

# Status of Michigan Cities

---

## An Index of Urban Well-Being

April 2002



*Prepared for*  
Michigan Bipartisan Urban Caucus and the  
Michigan Economic and Environmental Roundtable

*Prepared by*  
Public Sector Consultants, Inc.  
Lansing, Michigan

Funded by a grant from  
the Mott Foundation and  
the Frey Foundation

# **STATUS OF MICHIGAN CITIES**

## *An Index of Urban Well-Being*

---

April 2002

***Prepared for***  
Michigan Bipartisan Urban Caucus  
and  
Michigan Economic and Environmental Roundtable

***Prepared by***  
Public Sector Consultants, Inc.  
Lansing, Michigan



# Contents

---

## **INTRODUCTION 1**

*Goal 1*

*Methodology 2*

*Future Research 3*

## **SUMMARY 4**

*Index of Urban Well-Being 6*

EXHIBIT 1. 2000 Index of Urban Well-Being (Compared to a Base Year of 100) 10

EXHIBIT 2. Index of Urban Well-Being by Component 10

## **DATA ON REPRESENTATIVE CITIES 11**

### ***Demographics***

EXHIBIT 3. Urban Population, 1990 and 2000 12

EXHIBIT 4. Percentage of Population Aged 65 and Older, 1990 and 2000 13

EXHIBIT 5. Racial Composition, 1990 and 2000 14

EXHIBIT 6. Net Migration, 1990 to 2000 15

### ***Economics***

EXHIBIT 7. Unemployment Rates, 1990 and 2000 (Percentage of Labor Force) 16

EXHIBIT 8. Total Employment, 1990 and 2000 17

EXHIBIT 9. Labor Force, 1990 and 2000 18

EXHIBIT 10. Michigan Median Household Income, 1989 and 1999 (est.) 19

EXHIBIT 11. Poverty Rates, 1990 and 1998 21

### ***Property Values***

EXHIBIT 12. Growth in Urban Property Value (State Equalized Value), Annual Rate, 1990–2000 22

EXHIBIT 13. Average Home Value, 1989 and 1999 (est.) 24

EXHIBIT 14. Home Ownership, 1990 and 2000 (est.) 26

### ***Crime***

EXHIBIT 15. Crime Rates, 1990 and 2000 27

### ***Schools***

EXHIBIT 16. Michigan Educational Assessment Program (MEAP), Percentage of Composite\* Passing Scores, School Years 1997 and 2000 28

EXHIBIT 17. Free and Reduced Lunch Program 29

EXHIBIT 18. State Foundation Grant and Other School Aid, 2000–2001, and Teacher Salaries, 1999–2000 30

EXHIBIT 19. K–12 Enrollment and Student Teacher Ratios, 1999 and 2000 31

EXHIBIT 20. Dropout and Graduation Rates, School Years 1996–1997 and 1999–2000 32

### ***Government Finance***

EXHIBIT 21. Tax Collections, 1990 and 2000 33

EXHIBIT 22.	Total General Fund Revenues, 1990 and 2000	34
EXHIBIT 23.	General Fund Balances, 1990 and 2000	35
EXHIBIT 24.	General Long-Term Debt, 1990 and 2000	36
EXHIBIT 25.	General-Obligation Bond Rating	37
EXHIBIT 26.	Operating Millage, 1990 and 2000	38

***Health***

EXHIBIT 27.	Infant Mortality Rate, 1990 and 2000 (Deaths per 1,000 Live Births)	39
EXHIBIT 28.	Heart Disease Death Rate, 1990 and 2000 (Deaths per 100,000 Residents)	40
EXHIBIT 29.	Cancer Death Rate, 1990 and 2000 (Deaths per 100,000 Residents)	41

***Environment***

EXHIBIT 30.	Hazardous-Waste Treatment, Storage, and Disposal Facilities, 2000	42
EXHIBIT 31.	Brownfield Redevelopment, 1997 and 1999–2000*	43
EXHIBIT 32-A.	Toxic Release Inventory, On-Site Releases, 1990* and 1999** (Pounds of Chemicals)	45
EXHIBIT 32-B.	Toxic Release Inventory, Transfers, 1990* and 1999** (Pounds of Chemicals)	46
EXHIBIT 32-C.	Toxic Release Inventory, Combined On-Site Releases and Transfers, 1990* and 1999**	47
EXHIBIT 33.	Air Quality: Number of Days During which Ozone Level Was Unhealthy (PSI Exceeding 100) Annual Average, 1990 to 1999	50
EXHIBIT 34.	Parks and Open Space, 2000	52

# Introduction

---

The well-being of Michigan's central cities and urban areas affects all state residents. This report is the second in what is planned as an ongoing, biennial compilation that provides policymakers and the public with an overview of the condition of Michigan's largest cities. This report examines a variety of indicators in areas of health, education, environment, economics, and government finance. New data sets will be added over time, to allow an increasingly comprehensive assessment of life in Michigan's urban areas.

The report is sponsored by the Michigan Economic and Environmental Roundtable for the Michigan House of Representatives Bipartisan Urban Caucus. The Mott and Frey Foundations provided funding.

## GOAL

The goal of this project is to provide state and local policymakers and their constituencies—Michigan citizens—with up-to-date information about the well-being of Michigan cities so that they can make informed policy decisions for the benefit of Michigan cities. In particular, the report provides

- a statistical picture of the current conditions in our major urban areas;
- the basis on which these conditions may be tracked over time and important trends discerned;
- a discussion of the importance of these conditions in determining the relative well-being of cities; and
- a catalyst for engaging interested parties in discussing ways to improve the standard of living and quality of life in Michigan cities.

To our knowledge, nothing similar has been tried since the first index of urban well-being was released in August 1999. There are many useful reports that summarize one specific aspect of urban life—such as city government finances or the general health of a city's population—but nothing that compiles and compares data on a multitude of factors. There also is research on conditions at the county, multi-county, and state level, but data at the city level rarely are available. Finally, there is a wealth of research based on the detailed statistics (in most cases down to the city block) collected every decade by the U.S. census, but it has limited use for tracking the quality of urban life because the data are not available frequently enough.

This report's goal differs from that of other statistical reviews. An attempt will be made to update this report biennially; thus the data used must be available at least every other year, with the decennial census data used only as a benchmark. Furthermore, while it is desirable to have as the unit of analysis the city proper, much of the publicly available economic and social data is presented only at the county or state level. Despite these data constraints, we believe we have collected and summarized a useful statistical overview of the current condition of Michigan's cities.

## METHODOLOGY

We began by selecting a representative list of 13 Michigan cities, using three criteria. We included four large cities, two independent cities that are contiguous to large metropolitan areas, and seven cities that represent Michigan’s geographic diversity, shown below:

Large Cities	Contiguous Cities	Geographically Diverse Cities
Detroit	Wyoming	Ann Arbor
Grand Rapids	Warren	Battle Creek
Flint		Kalamazoo
Lansing		Muskegon
		Pontiac
		Saginaw
		Traverse City

Of course, these 13 cities comprise only a fraction of all Michigan municipalities. The hope is that by carefully choosing the cities for our sample, measuring their well-being will allow us to generalize to all urban areas in the state.

After selecting the representative cities, we then determined the appropriate time period of analysis. To avoid misinterpretation, it is important to pick dates that correspond to roughly the same points in the economic cycle. For example, there was a vast change in the unemployment rate from 1992 (the last recession) to 2000 (a very good year for the overall economy); comparing these data is useful if we are analyzing the state’s progress during the economic expansion but useless as a guide to long-run changes in the state’s underlying economic fundamentals.

Therefore, we used data for 1990 and 2000, where available. This time span has the advantage of comparing essentially peak-to-peak economic conditions. Unfortunately, in many cases we were forced to adjust the time period of analysis to fit the available data. Therefore, for some measures, the data series ends in 1998 or 1999; for some others, historical data for ten years back simply are not available. The time period for each measure is identified in the detailed tables.

This report summarizes data in the following eight major areas:

- Demographics
- Economics
- Property values
- Crime
- K–12 education
- Government finance

- Health
- Environmental conditions

For each measure we began by comparing current conditions within a city to those of a decade (or selected time period) ago. Have conditions improved or deteriorated during the time period? We also looked for variability among the cities; i.e., is there a wide divergence among the 13 cities or are the trends similar? Then, in general, we compared the recent data for each city with the average for its surrounding county and for the state as a whole. How do conditions in the central city compare to its surrounding area? In most cases, we view this comparative measure as most important.

## **FUTURE RESEARCH**

It is hoped this is only the second of a long, useful series of *Status of Michigan Cities* reports. Unfortunately, good data are not available for many urban quality-of-life subjects under current policy discussion. For example, few cities maintain a central database on the age and condition of such public infrastructure as roads, sewers, water systems, and school facilities. Such data would be invaluable in the debates concerning urban sprawl, brownfield redevelopment, and state support for K–12 education. Government at all levels—federal, state, and local—must assist researchers in establishing a central database containing vital information on urban areas.

# Summary

---

There is both bad and good news about Michigan cities. On the one hand, in most instances population continues to shift from the urban core to the surrounding area and farther, taking with it job opportunities and economic activity. On the other hand, crime is down significantly in the cities, and measures of infant mortality and deaths from cancer and heart disease show improvement. The data and our analysis of each measure are presented in detail in the exhibits that comprise the body of this report. Our findings may be summarized as follows.

- Urban **population** continues to fall, both in absolute terms and relative to the nonurban areas. From 1990 to 2000, the population in the 13 representative cities fell 4.3 percent, while during the same period the population of the state rose 6.9 percent. In 2000, the population of the 13 cities represented about 31 percent of the total surrounding counties, down from about 34 percent in 1990.
- **Population change** results both from natural events (births minus deaths) and migration. Each of the cities experienced out-migration from 1990 to 2000. Net out-migration was highest in Flint (28.9 percent of the 2000 population) and Saginaw (28.0 percent) and lowest in Wyoming (4.4 percent).
- The **unemployment rate** dropped sharply in all of the 13 cities from 1990 to 2000. The average fell from 9.8 percent unemployed in 1990 to 4.9 percent in 2000. Pontiac enjoyed the biggest drop, from 15.5 percent in 1990 to 6.4 percent in 2000, a reduction of nearly 60 percent.
- Nevertheless, the **unemployment rate** gap between the urban and nonurban areas increased. In 1990 the 13-city average unemployment rate was 29 percent higher than the statewide average; by 2000 it was 36 percent higher.
- The relative decline in economic activity in the urban areas is evident in the data on **total employment**. The number of workers in the 13 cities increased 7.3 percent from 1990 to 2000, but during the same 10-year period, employment increased 20.3 percent for the state as a whole. In 1990, 23 percent of state employment was in the 13 cities; by 2000 the figure had fallen to 20 percent. If the 1990 ratio of urban-to-state employment had remained constant, there would have been an additional 124,000 workers in these 13 cities in 2000.
- **Median household income** in the 13 cities rose from \$25,140 in 1989 to \$34,552 (estimated) in 1999. Although this 37.4 percent increase is slightly above the 34.4 percent inflation rate during the same period, it is far below the 53.8 percent increase for the state as a whole. In the most recent year, median household income in the 13 cities was only about three-quarters of the median state household income, down from 80 percent in 1989.
- Overall, **property values** grew 5.4 percent in the 13 cities from 1990 to 2000— much less than the 7.2 percent average of the counties in which the cities are located. Business property recorded the largest difference in growth rates, rising 3.8 percent in the cities

and 5.6 percent for the counties as a whole. In 1990, of all business property value in the 12 counties in which the 13 cities are located, 27.4 percent was located within the cities; by 2000 the percentage had fallen to only 23.2 percent.

- **Home ownership** rates are much higher in nonurban areas than in cities. In 2000 an estimated 57.8 percent of housing units in the 13 cities were owner-occupied single-family homes, compared to 73.8 percent for the state as a whole. Home ownership rates in the cities generally increased from 1990 to 2000.
- **Crime**, especially major crime (murder, rape, robbery, assault, burglary, larceny, arson, and car theft) declined dramatically in the 13 cities from 1990 to 2000: from 91.4 to 67.0 major crimes per thousand population—a 26.7 percent decline. Total crime fell 11.9 percent during the same period. However, the crime rate remains much higher in cities than in nonurban areas. At 67.0 instances per thousand population in 2000, the major crime rate in the 13 cities was 63 percent greater than the state average.
- Nineteen percent of all Michigan **K–12 pupils** are enrolled in one of the 13 urban school districts. We compiled composite passing MEAP scores for the cities, their intermediate school districts (ISDs), and the state. In 2000, 48.9 percent of the 13 cities’ students achieved passing MEAP scores, up from 41.0 percent in 1997 but below the 59.5 percent ISD average. (The MEAP has undergone so many changes in the last decade that we concentrated only on the last few years.)
- There are more **low-income families** in the cities than in the nonurban areas. In 2000, 49.2 percent of students in the 13 school districts qualified (based on family income) for the federal free or reduced-price school lunch program. This compares to only 33.4 percent of the students in the ISDs in which the cities are located and 28.9 percent for the state as a whole.
- On average, **school spending per pupil** is higher in the urban districts than it is for the state as a whole. The \$6,745 state foundation grant per pupil in 2001 is \$126 higher than the statewide average. Had we included the state’s “at-risk” funding (a program to help pupils at risk of academic failure) the gap would be even wider, since the greater percentage of at-risk monies are directed to urban schools. The 2000 average urban teacher salary, \$49,285, was \$241 higher than the state average.
- The 13 urban schools in this study have higher **dropout rates** and lower graduation rates than the average of the surrounding ISDs or the state as a whole. In 2000 the average dropout rate for the 13 school districts was 5.8 percent, ranging from a high of 11.6 percent in Detroit to a low of 2.9 percent in Warren. On average, the dropout rate for the urban schools is approximately 50 percent higher than the average rate for their surrounding ISDs, while the graduation rate is only about 8 percent less than the ISDs.
- **City government finances** improved greatly from 1990 to 2000, with most cities increasing their fund balance during this period. A combination of strong economic growth and, in some cities, operating millage increases, has left city governments with healthier local budgets than in the late 1980s.

- Measures of the **physical health** of city residents improved during the last ten years. Infant mortality declined in 12 of the 13 cities. The average rate fell from 12.8 per 1,000 live births in 1986–1990 to 4.6 in 2000, a 25 percent decline. However, the average rate for the 13 cities was approximately 17 percent above that of the surrounding counties in 1996–2000.
- The **rate of heart disease and cancer deaths** also declined in the 13 cities. From 1990 to 2000, the heart disease death rate fell from 320 per 100,000 residents to 283, a 12 percent decline. The cancer death rate also fell slightly, from 214 per 100,000 residents in 1990 to 200 in 2000. The death rate from these two diseases is moderately higher in the thirteen urban areas, on average, than in the surrounding counties.
- Tracking **environmental conditions** in our major urban areas is very difficult because the data are inconsistent among the cities and collection methods vary from year to year. Clearly, an important policy objective should be to upgrade the available urban environmental data. This report summarizes four measures of pollution: number of hazardous waste facilities, number of “brownfield” sites (abandoned, idle, or underused industrial and commercial facilities where expansion or redevelopment is impeded by real or perceived environmental contamination) being redeveloped with state funding, toxic-release inventory, and “ozone days.” The 13 cities have a high percentage—39 percent—of all hazardous waste facilities in the state yet only 20 percent of the state’s population. In 1999, over \$21 million of state dollars was directed to cleaning up brownfield sites in the 13 cities. Finally, as recorded by the Michigan Department of Environmental Quality, the combined on-site releases and transfers of toxic materials in the 13 cities rose 159 percent from 1990 to 1999—from 53.4 million to 138.3 million pounds a year. Much of the increase is attributed to a federal law change in 1998 that mandated reporting in seven additional industry sectors.

## INDEX OF URBAN WELL-BEING

In an effort to summarize the change in living conditions in Michigan’s urban centers, we have compiled an “index of urban well-being.” As is the case with any composite index, the components and calculations are somewhat arbitrary. In most cases, this index measures the relative progress of selected Michigan cities in comparison to the county or intermediate school district (ISD) in which they are located and/or the state as a whole. For this report, the index comprises 12 factors. These particular 12 variables were selected because they represent the broad subject areas covered in the report and a full range of data is available for each.

- City population growth relative to county (1990 to 2000)
- Absolute change in urban unemployment rates (1990 to 2000)
- Change in the unemployment rate relative to county (1990 to 2000)
- Change in total employment relative to county (1990 to 2000)
- Growth of median household income relative to county (1989 to 1999)
- Growth in total property values relative to county (1990 to 2000)

- Change in crime relative to county (1990 to 2000)
- Change in crime relative to statewide average (1990 to 2000)
- Improvement in MEAP scores relative to ISDs (1997 to 2000)
- Change in graduation rates relative to ISDs (1997 to 2000)
- City government fund balance as a percentage of total revenue (1990 to 2000)

In most cases, a base year was calculated and set to 100. The most current data were used to measure the change from the base. Due to data limitations, the base year of the index is a composite of several years—1989, 1990, and 1997. The most recent year for each of the series also varies. The goal is to recreate and improve the index each year the report is released.

**Population** — The index number was calculated by indexing the percent change in population from 1990 to 2000 to 100 and dividing the change for the cities by the change for the counties. The urban index declined from the last report because the cities lost more ground relative to the counties from 1990 to 2000 than from 1990 to 1996, the period used in the previous report. From 1996 to 2000, the population of the 13 cities fell 4.3 percent while the population of the surrounding counties rose 4.6 percent.

**Unemployment rate** — The index was calculated by indexing the percentage point decline in the average rate for the 13 cities to 100. It appears that the index number calculated in the last report is in error. Using consistent methodology, the 1999 index would be 103.6 rather than 112.0. This adjustment would change the composite index of urban well-being in the previous report from 97.5 to 96.8. The improvement in the index (adjusted) occurs, in large part, because the unemployment rate in the cities jumped sharply from the base year of 1988 used in the previous report to the base year of 1990 used in this report. Therefore, the improvement in the more recent period was larger, although the average unemployment rate for the 13 cities was about unchanged from 1998 to 2000.

**Relative Unemployment rate** — The index number was calculated by dividing the percent change in the average city unemployment rate (1990–2000) by the percent change in the average county unemployment rate (1990–2000). The urban index improved significantly because the improvement in the urban areas was larger relative to the improvement in the surrounding counties in the 1990–2000 period than in the 1988–1998 period used in the previous report. This occurred, in large part, because, as mentioned above, the unemployment rate in the cities jumped sharply from the base year of 1988 used in the previous report to the base year of 1990 used in this report.

**Total employment** — The index number was calculated by indexing the percent change in employment from 1990 to 2000 to 100, and dividing the change for the cities by the change for the counties. The urban index improved significantly because employment growth in the urban areas was better relative to growth in the surrounding counties in the 1990–2000 period than in the 1988–1998 period used in the previous report.

**Household income** — The index number was calculated by indexing the percent change in median household income from 1990 to 2000 to 100 and dividing the change for the cities by the change for the counties. The urban index declined from the last report because the cities lost more ground relative to the counties from 1989 to 1999, than from 1989 to 1997, the period used in the previous report.

**Total property values** — The index number was calculated by indexing the average annual percent change in total property values from 1990 to 2000 to 100 and dividing the change for the cities by the change for the counties. The urban index improved because property value growth in the urban areas, particularly in Detroit and Pontiac, was better relative to growth in the surrounding counties in the 1990–2000 period than in the 1988–1998 period used in the previous report.

**Business property values** — The index number was calculated by dividing the percent change in business property values for the 13 cities by the percent change in business property values in the surrounding counties. The urban index improved because property value growth in the urban areas, particularly in Battle Creek and Muskegon, was better relative to growth in the surrounding counties in the 1990–2000 period than in the 1988–1998 period used in the previous report.

**Crime (City vs. County)** — The index number was calculated by indexing the percent change in the total crime rate per thousand from 1990 to 2000 to 100 and dividing the change for the cities by the change for the counties. The index declined from the last report because crime in the 13 cities declined more in the 1990–1996 period used in the last report than in the 1990 to 2000 period. Nonetheless, crime rates showed a continuing downward trend.

**Crime (City vs. State)** — The index number was calculated by indexing the percent change in total crime per thousand population from 1990 to 2000 to 100, and dividing the change for the cities by the change for the state. The index declined from the last report because crime in the 13 cities declined less in the 1990–2000 period relative to the statewide decline than in the 1990–1996 period used in the last report.

**MEAP** — The index number was calculated by indexing the percent change in the composite MEAP score from 1997 to 2000 to 100 and dividing the change for the cities by the change for the ISDs. The urban index improved significantly because the improvement in MEAP scores in the urban areas was better relative to the improvement in the surrounding ISDs in the 1990–2000 period than in the 1996–1998 period used in the previous report.

**Graduation rates** — The index number was calculated by indexing the percent change in the graduation rates from 1997 to 2000 to 100 and dividing the change for the cities by the change for the ISDs. The urban index improved significantly because the improvement in graduation rates in the urban areas was better relative to the improvement in the surrounding ISDs in the 1990–2000 period than in the 1996–1998 period used in the previous report.

**Fund Balances** — The index number was determined by calculating fund balances as a percentage of revenue in 1990 and 2000 and indexing the percent change to 100. The index declined from the last report because fund balances as a percentage of revenue improved less in the 1990 to 2000 period than in the 1987–1997 period used in the previous report.

Overall, the index of urban well-being fell from 100 in the base year of 1990 (in most cases) to 99.7 percent in 2000. In contrast, the 2000 index documents a positive improvement from the 1999 index, which stood at 97.5. However, the calculation of the 1999 index for the unemployment rate appears to be in error. Using consistent methodology for both periods, the index for the earlier period is 103.6 and the composite index is 96.8. The adjusted improvement in the composite index is thus 3, as is shown in Exhibit 1.

The calculation for this year’s report is comparable, but covers a different time period. Of the 12 measures used for this index, seven declined and five increased from the base year. The biggest improvements were the relative change in the MEAP test, the relative change in the graduation rate, the absolute decline in the unemployment rate and the fall in the crime index. The only index indicators that improved relative to the surrounding county were the MEAP test and the graduation rate. Exhibit 1 lists the 1999 and 2000 values for the 12 indicators, which are illustrated as a bar chart in Exhibit 2.

## EXHIBIT 1

### 2000 Index of Urban Well-Being (Compared to a Base Year of 100)

Measure	1989-1999	1990-2000	Percent Change
Relative Population Change	93.8	91.5	-2.5%
Unemployment Rate	103.6*	104.9	1.2
Relative Unemployment Rate	83.7	96.4	15.2
Total Employment	87.1	97.0	11.4
Average Household Income	96.8	94.2	-2.7
Total Property Values	96.1	98.3	2.3
Business Property Values	75.0	85.4	13.9
Crime Index	113.7	111.9	-1.6
Relative Crime Index	97.4	93.6	-3.9
MEAP Test Scores	107.0	112.7	5.3
Graduation Rates	101.0	107.7	6.6
Fund Balances	106.8	103.3	-3.3
<b>Composite Index</b>	<b>96.8*</b>	<b>99.7</b>	<b>3.0</b>

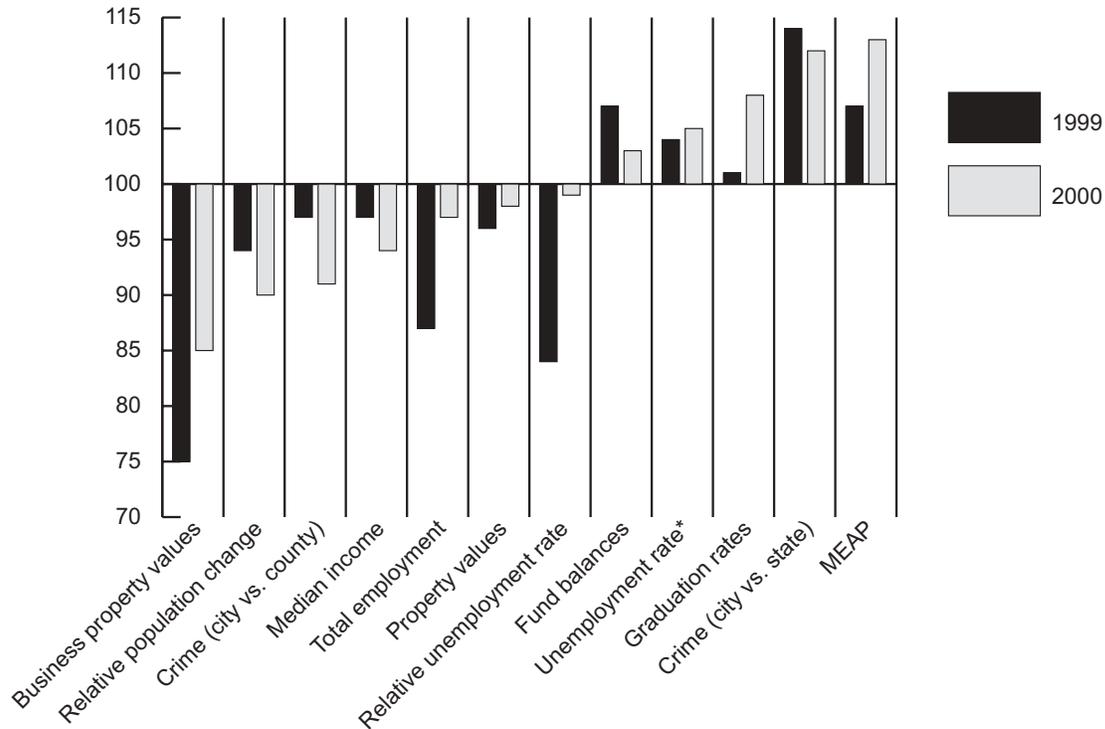
Note: The base year for the 12 measures is 1990, in most cases. The exceptions are in average household income (1989), MEAP test scores (1987), and graduation rates (1997).

\*Revised figure.

SOURCE: Public Sector Consultants.

## EXHIBIT 2

### Index of Urban Well-Being by Component



\*Revised 1999 figure

SOURCE: Public Sector Consultants.

# **Data on Representative Cities**

---

### EXHIBIT 3

#### Urban Population, 1990 and 2000

	City Population 1990	City Population 2000	Percent Change	County Population 1990	County Population 2000	Percent Change	City vs County Change/ Point Difference
Ann Arbor	109,592	114,024	4.0%	282,937	322,895	14.1%	-10.1%
Battle Creek	53,540	53,364	-0.3	135,982	137,985	1.5	-1.8
Detroit	1,027,974	951,270	-7.5	2,111,687	2,061,162	-2.4	-5.1
Flint	140,761	124,943	-11.2	430,459	436,141	1.3	-12.6
Grand Rapids	189,126	197,800	4.6	500,631	574,335	14.7	-10.1
Kalamazoo	80,277	77,145	-3.9	223,411	238,603	6.8	-10.7
Lansing	127,321	119,128	-6.4	281,912	279,320	-0.9	-5.5
Muskegon	40,283	40,105	-0.4	158,983	170,200	7.1	-7.5
Pontiac	71,166	66,337	-6.8	1,083,592	1,194,156	10.2	-17.0
Saginaw	69,512	61,799	-11.1	211,946	210,039	-0.9	-10.2
Traverse City	15,157	14,532	-4.1	64,273	77,654	20.8	-24.9
Warren	138,247	144,864	4.8	717,400	788,149	9.9	-5.1
Wyoming	63,891	69,368	8.6	500,631	574,335	14.7	-6.1
<b>Total</b>	<b>2,126,847</b>	<b>2,034,679</b>	<b>-4.3%</b>	<b>6,203,213</b>	<b>6,490,639</b>	<b>4.6%</b>	<b>-8.9</b>
State	9,295,297	9,938,444	6.9%				
<b>Urban as % of State</b>	<b>23%</b>	<b>20%</b>					

SOURCE: U.S. Census Bureau.

The latest estimated population data available for cities are for 2000. Statewide, population increased 6.9 percent from 1990 to 2000, but, with few exceptions, the cities studied for this report did not fare nearly as well.

- Total population declined in 9 of the 13 cities studied for this report. The exceptions are Ann Arbor, Grand Rapids, Warren, and Wyoming.
- The largest declines occurred in Flint (-11.2 percent), Saginaw (-11.1 percent) and Detroit (-7.5 percent).
- None of the 13 cities matched the increase of its surrounding county. Battle Creek came the closest. Pontiac and Traverse City lagged farthest behind.
- In total, the population in the 13 cities declined 4.3 percent—from 23 percent of the total state population to 20 percent.

While urban area population for the 13 cities fell by 4.3 percent, the nonurban areas of the surrounding counties increased by 4.6 percent.

**EXHIBIT 4**  
**Percentage of Population Aged 65 and Older, 1990 and 2000**

	City 1990	City 2000	Percent Change	County 1990	County 2000	Percent Change	City vs County Percentage point Difference 2000
Ann Arbor	7.3%	7.9%	8.2%	7.5%	8.1%	8.0%	-0.2%
Battle Creek	14.4	13.5	-6.3	13.3	13.7	3.0	-0.2
Detroit	12.1	10.4	-14.0	12.5	12.7	1.6	-2.3
Flint	10.7	10.5	-1.9	10.1	11.6	14.9	-1.1
Grand Rapids	13.0	11.6	-10.8	10.8	10.4	-3.7	1.2
Kalamazoo	10.7	10.1	-5.6	10.6	11.4	7.5	-1.3
Lansing	9.6	9.7	1.0	8.7	9.4	8.0	0.3
Muskegon	14.6	12.4	-15.1	13.1	12.9	-1.5	-0.5
Pontiac	8.7	8.5	-2.3	10.9	11.3	3.7	-2.8
Saginaw	11.9	11.4	-4.2	12.1	13.5	11.6	-2.1
Traverse City	16.8	15.2	-9.5	12.3	13.1	6.5	2.1
Warren	14.9	17.3	16.1	12.3	13.7	11.4	3.6
Wyoming	9.8	9.4	-4.1	10.8	10.4	-3.7	-1.0
<b>Average</b>	<b>11.9%</b>	<b>11.4%</b>	<b>-4.2%</b>	<b>11.2%</b>	<b>11.8%</b>	<b>5.3%</b>	<b>-0.3</b>
State	11.9%	12.3%	3.4%				

SOURCE: U.S. Census Bureau.

The latest data available for the 65-and-older population for cities and counties are from the 2000 census. Statewide, the 65-and-older population was 12.3 percent of total population in 2000.

- Nine of the cities studied fall below this percentage, an increase from 1997. Seven of the counties also fell below the state average.
- In four cities—Ann Arbor, Lansing, Pontiac, and Wyoming—the 65-and-older population is estimated at under 10 percent.

We find that on average, the relative share of the 65-and-older population is decreasing in the 13 cities, a turn-around from the previous report. Statewide, the increase in share from 1990 to 2000 is 3.4 percent; in the 13 cities, there is a decrease of 4.2 percent.

In 1990, the percentage of the 65-and-older population exceeded that of the county in eight of the cities. In 2000, that number decreased to four.

## EXHIBIT 5

### Racial Composition, 1990 and 2000

	City % Minority 1990	County % Minority 1990	City vs. County Percent Difference 1990	City % Minority 2000	County % Minority 2000	City vs. County Percent Difference 2000	City vs County Percentage Point Difference 2000
Ann Arbor	17.7%	16.5%	7.2%	25.3%	22.6%	11.9%	2.7
Battle Creek	19.1	12.7	50.4	25.3	16.1	57.1	9.2
Detroit	78.4	42.6	84.0	87.7	48.3	81.6	39.4
Flint	50.4	21.8	131.0	58.6	24.7	137.2	33.9
Grand Rapids	23.3	11.3	106.1	32.7	16.9	93.5	15.8
Kalamazoo	22.8	11.6	96.5	29.2	15.4	89.6	13.8
Lansing	26.0	15.9	63.5	34.7	20.5	69.2	14.2
Muskegon	30.1	15.8	90.5	39.4	18.7	110.7	20.7
Pontiac	48.5	10.4	366.0	60.9	17.2	254.1	43.7
Saginaw	47.8	21.9	118.2	53.0	24.7	114.6	28.3
Traverse City	1.7	2.0	-15.0	4.0	3.5	14.3	0.5
Warren	2.6	3.3	-21.2	8.7	7.3	19.2	1.4
Wyoming	6.3	11.3	-44.2	15.7	16.9	-7.1	-1.2
<b>Average</b>	<b>28.8</b>	<b>15.5</b>		<b>36.6%</b>	<b>19.7%</b>		<b>17.1</b>
State	17.8			19.8%			

SOURCE: U.S. Census Bureau.

One way to measure segregation in a community is to look at the percentage of minority population in comparison with its surrounding area: the narrower the difference, the less the segregation. The latest data available for cities and counties are from the 2000 census. The average minority percentage in the cities studied was 36.6. This represents a 27 percent increase since 1990.

- Nine cities had a minority population at least 50 percent higher than their surrounding county in 2000.
- All 13 cities and surrounding counties experienced an increase in minority population from 1990 to 2000.

It is likely that the percentage of minorities increased in most Michigan cities from 1990 to 2000, as the state rate increased from 17.8 to 19.8.

**EXHIBIT 6**  
Net Migration, 1990 to 2000

	Population			Births 1990-2000	Deaths 1990-2000	Net Migration	
	1990	2000	Change			Net Migration	As % of 2000 Population
Ann Arbor	109,608	114,024	4,416	15,499	5,816	-5,267	-4.6%
Battle Creek	53,516	53,364	-152	12,301	6,770	-5,683	-10.6
Detroit	1,027,974	951,270	-76,704	207,825	119,673	-164,856	-17.3
Flint	140,925	124,943	-15,982	35,451	15,297	-36,136	-28.9
Grand Rapids	189,126	197,800	8,674	45,216	20,643	-15,899	-8.0
Kalamazoo	80,277	77,145	-3,132	16,465	7,470	-12,127	-15.7
Lansing	127,321	119,128	-8,193	27,997	10,762	-25,428	-21.3
Muskegon	39,809	40,105	296	9,674	5,231	-4,147	-10.3
Pontiac	71,136	66,337	-4,799	16,619	6,792	-14,626	-22.0
Saginaw	69,512	61,799	-7,713	17,292	7,707	-17,298	-28.0
Traverse City	15,155	14,532	-623	2,121	1,913	-831	-5.7
Warren	144,864	138,247	-6,617	20,221	16,337	-10,501	-7.6
Wyoming	63,891	69,368	5,477	12,652	4,121	-3,054	-4.4
<b>Urban Total</b>	<b>2,133,114</b>	<b>2,028,062</b>	<b>-105,052</b>				<b>5.2</b>

SOURCE: Michigan Information Center and Public Sector Consultants.

Net migration—the movement of people in and out of a city—is calculated by subtracting the change in a city’s total population from the difference between births and deaths. The table presents the net migration calculations from 1990 to 2000 for the 13 selected cities.

- All 13 cities experienced an outflow of migration during the 1990s.
- As a percentage of its population, the smallest losses were in Ann Arbor and Wyoming, and the largest losses were in Flint and Saginaw.

**EXHIBIT 7**  
**Unemployment Rates, 1990 and 2000**  
**(Percentage of Labor Force)**

	City 1990	City 2000	Percent Change	County Average 1990	County Average 2000	Percentage Point Difference	
						City vs. County 2000	City vs. State 2000
Ann Arbor	4.2%	1.4%	-66.7%	5.0%	1.6%	-0.2	-2.2
Battle Creek	8.6	5.0	-41.9	7.5	4.3	0.7	1.4
Detroit	14.3	6.6	-53.8	8.8	3.9	2.7	3.0
Flint	16.6	9.5	-42.8	9.8	5.4	4.1	5.7
Grand Rapids	8.1	4.4	-45.7	5.8	3.1	1.3	0.8
Kalamazoo	8.0	4.3	-46.3	5.4	2.8	1.5	0.7
Lansing	8.0	3.3	-58.8	6.4	2.6	0.7	-0.3
Muskegon	11.4	6.1	-46.5	8.7	4.6	1.5	2.5
Pontiac	15.5	6.4	-58.7	5.7	2.2	4.2	2.8
Saginaw	13.8	7.4	-46.4	8.0	4.2	3.2	3.8
Traverse City	4.8	2.5	-47.9	7.0	3.7	-1.2	-1.1
Warren	8.7	3.7	-57.5	7.4	3.1	0.6	0.1
Wyoming	5.7	3.0	-47.4	5.8	3.1	-0.1	-0.6
<b>Average</b>	<b>9.8%</b>	<b>4.9%</b>	<b>-50.2%</b>	<b>7.1%</b>	<b>3.4%</b>	<b>1.5</b>	<b>1.3</b>
State	7.6%	3.6%	-52.6%				

SOURCE: Michigan Department of Career Development, Office of Labor Market Information.

One key economic indicator for a city is its unemployment rate, which is calculated by dividing the number of unemployed people looking for work by the total labor force (population aged 16–64). The unemployment rate may understate the amount of unemployment because it does not include people not actively seeking work, many of whom may have become discouraged and given up. The number not seeking work is likely to be much larger during a period of economic weakness than it is during one of economic strength.

The 2000 statewide unemployment rate was 3.6 percent.

- Of the 13 Michigan cities studied, nine had a 2000 rate higher than the state average.
- Only four cities—Ann Arbor, Traverse City, Warren, and Wyoming—were below the state average.
- Only in three—Ann Arbor, Traverse City, and Wyoming—was the city unemployment rate below that of surrounding county.
- From 1990 to 2000, the state unemployment rate fell 52.6 percent; the urban average fell 50.2 percent.
- The unemployment rate fell sharply in all 13 cities in the last decade, and in five—Ann Arbor, Detroit, Lansing, Pontiac, and Warren—the decline exceeded 50 percent.
- The city with the smallest decline was Battle Creek (-41.9 percent).

## EXHIBIT 8

### Total Employment, 1990 and 2000

	City 1990	City 2000	% Change	County 1990-2000 % Change	Percentage Point Difference	
					City vs. County 2000	City vs. State 2000
Ann Arbor	61,625	69,925	13.5%	12.9%	0.6	-6.9
Battle Creek	24,425	26,525	8.6	9.2	-0.6	-11.7
Detroit	398,050	402,375	1.1	4.6	-3.5	-19.3
Flint	56,650	52,750	-6.9	-3.7	-3.2	-27.2
Grand Rapids	95,475	118,275	23.9	25.3	-1.4	3.5
Kalamazoo	40,125	43,125	7.5	8.9	-1.4	-12.9
Lansing	62,800	64,425	2.6	3.6	-1.0	-17.8
Muskegon	16,100	18,850	17.1	18.7	-1.6	-3.3
Pontiac	31,850	34,475	8.2	15.6	-7.3	-12.1
Saginaw	26,975	27,600	2.3	5.5	-3.2	-18.0
Traverse City	8,475	11,100	31.0	29.5	1.5	10.6
Warren	77,250	89,075	15.3	16.2	-0.9	-5.0
Wyoming	36,375	45,625	25.4	25.3	0.1	5.1
<b>Total</b>	<b>936,175</b>	<b>1,004,125</b>	<b>7.3%</b>	<b>10.6%*</b>	<b>-3.3</b>	<b>-13.0</b>
State	4,076,000	4,905,000	20.3%			

\*Weighted average.

SOURCE: Michigan Department of Career Development, Office of Labor Market Information.

The most important indicator of a city's economic vitality is the change in employment over several years. In this report, Public Sector Consultants used the growth rate from 1990 to 2000.

Statewide, employment increased 20.3 percent from 1990 to 2000, compared with only a 7.3 percent increase for the 13 cities. Among the cities studied for this report, however, there was wide variation in the change in employment over the last decade.

- In 10 cities, employment increased at less than the state rate.
- In one city, Flint, employment declined.
- Flint fared the worst (down 6.9 percent) and Traverse City the best (up 31 percent).
- In the surrounding counties, there were no employment declines, with the exception of Flint. Increases ranged from 3.6 percent in Ingham County to nearly 29.5 percent in Grand Traverse.
- Only in 3 cities did employment grow faster than in the surrounding county; Ann Arbor, Traverse City, and Wyoming.
- Detroit, Flint, Pontiac, and Saginaw fared the worst relative to their surrounding county.

## EXHIBIT 9

### Labor Force, 1990 and 2000

	City 1990	City 2000	Percent Change	County % Change 1990–2000	Percentage Point Difference	
					City vs. County 2000	City vs. State 2000
Ann Arbor	61,625	69,925	13.5%	12.9%	0.6	-2.3
Battle Creek	24,425	26,525	8.6	9.1	-0.5	7.2
Detroit	398,050	402,375	1.1	4.6	-3.5	-14.7
Flint	56,650	52,750	-6.9	3.8	-10.7	-22.7
Grand Rapids	95,475	118,275	23.9	25.3	-1.4	8.1
Kalamazoo	40,125	43,125	7.5	8.9	-1.4	-8.3
Lansing	62,800	64,425	2.6	3.6	-1.0	-13.2
Muskegon	16,100	18,850	17.1	18.7	-1.6	1.3
Pontiac	31,850	34,475	8.2	15.6	-7.4	-7.6
Saginaw	26,975	27,600	2.3	5.5	-3.2	-13.5
Traverse City	8,475	11,100	31.0	29.4	1.6	15.2
Warren	77,250	89,075	15.3	16.2	-0.9	-0.5
Wyoming	36,375	45,625	25.4	25.3	0.1	9.6
<b>Urban Total</b>	<b>936,175</b>	<b>1,004,125</b>	<b>7.3%</b>			<b>8.5%</b>
State	4,470,000	5,175,000	15.8%			

SOURCE: Michigan Department of Career Development.

A city's labor force equals the total number residents working or actively looking for work.

- From 1990 to 2000, the total 13-city labor force increased 7.3 percent. This contrasts sharply with the 15.8 percent increase for the state as a whole.
- In only three cities—Ann Arbor, Traverse City, and Wyoming—did the labor force grow faster than in the surrounding county
- Only Flint suffered a decline—6.9 percent.
- Traverse City had the largest increase—31 percent.

**EXHIBIT 10**  
Michigan Median Household Income, 1989 and 1999 (est.)

	City Median Income 1989	City Median Income 1999	Percent Change	County Median Income 1999	City as % of County 1999	County 1989-99 Percent Change	City vs. County Percentage Point Difference
Ann Arbor	\$33,344	\$57,937	73.8%	\$58,105	99.7%	60.0%	13.8
Battle Creek	25,306	32,882	29.9	38,643	85.1	39.3	-9.4
Detroit	18,742	23,153	23.5	39,012	59.3	39.3	-15.8
Flint	20,176	23,341	15.7	41,918	55.7	35.1	-19.4
Grand Rapids	26,809	38,861	45.0	48,564	80.0	50.1	-5.1
Kalamazoo	23,207	32,782	41.3	44,610	73.5	43.6	-2.3
Lansing	26,398	32,874	24.5	44,115	74.5	46.3	-21.8
Muskegon	18,748	25,558	36.3	37,892	67.5	47.9	-11.6
Pontiac	21,962	29,248	33.2	68,168	42.9	57.0	-23.8
Saginaw	17,736	20,796	17.3	38,796	53.6	38.7	-21.4
Traverse City	27,396	40,480	47.8	44,057	91.9	51.7	-3.9
Warren	35,890	50,146	39.7	53,093	94.4	36.4	3.3
Wyoming	31,103	41,118	32.2	48,564	84.7	50.1	-17.9
<b>Average</b>	<b>\$25,140</b>	<b>\$34,552</b>	<b>37.4%</b>	<b>\$46,414</b>	<b>74.1%</b>	<b>45.8%</b>	<b>-10.4</b>
State	\$31,020	\$47,708	53.8%				

SOURCE: U.S. Census Bureau; calculations by Public Sector Consultants.

The latest income data available for cities is for 1989 (from the 1990 census). Public Sector Consultants updated the numbers to 1999 by using (1) the 1989–99 increase in adjusted gross income, which is available by school district from the Michigan Department of Treasury, and (2) 1995–99 percentage changes in employment and weekly earnings, which are available from the Michigan Department of Career Development (MDCD). Earnings data are available only for counties; therefore we assume that the increase for the city and the surrounding county was the same for 1995–99. (The MDCD employment numbers indicate little difference in growth for the city and surrounding county.)

Michigan median household income increased an estimated 53.8 percent from 1989 to 1999.

- The only city to record faster income growth was Ann Arbor (almost 74 percent).
- The slowest growth was in Flint (15.7 percent) and Saginaw (17.3 percent).
- Ann Arbor and Warren were the only cities that had faster income growth than the surrounding county.
- The cities falling furthest below the growth rate of the surrounding county were Pontiac, Saginaw, and Lansing.

The statewide median household income in 1999 was \$47,708.

- Among the 13 cities, the high was Ann Arbor (nearly \$58,000) and the low was Saginaw (a little under \$21,000).
- The only cities above the state average were Ann Arbor and Warren.

- None of the 13 cities had a median income as high as its county's.
- In Ann Arbor, Battle Creek, and Traverse City, the median household income was over 90 percent of the county's.
- The lowest income relative to the county was in Pontiac (42.9 percent), Saginaw (53.6 percent), Flint (55.7 percent), and Detroit (59.3 percent).

## EXHIBIT 11

### Poverty Rates, 1990 and 1998

	City % of Population in Poverty 1990	County % of Population in Poverty 1990	City vs. County Percentage Point Difference 1990	County % of Population in Poverty 1998
Ann Arbor	14.3%	12.2%	2.1	8.1%
Battle Creek	18.0	14.3	3.7	13.4
Detroit	32.0	20.1	11.9	17.3
Grand Rapids	15.4	9.2	6.2	8.8
Kalamazoo	22.8	13.5	9.3	11.1
Lansing	19.3	16.6	2.7	13.0
Flint	30.0	16.5	13.5	14.6
Muskegon	23.9	15.3	8.6	14.0
Pontiac	25.6	6.0	19.6	6.2
Saginaw	31.1	17.2	13.9	15.3
Traverse City	8.3	8.5	-0.2	7.7
Warren	6.4	5.2	1.2	6.0
Wyoming	7.0	9.2	-2.2	8.8
<b>Average</b>	<b>19.5%</b>	<b>12.9%</b>	<b>6.6</b>	<b>9.0%</b>
State	13.0%			11.4%

SOURCE: U.S. Census Bureau.

An important measure of economic hardship in a city is the number of people living below the poverty line. The latest data available for cities is for 1990, from the 1990 census, and the latest available data for counties is for 1998. For a family of three in Michigan, the poverty threshold was \$9,981 in 1990 and \$13,120 in 1998.

- In 1990 three of the 13 cities had a poverty rate of 30 percent or more: Detroit (32 percent), Saginaw (31 percent), and Flint (30 percent).
- The lowest rates of poverty in 1990 were in Warren (6 percent), Wyoming (7 percent), and Traverse City (8 percent).
- In 11 cities, the poverty rate was higher than in the surrounding county. Pontiac, with more than a quarter of its residents living in poverty, fared the worst in comparison to its county (Oakland, with 6 percent).

It is likely that the poverty rate declined in most Michigan cities from 1990 to 1998, as the state rate fell from 13.0 to 11.4 percent. In addition, poverty rates declined in all but two surrounding counties—Oakland (Pontiac) and Macomb (Warren).

**EXHIBIT 12**  
Growth in Urban Property Value (State Equalized Value), Annual Rate,  
1990–2000

	All Property 1990–2000	Residential 1990–2000	Business 1990–2000
Washtenaw County	7.6%	9.2%	5.3%
<b>Ann Arbor</b>	<b>5.4</b>	<b>6.3</b>	<b>4.2</b>
Calhoun County	7.4	8.0	6.3
<b>Battle Creek</b>	<b>6.4</b>	<b>6.8</b>	<b>5.9</b>
Wayne County	6.8	7.9	4.9
<b>Detroit</b>	<b>6.9</b>	<b>8.7</b>	<b>4.3</b>
Kent County	7.3	7.6	6.9
<b>Grand Rapids</b>	<b>5.4</b>	<b>5.1</b>	<b>5.8</b>
Kalamazoo County	6.6	7.7	5.0
<b>Kalamazoo</b>	<b>5.1</b>	<b>5.4</b>	<b>4.7</b>
Ingham County	6.1	6.3	5.4
<b>Lansing</b>	<b>4.3</b>	<b>4.1</b>	<b>4.6</b>
Genesee County	6.3	8.0	3.6
<b>Flint</b>	<b>0.8</b>	<b>3.6</b>	<b>-1.3</b>
Muskegon County	7.8	8.5	6.4
<b>Muskegon</b>	<b>5.5</b>	<b>6.8</b>	<b>4.5</b>
Oakland County	7.6	8.4	6.0
<b>Pontiac</b>	<b>4.9</b>	<b>8.9</b>	<b>2.4</b>
Saginaw County	5.9	7.1	4.5
<b>Saginaw</b>	<b>3.4</b>	<b>3.6</b>	<b>3.1</b>
Grand Traverse County	10.2	10.9	8.7
<b>Traverse City</b>	<b>7.8</b>	<b>7.8</b>	<b>7.8</b>
Macomb County	7.7	8.5	6.1
<b>Warren</b>	<b>4.8</b>	<b>5.8</b>	<b>3.1</b>
Kent County	7.3	7.6	6.9
<b>Wyoming</b>	<b>5.4</b>	<b>6.1</b>	<b>4.6</b>
<b>Urban Average (weighted)</b>	<b>5.4%</b>	<b>6.6%</b>	<b>3.9%</b>
County Average	7.2%	8.2%	5.6%
State	7.6%	8.7%	5.4%

SOURCE: Michigan Department of Treasury, State Tax Commission; calculations by Public Sector Consultants.

A key indicator of a city's economic vitality is the growth in property value compared to other cities, the state, and the county in which it is located.

Statewide, from 1990 to 2000, property values increased an average of 7.6 percent annually. Of the 13 cities studied for this report, only Traverse City exceeded the state figure.

- Experiencing the slowest annual property growth were Flint (0.8 percent), and Saginaw (3.4 percent).
- The fastest urban growth rates occurred in Traverse City (7.8 percent), Detroit (6.9 percent), and Battle Creek (6.4 percent).
- For all 13 cities, property value growth averaged 5.4 percent during this period, significantly below the statewide rate.

- In the 12 counties in which the 13 cities are located, the 1990–2000 property growth rate averaged 7.2 percent.
- The only city that exceeded the growth rate of its county was Detroit.
- The cities that fared the poorest relative to their county were Flint (–5.5 percentage points difference between city and county), Warren (–2.9 percentage points), and Pontiac (–2.7 percentage points).

Comparing the growth in value of commercial/industrial (C/I) property with that of residential property indicates whether a city is attracting new businesses or current businesses are expanding. In regard to 1990–2000 growth in C/I versus residential property value, the findings are mixed.

- In two cities—Lansing and Grand Rapids—the growth in the value of C/I property exceeded that of residential property. Growth in C/I property equaled residential growth in Traverse City.
- In three—Battle Creek, Kalamazoo, and Saginaw—C/I growth was within 1 percent of residential growth.
- In three—Pontiac, Flint, and Detroit—the growth in C/I property values fell well short of residential growth.
- In only one city—Flint—did C/I property value actually decline (–1.3 percent). Similarly, the growth rate of 3.6 percent in Genesee County was the lowest of the 12 counties.

**EXHIBIT 13**  
Average Home Value, 1989 and 1999 (est.)

	Average Home Value 1989 (000)	Average Home Value 1999 (000)	Percent Change 1989-99	County Average Home Value 1999*	County % Change 1989-99	City Value as % of County 1999	City vs. County % Point Difference 1989-99
Ann Arbor	\$136	\$206	51.5%	\$172	89.2%	119.8%	-37.7
Battle Creek	50	90	80.0	82	104.1	109.8	-24.1
Detroit	29	60	106.9	101	85.5	59.4	21.4
Grand Rapids	62	107	72.6	119	87.4	89.9	-14.8
Kalamazoo	59	98	66.1	108	83.7	90.7	-17.6
Lansing	52	70	34.6	96	58.9	72.9	-24.3
Flint	38	58	52.6	93	97.1	62.4	-44.5
Muskegon	36	64	77.8	81	90.3	79.0	-12.5
Pontiac	38	74	94.7	185	75.2	40.0	19.5
Saginaw	35	51	45.7	81	81.2	63.0	-35.5
Traverse City	75	142	89.3	118	98.9	120.3	-9.6
Warren	68	114	67.6	136	85.8	83.8	-18.2
Wyoming	59	103	74.6	119	87.4	86.6	-12.8
<b>Urban Average</b>	<b>\$ 57</b>	<b>\$ 95</b>	<b>66.7%</b>	<b>\$114</b>	<b>86.5%</b>	<b>83.0%</b>	<b>-13.3</b>
State	\$ 73	\$125	71.2%				

\*State Equalized Value

\*\*Census

SOURCE: Michigan Department of Treasury and U.S. Census Bureau; calculations by Public Sector Consultants.

An important indicator of the well-being of a community is the average value of a home, both the absolute value and its change. Low and/or falling home values are closely associated with a community in decline. The decline usually is caused by falling demand for homes because public services are deteriorating and/or residents and businesses are moving out of the city.

The latest data available for housing values by city is from the 1990 census (for 1989), and Public Sector Consultants took several steps to develop a consistent data set for 1989 and 1999. First, the residential state equalized valuation (SEV) for each city for 1989, as reported by the Michigan Tax Commission, was divided by the number of owner-occupied homes reported in the 1990 census (and multiplied by two, because SEV is 50 percent of market value). This calculated average home value then was compared with the average home value as reported in the 1990 census. The calculated number in each case was found to be 5–15 percent above the census figure. This is because residential SEV includes homes that are rented and apartment complexes with four or fewer units. Second, 1999 residential SEV (times two) was divided by the number of homestead exemption affidavits for each city, as reported by the Michigan Department of Treasury. This number then was reduced by the percentage that the 1989 SEV calculation exceeded the census estimate of average home value. The final result is an estimate of average home values in 1999 that should be reasonably consistent with the 1990 census data.

Statewide, in 1989, the average home value was \$73,249. The value rose by about 71 percent from 1989 to 1999.

- Of the 13 cities studied, the 1989 highest home value was in Ann Arbor (\$135,946) and the low was in Detroit (\$28,805).
- In only two cities—Ann Arbor and Traverse City—did 1989 home values exceed the state average.
- From 1989 to 1999, six cities exceeded the statewide increase: Detroit (106.9 percent), Pontiac (94.7 percent), Traverse City (89.3 percent), Battle Creek (80 percent), Muskegon (77.8 percent), Wyoming (74.6 percent), and Grand Rapids (72.6 percent).
- In 1999, the average home value in the 12 counties was \$114,000; the average home value in the 13 cities was \$95,000.
- Ann Arbor, Battle Creek, and Traverse City were the only cities studied in which the average home value exceeded the county average.
- In two cities the average home value was less than 60 percent of that of the surrounding county: Pontiac (40 percent of the county figure) and Detroit (about 59 percent).
- From 1989 to 1999, only two cities—Detroit and Pontiac—recorded larger increases in value than the surrounding county.

## EXHIBIT 14

### Home Ownership, 1990 and 2000 (est.)

	Occupied Housing Units 1990	Owner Occupied Homes 1990	Percent Home Ownership 1990	Occupied Housing Units 2000	Owner Occupied Homes 2000	Percent Home Ownership 2000	County % Home Ownership 1990	County % Home Ownership 2000
Ann Arbor	41,657	17,996	43.2%	45,693	20,685	45.3%	55.3%	59.7%
Battle Creek	21,457	13,494	62.9	21,348	14,044	65.8	71.0	73.0
Detroit	374,057	197,929	52.9	336,428	184,647	54.9	63.9	66.6
Grand Rapids	69,029	41,349	59.9	73,217	43,717	59.7	69.7	70.3
Kalamazoo	29,409	13,928	47.4	29,413	14,027	47.7	64.4	65.7
Lansing	50,635	27,737	54.8	49,505	28,488	57.5	58.4	60.8
Flint	53,894	31,306	58.1	48,744	28,679	58.8	70.4	73.2
Muskegon	14,770	8,070	54.6	14,569	8,284	56.9	59.4	77.7
Pontiac	24,777	12,321	49.7	24,234	12,786	52.8	77.2	74.7
Saginaw	26,179	15,065	57.5	23,182	14,749	63.6	70.7	73.8
Traverse City	6,201	3,824	61.7	6,443	3,805	59.1	74.8	77.4
Warren	54,602	43,415	79.5	55,551	44,659	80.4	67.7	78.9
Wyoming	24,168	16,297	67.4	26,536	17,948	67.6	69.7	70.3
<b>Urban Avg.</b>	<b>60,833</b>	<b>34,056</b>	<b>56.0%</b>	<b>58,066</b>	<b>33,578</b>	<b>57.8%</b>		
State	3,419,331	2,427,643	71.0%	3,785,661	2,793,124	73.8%	67.9%	73.8%

SOURCE: U.S. Census Bureau; calculations by Public Sector Consultants.

An important measure of community stability is home ownership. A dip in the percentage of households owning their home may indicate that a community is in decline. The latest home-ownership data available for cities are from the 1990 census. To calculate the rate of home ownership, Public Sector Consultants divided the number of owner-occupied homes by the number of occupied households, then updated the data to 2000. The number of owner-occupied homes was based on the homestead exemption affidavits filed with the Michigan Department of Treasury, and the number of households was estimated by dividing 2000 population by the average household size (1990 census).

The home ownership rate in Michigan increased from 71 percent in 1990 to 73.8 percent in 2000. The city home ownership rate also rose, from 56.0 percent to 57.8 percent.

- Of the 13 cities studied, the 2000 home-ownership low was in Ann Arbor (45.3 percent), which has a large student population, and the high in Warren (80.4 percent).
- In 1990 home ownership was higher than the statewide average only in Warren (79.5 percent).
- Also, only in Warren was home ownership higher than in the surrounding county.
- In 2000, only Warren (80.4 percent) exceeded the state average.
- By 2000 home ownership appears to have increased in 11 of the 13 cities, failing to increase in only Grand Rapids and Traverse City.

**EXHIBIT 15**  
Crime Rates, 1990 and 2000

	Major Crime				Other Crime				Total Crime				
	Total 1990	Per 1000 1990	Total 2000	Per 1000 2000	Total 1990	Per 1000 1990	Total 2000	Per 1000 2000	Total 1990	Per 1000 1990	Total 2000	Per 1000 2000	Percent Change Per 1000
Ann Arbor	9,249	84.4	4,015	35.2	10,484	95.6	5,510	48.3	180.0	127.4	83.5	180.0	-53.6%
Battle Creek	3,208	59.9	5,081	95.2	3,612	67.5	5,427	101.7	196.9	162.4	196.9	196.9	54.5
Detroit	126,361	122.9	97,776	102.8	40,611	39.5	35,974	37.8	162.4	140.6	140.6	140.6	-13.4
Flint	19,318	137.1	11,187	89.5	15,989	113.5	7,625	61.0	250.5	150.6	150.6	150.6	-39.9
Grand Rapids	16,541	87.5	13,056	66.0	23,914	126.4	22,540	114.0	213.9	180.0	180.0	180.0	-15.9
Kalamazoo	8,427	105.0	6,075	78.7	12,449	155.1	11,215	145.4	260.0	224.1	224.1	224.1	-13.8
Lansing	10,382	81.5	6,958	58.4	12,559	98.6	13,733	115.3	180.2	173.7	173.7	173.7	-3.6
Muskegon	4,794	120.4	3,537	88.2	3,356	84.3	9,455	235.8	204.7	323.9	323.9	323.9	58.2
Pontiac*	6,423	90.3	4,707	71.0	8,387	117.9	6,294	94.9	208.2	165.8	165.8	165.8	-20.3
Saginaw	8,985	129.3	4,491	72.7	11,246	161.8	8,512	137.7	291.0	210.4	210.4	210.4	-27.7
Traverse City	776	51.2	684	47.1	1,654	109.1	1,384	95.2	160.3	142.3	142.3	142.3	-11.2
Warren	8,854	61.2	4,094	28.3	6,690	46.2	5,330	36.8	107.4	65.1	65.1	65.1	-39.4
Wyoming	3,634	56.9	2,656	38.3	5,213	81.6	6,523	94.0	138.5	132.3	132.3	132.3	-4.4
<b>Urban Total</b>	<b>226,952</b>	<b>91.4</b>	<b>164,317</b>	<b>67.0</b>	<b>156,164</b>	<b>99.8</b>	<b>139,522</b>	<b>101.4</b>	<b>191.1</b>	<b>168.4</b>	<b>168.4</b>	<b>168.4</b>	<b>-11.9%</b>
State	549,344	60.2	401,398	41.2	717,309	78.6	685,572	70.5	138.8	111.7	111.7	111.7	-19.5%

\*Data are for 1992 and 1998.

Note: Major crimes include murder, rape, robbery, assault, burglary, larceny, arson, and car theft.

SOURCE: Uniform Crime Report Statistics, Michigan State Police.

Categorized as major crime are murder, rape, robbery, assault, burglary, larceny, arson, and car theft.

- From 1990 to 2000, incidents of major crime fell in all cities except one—Battle Creek, which experienced a significant increase.
- As a group, the cities' rate fell from 91 crimes per thousand people in 1990 to 67 per thousand in 2000, a decline of nearly 27 percent.
- Even with the reduction from 1990, major crime in the 13 cities in 2000 was 63 percent higher than for the state as a whole.

The rate for "other" crimes on average increased in the cities by 1.6 percent from 1990 to 2000, compared to a 10.3 percent decrease statewide. At 101.4 incidents per thousand people, non-major crime in the urban areas was 44 percent above the statewide rate.

**EXHIBIT 16**  
**Michigan Educational Assessment Program (MEAP),**  
**Percentage of Composite\* Passing Scores, School Years 1997 and 2000**

	Percentage Composite Passing 1997	Percentage Composite Passing 2000	Percent Change	Percentage Point Difference	
				Urban vs. ISD 2000	Urban vs. Statewide Average 2000
Ann Arbor	62.4%	71.2%	14.1%	13.4	14.1
Battle Creek	37.2	42.4	14.0	-12.3	-14.7
Detroit	34.2	42.0	22.8	-11.6	-15.1
Flint	24.6	32.6	32.5	-23.9	-24.5
Grand Rapids	33.2	40.4	21.7	-25.0	-16.7
Kalamazoo	41.9	49.6	18.4	-11.7	-7.5
Lansing	35.9	46.7	30.1	-17.6	-10.4
Muskegon	31.0	41.6	34.2	-11.4	-15.5
Pontiac	31.1	35.3	13.5	-29.1	-21.8
Saginaw	33.5	39.9	19.1	-16.8	-17.2
Traverse City	54.2	66.7	23.1	5.7	9.6
Warren	55.2	64.9	17.6	5.5	7.8
Wyoming	58.9	61.8	4.9	-3.6	4.7
<b>Urban Average State</b>	<b>41.0%</b>	<b>48.9%</b> 57.1%	<b>19.2%</b>	<b>-10.6</b>	<b>-8.2</b>

\*Composite=total number of tests (not students) taken in grades 4, 5, 7, 8, and 11.  
 SOURCE: Standard & Poors, Inc., www.standardandpoors.com.

In school year 1999–2000, for the combined Michigan Educational Assessment Program (MEAP) tests taken by students in grades 4, 5, 7, 8, and 11, about 49 percent of the students in the 13 cities achieved a “passing” (satisfactory) score, up from 41 percent in 1996–97.

- The percentage of MEAP tests at or above the passing grade ranged from a low of about 32 percent in Flint to a high of 71 percent in Ann Arbor.
- Four of the 13 school districts scored above the statewide average: Ann Arbor, Traverse City, Warren, and Wyoming.
- Ten districts performed below the intermediate school district (ISD) in which they are located; in three—Flint, Grand Rapids, and Pontiac—students averaged more than 20 percentage points below the ISD average.
- Overall, the 13 urban schools scored about 8 percentage points below the state average in 1999–2000 (the urban and state averages were 48.9 percent and 57.1 percent, respectively).

## EXHIBIT 17

### Free and Reduced Lunch Program

	Percentage Eligible 1998	Percentage Eligible 2000	Percent Change	City vs. ISD Percent Difference 2000	City vs. State Percentage Point Difference 2000
Ann Arbor	17.5%	17.1%	-2.3%	-8.9%	-11.8%
Battle Creek	56.1	50.2	-10.5	85.8	21.3
Detroit	70.0	68.5	-2.1	106.5	39.6
Flint	63.1	64.2	1.7	134.6	35.3
Grand Rapids	65.3	65.4	0.2	190.2	36.5
Kalamazoo	55.4	59.6	7.6	127.0	30.7
Lansing	52.6	51.7	-1.7	197.2	22.8
Muskegon	67.8	66.5	-1.9	100.0	37.6
Pontiac	65.5	63.9	-2.4	299.4	35.0
Saginaw	63.4	63.3	-0.2	120.9	34.4
Traverse City	23.3	23.1	-0.9	-32.1	-5.8
Warren	14.0	14.8	5.7	-31.0	-14.1
Wyoming	29.1	30.9	6.2	29.3	2.0
<b>Urban Average</b>	<b>49.5%</b>	<b>49.2%</b>	<b>-0.6%</b>	<b>75.1%</b>	<b>20.3%</b>
State	31.6%	28.9%	-2.7%		

SOURCE: Standard & Poors, Inc.

Urban schools in Michigan have a much higher percentage of students eligible to participate in the federal free or reduced-price lunch program than is the case statewide. Eligibility is based on family income (for a family of four, annual income below \$21,000 qualifies the children for free meals; income under \$30,000 qualifies them for reduced-price meals).

- In 2000, 49 percent of the students in the 13 cities combined were eligible for the federal program. This compares to about 29 percent statewide.
- Detroit had the highest percentage of students eligible—68 percent—for the lunch program, more than 39 percentage points above the state average.

Most urban schools had a significantly higher percentage of students eligible for free and reduced-price lunch than was the case in the intermediate school districts (ISDs) in which they are located.

**EXHIBIT 18**  
**State Foundation Grant and Other School Aid, 2000–2001,**  
**and Teacher Salaries, 1999–2000**

	State Foundation Grant 2000–2001		Other School Aid 2000–2001		Teachers Salaries 1999–2000	
	Per Pupil	Compared to State Average	Per Pupil	Compared to State Average	Average	Compared to State Average
Ann Arbor	\$8,511	\$1,892	\$1,445	\$401	\$56,865	\$7,821
Battle Creek	6,424	–195	2,050	1,006	41,192	–7,852
Detroit	6,584	–35	2,184	1,140	42,774	–6,270
Flint	6,752	133	2,408	1,364	48,968	–76
Grand Rapids	6,282	–337	2,450	1,406	53,349	4,305
Kalamazoo	6,671	52	1,985	941	46,129	–2,915
Lansing	6,605	–14	2,070	1,026	51,111	2,067
Muskegon	6,458	–161	2,622	1,578	50,230	1,186
Pontiac	6,384	–235	1,562	518	42,660	–6,384
Saginaw	6,483	–136	2,037	993	49,670	626
Traverse City	6,000	–619	1,588	544	45,094	–3,950
Warren	8,353	1734	1,290	246	60,139	11,095
Wyoming	6,173	–446	1,712	668	52,519	3,475
<b>Urban Average</b>	<b>\$6,745</b>	<b>\$126</b>	<b>\$1,954</b>	<b>\$910</b>	<b>\$49,285</b>	<b>\$241</b>
State	\$6,619		\$1,044		\$49,044	

SOURCE: Michigan Department of Education.

The foundation grant is the basic operating money available to school districts; it includes nearly all local property tax revenue but excludes federal funds and state monies for special at-risk programs. In the 2000–01 school year, the state foundation grant for the 13 urban districts averaged \$6,745 per student, \$126 above the statewide average. The 13 urban school districts also received substantial nonfoundation grant support.

- Every district received more nonfoundation monies than the state per pupil average of \$1,044.
- Muskegon received the most nonfoundation grant monies: \$2,622 per pupil.

In 1999–2000, teachers’ salaries in the 13 districts averaged \$49,285. This is \$241 above the state average. Urban teacher salaries ranged from a high of \$60,139 (in Warren, almost \$11,000 above the state average) to a low of \$41,192 (in Battle Creek, more than \$7,800 below the average). Some of this disparity likely is due to differences in teacher experience.

**EXHIBIT 19**  
K–12 Enrollment and Student Teacher Ratios, 1999 and 2000

	Enrollment		Students per Teacher			
	1999	2000	Average 1999	ISD Average 1999	Average 2000	ISD Average 2000
Ann Arbor	16,287	16,493	19.1	19.4	17.9	18.5
Battle Creek	8,204	7,725	13.9	17.7	13.2	17.2
Detroit	161,356	154,648	18.9	18.9	17.3	18.4
Flint	24,523	22,919	18.1	19.2	16.4	18.9
Grand Rapids	25,563	25,051	16.8	17.9	17.3	17.6
Kalamazoo	11,515	11,259	15.7	17	15.0	17
Lansing	17,836	17,620	15.3	17.7	16.3	17.3
Muskegon	6,600	6,423	17.2	17.7	16.5	17.6
Pontiac	12,609	12,290	19.3	18.3	19.3	17.8
Saginaw	12,675	12,834	17.2	18.2	17.9	17.9
Traverse City	10,966	10,669	18.9	18.4	18.2	17.2
Warren	15,119	14,260	20.1	19.2	18.4	19.1
Wyoming	5,520	5,531	17.4	17.9	18.4	17.6
<b>Urban total</b>	<b>328,773</b>	<b>317,722</b>				
State	1,662,815	1,666,741				
<b>Urban/ISD average</b>			<b>17.5</b>	<b>18.3</b>	<b>17.1</b>	<b>17.9</b>
State			17.9		17.5	

Note: Student/Teacher ratio is the total student headcount divided by professional instructional staff, excluding pre-kindergarten and adult education instructors. In districts with large numbers of teachers with non-classroom teaching assignments, using the student-teacher ratio will distort class size and make it appear that the district has smaller class sizes than it actually has.  
SOURCE: Standard and Poors, Inc. and Michigan K–12 Database.

In total, students in the 13 urban school districts comprised 19.1 percent of all Michigan K–12 public school students in 2000, a slight drop from 19.8 percent in 1999. Urban enrollment dropped by 3.4 percent during this period, while state enrollment remained level.

- The Detroit school district enrolled nearly 155,000 students, more than six times that of the second largest district in the state, and nearly the same number of students in the other 12 cities combined.
- In school year 2000, the average pupil-teacher ratio in the 13 urban schools—17.1 to one—was slightly better than the statewide average of 17.5 to one.
- The lowest pupil-teacher ratio among the 13 districts was in Battle Creek: 13.2 to one.
- The highest ratio among the 13 was in Pontiac: 19.3 to one.

## EXHIBIT 20

### Dropout and Graduation Rates, School Years 1996–1997 and 1999–2000

	1996–1997 Dropout Rate	1999–2000 Dropout Rate	% Difference Compared to ISD Average	% Difference Compared to Statewide Average	1996–1997 Graduation Rate	1999–2000 Graduation Rate	% Difference to ISD Average	% Difference to Statewide Average
Ann Arbor	8.3%	4.8%	41.2%	33.3%	69.9%	81.6%	–6.0%	–5.8%
Battle Creek	7.6	7.8	81.4	116.7	69.9	75.7	–10.2	–12.6
Detroit*	26.4	11.6	107.1	222.2	29.7	53.3	–34.0	–38.5
Flint	12.1	8.6	115.0	138.9	62.1	72.7	–15.3	–16.1
Grand Rapids	7.3	2.3	–17.9	–36.1	73.1	90.7	1.7	4.7
Kalamazoo	6.3	3.3	22.2	–8.3	76.7	87.7	–2.0	1.3
Lansing*	9.9	8.4	95.3	133.3	75.6	72.7	–13.8	–16.1
Muskegon	19.3	5.7	21.3	58.3	44.4	81.8	–1.4	–5.5
Pontiac	12.1	7.3	97.3	102.8	62.5	77.3	–10.5	–10.7
Saginaw	13.5	3.2	–15.8	–11.1	55.4	88.4	2.2	2.1
Traverse City	4.6	3.9	18.2	8.3	81.6	84.9	–3.1	–2.0
Warren	3.0	2.9	–3.3	–19.4	88.0	88.6	0.1	2.3
Wyoming	4.2	5.3	89.3	47.2	82.8	80.5	–9.8	–7.0
<b>Urban Average</b>	<b>10.4%</b>	<b>5.8%</b>	<b>50.1%</b>	<b>60.5%</b>	<b>67.1%</b>	<b>79.7%</b>	<b>–7.9%</b>	<b>–8.0%</b>
State	6.6%	3.6%			76.2%	86.6%		

\*1999 data.

SOURCE: Standard & Poors, Inc., [www.standardandpoors.com](http://www.standardandpoors.com).

The dropout rate indicates the percentage of students who left school and did not return the following year. The number applies to grades 9–12 only. Included are students who may have transferred to another school district, a charter school, or a private school. Student dropout rates in 1999–2000 were higher in nine urban schools than for the state as a whole.

- Urban dropout rates averaged a 44 percent decline from the 1996–97 school year, falling from 10.4 percent to 5.8 percent.
- Dropout rates ranged from 11.6 percent in Detroit to only 2.3 percent in Grand Rapids.
- In 10 of the 13 urban schools, the dropout rate in 1999–2000 was higher than in the intermediate school district in which they were located; only Grand Rapids, Saginaw, and Warren were below their ISD rate.

The graduation rate is the percentage of 9th grade students who complete their senior year and graduate. In Detroit, in 1999–2000, graduation was achieved by just over half of those who had been freshmen four years prior. This compares to a 86.6 percent graduation rate statewide in 1999–2000 and a 79.7 percent urban average.

**EXHIBIT 21**  
Michigan's Urban Areas  
Government Finance: Tax Collections, 1990 and 2000

	Taxes 1990 (\$000)	Taxes 2000 (\$000)	Percent Change	Taxes Per Capita 1990	Taxes Per Capita 2000
Ann Arbor	\$31,495	\$49,992	58.7%	\$286	\$438
Battle Creek	17,473	24,653	41.1	327	462
Detroit	461,525	662,039	43.4	449	696
Flint	37,248	41,070	10.3	263	329
Grand Rapids	40,295	63,737	58.2	212	322
Kalamazoo	17,796	25,238	41.8	222	327
Lansing	39,607	53,362	34.7	312	448
Muskegon	4,303	12,245	184.6	107	305
Pontiac	22,486	26,849	19.4	316	405
Saginaw	15,000	19,665	31.1	216	318
Traverse City	3,800	6,031	58.7	251	415
Wyoming	5,502	8,316	51.1	38	60
Warren	39,712	48,473	22.1	624	699
<b>Urban Total</b>	<b>\$736,243</b>	<b>\$1,041,670</b>	<b>41.2%</b>	<b>\$345*</b>	<b>\$514*</b>

\*Weighted average.

SOURCE: Michigan Municipal League and selected city financial reports.

This exhibit shows tax collections for each of the 13 cities in the study, measured both in total dollars and per capita, and compares recent collections to the previous decade. Note that property taxes levied for non-General Fund purposes are not included, which could skew per capita collection comparisons.

- Growth in General Fund tax collections averaged more than 41 percent from 1990 to 2000 for the 13 cities.
- The increase in tax collections was well above the 32 percent inflation rate during the same period.
- Per capita municipal tax collections rose in all 13 cities. As a whole, collections (weighted) rose from \$345 per resident to \$514 per resident, a 49 percent increase.

**EXHIBIT 22**  
Total General Fund Revenues, 1990 and 2000

	Total Revenues 1990 (\$000)	Total Revenues 2000 (\$000)	Percent Change	Revenues Per Capita 1990	Revenues Per Capita 2000
Ann Arbor	\$53,108	\$86,668	63.2%	\$482	\$760
Battle Creek	30,146	41,909	39.0%	564	785
Detroit	1,227,404	1,369,415	11.6%	1,194	1,440
Flint	64,336	84,451	31.3%	455	676
Grand Rapids	71,735	113,076	57.6%	378	572
Kalamazoo	33,507	45,735	36.5%	417	593
Lansing	68,875	100,295	45.6%	543	842
Muskegon	10,453	21,452	105.2%	259	535
Pontiac	46,931	59,612	27.0%	660	899
Saginaw	27,660	38,002	37.4%	398	615
Traverse City	7,363	10,895	48.0%	486	750
Warren	62,295	82,141	31.9%	429	594
Wyoming	13,877	21,309	53.6%	218	307
<b>Urban Total</b>	<b>\$1,717,691</b>	<b>\$2,074,959</b>	<b>20.8%</b>	<b>\$803*</b>	<b>\$1,024*</b>

\*Weighted average.

SOURCE: Michigan Municipal League and selected city financial reports.

This exhibit compares total General Fund revenue collections, including property and income tax, state revenue sharing, and federal aid for the 13 cities studied.

- Total revenue for the cities grew by about 21 percent from 1990 to 2000, well below the rate of inflation (32 percent).
- On average, per capita total taxes (weighted) in the 13 cities rose from \$803 in 1990 to \$1,024 in 2000, a 27.5 percent increase.

**EXHIBIT 23**  
**Government Finance: General Fund Balances, 1990 and 2000**

	Unrestricted Fund Balance 1990*	Unrestricted Fund Balance 2000*	Change	Fund Balance as a % of Total Revenues 1990	Fund Balance as a % of Total Revenues 2000
Ann Arbor	\$1,487,674	\$9,464,146	\$7,976,472	2.8%	10.9%
Battle Creek	1,063,842	11,312,235	10,248,393	3.5	27.0
Detroit	-46,516,523	65,927,526	112,444,049	-3.8	4.8
Flint	1,841,723	-14,709,249	-16,550,972	2.9	-17.4
Grand Rapids	5,678,031	14,779,156	9,101,125	7.9	13.1
Kalamazoo	6,032,020	9,093,508	3,061,488	18.9	19.0
Lansing	10,799,686	17,183,776	6,384,090	15.7	17.1
Muskegon	1,319,201	4,701,735	3,382,534	12.6	21.9
Pontiac	697,194	8,133,342	7,436,148	1.5	13.6
Saginaw	2,327,945	7,671,511	5,343,566	8.4	20.2
Traverse City	1,623,106	4,123,662	2,500,556	22.0	37.9
Warren	10,517,002	29,924,894	19,407,892	16.9	36.4
Wyoming	1,197,817	2,760,975	1,563,158	8.6	13.0
<b>Urban Average</b>				<b>10.8%</b>	<b>19.8%</b>

\*Includes Budget Stabilization Fund monies.

SOURCE: Michigan Municipal League and selected city financial reports.

One indicator of the financial health of a city is its fund balance as a percentage of revenues. Most of the 13 cities built up a large budget surplus during the strong economic expansion of the 1990s.

- In 2000 all of the 13 cities except Flint had a positive unrestricted fund balance; as a percentage of total revenues, the highs were in Traverse City (37.9 percent) and Warren (36.4 percent) and the lows in Detroit (4.8 percent) and Flint (-17.4 percent).
- Twelve of the 13 cities increased their fund balance as a percentage of revenue from 1990 to 2000.

**EXHIBIT 24**  
**Government Finance: General Long-Term Debt, 1990 and 2000**

	Outstanding Debt 1990 (\$000)	Outstanding Debt 2000 (\$000)	Change (\$000)	Debt Per Capita 1990	Debt Per Capita 2000
Ann Arbor	\$40,277	\$0	-\$40,277	\$366	\$0
Battle Creek	34,804	25,970	-8,834	651	487
Detroit	981,110	909,079	-72,031	954	956
Flint	54,557	31,690	-22,867	386	254
Grand Rapids	32,391	62,885	30,493	171	318
Kalamazoo	14,812	51,365	36,553	184	666
Lansing	47,477	47,443	-34	374	398
Muskegon	26,084	11,195	-14,889	646	279
Pontiac	65,747	33,130	-32,617	924	499
Saginaw	0	4,148	4,148	—	67
Traverse City	4,704	673	-4,031	310	46
Warren	29,373	36,940	7,567	202	267
Wyoming	9,055	43,869	34,813	142	632

SOURCE: Michigan Municipal League and selected city financial reports.

The outstanding general debt rose in 5 of the 13 cities. Grand Rapids, Kalamazoo, and Wyoming all recorded significant increases in per capita debt from 1990 to 2000. These numbers do not include proprietary debt but may include non-debt liabilities such as compensated absences.

- Outstanding per capita debt declined in seven cities: Ann Arbor, Battle Creek, Detroit, Flint, Muskegon, Pontiac, and Traverse City.
- The largest per capita debt (\$956) was in Detroit, and the smallest was in Ann Arbor, which had no general fund debt.
- These data are provided for information only, as the relationship between per capita debt and fiscal or economic health is not completely clear.

---

**EXHIBIT 25**  
General-Obligation Bond Rating

---

	1990 Bond Rating	2000 Bond Rating
Ann Arbor	A+	AA-
Battle Creek	A+	A+
Detroit	BBB	A-
Flint	BBB+	None
Grand Rapids	A+	AA
Kalamazoo	AA	AA
Lansing	AA	AA+
Muskegon	BBB	A
Pontiac	BBB	BBB
Saginaw	A	A-
Traverse City	None	A
Warren	None	A+
Wyoming	None	A

SOURCE: Standard & Poors, Inc.

---

When a city issues general-obligation bonds, it receives a bond rating from a rating agency such as Standard and Poors. The rating is an indicator of the fiscal health of the city and is based on a number of economic, financial, and political factors. The rating range for investment-grade bonds is from AAA (best credit risk) to BBB- (poorest credit risk). As shown, five of the ten cities for which ratings were available for both 1990 and 2000 received an upgrade in their bond rating from the 1990 rating.

**EXHIBIT 26**  
**Operating Millage, 1990 and 2000**

	Operating Mills 1990	Operating Mills 2000	Change (Mills)
Ann Arbor	12.89	11.18	-1.71
Battle Creek	9.38	10.25	0.87
Detroit	20.00	20.00	0.00
Flint	7.50	7.50	0.00
Grand Rapids	7.88	6.40	-1.48
Kalamazoo	20.00	19.27	-0.73
Lansing	13.90	14.90	1.00
Muskegon	13.00	10.00	-3.00
Pontiac	12.00	11.97	-0.03
Saginaw	6.00	5.80	-0.21
Traverse City	13.76	13.76	-0.00
Warren	8.32	8.80	0.48
Wyoming	7.21	7.02	-0.19

SOURCE: Michigan Municipal League.

Of the 13 cities covered in this report, from 1990 to 2000, the general operating mills increased in three, declined in eight, and stayed the same in the remaining two. The largest increase was in Battle Creek, and it was only .87 mills. The largest decline was three mills in Muskegon. Note that these figures do not include non-General Fund operating millage, which could skew the comparison between cities if one city levies significantly more non-General Fund millage than another. These data are provided for information only, as an increase or decline in operating millage is not necessarily a sign of fiscal or economic weakness or strength.

**EXHIBIT 27**  
**Infant Mortality Rate, 1986–1990 and 1996–2000**  
**(Deaths per 1,000 Live Births)**

	City 1986–1990	City 1996–2000	Percent Change	County 1996–2000	City vs County Percent Point Difference 1996–2000
Ann Arbor	9.4	6.5	–30.9%	6.3	0.2
Battle Creek	15.3	6.2	–59.5	7.5	–1.3
Detroit	20.7	15.0	–27.5	10.9	4.1
Flint	11.9	9.6	–19.3	12.3	–2.7
Grand Rapids	14.1	7.9	–44.0	7.9	0.0
Kalamazoo	11.0	8.5	–22.7	8.2	0.3
Lansing	17.0	15.3	–10.0	7.1	8.2
Muskegon	12.1	10.1	–16.5	9.0	1.1
Pontiac	15.4	15.2	–1.3	6.0	9.2
Saginaw	15.1	11.7	–22.5	8.7	3.0
Traverse City	5.9	6.2	5.1	6.0	0.2
Warren	9.0	6.0	–33.3	6.2	–0.2
Wyoming	9.1	6.2	–31.9	7.9	–1.7
<b>Average</b>	<b>12.8</b>	<b>9.6</b>	<b>–25.1%</b>	<b>8.0</b>	<b>1.6</b>

NA= Not Available.

SOURCE: 1990 and 2000 Michigan Resident Death Files, Division for Vital Records and Health Statistics, MDCH.

The infant mortality rate is defined as the number of infant deaths per 1,000 live births, and the exhibit presents the data for the change from 1986–1990 and 1996–2000.

- The infant mortality rate declined in 12 of the 13 cities.
- The cities with the most improvement were Battle Creek (the rate dropped 59.5 percent), Grand Rapids (44 percent), and Warren (33 percent).
- The one city in which the infant mortality rate increased during this period was Traverse City (the rate went up 5.1 percent).
- Overall, the rate fell 25.1 percent in the cities—from 12.8 to 9.6 deaths per 1,000 live births.
- The infant mortality rate in four of the cities in our study fell below the rate for the county in which the city is located. However, the average rate for the 13 cities was 17 percent above that of the surrounding counties in 1996–2000.

**EXHIBIT 28**  
**Heart Disease Death Rate, 1990 and 2000**  
**(Deaths per 100,000 Residents)**

	City 1990	City 2000	Percent change	County 2000	City vs. County Percent Difference 2000
Ann Arbor	149.1	136.8	-8.3%	163.0	-16.1%
Battle Creek	386.1	348.5	-9.7	298.5	16.8
Detroit	393.2	344.4	-12.4	326.9	5.3
Flint	358.4	303.3	-15.4	274.2	10.6
Grand Rapids	357.6	266.9	-25.4	218.9	21.9
Kalamazoo	302.8	255.4	-15.7	241.4	5.8
Lansing	238.2	242.6	1.8	192.9	25.8
Muskegon	408.6	336.6	-17.6	264.8	27.1
Pontiac	311.0	242.7	-22.0	245.5	-1.1
Saginaw	342.9	325.2	-5.1	279.1	16.5
Traverse City	389.7	357.8	-8.2	233.6	53.2
Warren	351.5	365.9	4.1	299.1	22.3
Wyoming	181.1	152.8	-15.6	218.9	-30.2
<b>Average</b>	<b>320.8</b>	<b>283.0</b>	<b>-11.8%</b>	<b>253.2</b>	<b>11.8%</b>

SOURCE: 1990 and 2000 Michigan Resident Death Files, Division for Vital Records and Health Statistics, MDCH.

This exhibit presents the 1990 and 2000 heart disease death rates (number of deaths per 100,000 residents) for the 13 cities studied and for the counties in which they are located.

- The death rate from heart disease declined from 1990 to 2000 in all cities except Lansing and Warren.
- Overall, deaths from heart disease declined nearly 12 percent to 283 per 100,000 residents in the 13 cities; the average was 380 in 1987 and 320.8 in 1997.
- Six cities recorded a 15 percent or greater drop in the number of deaths from heart disease.
- The heart disease death rate in the cities was, on average, 13 percent above that for the surrounding county.

**EXHIBIT 29**  
**Cancer Death Rate, 1990 and 2000**  
**(Deaths per 100,000 Residents)**

	<b>City 1990</b>	<b>City 2000</b>	<b>Percent Change</b>	<b>County 2000</b>	<b>City vs. County Percent Difference 2000</b>
Ann Arbor	119.1	117.5	-1.3%	138.5	-15.1%
Battle Creek	281.7	213.6	-24.2	236.2	-9.6
Detroit	235.0	203.0	-13.6	209.4	-3.1
Flint	241.3	216.9	-10.1	202.8	7.0
Grand Rapids	207.6	188.1	-9.4	160.4	17.2
Kalamazoo	186.9	142.6	-23.7	185.3	-23.0
Lansing	163.6	162.9	-0.4	133.3	22.2
Muskegon	223.1	266.8	19.6	208.9	27.7
Pontiac	194.2	167.3	-13.8	187.9	-10.9
Saginaw	240.6	268.6	11.6	201.7	33.2
Traverse City	284.1	234.0		164.6	42.1
Warren	266.4	252.0	-5.4	217.2	16.0
Wyoming	142.1	161.5	13.7	160.4	0.7
<b>Average</b>	<b>214.3</b>	<b>199.6</b>	<b>-6.9%</b>	<b>187.2</b>	<b>6.6%</b>

SOURCE: 1990 and 2000 Michigan Resident Death Files, Division for Vital Records and Health Statistics, MDCH.

The rate of death from cancer has changed little during the past decade.

- On average, for the 13 cities studied, cancer deaths in 1990 were about 214 per 100,000 city residents. Cancer deaths ten years later were slightly less: approximately 200 deaths per 100,000. This represents only a 7 percent decline, compared to nearly a 12 percent decline in heart disease death rate over the same period.
- Cancer death rates in 2000 varied considerably among the cities, from a high of 269 in Saginaw to a low of 117 in Ann Arbor.
- The cancer death rate in the 13 cities in 2000 was slightly higher than the average for the counties in which they are located; the averages are 200 and 187, respectively.

**EXHIBIT 30**  
**Hazardous-Waste Treatment, Storage,  
and Disposal Facilities, 2000**

	City 2000	County 2000	City as Percent Of County 2000	City as Percent Of State 2000
Ann Arbor	4	8	50.0%	1.7%
Battle Creek	1	2	50.0	0.4
Detroit	24	52	46.2	10.3
Flint	12	13	92.3	5.1
Grand Rapids	9	15	60.0	3.8
Kalamazoo	11	12	91.7	4.7
Lansing	6	9	66.7	2.6
Muskegon	6	10	60.0	2.6
Pontiac	5	20	25.0	2.1
Saginaw	6	6	100.0	2.6
Traverse City	0	0	NA	NA
Warren	4	9	44.4	1.7
Wyoming	3	15	20.0	1.3
<b>Total</b>	<b>91</b>	<b>154</b>	<b>59%</b>	<b>38.9%</b>
State	234			

NA= Not applicable.

SOURCE: Michigan Department of Environmental Quality, Waste Management Division.

An indicator of the environmental condition of a city is the number of hazardous-waste treatment, storage, and disposal facilities located within its borders. The data come from the Waste Management Division of the Michigan Department of Environmental Quality and may be viewed on the division's website.

In 2000 the number of such facilities in the 13 cities totaled more than half the number in the 12 counties in which the cities are located and more than a third of the statewide number.

**EXHIBIT 31**  
Brownfield Redevelopment,  
1997 and 1999–2000\*

	Number of Sites Funded 1997	Amount Approved for Assessment and Reclamation (000) 1997	Number of Sites Funded 1999–00	Amount Approved for Assessment and Reclamation (000) 1999–00
Ann Arbor	0	0	0	0
Battle Creek	2	\$125	8	\$4,400
Detroit	4	4,430	13	11,572
Flint	6	1,080	2	220
Grand Rapids	3	3,000	3	400
Kalamazoo	2	64	4	216
Lansing	5	3,344	1	2,270
Muskegon	1	1,000	0	0
Pontiac	2	345	5	280
Saginaw	9	272	5	425
Traverse City	1	1,583	1	250
Warren	1	1,400	1	681
Wyoming	0	0	0	0
<b>Urban total</b>	<b>36</b>	<b>\$16,643</b>	<b>43</b>	<b>\$20,714</b>
State	128	\$34,172		\$77,000

\*State programs devoted to site cleanup and brownfield redevelopment are numerous and possess similar objectives, but vary in their requirements for eligibility. These programs are capitalized by a variety of funding sources (e.g., bonds, unclaimed bottle deposit revenues, and general fund dollars). For 1997 this exhibit examines the Site-Reclamation Program and the Site Assessment Fund Program. For 1999–2000 we examined projects under the Cleanup and Redevelopment Fund and the Clean Michigan Initiative Bond Program. Dollar totals are combined in 1999–2000 due to the timing of the appropriation late in the fiscal year. These figures do not include the Leaking Underground Storage Tank Cleanup Program or the Emergency and Contingency Program. SOURCE: Michigan Department of Environmental Quality, Environmental Response Division.

A “brownfield” is an abandoned, idle, or under-used industrial or commercial property where expansion or redevelopment is impeded because of real or perceived environmental contamination at the site. The presence of brownfields and the ability to redevelop them are critical to the state and particularly older urban areas. Redeveloping brownfields limits urban sprawl into undeveloped areas by encouraging the reuse of established commercial, industrial and residential districts where public services are already in place. The Brownfield Redevelopment Financing Act and the Single Business Tax Credit are two of the many tools communities are now using to help level the playing field for brownfield properties that otherwise would not be able to compete with open space for development. Changes to state law and voter approval in 1998 of the Clean Michigan Initiative (CMI) reflect citizen concern about the problem and commitment to allocating resources to try to reduce it.

This exhibit presents the number of brownfield redevelopment projects funded by the state in the 13 cities between 1999 and 2000 and also the costs of assessment and reclamation. The State of Michigan allocated a total of more than \$77 million for these purposes in 1999 and 2000, \$21 million of which was allocated in the 13 cities. (Local and federal government and private companies may have spent money for these purposes as well, but these amounts are

not included here.) State expenditures on brownfield sites have increased dramatically with the addition of CMI dollars. In 2001, an additional \$63 million was allocated to brownfield cleanup and redevelopment.

**EXHIBIT 32-A**  
**Toxic Release Inventory,**  
**On-Site Releases, 1990\* and 1999\*\***  
**(Pounds of Chemicals)**

	City (000 pounds) 1990	County (000 pounds) 1990	City (000 pounds) 1999	Percent Change	County (000 pounds) 1999	City as % of County 1990	City as % of County 1999	City as % of State 1990	City as % of State 1999
Ann Arbor	225	4,853	30	-86.8%	281	4.7%	10.6%	0.2%	0.0%
Battle Creek	360	612	73	-79.7	370	58.8	19.8	0.3	0.1
Detroit	3,545	14,167	2,415	-31.9	18,677	25.0	12.9	3.0	2.5
Flint	3,948	4,452	671	-83.0	1,847	88.7	36.3	3.3	0.7
Grand Rapids	4,517	1,308	1,549	-65.7	2,660	345.4	58.2	3.8	1.6
Kalamazoo	1,211	9,479	1,505	24.3	1,516	12.8	99.3	1.0	1.5
Lansing	1,929	2,016	2,566	33.0	2,598	95.7	98.8	1.6	2.6
Muskegon	2,341	2,732	1,763	-24.7	1,812	85.7	97.3	2.0	1.8
Pontiac	2,344	9,352	1,743	-25.7	4,863	25.1	35.8	2.0	1.8
Saginaw	9,985	10,364	1,587	-84.1	1,624	96.3	97.7	8.3	1.6
Traverse City	18	18	45	147.9	45	100.0	100.0	0.0	0.0
Warren	450	3,644	391	-13.2	1,311	12.4	29.8	0.4	0.4
Wyoming	49	1,308	41	-17.5	2,660	3.8	1.5	0.0	0.0
<b>Total</b>	<b>30,925</b>	<b>62,997</b>	<b>14,379</b>	<b>-53.5%</b>	<b>37,604</b>	<b>49.1%</b>	<b>38.2%</b>	<b>25.8%</b>	<b>14.7%</b>
State	119,855		97,575	-18.6%					

\*1990 data taken from the EPA TRIS database.

\*\*1999 data taken from the Michigan SARA Title III Database.

Note: A facility can at any time voluntarily revise or correct reported data. This city and county data is from October 9, 2001. The state total is from March 1, 2001.

Note: In 1998, pursuant to SARA Title III, mandated reporting was required in 7 additional industry sectors.

Note: Off-site disposal is included as a transfer.

SOURCE: Michigan Department of Environmental Quality.

## EXHIBIT 32-B

### Toxic Release Inventory, Transfers, 1990\* and 1999\*\* (Pounds of Chemicals)

	City (000 pounds) 1990	County (000 pounds) 1990	City (000 pounds) 1999	Percent Change	County (000 pounds) 1999	City as % of County 1990	City as % of County 1999	City as % of State 1990	City as % of State 1999
Ann Arbor	37	189	8	-79.4%	1,551	19.5%	0.5%	0.1%	0.0%
Battle Creek	59	83	464	689.4	6,674	70.5	7.0	0.1	0.1
Detroit	7,924	39,124	63,038	695.5	138,045	20.3	45.7	12.9	19.8
Flint	1,112	1,164	1,653	48.7	2,675	95.5	61.8	1.8	0.5
Grand Rapids	3,237	4,114	5,706	76.3	10,024	78.7	56.9	5.3	1.8
Kalamazoo	2,026	5,704	30,816	1421.2	31,638	35.5	97.4	3.3	9.7
Lansing	155	157	1,481	858.2	1,718	98.5	86.2	0.3	0.5
Muskegon	5,239	6,687	10,474	99.9	11,614	78.4	90.2	8.5	3.3
Pontiac	900	3,105	2,679	197.6	21,320	29.0	12.6	1.5	0.8
Saginaw	1,554	1,560	400	-74.3	1,224	99.6	32.7	2.5	0.1
Traverse City	0***	0	5,437	NM	5,437	100.0	100.0	0.0	1.7
Warren	319	860	1,669	422.8	9,651	37.1	17.3	0.5	0.5
Wyoming	2,968	4,114	96	3121.6	10,024	0.1	1.0	0.0	0.0
<b>Total</b>	<b>22,564</b>	<b>62,747</b>	<b>123,920</b>	<b>449.2%</b>	<b>241,571</b>	<b>36.0%</b>	<b>51.3%</b>	<b>36.6%</b>	<b>39.0%</b>
State Total	61,601		362,934	489.2%					

\*1990 data taken from the EPA TRIS database.

\*\*1999 data taken from the Michigan SARA Title III Database.

\*\*\*Traverse City's 1990 transfers totaled only 265 pounds.

Note: A facility can at any time voluntarily revise or correct reported data. This city and county data is from October 9, 2001. The state total is from March 1, 2001.

Note: In 1998, pursuant to SARA Title III, mandated reporting was required in 7 additional industry sectors.

Note: Off-site disposal is included as a transfer.

NM=Not Measurable.

SOURCE: Michigan Department of Environmental Quality.

## EXHIBIT 32-C

### Toxic Release Inventory,

### Combined On-Site Releases and Transfers, 1990\* and 1999\*\*

	City (000 pounds) 1990	County (000 pounds) 1990	City (000 pounds) 1999	Percent Change	County (000 pounds) 1999	City as % of County 1990	City as % of County 1999	City as % of State 1990	City as % of State 1999
Ann Arbor	263	5,041	37	-85.7%	1,832	5.2%	2.0%	0.1%	0.0%
Battle Creek	419	696	537	28.3	7,044	60.2	7.6	0.2	0.2
Detroit	11,469	53,291	65,453	470.7	156,723	21.5	41.8	6.3	23.0
Flint	5,060	5,616	2,324	-54.1	4,522	90.1	51.4	2.8	0.8
Grand Rapids	7,754	5,422	7,255	-6.4	12,684	143.0	57.2	4.3	2.6
Kalamazoo	3,236	15,183	32,321	898.7	33,154	21.3	97.5	1.8	11.4
Lansing	2,084	2,173	4,047	94.2	4,316	95.9	93.8	1.1	1.4
Muskegon	7,581	9,419	12,237	61.4	13,425	80.5	91.1	4.2	4.3
Pontiac	3,245	12,457	4,422	36.3	26,182	26.0	16.9	1.8	1.6
Saginaw	11,539	11,925	1,987	-82.8	2,848	96.8	69.8	6.4	0.7
Traverse City	18	18	5,482	NM	5,482	100.0	100.0	0.0	1.9
Warren	769	4,504	2,060	167.7	10,963	17.1	18.8	0.4	0.7
Wyoming	52	5,422	136	161.1	12,684	1.0	1.1	0.0	0.0
<b>Total</b>	<b>53,489</b>	<b>125,745</b>	<b>138,299</b>	<b>158.6%</b>	<b>279,175</b>	<b>42.5%</b>	<b>49.5%</b>	<b>29.5%</b>	<b>30.0%</b>
State	181,456	181,456	460,509	153.8%					

\*1990 data taken from the EPA TRIS database.

\*\*1999 data taken from the Michigan SARA Title III Database.

Note: A facility can at any time voluntarily revise or correct reported data. This city and county data is from October 9, 2001. The state total is from March 1, 2001.

Note: In 1998, pursuant to SARA Title III, mandated reporting was required in 7 additional industry sectors.

Note: Off-site disposal is included as a transfer.

NM=Not Measurable.

SOURCE: Michigan Department of Environmental Quality.

The toxic release inventory (TRI) is published by the Michigan Department of Environmental Quality. Since 1988, facilities in 19 manufacturing sectors throughout the country have been required to report to the U.S. Environmental Protection Agency the environmental releases and transfers (see definition below) of more than 650 chemicals; facilities report how much they release (measured in pounds) of these substances, both in controlled amounts and by accident. (NOTE: Because facilities may revise or correct their data at any time, it is important to note that the data in Exhibits 32-A–C are from reports on file as of October 2001. The TRI, although very comprehensive and important, does not cover all toxic releases into the environment. Certain industries, such as dry cleaners, are not required to report releases to the TRI. Moreover, other sources of toxic release are not part of the inventory, including automobile exhaust.)

Exhibit 31-A gives the total number of on-site releases reported for 1990 and 1999; Exhibit 31-B presents the total number of transfers; and Exhibit 31-C combines the two data sets. For purposes of the TRI, an on-site release is an air emission, discharge to a surface water body (e.g., lake, stream), the injection of substances into the ground, or disposal of toxic materials on site. A transfer is a discharge to a publicly owned treatment facility or removal of a substance from the site to an off-site location.

Beginning in 1998, seven additional industries were required to report to the EPA for the TRI: metal mining, coal mining, coal and oil-fired electrical generating facilities, commercial hazardous-waste treatment and disposal facilities, chemical wholesale distribution facilities, petroleum bulk terminals and plants, and solvent-recovery facilities. With the inclusion of these facilities, TRI data has changed, and this should be taken into account by the reader.

The city and county data is reported as of October 9, 2001. The state total is from March 1, 2001.

- Overall, the on-site releases in the 13 cities dropped from 1990 to 1999. In ten of the cities (Kalamazoo, Lansing, and Traverse City are the exceptions), there was a reduction, ranging from –86.8 percent in Ann Arbor to a 13 percent drop in Warren.
- During the same years, however, transfers rose dramatically statewide and in the urban areas (Ann Arbor and Saginaw are the exceptions).
- Statewide, the number of pounds of chemicals released on site and transferred jumped more than 153 percent from 1990 to 1999. In the 13 cities, the increase was 158 percent.

The apparent reduction in on-site releases in ten cities between 1990 and 1999 may be due to larger quantities of waste materials being removed from air and water on-site discharges for transfer for off-site disposal.

Transfers increased over 100 million pounds in the 13 cities during this nine-year period, yet there was not a corresponding reduction in on-site releases (they decreased less than 15 million pounds). This leads analysts to believe that the large increase reported in transfers most

likely stems from increased economic activity and production, improved reporting, additional reporting requirements, or factors other than a reduction in on-site releases (see Exhibit 31-B).

The combined on-site and transferred toxic release information (presented in Exhibit 31-C) is perhaps a better measure of long-term sustainability than it is of the quality of the environment. The long-term sustainability goal is to reduce waste generation per unit of production. Sustainability is defined as the capacity of actions and programs to meet the needs of the present without compromising the ability of future generations to meet their own needs.

### EXHIBIT 33

#### Air Quality: Number of Days During which Ozone Level Was Unhealthful (PSI Exceeding 100) Annual Average, 1990 to 1999

	City Average 1990–94	City as % of Urban Total 1990–94	City Average 1995–99	City as % of Urban Total 1995–99	Percent Change
Ann Arbor	0.0	0.0%	0.0	0.0%	0.0%
Battle Creek*	0.2	2.0	0.2	2.6	0.0
Detroit	4.4	44.0	4.0	52.0	-9.0
Flint	0.4	4.0	0.4	5.2	0.0
Grand Rapids**	4.8	48.0	3.0	39.4	-37.5
Kalamazoo*	0.2	2.0	0.2	2.6	0.0
Lansing	0.2	2.0	0.0	0.0	-100.0
Muskegon**	4.8	48.0	3.0	39.4	-37.5
Pontiac	NA	NA	NA	NA	NA
Saginaw***	NA	NA	NA	NA	NA
Traverse City	NA	NA	NA	NA	NA
Warren	NA	NA	NA	NA	NA
Wyoming	NA	NA	NA	NA	NA
<b>Urban Average</b>	<b>1.7</b>		<b>1.3</b>		<b>-24.0%</b>

NA= Not available.

\*Grand Rapids and Muskegon data are measured together.

\*\*Battle Creek and Kalamazoo are measured together.

\*\*\*Monitoring in Saginaw discontinued in 1995.

SOURCE: Michigan Department of Environmental Quality, Annual Air Quality Report 1999.

The Pollutant Standards Index (PSI) was developed by the U.S. Environmental Protection Agency to provide a simple, uniform way to report daily air pollution concentrations. It also allowed government agencies to advise the public about the health effects associated with various levels of pollution and to advise precautionary steps if conditions warranted. The PSI converts pollution concentrations into a numerical scale of 0–500. The numbers on the PSI scale relate to potential health effects of the criteria pollutants, including ozone.

The ozone level is considered unhealthful when the pollution standards index (PSI) exceeds 100, and for this report we use the number of days this occurred. The monitoring season for ozone is April 1 through September 30 each year. The Michigan Department of Environmental Quality provides the data annually.

Ozone levels are reported for U.S. metropolitan areas having a population greater than 200,000. Because Pontiac, Traverse City, Warren, and Wyoming have fewer than 200,000 residents, we do not have specific levels for those cities. Also, Muskegon and Grand Rapids, and Battle Creek and Kalamazoo, are measured together.

We have data for every year since 1990, but because there are large annual fluctuations in ozone due to weather, we have averaged the 1990–94 data and compared them to 1995–99 data. The results of these calculations suggest that the number of “ozone days” has dropped recently. Increased air pollution control, voluntary reduction in use of gasoline-powered equip-

ment during ozone alerts in southeast Michigan, and reduced emissions due to technological improvements in the automobile and gasoline industries may have contributed for the decline in the number of ozone days during a period of economic growth in the state.

In October 1999 the PSI was expanded to a new air quality index (AQI) to provide more specific information on health risks associated with exposure to air pollution. The AQI is a relatively simple way to communicate air quality. Similar to the PSI, it also:

- adds a new category known as “unhealthy for sensitive groups” for those individuals most sensitive to a pollutant exposure level, either because of medical conditions (respiratory disease) or inherent sensitivity;
- requires advisory statements to be issued when the index is above 100; and
- establishes new breakpoints for ozone 8-hour exposure levels and fine particulate (particulate matter with a diameter of less than 2.5 microns) exposure levels.

The AQI evaluates information from continuous monitors, then automatically calculates and categorizes the quality of air we breathe. The AQI criteria pollutants include particulate, ozone, carbon monoxide, sulfur dioxide, and nitrogen dioxide. The AQI tells the public if the air quality is “good,” “moderate,” “unhealthy for sensitive groups,” “unhealthy,” “very unhealthy,” or “hazardous.”

The AQI has limitations: it does not provide an indication of chronic air pollution exposure over months or years, nor does it reflect additional pollutants in the air we may breathe. The AQI will replace the PSI for tracking purposes in future editions of this report .

The website for the daily AQI values is: <http://www.deq.state.mi.us/aqi/>.

**EXHIBIT 34**  
Parks and Open Space, 2000

	No. of Parks	Total Acreage	Total Population	Acreage per capita	Annual Expenses per capita
Ann Arbor	146	2,026	114,024	0.018	\$23.81
Battle Creek	29	1,670	53,364	0.031	26.23
Detroit	391	5,863	951,270	0.006	6.51
Flint	67	1,836	124,943	0.014	NA
Grand Rapids	68	1,461	197,800	0.007	20.76
Kalamazoo	50	600	77,145	0.007	14.51
Lansing	108	2,317	119,128	0.019	NA
Muskegon	63	650	40,105	0.011	29.06
Pontiac	29	332	66,337	0.005	NA
Saginaw	36	600	61,799	0.010	10.65
Traverse City	NA	NA	14,532	NA	NA
Warren	24	310	144,864	0.002	NA
Wyoming	20	650	69,368	0.004	9.04
<b>Urban Total/Average</b>	<b>1,031</b>	<b>18,315</b>	<b>2,034,679</b>	<b>0.009</b>	

NA= Not available.

SOURCE: Public Sector Consultants, Inc.

For the first time in this report we offer a “snapshot” of the 2000 urban acreage devoted to public parks and open spaces and the financial costs necessary to manage them. It is hoped that this data set will be updated in future reports to track the loss and/or increase of public park land in the 13 cities.

Public open space lands such as parks and parkways are important determinants of the quality of life within a community. These lands serve multiple functions, including outdoor recreation, outdoor education, buffers, flood and storm water management, habitat preservation, air and surface water quality improvement, protection of groundwater recharge areas, aesthetics, and providing community focal points.

Determining how much land is needed for parks and recreational activities is complex. The amount necessary is usually determined through an analysis of neighborhood and community-wide needs for outdoor recreation areas, for natural and cultural resource protection and management, and for other open space uses such as aesthetics and buffers. However, communities are extremely varied in their population characteristics, the opportunities for providing open space, and the need for natural resource management. Therefore, local examination of needs is very important and requires understanding the physical and social resources of the community and the community’s goals for parks and open space.

- Battle Creek has the highest acreage per capita (0.031). The city spends \$26.23 per capita to maintain its park and open space acreage.
- Muskegon spends the most (\$ 29.06) to maintain 0.011 acres per capita.
- Detroit reports the highest number of parks (391), but has the lowest acreage per capita (0.006).