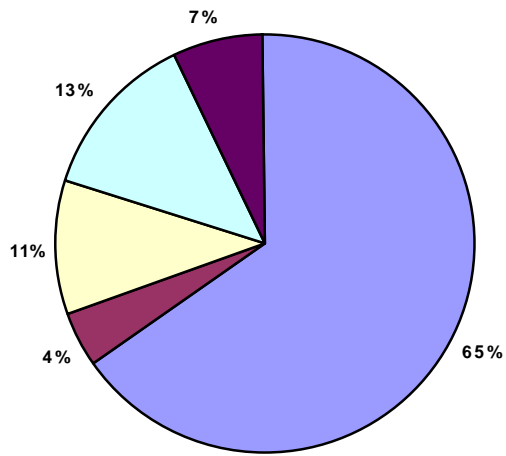
Cuyahoga County Share of Regional Population: 1970 - 2030



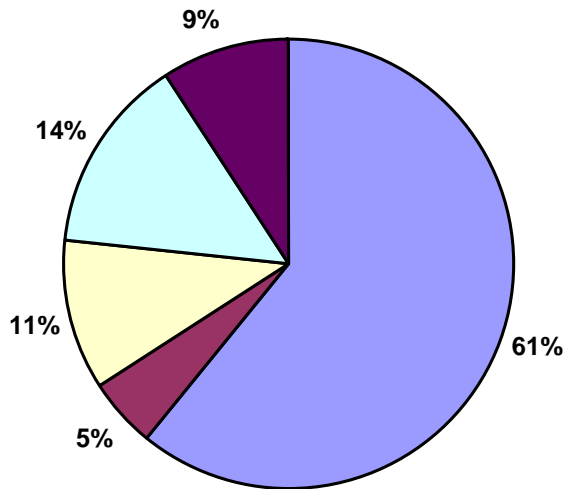
Distribution of Regional Population: 1970



Distribution of Regional Population: 2000



Distribution of Regional Population: 2030



Households

The City of Cleveland, the Cleveland region, and the nation as a whole are experiencing a long-term trend of declining household size. A greater number of people live alone or in smaller households than they did 40 years ago. At the same time, the number of households has increased more than 40% since 1960. Compared to the total population growth of about 1% over 40 years, the number of households has increased by 36%. Even when the population dropped by 150,000 in the Cleveland region, the number of households increased by more than 60,000 from 1970 to 1980. The City of Cleveland's share of the region's households and household population declined from 1960 to 2000, but it was not as pronounced as the decline of its population share.

Figure 2.3: Regional household number, size, and population, 1960-2000

SOURCE: U.S. Bureau of the Census, 2000

REGIONAL HOUSEHOLDS, 1960-2000					
	1960	1970	1980	1990	2000
<i>City of Cleveland Population</i>	876,050	750,903	573,822	505,616	478,403
Regional Population	2,126,983	2,320,572	2,173,734	2,102,248	2,148,143
<i>City of Cleveland Household Size</i>	3.25	3.02	2.63	2.53	2.51
Regional Household Size	3.57	3.16	2.73	2.56	2.47
<i>City of Cleveland # of Households</i>	269,891	248,280	218,499	199,617	190,638
Regional # of Households	627,555	723,218	785,220	808,426	853,165

SOURCE: U.S. Bureau of the Census, 2000

Another startling trend in the size of households is that at the beginning of the time period being analyzed; the size of households within the City of Cleveland was much smaller than those in the surrounding suburban communities. Since 1960, the size of households in Cleveland has evened off with those in surrounding communities.

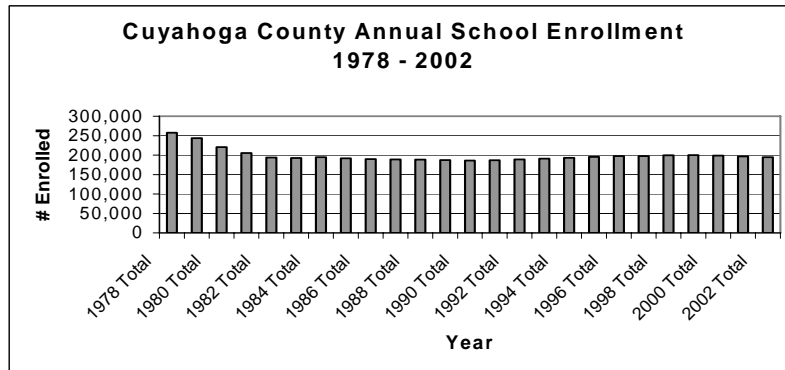
GCRTA is continuing to serve smaller and smaller households. The number of people in a household has decreased, while the number of single-parent homes has drastically increased. Increasing the density of residential development in areas already well-served by transit should be a top priority for the region. While more dense residential development is not always synonymous with apartments or multi-unit dwellings, a variety of mixed land uses near major transit lines and transfer points can potentially make public transit a more viable option.

School Enrollment

GCRTA has school enrollment data from 1975-2000 for the entire region. Approximately 18% of the persons in the region are enrolled in school. School enrollment declined, along with regional population, from 1975 – 1985, and continued to decline each year until 1989. Since 1990, school enrollment in the region has slowly increased with the exception of the year 2000. As enrollment rises and falls, its fluctuations mirror the total population, as evidenced by enrollment remaining almost constant at 18% of the population.

Figure 2.4: Annual school enrollment in Cuyahoga County, 1978-2002

Source: Ohio Department of Education



Historically, GCRTA has always served a significant portion of student and student-related travel. RTA has often formed partnerships with various school districts to serve student travel, including a new agreement to carry larger numbers of Cleveland Municipal School District students. During the course of the past year, GCRTA initiated the “U-Pass Program” for students at Case Western Reserve University. Institutions have a consistent amount of people in a relatively small area, moving in and out on a regular basis. The enrollment in K-12 has increased since the middle of the 1990s and further attempts are being made to gain additional riders from institutions of higher learning. For example, the 16,000 students at Cleveland State University are considering joining RTA's U-Pass program.

Employment

Between 1970 and 1999, overall regional employment increased 25%, although the majority of those new jobs were not located within the City of Cleveland or Cuyahoga County. The major event in this timeframe was the economic downturn that occurred between 1978 and 1983, when the regional economy lost more than 80,000 manufacturing jobs. During this same time period, the service industries emerged as the largest source of jobs in the nation and the region. The manufacturing decline and services growth continues to the present day. In 1970, manufacturing accounted for 31% of the regional employment and services provided 18%. By 1999, manufacturing was 16% and services was 32%.

Throughout the 1990s, the region witnessed an increase in the total number of employees, as the nation did as a whole. However, where was this employment growth located? A more detailed analysis below shows an increase of 12.4% in the Cleveland region, a 9.8% increase in Cuyahoga County, and a 3.9% increase in the City of Cleveland.

Figure 2.5: Regional annual levels of employment, 1970-2000

SOURCE: U.S. Bureau of the Census, 2000

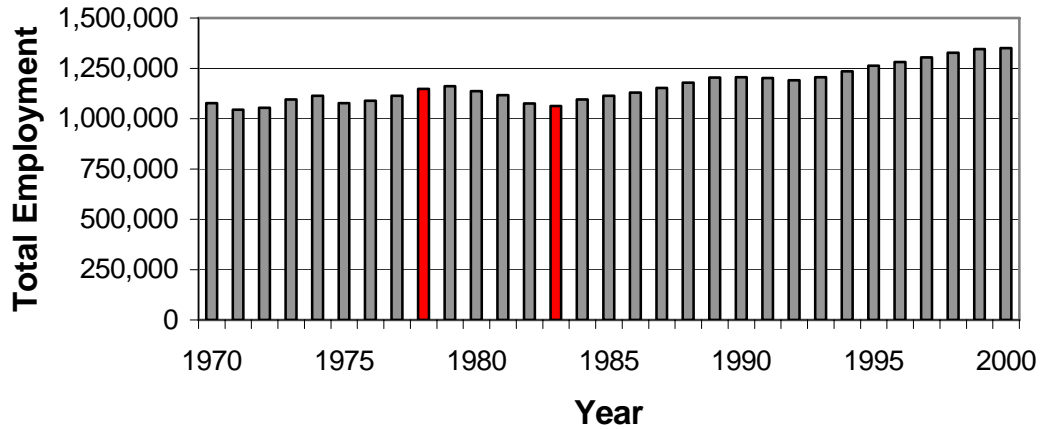


Figure 2.6: Number of employees in Cleveland PMSA, Cuyahoga, and Cleveland, 1993-2000

SOURCE: U.S. Bureau of the Census, 2000

	1993:Q1	2000:Q1	93-00	%
PMSA	1,004,425	1,129,315	124,891	12.4%
Suburban Counties*	270,066	322,991	52,925	19.6%
Cuyahoga	734,359	806,324	71,965	9.8%
Suburban Cuyahoga**	435,978	496,322	60,344	13.8%
Cleveland	298,381	310,002	11,621	3.9%
*Includes Cleveland PMSA minus Cuyahoga County				
**Includes Cuyahoga County minus City of Cleveland				

Despite some of the trends discussed earlier, the City of Cleveland has witnessed a dramatic change in the local economy, as the nation has as a whole. Cleveland has grown in some major service industries, as well as in public-sector administrative employment. Health-care providers, particularly those around University Circle like University Hospitals and The Clinic, also continue to experience job growth.

Looking at trends for the region surrounding RTA's service a similar picture is portrayed.
 (Source and analysis for Figures 2.7 through 2.9: Council of Economic Opportunities of Greater Cleveland, based on Ohio Department of Job and Family Services ES-202 Data)

Figure 2.7 Cuyahoga County Employment Trends, (a) Total, (b) Manufacturing and (c) Non-Manufacturing

(a) Cuyahoga County Total Employment Trends					
2001-2002 First Quarter Data, Cleveland & Suburbs					
<u>JIRISDICTION</u>	<u>1Q 2002 JOBS</u>	<u>1Q 2003 JOBS</u>	<u>2002-2003 # INCREASE</u>	<u>2002-2003 % INCREASE</u>	<u>% OF LOSSES IN SUBURBS</u>
Cleveland	287,608	278,456	-9,152	-3.2%	
Suburbs	513,416	473,816	-39,600	-7.7%	
Cuyahoga County	801,024	752,272	-48,752	-6.1%	81.2%
(b) Cuyahoga County Manufacturing Employment Trends					
2001-2002 First Quarter Data, Cleveland & Suburbs					
<u>JIRISDICTION</u>	<u>1Q 2002 JOBS</u>	<u>1Q 2003 JOBS</u>	<u>2002-2003 # INCREASE</u>	<u>2002-2003 % INCREASE</u>	<u>% OF LOSSES IN SUBURBS</u>
Cleveland	31,964	29,525	-2,439	-7.6%	
Suburbs	76,903	63,648	-13,255	-17.2%	
Cuyahoga County	108,867	93,173	-15,694	-14.4%	84.5%
(c) Cuyahoga County Non-Manufacturing Employment Trends					
2001-2002 First Quarter Data, Cleveland & Suburbs					
<u>JIRISDICTION</u>	<u>1Q 2002 JOBS</u>	<u>1Q 2003 JOBS</u>	<u>2002-2003 # INCREASE</u>	<u>2002-2003 % INCREASE</u>	<u>% OF LOSSES IN SUBURBS</u>
Cleveland	255,644	248,931	-6,713	-2.6%	
Suburbs	436,513	410,168	-26,345	-6.0%	
Cuyahoga County	692,157	659,099	-33,058	-4.8%	79.7%

As seen in Figure 2.7(a), of the 752,272 jobs in Cuyahoga County 278,456 of them are located in the city of Cleveland while the other 473,816 are in the suburbs. This means that 37% of the jobs in Cuyahoga County are located in the city of Cleveland. That is actually a little higher than it was in 2002, since a large majority of the jobs lost in Cuyahoga County during the 2000-2004 recession were lost in the suburbs, not in the city.

In Figure 2.7 (b) a large majority of the high wage manufacturing jobs in Cuyahoga County are also located out in the suburbs. Of the 93,173 manufacturing jobs that we still have left, only 29,525 of them are located in the city of Cleveland. Thus, only 32% of our manufacturing jobs are in Cleveland, with the other 68% being located out in the suburbs. Of the 659,099 non-manufacturing jobs in Cuyahoga County seen in Figure 2.7 (c), only 248,931 of them are in the city of Cleveland. Thus, 38% of non-

manufacturing jobs are in the city of Cleveland, with the other 62% located out in the suburbs.

Figure 2.8 Cleveland-Akron-Lorain-Elyria CSA Total Employment Trends
2000 – 2004 Third Quarter Data, Eight Counties

<u>COUNTY</u>	<u>3Q 2000 JOBS</u>	<u>3Q 2001 JOBS</u>	<u>3Q 2002 JOBS</u>	<u>3Q 2003 JOBS</u>	<u>3Q 2004 JOBS</u>	<u>2000-2004 # INCREASE</u>	<u>2000-2004 % INCREASE</u>
Medina	53,548	53,316	54,340	56,531	57,846	4,298	8.0%
Portage	52,749	51,196	52,702	53,402	53,702	953	1.8%
Geauga	34,053	33,612	33,100	33,434	34,358	305	0.9%
Summit	265,817	259,405	260,084	257,884	263,294	-2,523	-0.9%
Lake	101,932	98,097	96,868	97,612	98,840	-3,092	-3.0%
Ashtabula	35,368	33,333	34,363	33,282	33,928	-1,440	-4.1%
Lorain	105,067	99,104	99,182	99,736	100,740	-4,327	-4.1%
Cuyahoga	804,287	779,902	761,093	749,699	744,336	-59,951	-7.5%
6 Counties							
Cleveland PMSA	1,134,255	1,097,364	1,078,946	1,070,294	1,070,048	-64,207	-5.7%
7 Counties							
7 Crain's Counties	1,417,453	1,374,632	1,357,369	1,348,298	1,353,116	-64,337	-4.5%
8 Counties							
Cleve/Akr CSA	1,452,821	1,407,965	1,391,732	1,381,580	1,387,044	-65,777	-4.5%
88 Counties							
State of Ohio	5,468,473	5,354,336	5,290,826	5,225,523	5,250,625	-217,848	-4.0%
All USA Counties							
United States	132,450,000	131,871,000	130,559,000	130,253,000	132,127,000	-323,000	-0.2%

Figure 2.9 Cleveland-Akron-Lorain-Elyria CSA Manufacturing Job Trends
2001-2004 Second Quarter Data, Eight Counties

<u>COUNTY</u>	<u>3Q 2001 MFG JOBS</u>	<u>3Q 2002 MFG JOBS</u>	<u>3Q 2003 MFG JOBS</u>	<u>3Q 2004 MFG JOBS</u>	<u>MFG 2001-2004 # INCREASE</u>	<u>MFG 2001-2004 % INCREASE</u>
Geauga	9,827	9,347	8,917	9,540	-287	-2.9%
Ashtabula	9,278	9,246	8,681	8,666	-612	-6.6%
Portage	13,355	12,392	12,151	12,204	-1,151	-8.6%
Medina	10,681	10,053	9,821	9,616	-1,065	-10.0%
Summit	42,270	36,787	37,505	37,518	-4,752	-11.2%
Lorain	24,728	22,669	22,038	21,443	-3,285	-13.3%
Lake	25,071	22,639	21,308	21,573	-3,498	-14.0%
Cuyahoga	106,008	96,460	90,805	89,150	-16,858	-15.9%
6 Counties						
Cleveland PMSA	185,593	170,414	161,570	159,988	-25,605	-13.8%
7 Counties						
7 Crain's Counties	231,940	210,347	202,545	201,044	-30,896	-13.3%
8 Counties						
Cleve/Akr/Lor CSA	241,218	219,593	211,226	209,710	-31,508	-13.1%
88 Counties						
State of Ohio	942,885	882,555	838,386	824,731	-118,154	-12.5%
All USA Counties						
United States	16,185,000	15,195,000	14,420,000	14,404,000	-1,781,000	-11.0%

NOTE: Excludes additional job losses 2000-2001, since the US Department of Labor redefined manufacturing jobs from Standard Industrial Classification (SIC) to North American Industry Classification System (NAICS) in 2001, but has not yet released NAICS figures for Ohio counties in 2000.

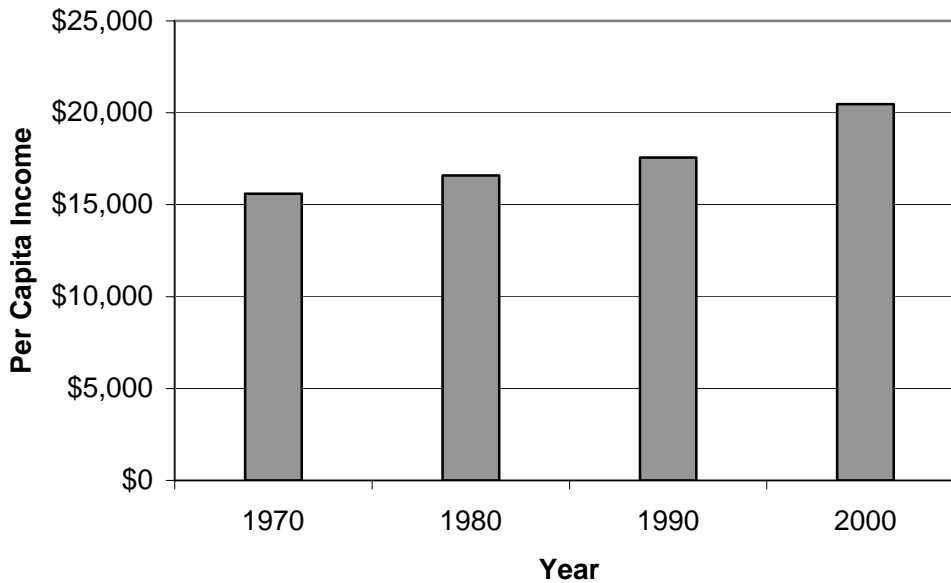
Figures 2.8 and 2.9 present similar job data as in Figure 2.7 but with a focus on comparing local, regional, state and national employment figures. Over the long run there has been growth in local employment within the county. But Northeast Ohio's growth is continuously below the growth in the rest of Ohio. Further, Ohio's job growth has been below the national average for an all-time record 109 months in a row for the last nine years. A very troubling statistic is that Cuyahoga County has lost nearly 8% of its total jobs during the last four years. Even worse, it lost nearly 16% of manufacturing jobs just during the last three years. Amazingly however, RTA ridership has held steady and even shown a modest increase in the face of this fact, which reflects a payoff to investments in improved service quality and marketing.

Regional Income

Per capita income is defined as wage, salary, investment, pension and other income divided by total population. From 1970 to 1999, regional per capita income (in 1998 constant dollars) increased 53%. The decline over the 1978 – 1983 period corresponds with the regional employment decline, especially the loss of 80,000 high-paying manufacturing jobs noted earlier. The growth in income since 1983 is the result of steady employment increases over that time.

Figure 2.10: Regional per capita income, 1970-2000

SOURCE: U.S. Bureau of the Census, 2000



Ohio's job growth is not consistent across industries. The leading job growth industries are services and retail trade. Of the 650,000 new jobs projected for Ohio to the year 2006, the service sector is expected to add about 400,000 jobs or more than three-fifths of all job growth. Retail trade will account for about another 120,000 jobs. Business and health services account for about two-thirds of the projected growth in the service sector. Eating and drinking places will account for over half of the growth in retail trade.

Firms in low unemployment areas, in particular, will continue to have to be inventive to retain and attract new workers. Many areas of Ohio are faced with the geographic reality that a substantial portion of the jobless population lives in inner city areas, while the jobs may be in suburban areas, so that transportation becomes an issue.

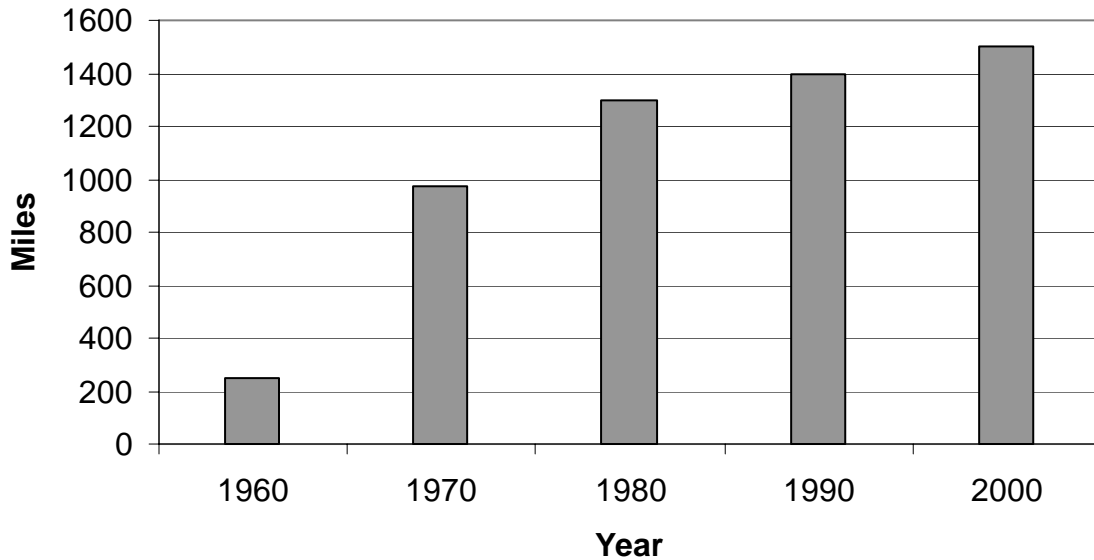
Freeway Lane Miles

Over the past 40 years, the number of freeway lane miles in the region has increased from less than 250 miles in the year 1960 to more than 1,500 miles in the year 2000. During the year 2001, new freeway lane miles were under construction on I-71 in Medina and Cuyahoga County, and on I-90 in Cuyahoga County. Additional lane miles on I-90 in Lorain County have been constructed; but their opening has been delayed for safety reasons until completion of the project in Cuyahoga County.

The greatest increase in new freeway lane miles occurred in the years between 1960 and 1980. This means that 85% of the current freeway lane mileage was established by 1980. Only 7% of the current freeway lane mileage system is less than 10 years old. The age of the region's freeway system has serious implications, as the pavements and structures require major rehabilitation (i.e. Innerbelt) and/or replacement after 20 years of use. As these lane miles approach the end of their useful life, funding for resurfacing and other repairs will be essential.

Figure 2.11: Regional number of freeway lane miles, 1960-2000

SOURCE: U.S. Bureau of the Census, 2000



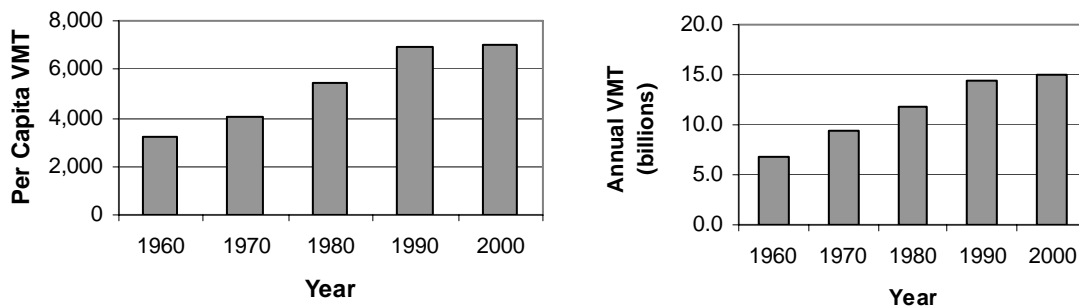
The increase in the number of freeway lane miles has been occurring at a slower rate in every decade since the 1960s. This would suggest that the region's amount of freeway infrastructure is approaching its maximum. Nonetheless, major infrastructure additions continue to occur and are being planned for, as with the I-271 express lanes and Harvard Road interchange, the Jennings Freeway, and lanes added/to be added along portions of SR 2, Interstates 71, 77, 90 and the Cleveland Innerbelt Project.

Annual Vehicle Miles of Travel

Computer models calculate regional estimates of average weekday vehicle miles of travel (VMT). Since monitoring every vehicle for every mile traveled within the region is impractical, NOACA uses travel demand models to estimate daily traffic volumes on a network of arterial and collector streets. These estimates are expanded to include all streets, and factored to provide annual figures.

Annual vehicle miles of travel have more than doubled in Northeast Ohio over the past 40 years. However, the rate of increase has slowed for the last 20 years, with the most dramatic decline occurring over the last 10 years. While VMT continues to rise, the lower percent increase may reveal a steadying of the miles traveled within the region. On the other hand, the drastic increase in the number of households with an automobile, the slowed growth of the freeway infrastructure, and the rapid development on the urban fringe have all resulted in more highly congested roads and more minutes spent in an automobile for work-related trips.

Figure 2.12/2.13: Regional per capita and annual vehicle miles traveled, 1960-2000
SOURCE: U.S. Bureau of the Census, 2000



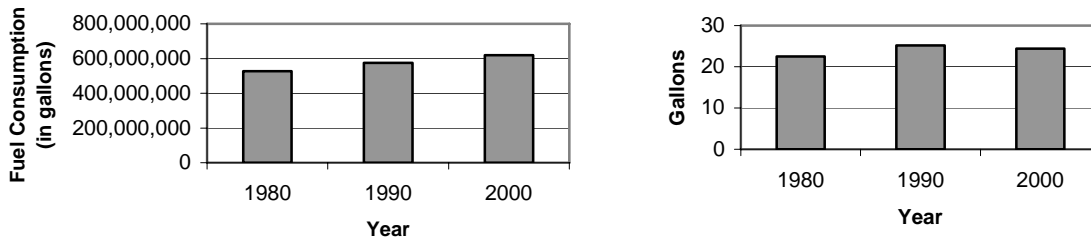
Fuel Consumption

GCRTA, with the assistance of the NOACA staff, estimates motor vehicle fuel consumption based upon the State of Ohio Department of Taxation data. Ohio distributes fuel taxes back to units of government, based on state regulations. Since this is the case, its usage can be estimated by converting tax distributions to the area back to gallons of fuel taxed. The resulting estimates can then be used with vehicle miles of travel (VMT) estimates to generate miles per gallon estimates. Estimates of vehicle miles of travel and fuel consumption are provided for 1980, 1990, and 2000.

In 1972, the first fuel shortage events since World War II occurred in the United States. As a result, Americans began to purchase smaller, more fuel-efficient vehicles. For several years in Northeast Ohio, the increase in VMT was offset by greater increases in fuel efficiency, resulting in decreasing fuel consumption. Around 1990, the fuel efficiency no longer offset increased travel and fuel consumption began to rise.

Figure 2.14/2.15: Regional fuel consumption and efficiency, 1980-2000

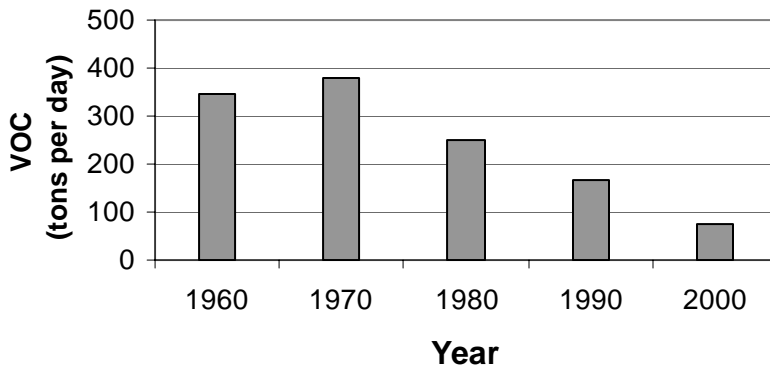
Source: NOACA



Vehicle Emissions

Figure 2.16: Regional volatile organic compounds in tons, 1960-2000

Source: NOACA



Volatile organic compounds (VOCs), commonly referred to as hydrocarbons, and oxides of nitrogen, both emitted from vehicles, react in sunlight on warm days to produce ozone, a gas that irritates the lungs and eyes and worsens pre-existing respiratory problems. While vehicle emissions relate to the vehicle miles traveled, the efficiency of the vehicle's engine may reveal the most significant relationship. The Clean Air Act of 1970, and later amendments to it, required automobile manufacturers to make more efficient engines with respect to emissions of air pollutants. Changes in gasoline formulation were also required to further reduce emissions. Since the Clean Air Act, hydrocarbon emissions have decreased significantly, despite continued increases in vehicle miles traveled.

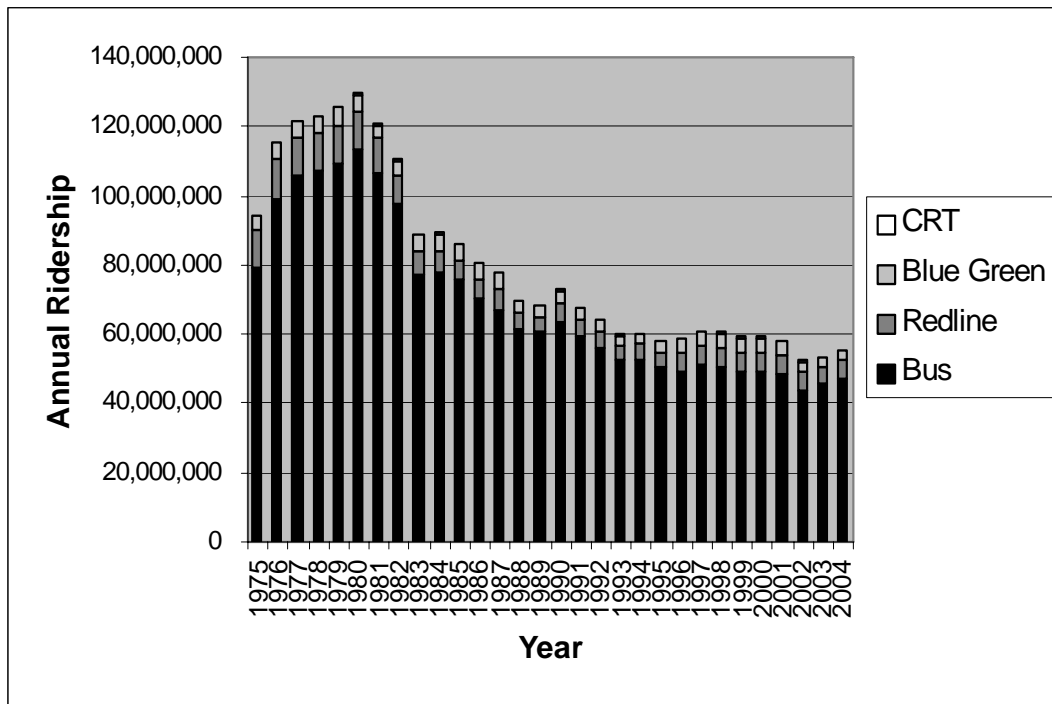
Beginning with the Clean Air Act driven designations in 1978, ozone levels in portions of Northeast Ohio, including the City of Cleveland, were classified as "Non-Attainment" of the National Ambient Air Quality Standard (NAAQS). The 1990 Clean Air Act Amendments led to the development of a new State Implementation Plan (SIP) for Ohio that included several traffic control measures. Unfortunately, stricter federal air quality standards has resulted in Northeast Ohio being declared in nonattainment for two pollutants regulated by the Clean Air Act: ozone and fine particulates (PM_{2.5}). During 2005 NOACA is convening a public involvement process to assist in formulating regional recommendations for Ohio EPA to consider as it updates the SIP in order to attain federal standards for ozone and fine particulates.

Transit Ridership

GCRTA, created in 1975, grew in the number of trips every year for its first five years, largely as a result of deeply discounted fares and improved service coordination. The peak year for transit ridership occurred in the year 1980, with the ridership peaking at 130 million trips. Since 1980, annual ridership has been cut in half, with a 20% decrease from 1982 to 1983. Ridership reached a low point in 1995, with a little more than 58 million trips per year. After 1995, transit ridership increased for two years, rising to almost 61 million in 1997. In 2003 (54.5 million trips) and 2004 (55.5 million trips) RTA again experienced two consecutive years of ridership growth, the first time since 1995.

Figure 2.17: Annual RTA total ridership,

Source: RTA 1976-2004 Annual Reports



*1975 is inaccurate as RTA began collecting data in October 1975

**During 1988 the method of counting passengers was changed

Despite the leveling of the number of passengers over the last 10 years, RTA has witnessed a growing percentage of their riders being without an automobile.

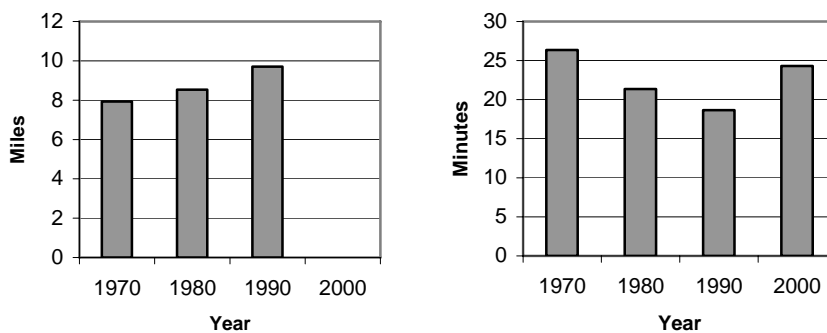
As one of six transit operators in the region, GCRTA carries 98% of all the transit trips. Increases in transit ridership in Lake, Lorain, and Medina counties do not greatly offset the trends established by GCRTA. Overall, the number of transit riders has now been steady for the last 10 years. Future RTA projects, such as the Euclid Corridor and new transit center/park & ride lot expansions, will support the increased ridership initiative.

Average Work Trip Length and Travel Time

The Census Bureau has recorded time and distance work trip data since 1970. Trips to and from work cause the most recurring congestion. Work trips in Northeast Ohio increased in length and shortened in travel time for at least the last 30 years. The trend in shorter travel times for work trips serves as an indicator of the small amount of congestion in the region up to 1990. Over the past 10 years, however, the travel times to work have skyrocketed, indicating more congested freeways and thoroughfares or shorter work trips. Although there is some evidence of the latter, the former is the primary reason for the skyrocketing work trip times.

Figure 2.18/2.19: Regional miles and minutes traveled to work, 1970-2000

SOURCE: U.S. Bureau of the Census, 2000 (Census Data for Miles in 2000 not available)



Conclusions

The region's demographic, employment, and travel data all suggest further hardships for public transportation in Northeast Ohio. People and jobs are moving further and further away from the urban core, and automobile-focused development and travel patterns continue supporting these outward movements. As a result, it is simply not feasible for many people in outlying areas to utilize public transit. In addition, Northeast Ohio continues to feel the effects of a protracted economic recession. Nonetheless, in 2003 and 2004 RTA was able to post two consecutive years of ridership growth, which is a testimony to its successful efforts to provide quality service to customers.



RTA East 55th Street Rapid Transit Station existing area and renovation rendering.

Market Analysis

National and Local Trends

A major trend with similar manifestations at the national and local levels is greater car availability per person. As the US population grew by 23% from '69 to '95, average cars per household doubled. The number of households is increasing, but persons per household have been decreasing. Since contemporary standards include the expectation that a household will not only occupy a dwelling unit but will also have available at least one vehicle, we find vehicle availability on the rise.

Nationally, one can observe a decline in the number of car-less households, from 13 million in 1969 to 8 million by 1995. Americans are traveling more, over time, making about 145 million trips in 1969 and 379 million trips in 1995.

As of 1997, about 16 million of the nation's 100 million households had no more than a poverty-level income. But 4.6 million of the 16 million had no motor vehicle available to the household, and accounted for 48% of the American populace who could be considered transit-dependent. About 2.9 million African-American households were numbered among the 4.6 million who lacked auto transportation, for a rate of 63%.

Accordingly, public transit agencies such as RTA cannot move completely away from their "social safety net" responsibilities and operate fully "as a business." RTA will need to continue to serve a large number of customers who are socially and economically disadvantaged.

While the 1990 Census showed nearly 95,000 households as having no car, the most recent Census suggested that number was now about 72,000. In 1990, more than 15% of the County's households did not own an automobile; the current share is just under 12%.

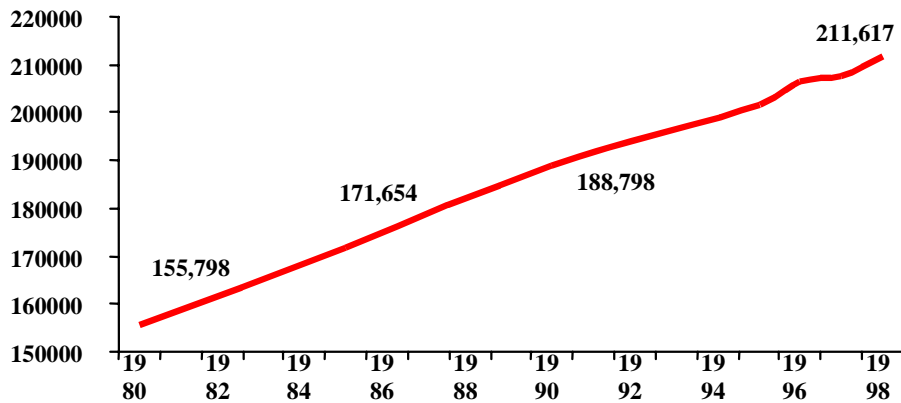
Our society now shows an unsurprising, but sometimes overlooked trend: women's work trips are increasing. Two-thirds of adult women are now in the labor force, up from 37% in 1969. And, about 85% women drive now compared with 61%, 25 years ago. About 60% of RTA's riders are females.

Other national trends are also worthy of note as RTA plans its annual marketing activity. Taking into account the whole United States, transit accounts for 1.8% of all trips and 2.1% of all person miles of travel. Today, about 5.1% of American workers travel to work by transit. This varies dramatically by State, with Ohio ranked 22nd as of the 2000 Census. Less than 3% of Ohio's workers use transit to get to work—trailing such States as Utah and Alaska as many as 27% in New York State and 35% in the District of Columbia do so.

By the 1990 Census, 50,290 workers residing in Cuyahoga County used public transit to get to work—a 3.6% share. At that time, about 543,000 used a private car, truck, or van for work trips. The transit share has now dropped to 3.1%, or about 42,000 workers. This contrasts with 575,000 now driving to work. Population forecasters see the share dropping even more—to 2.6% in the next five years.

Figure 2.19: US Motor Vehicle Registration (millions), 1980-2000

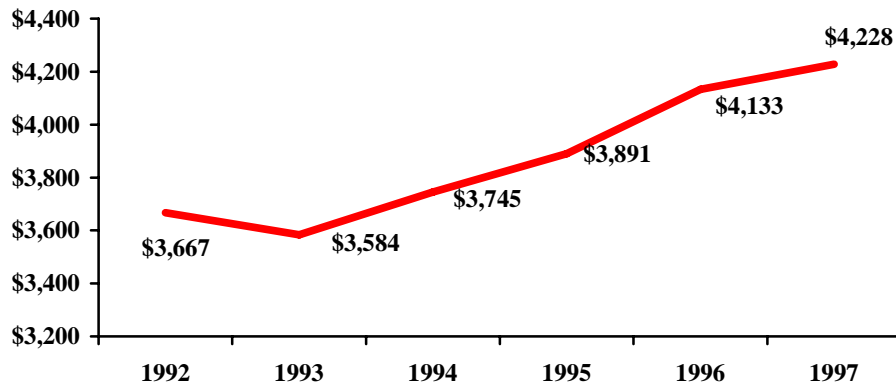
Source: 2000 RTA Market Research Report



In 1998, there were 211 million registered vehicles but only 186 million licensed drivers, in the U.S.A.

Figure 2.20: US Automotive Fixed Cost (\$ per year), 1992-1997

Source: 2000 RTA Market Research Report



Also continuing to climb is the average fixed cost of operating an automobile in the US. This factor largely reflects annual depreciation amounts and rises with a greater preponderance of newer and more expensive vehicles in the national "fleet."

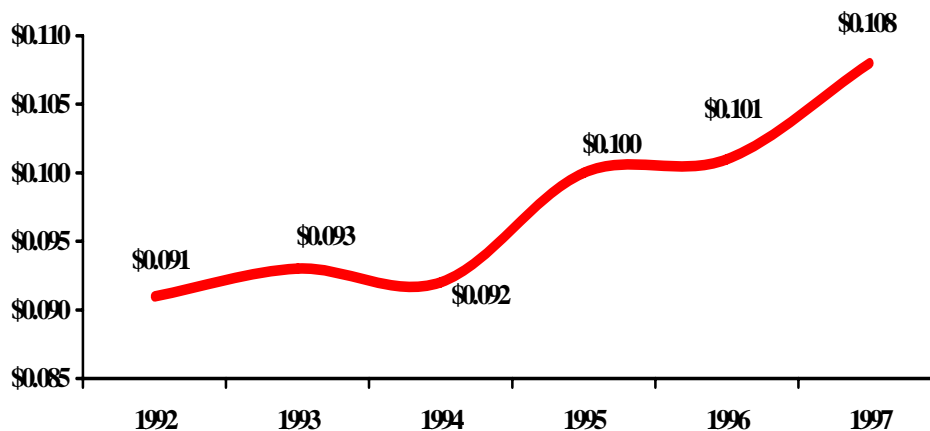


Figure 2.21: US Automotive Variable Cost (per mile), 1992-1997

Source: 2000 RTA Market Research Report

The variable cost associated with auto ownership is relatively constant on a per mile basis. But even here, we see an upturn from the neighborhood of nine cents in the early 1990's to an 11-cent level today. Though validated statistics are not yet available, the fuel portion has undergone dramatic variability over the past four or more years.

Putting these together yields the result that for the average commuting American worker traveling 30 miles round trip for 250 days a year will today spend more than \$5,300. That same travel pattern in 1992 would have cost \$700 less annually.

Over about the same period, total US expenditures for public local bus and transit rose from nearly \$17 billion at the decade's outset to a peak of about \$21 billion in 1995. National statistics indicate, however, that the nation's overall spending on public transit has gone down both in current and constant dollars.

Shifting to the local demographic scenario, Cuyahoga County's 2000 population was registered as 1,393,978, residing in 571,457 households (of which 354,615 are families), nearly 200,000 of who live at or below a poverty-level income. Median household income is estimated at \$39,745 for 2001, up from \$28,760 in 1990 and \$33,500 in 1995. By mid-decade, median household income in Cuyahoga County is projected to pass \$40,000. Considering the rise in single-person households, reductions in family households, and smaller cohorts under age 12, Per Capita Income will rise even faster than median household income. By 2006, Per Capita Income in the County could reach \$31,000, up from \$14,943 in 1990 and its current level of about \$28,000.

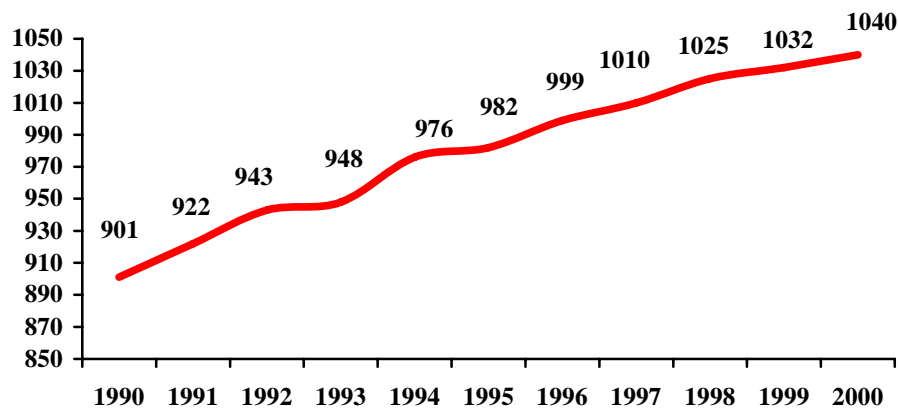
Cuyahoga County residents' median age is now 38, two years older than the 1990 figure of 36. Within five years, the County's population will split into two equal halves on either side of the 40 year-old line. The area will see moderately fewer people enrolled in educational institutions. Whereas in 1990, 224,719 were enrolled in public and private primary and secondary schools, that number is now leveling off in the 222,000 range. College-student residents numbered more than 93,000 in 1990, but that figure now appears to be leveling off at the 88,000 for the remainder of the decade.

On the other hand, Cuyahoga County will improve in average educational attainment. Larger shares of the population have and will have one or more degrees from institutions of higher education. More than 120,000 residents held undergraduate degrees (only) as of 1990, but that jumped to the present estimate of 168,000 and could go as high as 190,000 in another five years. Meanwhile, the complement of residents with graduate degrees rose from under 70,000 in 1990 to the current level of over 78,000 and an expected further jump to 82,000 by 1996. The area is getting better educated in the aggregate, with 18% holding one or more college degrees, and that share rising to nearly 20% in the next half-decade.

The County's population is 53% female, 47% male. Racial and ethnic composition shifted through the past decade, with African-Americans showing a slightly higher share than in 1990—at 27%, whites at 67%, dual or multi-racial at 2%, and other races 4%. ("Other races" and multiracial categories have likely grown more as an artifact of different wording in the 2000 Census form compared with earlier versions and less from dramatic demographic shifts in the Cleveland area.) More than half (57%) of RTA's riders are African-American.

Cuyahoga County can claim nearly as many motor vehicle registrations as people. Its 1.4 million residents have collectively registered 1,040,232 cars and light trucks, about 10% of the entire State's (including the other 87 counties)—numbering 11,740,513. The County gained an average of about 14,000 registrations each year of the decade

Figure 2.22: Cuyahoga County Car and Light Truck Registration (in thousands)



Source: 2000 RTA Market Research Report

But the County's total population is not growing much at all, as reflected in the fluctuating but overall rather constant number of licensed drivers. An upturn was reflected in 2000, possibly the result of baby boomers' children (the "baby boomlet") reaching driving age.

The increasing local "fleet" of passenger vehicles, together with a lack of growth in licensed drivers, means that more vehicles (1.15 in 2000) are available per driver.

Figure 2.23: Cuyahoga County Passenger-Vehicle Drivers License Holders (in thousands)

Source: 2000 RTA Market Research Report

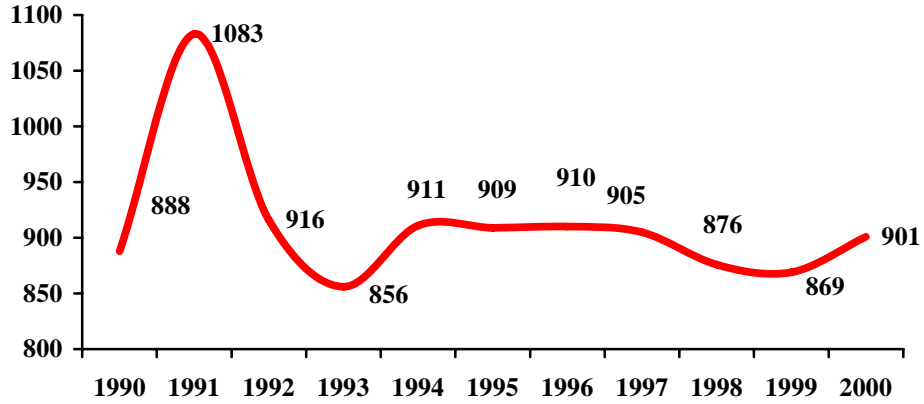
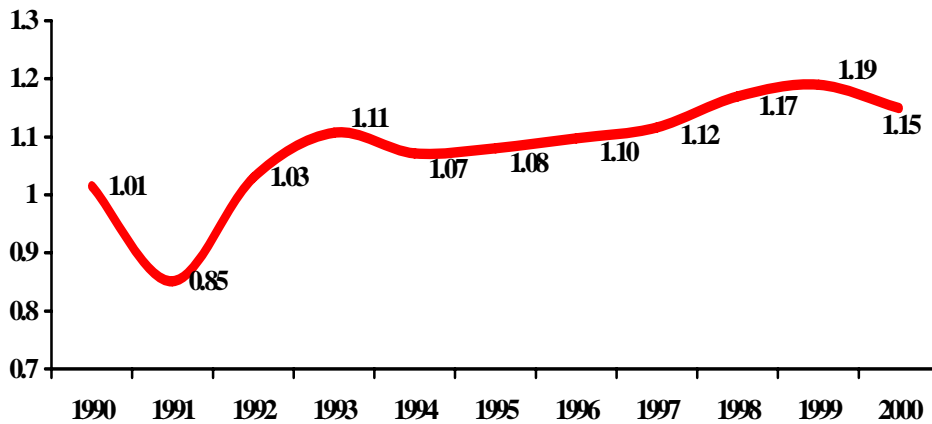


Figure 2.24: Cuyahoga County Passenger-Vehicles per Licensed Driver



Source: 2000 RTA Market Research Report

Increased vehicle traffic causes delays. In 1999, traffic delay in the Cleveland urbanized area was estimated at 36.8 million person-hours, associated with monetary losses totaling \$665 million (ranking 28th among US urban areas) or about \$350 per driver per year (ranking 46th). Traffic delay accounted for about 60 million gallons in wasted gasoline, putting the area 28th nationally.

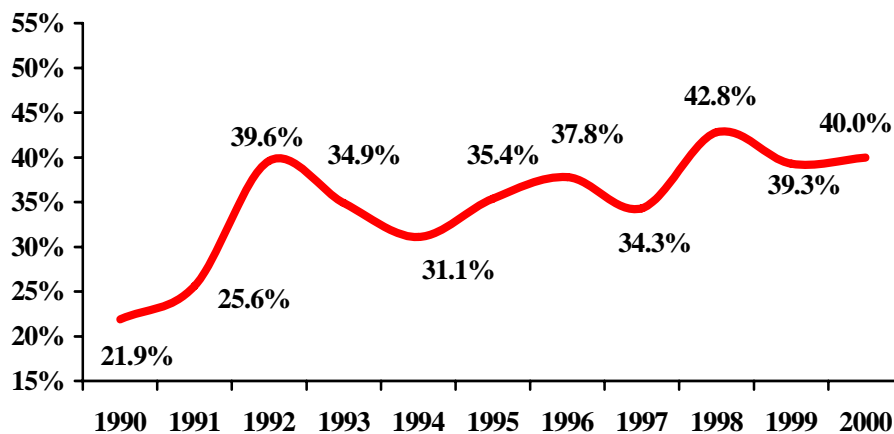
Census and other survey data show travel time to work Cuyahoga County continuing to be reduced over time, even though both residence and employment are more dispersed and less densely concentrated. About 450,000 of the County's active labor force—totaling about 575,000--have less than a 30-minute commute.

These lower ranks contrast with the area's rank of 19 on the basis of population alone. Congestion is still an area transportation problem, but it is actually disproportionately mild relative to what is experienced in other metropolitan areas.

Another trend of interest is the increasing share of RTA passengers who report coming from homes where no vehicle is available. This share has been on a steady upturn over the decade. The overall number of riders has remained steady and the number of households without an automobile has decreased, so the trend shown below is a positive reality.

Figure 2.25: RTA Riders without Vehicles in Household, 1990-2000

Source: 2000 RTA Market Research Report



RTA Research Highlights

RTA conducts periodic surveys of three target audiences – current riders, potential customers, and the general public. The first group is surveyed while traveling RTA via the “on-board” survey. The other two groups are surveyed by telephone in their homes via the potential customer survey and the general public opinion survey. The surveys are intended to give RTA an inventory of the opinions shared by a variety of constituents, whether current customers or potential customers. The full results of these surveys are available from RTA's Marketing Department.

Also included in the appendix are the marketing objectives, utilizing the same general marketing segments as the surveys. The specific marketing segments were divided up into six pieces: current choice customers riding at least five days per week, current transit-dependent customers riding at least five days per week, other current choice riders, other current transit-dependent riders, potential customers, and the general public. Analyzing the market segments, some of the greatest concerns of current and potential customers included safety while on board, driver courtesy, security while riding, short travel time, and the on-time arrival of RTA. Some of the RTA attributes that current and potential customers do not place high on their list are the calling out of stops by the drivers, clean RTA shelters, buses, and rapids both inside and out, and the RTA management.

CONCLUSIONS

As this chapter has shown, RTA continues to face trends that have constrained transit ridership. This includes jobs and population moving beyond the easy reach of bus and rail lines, relatively low congestion and travel times on area roads, and relatively low automobile operating costs. Additionally, the local economy has also kept many out of the workforce, further reducing trips taken by transit.

While the factors influencing these trends are far beyond the control of any transit authority, RTA is working to increase its market share by improving service quality to retain riders and gain more choice riders, through its "Back to Basics" initiative. The Long Range Plan Strategic Initiatives in Chapter 1 are an outgrowth of this effort.

RTA has taken substantial public feedback through customer research and face-to-face sessions held by top managers at major RTA rapid transit stations like Windermere and Tower City. Public meetings on major transit initiatives, like the Euclid Corridor Transportation Project, have also provided feedback to RTA management on important issues. Steps to implement RTA's future plans will continue to draw upon ongoing customer research and feedback. Appendix C contains selected data on customer preferences that RTA is using to help direct its short- and long-term improvement plans.

In spite of the unfavorable trends discussed in this chapter, RTA remains the travel mode of choice for many residents and visitors to Cleveland and surrounding communities. RTA has dedicated itself to providing these customers with the best possible service.



Renderings of the renovated Puritas-West 150th Red Line Rapid Transit Station, projected to be under construction in 2007 and completed in late 2008.