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# **A Report on the Demographics of Michigan's Urban Brownfield Communities**

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Date: December 27, 1999

## **Anderson Economic Group**

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## Purpose of the Analysis

Anderson Economic Group, a consulting firm with expertise in environmental economics and the environmental justice field, conducted this detailed evaluation of the communities that contain urban brownfields in the State of Michigan. The purpose of the report is to analyze the demographic composition of those communities that surround areas of historic environmental contamination, commonly known as "brownfields." Although many participants in environmental justice debates assert that environmental contamination falls disproportionately on the poor and minorities, increasing the risks to health, there are regrettably few objective analyses available that support this contention.<sup>1</sup> This report, while not settling the issue of whether environmental justice should be pursued by specific government policies, provides the first

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<sup>1</sup> A 1987 study entitled *Toxic Wastes and Race in the United States*, published by the Commission for Racial Justice, is often cited as proof of racial disparity in the location of environmental contaminants. In fact, the study does not prove such disparities. One recent analysis points out that the 1987 study "fails as a persuasive analysis for at least three reasons," including data quality and misleading or inadequate site designations. See Foreman, Jr., Christopher. *The Promise and Peril of Environmental Justice*. Washington, D.C.: Brookings Institution Press, 1998, p. 21. Foreman also notes the severe shortcomings in a 1983 study by the Governmental Accounting Office, again often cited as proof of disparate health risks.

A recent overview produced by the Michigan Senate Fiscal Agency is representative of many reports in this field. It references a number of sources to support the general claim of disparate health risks or disparate exposures to environmental contaminants. Upon examination, these are mostly secondary sources, which in turn repeat the citations of just a handful of primary sources. The primary sources are often limited to the Governmental Accounting Office and Commission for Racial Justice studies mentioned above. See "Environmental Justice, and Overview," by Suzanne Lowe, Michigan Senate Fiscal Agency Issue Paper, October 1999.

It is clear that racial and ethnic minorities and low-income populations in the United States have lower life expectancy. However, as described in detail in a comprehensive Institute of Medicine analysis, there are extreme difficulties in proving that environmental factors cause this disparity in health, with one exception. The exception is lead poisoning, which is clearly associated with poverty and race. The Institute concluded that, "some communities exposed to higher levels of environmental stressors include minority and economically disadvantaged populations. Because the populations of these communities are small and because they also have other complex disease risks, it is frequently difficult to separate exposures to environmental stressors from other disease of health risks." See, *Toward Environmental Justice, Research Education and Health Policy Needs*, National Academy Press, 1999; especially the preface, chapter 2 and appendix A.

Finally, the EPA itself acknowledges that lack of evidence for the claim of disparate health risk, noting correlation between race, class, and mortality; but noting that "the extent to which exposures to air pollutants and other environmental agents contribute to these observed differences, however, is uncertain." US EPA, "Environmental Justice: Working Toward Solutions," August 1997.

objective look at the proximity to environmental hazards by minority populations in the State of Michigan.

## **About "Environmental Justice"**

“Environmental justice,” in this report, refers to the evaluation of the impact of a facility, installation, or activity under Title VI of the 1964 Civil Rights Act, as interpreted by the Executive Branch of the U.S. Government under Executive Order 12898 of 1994.

The Executive Order requires that:

“[E]ach Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations....”<sup>2</sup>

After the executive order took effect, federal agencies took widely varying actions to comply with the directive. The Environmental Protection Agency's "EJ" initiative is probably the most aggressive. The agency released a draft guidance statement in February of 1998, which garnered significant comment and criticism. Although the guidance document has not been finalized, the EPA continues to handle EJ complaints, and state authorities as well as EPA regional offices have widely varying environmental justice policies.<sup>3</sup>

## **About the Authors**

Patrick Anderson, Managing Director, and Ian Clemens, Consultant for Anderson Economic Group, have extensive experience in preparing environmental justice demographic analyses. AEG's past work in this field includes the preparation of the key demographic analysis used in the *Select Steel* case, the only EPA-resolved EJ case in the United States to date. AEG also prepared analysis presented to EPA administrator Carol Browner at the 1998 meeting of the U.S. Council of Mayors in Detroit, at the request of Detroit Mayor Dennis Archer. Similar analyses have been undertaken by AEG for other organizations. The authors of this report served on the Environmental Justice Task Force created by the Michigan Department of Environmental Quality.

AEG maintains an extensive environmental justice resource center, complete with custom maps of key areas in the Midwest and Michigan, on its website at [www.aeg1.com](http://www.aeg1.com).

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<sup>2</sup> Executive Order 12898 on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, February 11, 1994.

<sup>3</sup> The AEG website contains links to various EJ sites, excerpts from documents, and analyses of the effect of various potential implementations of EJ policies. The Michigan Department of Environmental Quality Environmental Justice Task Force, on which the authors served, recently submitted a report that discusses many of the issues involved.

## Why Study Brownfields?

The notion of environmental equity, or “environmental justice” grew out of the concern that low income and minority Americans are being disproportionately exposed to environmental contaminants, and that this excessive exposure results in additional health risks to those populations. Brownfield communities are those that surround sites where environmental contaminants have been released into the soil, air, or water. Studying communities that host significant brownfields provides an answer to one key question underlying the environmental justice debate: Are minorities located disproportionately in communities with significant environmental contamination?

### What is a “Brownfield”?

“Brownfields” are an indicator of historic industrial activity resulting in some environmental contamination. The term can have specific meanings under certain state laws that allow for tax credits for the development of such sites, but normally has a general meaning. Michigan's brownfield redevelopment financing act defines an eligible brownfield plan by reference to Michigan's primary environmental statute, which defines a “facility” as “any area, place, or property where a hazardous substance in excess of the concentrations [allowed by law] ... comes to be located.”<sup>4</sup>

Federal agencies and federal law have similar definitions of the term as well. The 1996 Memorandum of Agreement between the Michigan Department of Environmental Quality and the U.S. Environmental Protection Agency refers to brownfields as, “contaminated, or potentially contaminated, properties.”<sup>5</sup> Brownfields are often defined by reference to the federal CERCLA law.<sup>6</sup> A 1997 federal law establishing tax advantages for removing environmental contamination in brownfields defines an eligible property as one in “which there has been a release (or threat of release) or disposal of a hazardous substance” and which is located in a “target area.” Targeted areas can qualify by means of poverty, population, or inclusion on a previous EPA brownfield list.<sup>7</sup>

### Past Studies of Brownfield Communities

Brownfield communities were analyzed in a June 1999 report issued by the U.S. Environmental Protection Agency Office of Solid Waste and Emergency Response, as part of the agency's environmental justice program.<sup>8</sup> The report took the form of an examination of selected “pilot” brownfield communities, including Detroit, Michigan. While the voluminous study provides useful information on what communities are doing with their brownfields, the study is not an examination of the demographics of brownfield communities, or of the health risks associated

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<sup>4</sup> Brownfield Redevelopment Finance Act, 1996 PA 381; part 201 of 1994 PA 451, section 20101.

<sup>5</sup> Superfund Memorandum of Agreement, Addendum I: Brownfield Redevelopment, 1996; Michigan DEQ and US EPA.

<sup>6</sup> Comprehensive Environmental Response Compensation, and Liability Act of 1980 (CERCLA), Section 104(a)(3).

<sup>7</sup> PL 105-34, Subtitle E, “brownfields,” section 941, “expensing of environmental remediation expenses.” See also the EPA brownfields page at <http://www.epa.gov/brownfields/> for information on federal brownfield programs.

<sup>8</sup> Brownfield Title VI Case Studies, US EPA OSWR, EPA 500-R-99-003, June 1999, three volumes. Available at [www.epa.gov/brownfields](http://www.epa.gov/brownfields).

with proximity to environmental contamination. The study was explicitly intended to rebut criticism of the agency's environmental justice draft guidance statement.<sup>9</sup> Although it does not pretend to be an objective analysis of the population in brownfield communities, it would have at least two serious methodological flaws if viewed as such.<sup>10</sup>

## **Brownfield Criteria in this Study**

To best identify those communities with significant, historical environmental contamination, we created a custom database of all cities that have established brownfield redevelopment authorities under Michigan state law. Such actions signify that the area should be considered, for two reasons:

- The Act contains a definition of a brownfield as “any area, place, or property where a hazardous substance in excess of the concentrations [allowed by law] ... comes to be located.”<sup>11</sup>
- The scale of hazardous substance contamination is large enough to cause the community to take the steps necessary to create a brownfield redevelopment authority.<sup>12</sup>
- Only the cities are considered, rather than the surrounding county. The Act is broad enough to allow tax incentives throughout a county, rather than only in areas where a significant number of contaminated sites exist. A number of counties have established authorities to allow for the tax incentives to be used in all areas of the county, whether they have a significant number of sites or not.

We selected these areas involved to best identify those areas with historic and significant environmental contamination. However, there is no perfect definition of environmentally contaminated area. This approach has at least two weaknesses, in that some brownfield sites will be missed, and cities with heavy exposure are treated the same way as those with a smaller

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<sup>9</sup> The background section of the summary volume explains the motivation for the report:

"During the 90-day public comment period [on the EPA EJ Guidance Statement], local leaders, industry representatives, and national organizations formally asserted that the guidance, as currently written, would stifle development in inner-city areas where discriminatory effects could be alleged. There was uncertainty and fear that a potentially lengthy and costly Title VI investigation could deter potential developers from investment in these areas, stifling progress made in recent years in redeveloping brownfields, regardless of tax breaks in Empowerment Zones, incentives for brownfields redevelopment, and other urban revitalization programs.

"At the Mayors' Forum on Title VI held in Detroit, Michigan in July 1998, EPA Administrator Carol Browner committed to conduct studies to determine whether the guidance proved to be a barrier to the re-development of brownfields."

<sup>10</sup> The highlighted communities were selected partially on the basis of demographics, and the information is almost entirely derived from survey data from self-interested parties.

<sup>11</sup> Brownfield Redevelopment Finance Act, 1996 Michigan PA 381; part 201 of 1994 PA 451, section 20101. Act 451 is sometimes called the natural resources and environmental protection act.

<sup>12</sup> Under the Act, an authority can be created by local communities to achieve a number of purposes, including: creating a tax increment financing district; allowing property owners to receive single business tax credits under 1996 PA 383, owning land, and creating a revolving fund to pay for remediation and other expenses. Creating the authority requires a resolution passed at a public meeting of the governing body of a municipality such as a city.

number of sites.<sup>13</sup> However, this definition avoids both of the following extremes:

- *Using too broad of a definition of environmental contamination.*  
If one included every known site where any hazardous substance exceeded residential cleanup standards, nearly every city, township, village, and county would be considered a "brownfield." Nearly every community has the site of an old repair or gas station, or agricultural fertilizer mixing area, or place where tractors were stored. To use such a definition would make an exercise such as this meaningless, as the whole state—and much of the country—would then be defined as one big brownfield.<sup>14</sup> In addition, to use such a definition would needlessly alarm citizens, as well as to implicitly deny the progress that has been made over the past half-century in reducing emissions and controlling truly hazardous substances.
- *Using too selective criteria, such as only picking Superfund sites.*  
This approach would miss the large majority of facilities that have introduced hazardous substances into the community over the past century. Most human exposure to hazardous materials does not come through occasional exposure at a relative handful of heavy-concentration facilities, but through everyday exposure to smaller amounts of such substances where people live and work. As noted elsewhere in this report, detrimental health effects of such small-dosage exposures are, for the most part, unproven. However, the potential for such risks is the fundamental issue that drives the legitimate concern about environmental justice, and it can't be compartmentalized into just a few facilities.

On the basis of these considerations, the selection of cities that have established brownfield authorities is the best definition currently available of communities with significant, historical exposure to hazardous substances released into the air, soil, or water. We call such communities "brownfield communities" as they are recognized entities that have acknowledged the degree of environmental contamination in their communities, and have formally decided to participate in tax incentives available for the cleanup of past contamination.<sup>15</sup>

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<sup>13</sup> For example, it may be possible that some facilities that appeared on a federal or state priority list were cleaned up using other funds, and the community no longer feels compelled to establish a brownfield authority. However, this category cannot be very large; there are about 1,400 facilities on the National Priority List, versus 600,000 brownfields reported in U.S. cities by the Council of Mayors. Furthermore, such communities would probably have other brownfield sites that would call for establishment of an authority, and potential purchasers of such sites may still qualify for brownfield tax advantages.

Another question is the degree to which there are more contaminated facilities in the rural portions of those counties that have established county-wide authorities, than there are in urban areas that have not established authorities. There are certainly some such facilities in both categories, but it is unclear whether this biases the results of this analysis one way or another. Clearly, as discussed in the text, there is overwhelming evidence that cities have a serious problem with brownfields.

<sup>14</sup> Ironically, this over-selection would convert EJ demographic analysis into the most naive of exercises. With the assumption of "every community is a brownfield community," the demographics of any one site would have to be compared with all other such sites—which would be the state as a whole.

<sup>15</sup> That does not mean that the entire community is a "brownfield," although most or all of the residents of such communities have exposure to, or at least proximity to, facilities with the environmental hazards. It also does not mean that the residents have higher health risks, as discussed in the text.

## The Industrial Site Decision: Racism or Economics?

Part of the environmental justice movement is motivated by the belief that, through a desire to prey on those with less political power, or through racism itself, industrial sites have been historically located in areas with minority and low-income residents. Many urban areas support concentrations of minority populations above the state average, with household median incomes below the state average. For this reason, urban sites are commonly scrutinized by those concerned with environmental justice.

However, the location decision for an industrial facility is often a complicated one. Business managers have a clear economic incentive to locate near markets and suppliers, where there is an available workforce, and where land costs are low. For industrial facilities founded in the 1950's and 1960's, land costs were generally higher in the cities, but the cities also offered markets, workers, and suppliers. Over the past decades, this trend has reversed itself. Land costs in suburbs and rural areas have increased relative to cities in the Midwest, but industrial facilities have been attracted to the suburbs due to a higher concentration of markets and suppliers found there.

The degree to which brownfields are an urban problem can be highlighted by two pieces of evidence: the self-reported statistics of cities themselves, and the "voting with their feet" site selection decisions. Urban leaders themselves report over 600,000 brownfield sites in cities across the country—an astounding number when you consider that there are only 50 states in the union, some of which have no single city with over 500,000 in population.<sup>16</sup> On top of the sheer numbers of urban sites is the clear and worrisome trend of new plants eschewing the advantages of urban sites (including existing infrastructure, available workforce, and transportation grids) in favor of rural areas with little environmental liability risk.

The State of Michigan now encourages the development of urban "brownfields" in reaction to environmental concerns raised with plowing "greenfields" for new industrial areas. This encouragement comes in both tax incentives, and the reduction in the onerous environmental liability that federal and state laws had placed on even innocent landowners and lenders.<sup>17</sup> Concerns about prohibiting the proliferation of urban sprawl are also coming to the forefront.

The combination of all these factors continues to change the economic incentives for site decisions. Economics alone provided strong incentives to locate industrial sites in urban areas for most of the century; economics in the last few decades suggested suburban sites for many facilities; economics now makes urban sites more attractive. While other factors, including relative political power and the omnipresent "NIMBY" (Not In My Back Yard) impulse clearly affect industrial site decisions, one cannot ignore the powerful and changing economic incentives.

Thus, we cannot completely answer the question of what *motivates* industrial site decisions. However, we can analyze the *actual* locations of past industrial sites that have resulted in environmental contamination. This is the core methodology of this study.

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<sup>16</sup> U.S. Conference of Mayors; as reported in Moss, "Gold Mines or Black Holes," *Plant Site Locations*, Fall 1999.

<sup>17</sup> In Michigan, recent reforms to the environmental laws now allow a new purchaser to limit his or her liability for past environmental contamination. These reforms include 1996 PA 380.

The US EPA also allows, in some circumstances, for covenants not to sue new landowners.



## Methodology

We identified all cities within the State of Michigan that had established brownfield authorities, or which were included in larger brownfield authorities.<sup>18</sup> Then we created a composite of them for demographic analysis.<sup>19</sup> We included in the analysis the population in the entire city, thus providing a direct analysis of the populations most likely to be affected by environmental contaminants released by past industrial activity in the state.

## Findings

The following are the findings of our investigation of Michigan cities' brownfield authorities.

1. As of October 1999, there were 106 city brownfield authorities in the State of Michigan. They are most pronounced in Southeastern and Southern Michigan, as might be expected by the degree of industrialization in the area over the past century. However, there are also significant northern Michigan brownfield areas, such as Alpena in the Northwestern tip of the Lower Peninsula.
2. Almost one-third of the population of the State of Michigan lives in brownfield cities. We estimate that 3.3 million people in 1999 lived in such areas (1.2 million households), out of a total Michigan Population of 9.9 million.
3. About 63 percent of those living in brownfield cities are white, 37 percent are non-white, and about 3.5 percent are Hispanic.<sup>20</sup> The share of residents living in brownfield authority areas who are non-white (using the census definition) is significantly higher than in the State of Michigan as a whole—about 37 percent compared to about 17 percent, respectively. The share of residents who are Hispanic is roughly equal, whereas the share of white residents is substantially less.
4. The 1999 medium household income in brownfield cities is less than that for the State of Michigan—about \$32,000 for brownfield authority areas and roughly \$45,000 for Michigan.
5. There are 43 counties in Michigan with urban brownfield authorities, and 40 counties with no urban brownfields. Of these 43 counties with urban brownfields, 31 have a lower share of minority populations in the county as a whole than in the brownfield cities in those counties. Conversely, 12 brownfield counties have a higher minority share than found in the brownfield cities within those counties.

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<sup>18</sup> Some counties, villages, and townships have created authorities as well. This composite includes only *cities* in such authorities. The data was current through October 1999. Other communities, such as Midland and Jackson counties, have been added since then.

<sup>19</sup> Anderson Economic Group used an advanced Geographic Information Systems (GIS) platform to create a custom database of Michigan urban brownfield communities, and then analyze the demographics of those communities. The same techniques and data sources are used for AEG's commercial clients.

<sup>20</sup> These categories are defined by the U.S. Census Bureau. Under the Census definition, Hispanics can be of any race.

Overall, brownfield cities tend to have a higher share of minority groups than the share living in their respective surrounding counties.

6. While the data in this report show that minority populations live in greater proximity to sites of environmental contamination, the degree to which this proximity results in additional health risks remains unproven.

## Conclusions and Observations

The data presented in this report firmly establish two points:

1. It is clear that residents living in urban areas established as brownfield authorities are significantly more likely to be members of a minority group than the average state resident. Residents of brownfield cities are also more likely to be of a minority group than residents of the surrounding county, although the difference is less pronounced, and some counties have a higher minority population share than urban brownfield cities within the county.
2. It is also striking that fully one-third of Michigan's population live in an urban brownfield city.

Where does this leave the environmental justice debate? We have the following observations, which provide some support for the basic complaint of environmental justice, but also temper some of its rhetoric:

- It is clear that a person living near an area of environmental contamination, as defined by the creation of an urban "brownfield" authority, is significantly more likely to be nonwhite than a resident of the state as a whole. Such a person is also more likely to be a minority than a resident of the surrounding county. This lends support to the basic contention that, if environmental contamination leads to health risks, minority populations have a higher likelihood of exposure to such health risks.
- Many of the automobile industry manufacturing sites, such as those in Lansing, Detroit, and Flint, were established before the great waves of migration that brought minority groups to Michigan. Thus, plant location decisions made in 1900, for example, may not be related to the demographic, cultural, and political divisions that exist today. Thus, one cannot directly attribute all the historic environmental contamination to decisions made in the current era, or even to the same groups of people who make up our state today.
- It is difficult to conclude that one-third of the population of Michigan, including many residents of areas with considerable income and influence, are being targeted for an unfair burden.
- Some environmental justice policies would make the location of new facilities in urban areas punitively expensive. The populations that would be deprived of the opportunities for jobs in such facilities would have a significantly higher minority share than the general population. Therefore, the strict EJ policies supported by some activists might

turn out to hurt the job opportunities of the very populations they were designed to protect.

- The enforcement of such strict EJ policies would inevitably lead to acceleration of urban “sprawl.” In particular, it would encourage the plowing of rural “greenfields” rather than the development of urban “brownfields.”

## Demographics of Urban Brownfield Communities

The following four tables illustrate city brownfield demographic figures for 1999. Factors that were analyzed include per capita income, median household income, share of minority population, and population density for cities and counties with urban brownfields compared against the State of Michigan as a whole.

**Table 1: Per Capita Income**

<i>Areas of Comparison</i>	<i>1999</i>
Cities with Urban Brownfields	\$17,340
Counties with Urban Brownfields	\$22,062
State of Michigan	\$20,573

In comparing per capita income, Michigan cities with brownfield authorities had a lower average income than the counties in which they are situated and the State of Michigan.

**Table 2: Median Household Income**

Brownfield cities also had a lower median household income than counties with urban brownfields and Michigan as a whole. ("Median household income" means the income at which an equal number of households have higher and lower income.)

<i>Areas of Comparison</i>	<i>1999</i>
Cities with Urban Brownfields	\$31,717
Counties with Urban Brownfields	\$42,767
State of Michigan	\$45,087

**Table 3: Minority Population**

<i>Areas of Comparison</i>	<i>1999</i>
Cities with Urban Brownfields	37.4%
Counties with Urban Brownfields	17.7%
State of Michigan	16.2%

Higher concentrations of non-white populations were found in brownfield cities than in the surrounding counties and the state as a whole.

**Table 4: Population Density**

(Number of People per Square Mile)

Brownfield cities had higher population density than counties with urban brownfields. The density for Michigan as a whole--which includes many rural areas--was much lower than that of brownfield cities or counties.

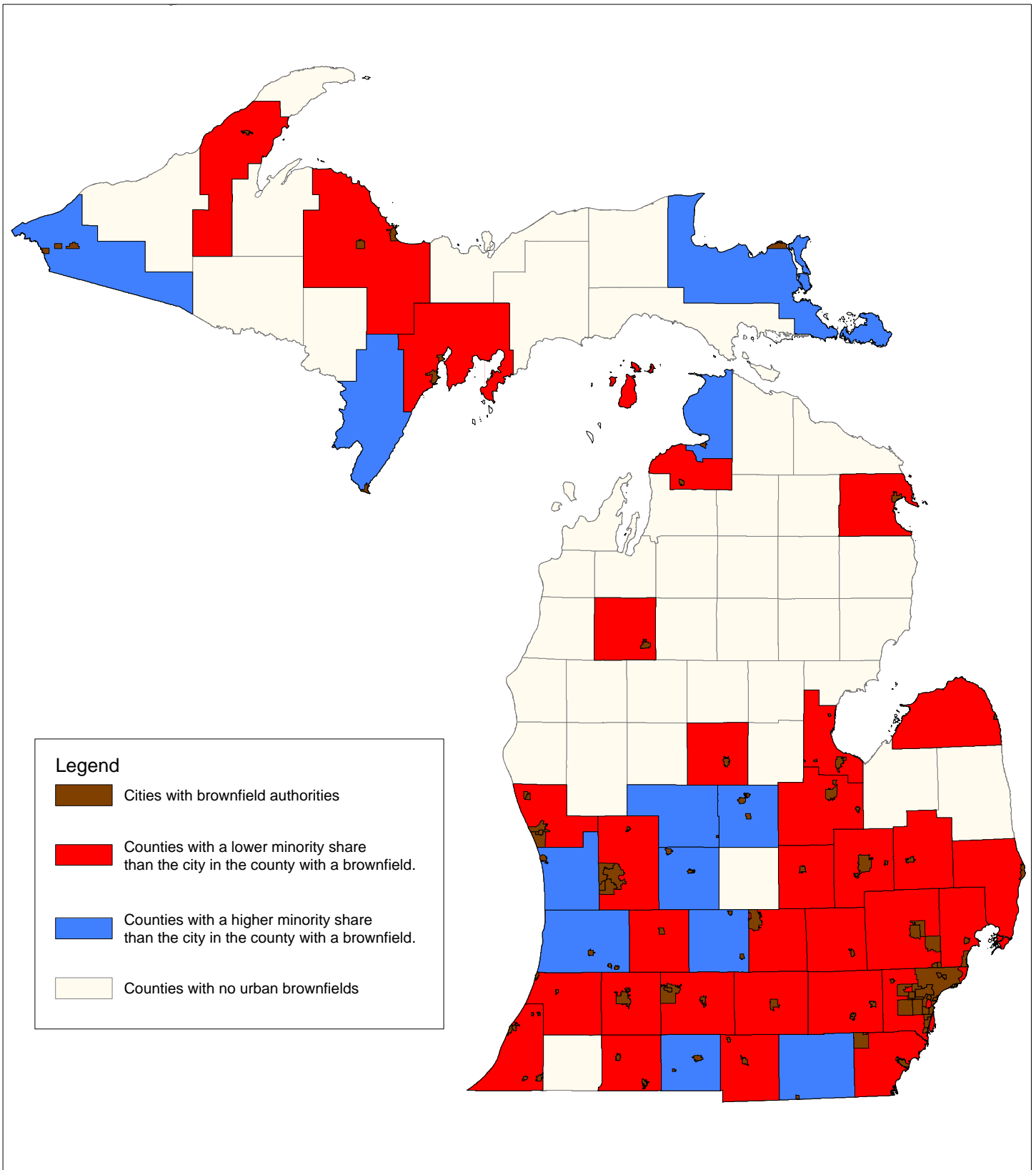
<i>Areas of Comparison</i>	<i>1999</i>
Cities with Urban Brownfields	4640
Counties with Urban Brownfields	1314
State of Michigan	169

## **Comparison of Brownfield County and City Minority Populations**

The map on the next page, created with the AEG Geographical Information Systems database, shows a geographical representation of minority populations in Michigan's counties and cities with urban brownfield authorities.

There are 43 counties in Michigan with urban brownfield authorities, and 40 counties with no urban brownfields. As the map illustrates, 31 brownfield counties have a lower share of minority populations than in the brownfield cities in those counties. Conversely, 12 brownfield counties have a higher minority share than found in the brownfield cities within those counties. Overall, more brownfield cities tend to have a higher share of minority groups than the share living in the respective counties.

# Michigan Counties with Urban Brownfield Authorities: Comparison of County and City Minority Populations



## **Selected Demographic Data**

Table 5 gives a breakdown of the aggregate population, percentage of minority residents, and median household income figures from 1990 and 1999 for Michigan counties and cities with urban brownfield authorities.

To create the table, data from the Michigan Department of Environmental Quality and Michigan Department of State was imported into a Geographical Information Systems database program, which associated each city brownfield authority with its geographic boundary. From that information, Anderson Economic Group derived the statistical analyses shown on the following pages from its existing GIS database for the State, including extensive demographic information. Data from the 1990 Census (actual data from the enumeration) and projected data for 1999 are included in the table.

# Michigan Counties and Cities with Brownfield Authorities

## Selected Demographic Comparisons

	<i>Date Filed</i>	<u>1990</u>			<u>1999</u>		
		<i>% Minority</i>	<i>Population</i>	<i>Median HH Inc</i>	<i>% Minority</i>	<i>Population</i>	<i>Median HH Inc</i>
<b>Allegan County</b>					<b>3.0%</b>	<b>102,854</b>	<b>\$ 41,948</b>
Allegan	03/27/98	5.9%	4,547	\$ 26,121	4.9%	4,829	\$ 35,134
Otsego	05/22/98	1.4%	3,937	\$ 26,184	1.2%	4,152	\$ 38,102
Plainwell	12/16/97	1.4%	4,057	\$ 27,330	1.4%	4,319	\$ 36,743
<b>Alpena County</b>					<b>1.0%</b>	<b>30,241</b>	<b>\$ 32,245</b>
Alpena	03/21/97	1.3%	11,354	\$ 20,472	1.2%	11,023	\$ 30,867
<b>Barry County</b>					<b>1.0%</b>	<b>54,749</b>	<b>\$ 39,524</b>
Hastings	10/01/98	1.4%	6,549	\$ 25,085	1.2%	6,995	\$ 35,404
<b>Bay County</b>					<b>2.0%</b>	<b>109,691</b>	<b>\$ 38,680</b>
Auburn	06/07/99	1.5%	1,855	\$ 31,492	1.2%	1,900	\$ 52,444
Bay City	02/06/98	6.4%	38,936	\$ 21,380	4.1%	37,776	\$ 28,486
Essexville	02/19/98	2.5%	4,088	\$ 33,267	1.9%	4,013	\$ 49,292
Pinconning	06/16/98	3.6%	1,291	\$ 18,269	2.0%	1,246	\$ 28,382
<b>Berrien County</b>					<b>18.0%</b>	<b>159,739</b>	<b>\$ 36,297</b>
Benton Harbor	05/06/98	92.7%	12,818	\$ 8,866	93.6%	12,470	\$ 12,875
Buchanan	07/29/99	12.7%	4,992	\$ 24,084	11.6%	4,706	\$ 35,095
Coloma	07/28/99	2.1%	1,679	\$ 28,636	1.4%	2,301	\$ 35,213
Niles	08/06/98	14.2%	12,456	\$ 23,700	14.7%	11,778	\$ 31,419
St. Joseph	05/14/97	5.1%	9,214	\$ 28,566	6.0%	8,728	\$ 37,103
Watervliet	01/16/97	1.4%	1,867	\$ 23,750	1.9%	1,795	\$ 32,461
<b>Branch County</b>					<b>4.0%</b>	<b>43,605</b>	<b>\$ 30,355</b>
Bronson	02/25/99	1.8%	2,342	\$ 19,867	1.1%	2,446	\$ 23,780
Coldwater	04/28/97	2.2%	9,607	\$ 22,562	3.1%	10,009	\$ 26,852
<b>Calhoun County</b>					<b>13.0%</b>	<b>142,323</b>	<b>\$ 35,549</b>
Battle Creek	01/20/98	19.3%	53,540	\$ 25,306	19.8%	55,369	\$ 31,986
Marshall	02/24/98	3.7%	6,891	\$ 30,000	2.4%	7,214	\$ 39,300
Springfield	12/11/98	8.2%	5,582	\$ 25,470	9.9%	5,599	\$ 31,433
<b>Charlevoix County</b>					<b>2.0%</b>	<b>24,782</b>	<b>\$ 36,804</b>
East Jordan	01/11/99	3.5%	2,240	\$ 20,696	2.7%	2,366	\$ 30,685
<b>Chippewa County</b>					<b>18.0%</b>	<b>38,020</b>	<b>\$ 25,681</b>
Sault Ste. Marie	12/04/97	15.3%	14,689	\$ 21,166	15.1%	15,773	\$ 25,514
<b>Delta County</b>					<b>2.0%</b>	<b>38,961</b>	<b>\$ 30,623</b>
Escanaba	12/15/97	2.8%	13,659	\$ 19,982	2.7%	13,750	\$ 26,856
Gladstone	03/06/98	2.5%	4,565	\$ 22,134	2.4%	4,657	\$ 29,830
<b>Eaton County</b>					<b>5.0%</b>	<b>101,815</b>	<b>\$ 39,491</b>
Eaton Rapids	09/24/98	1.8%	4,695	\$ 29,706	1.5%	4,800	\$ 32,723
Grand Ledge	03/17/99	1.9%	7,579	\$ 31,563	1.5%	7,622	\$ 33,601
<b>Emmet County</b>					<b>4.0%</b>	<b>28,973</b>	<b>\$ 38,270</b>
Petoskey	01/25/99	3.7%	6,056	\$ 26,055	3.5%	6,280	\$ 39,199



Date Filed	1990			1999			
	% Minority	Population	Median HH Inc	% Minority	Population	Median HH Inc	
<b>Genesee County</b>				<b>22.0%</b>	<b>436,864</b>	<b>\$ 39,728</b>	
Davison	06/01/98	1.4%	5,693	\$ 30,393	1.3%	5,629	\$ 34,018
Flint	02/09/99	50.4%	140,761	\$ 20,176	52.0%	139,087	\$ 23,230
<b>Gogebic County</b>				<b>3.0%</b>	<b>16,693</b>	<b>\$ 26,590</b>	
Bessemer	02/10/99	1.1%	2,272	\$ 15,472	0.9%	2,088	\$ 23,490
Ironwood	09/15/97	0.8%	6,849	\$ 16,857	0.8%	6,324	\$ 25,600
Wakefield	03/26/98	1.0%	2,314	\$ 17,625	0.8%	2,139	\$ -
<b>Gratiot County</b>				<b>2.0%</b>	<b>40,279</b>	<b>\$ 30,412</b>	
Alma	11/17/98	4.0%	9,034	\$ 22,017	1.4%	9,298	\$ 26,910
Ithaca	11/17/98	3.5%	3,009	\$ 26,570	0.8%	3,071	\$ 33,639
St. Louis	11/17/98	2.5%	3,828	\$ 19,552	1.1%	3,902	\$ 24,097
<b>Hillsdale County</b>				<b>1.0%</b>	<b>46,865</b>	<b>\$ 33,431</b>	
Hillsdale	03/25/99	2.0%	8,170	\$ 21,688	1.8%	8,359	\$ 27,500
Litchfield	07/15/99	2.1%	1,317	\$ 21,122	1.3%	1,353	\$ 31,100
<b>Houghton County</b>				<b>3.0%</b>	<b>35,663</b>	<b>\$ 25,225</b>	
Houghton	03/31/97	7.8%	7,498	\$ 16,059	9.3%	7,000	\$ 25,328
<b>Huron County</b>				<b>1.0%</b>	<b>35,314</b>	<b>\$ 39,374</b>	
Harbor Beach	09/15/99	1.1%	2,089	\$ 15,438	0.8%	2,073	\$ 33,200
<b>Ingham County</b>				<b>15.0%</b>	<b>283,824</b>	<b>\$ 35,871</b>	
Lansing	10/01/97	25.3%	122,588	\$ 22,616	22.4%	119,286	\$ 31,897
<b>Ionia County</b>				<b>6.0%</b>	<b>62,293</b>	<b>\$ 31,745</b>	
Belding	02/26/97	2.0%	5,969	\$ 22,987	1.1%	6,354	\$ 25,925
Ionia	05/01/97	3.1%	5,935	\$ 23,614	3.0%	6,391	\$ 25,683
<b>Isabella County</b>				<b>4.0%</b>	<b>58,361</b>	<b>\$ 30,785</b>	
Mt. Pleasant	05/23/97	5.4%	23,285	\$ 19,185	5.4%	26,166	\$ 26,542
<b>Jackson County</b>				<b>9.0%</b>	<b>156,978</b>	<b>\$ 34,481</b>	
Jackson	04/10/97	19.8%	37,446	\$ 20,830	20.5%	37,460	\$ 22,738
<b>Kalamazoo County</b>				<b>12.0%</b>	<b>229,847</b>	<b>\$ 39,600</b>	
Kalamazoo	05/13/97	22.7%	80,277	\$ 23,207	23.0%	85,116	\$ 27,546
Parchment	09/25/98	7.0%	1,958	\$ 30,742	7.1%	1,889	\$ 38,393
<b>Kent County</b>				<b>11.0%</b>	<b>548,904</b>	<b>\$ 43,684</b>	
Cedar Springs	10/28/98	1.9%	2,600	\$ 23,200	1.6%	2,706	\$ 28,581
Grand Rapids	06/11/97	23.6%	189,126	\$ 26,809	22.7%	211,032	\$ 33,741
Grandville	10/06/98	2.3%	15,624	\$ 36,906	2.5%	16,699	\$ 51,855
Walker	07/21/97	2.7%	17,279	\$ 32,827	2.4%	18,349	\$ 44,179
Wyoming	05/29/97	6.5%	63,891	\$ 31,103	5.6%	67,511	\$ 41,800
<b>Lapeer County</b>				<b>2.0%</b>	<b>89,687</b>	<b>\$ 42,825</b>	
Lapeer	02/03/98	6.7%	7,759	\$ 22,833	7.2%	8,988	\$ 25,907
<b>Lenawee County</b>				<b>3.0%</b>	<b>98,988</b>	<b>\$ 40,314</b>	
Morenci	11/07/97	1.3%	2,342	\$ 24,954	0.4%	2,512	\$ 33,171
<b>Livingston County</b>				<b>2.0%</b>	<b>150,675</b>	<b>\$ 57,335</b>	
Brighton	03/27/98	1.7%	5,686	\$ 35,551	2.1%	6,571	\$ 43,269
<b>Macomb County</b>				<b>4.0%</b>	<b>792,188</b>	<b>\$ 51,826</b>	
Mt. Clemens	03/21/97	19.7%	18,405	\$ 25,716	20.4%	19,139	\$ 31,701
St. Clair Shores	02/26/97	1.3%	68,107	\$ 36,929	1.5%	71,756	\$ 48,164

Date Filed	1990			1999			
	% Minority	Population	Median HH Inc	% Minority	Population	Median HH Inc	
<b>Marquette County</b>				<b>4.0%</b>	<b>61,491</b>	<b>\$ 33,405</b>	
Ishpeming	05/12/98	1.2%	7,200	\$ 21,199	1.2%	6,009	\$ 28,141
Marquette	01/28/98	5.5%	21,977	\$ 24,365	5.8%	19,704	\$ 31,581
<b>Menominee County</b>				<b>2.0%</b>	<b>24,452</b>	<b>\$ 31,288</b>	
Menominee	12/17/98	1.1%	9,398	\$ 20,829	1.0%	9,126	\$ 31,500
<b>Midland County</b>				<b>2.9%</b>	<b>82,404</b>	<b>\$ 48,014</b>	
Midland	07/08/99	4.3%	234	\$ 12,847	2.9%	238	\$ 20,083
<b>Monroe County</b>				<b>3.0%</b>	<b>144,799</b>	<b>\$ 48,065</b>	
Monroe	02/16/97	6.7%	22,902	\$ 29,088	6.4%	23,919	\$ 36,543
<b>Montcalm County</b>				<b>3.4%</b>	<b>61,474</b>	<b>\$ 29,713</b>	
Carson City	11/17/98	1.4%	1,158	\$ 20,313	2.2%	1,330	\$ 26,522
<b>Muskegon County</b>				<b>16.0%</b>	<b>167,622</b>	<b>\$ 31,948</b>	
Montague	12/22/97	2.4%	2,276	\$ 28,170	1.2%	2,353	\$ 36,331
Muskegon	08/04/97	30.1%	40,283	\$ 18,748	32.4%	40,943	\$ 21,889
Muskegon Hts.	07/16/99	72.0%	13,176	\$ 13,778	74.8%	13,275	\$ 15,413
Norton Shores	12/16/97	3.4%	21,755	\$ 33,646	3.4%	23,277	\$ 45,557
Roosevelt Park	10/14/97	2.5%	3,885	\$ 28,955	2.9%	3,997	\$ 40,095
Whitehall	09/30/98	3.1%	3,027	\$ 26,359	2.0%	3,136	\$ 38,023
<b>Oakland County</b>				<b>11.0%</b>	<b>1,182,832</b>	<b>\$ 60,512</b>	
Auburn Hills	09/30/98	13.8%	17,076	\$ 34,825	16.6%	20,593	\$ 43,084
Ferndale	10/08/99	4.2%	25,084	\$ 28,964	4.6%	26,356	\$ 34,205
Hazel Park	07/02/98	3.5%	20,051	\$ 26,615	3.8%	21,016	\$ 31,435
Pontiac	12/26/97	48.7%	71,166	\$ 21,962	48.0%	74,326	\$ 24,581
Troy	01/29/99	8.5%	72,884	\$ 55,407	10.9%	82,895	\$ 82,882
<b>Ottawa County</b>				<b>3.0%</b>	<b>228,861</b>	<b>\$ 49,888</b>	
Grand Haven	02/24/98	2.4%	11,951	\$ 28,989	2.2%	13,988	\$ 38,009
<b>Saginaw County</b>				<b>20.0%</b>	<b>209,482</b>	<b>\$ 36,722</b>	
Frankenmuth	06/07/99	0.5%	4,408	\$ 36,151	0.3%	4,277	\$ 57,338
Saginaw	12/17/97	47.7%	69,512	\$ 17,736	44.8%	66,989	\$ 21,695
Zilwaukee	06/07/99	1.5%	1,850	\$ 31,343	0.7%	1,782	\$ 42,443
<b>Shiawassee County</b>				<b>1.0%</b>	<b>72,810</b>	<b>\$ 36,305</b>	
Owosso	04/29/97	2.2%	16,322	\$ 23,220	1.6%	16,659	\$ 27,930
<b>St. Clair County</b>				<b>3.0%</b>	<b>161,993</b>	<b>\$ 39,819</b>	
Port Huron	11/06/97	9.9%	33,694	\$ 21,522	9.6%	35,715	\$ 25,705
<b>St. Joseph County</b>				<b>4.0%</b>	<b>61,317</b>	<b>\$ 36,532</b>	
Sturgis	03/31/97	2.1%	10,130	\$ 23,642	1.9%	10,464	\$ 31,836
Three Rivers	07/21/97	11.9%	7,413	\$ 21,477	13.5%	7,670	\$ 27,414
<b>Van Buren County</b>				<b>9.0%</b>	<b>75,993</b>	<b>\$ 31,905</b>	
Bangor	01/17/97	18.6%	1,922	\$ 16,441	16.3%	2,014	\$ 19,816
South Haven	05/14/97	16.7%	5,563	\$ 25,967	17.7%	5,768	\$ 31,069
<b>Washtenaw County</b>				<b>18.0%</b>	<b>306,892</b>	<b>\$ 51,086</b>	
Milan	04/01/97	2.0%	1,659	\$ 40,167	0.6%	1,851	\$ 51,938
Saline	05/27/99	2.7%	6,660	\$ 43,706	2.8%	6,757	\$ 62,215
Ypsilanti	05/27/99	30.6%	24,846	\$ 21,219	34.5%	25,772	\$ 25,240

	<i>Date Filed</i>	<b>1990</b>			<b>1999</b>		
		<b>% Minority</b>	<b>Population</b>	<b>Median HH Inc</b>	<b>% Minority</b>	<b>Population</b>	<b>Median HH Inc</b>
<b>Wayne County</b>					<b>44.0%</b>	<b>2,107,894</b>	<b>\$ 35,985</b>
Allen Park	07/16/97	2.0%	31,092	\$ 39,925	2.2%	29,819	\$ 56,004
Dearborn	06/19/97	2.4%	89,286	\$ 34,909	2.8%	87,545	\$ 47,027
Dearborn Heights	12/09/97	2.7%	60,838	\$ 36,771	3.2%	59,311	\$ 50,204
Detroit	05/13/98	78.4%	1,027,974	\$ 18,742	81.3%	1,000,847	\$ 21,727
Ecorse	07/16/97	43.1%	12,180	\$ 18,956	44.1%	11,662	\$ 22,251
Gibraltar	07/16/97	1.3%	4,297	\$ 41,291	1.2%	4,363	\$ 60,673
Hamtramck	07/16/97	16.4%	18,372	\$ 16,751	21.9%	17,598	\$ 19,157
Highland Park	07/16/97	93.6%	20,121	\$ 9,805	96.1%	19,234	\$ 11,639
Inkster	07/16/97	63.9%	30,772	\$ 25,198	70.1%	29,587	\$ 30,880
Melvindale	07/16/97	6.4%	11,216	\$ 26,179	7.0%	10,752	\$ 31,771
Plymouth	04/14/97	1.3%	9,560	\$ 38,326	1.5%	9,245	\$ 52,555
River Rouge	07/16/97	37.2%	11,314	\$ 17,500	39.4%	10,848	\$ 19,586
Riverview	04/25/97	3.9%	13,894	\$ 39,735	5.5%	14,182	\$ 55,497
Romulus	09/25/98	23.7%	22,897	\$ 31,723	29.1%	23,283	\$ 41,487
Southgate	07/16/97	3.5%	30,771	\$ 36,526	4.1%	30,331	\$ 49,979
Taylor	04/16/97	6.8%	70,811	\$ 32,659	8.7%	71,162	\$ 43,220
Trenton	02/24/98	1.9%	20,586	\$ 41,129	2.4%	20,723	\$ 56,773
Westland	02/26/97	5.3%	84,724	\$ 34,995	6.5%	86,840	\$ 47,339
Wyandotte	08/29/97	1.8%	30,938	\$ 28,312	1.7%	29,709	\$ 35,861
<b>Wexford County</b>					<b>2.0%</b>	<b>29,221</b>	<b>\$ 29,550</b>
Cadillac	12/06/96	1.6%	10,104	\$ 21,170	2.1%	11,057	\$ 28,114