

Common Sense Initiative, Automobile Manufacturing Sector

*U.S. Automobile Assembly Plants and Their Communities:
Environmental Economic, and Demographic Profile*

**Part III: Automobile/Light Duty Truck Assembly
Plant-Community Profiles**

**22. Auto Alliance Intl.
Flat Rock, MI**

December 1997

Contents and Guidelines for Use

Users of this profile should carefully review the description of methods, data limitations, and guidelines for use and interpretation of the data presented in Part I of the report.

Contents:

Plant Locations (National and Michigan maps)
Plant Location, Database Identification Numbers, 1994 Production and Employment
1991 and 1993 RCRA Biennial Report Summary
1991-1994 TRI Releases and Transfers Summary
1994 TRI Releases and Transfers by Chemical
1991-1994 Volatile Organic Compound and Nitrogen Oxide Emissions
1994 Summary of TRI Chemical Releases and Transfers from Sources within 3 Miles of Assembly Plant
Air Quality Attainment Status for Criteria Pollutants (as of 1994)
Community Demographic and Economic Characteristics
Facility Location (map)
Area Wide 1994 TRI Emission Profile (map)
1994 TRI Releases and Transfers from Sources within 3 Miles of Assembly Plant, by Chemical
Demographic Characteristics (maps)

General Guidelines for Use

Efforts have been made to ensure that the data presented here are accurate. The Project Team could not independently verify data accuracy in all cases, however, and some errors may remain. The following is a partial list of factors that should be considered in using these profiles:

1. Current releases presented in this report represent only some of the contamination sources in a given area. Data on historical releases (prior to 1991) were not included, and releases from non-assembly plant emission sources were identified only through the Toxics Release Inventory (TRI). TRI data do not cover all sources of releases. Considering only TRI data for a given community may mis-state the relative contribution of plants and their neighboring TRI facilities to an area's total releases.
2. Care must be taken to distinguish true changes over time in environmental releases from apparent changes, due, for example, to changes in the scope of reporting requirements.
3. TRI data are often based on engineering estimates and are reported on an annual basis. Data on releases over shorter time frames are not available.
4. TRI, the Biennial Report and other databases do not include all substances and environmental releases of concern.

Notes on Comparisons Across Facilities

1. The following factors can affect an assembly plant's environmental profile, among other things: the number of vehicles produced, plant age, process equipment age, and vehicle size and configuration.
2. Some plants are highly-integrated, performing some parts and all assembly steps in-house. Others obtain parts from other manufacturing facilities, or share assembly operations with another plant.
3. States differ in how they define hazardous waste and how they treat recycled wastes and small quantity generators. Therefore, data on quantities of BRS wastes generated may not be comparable for plants located in different states.
4. Area-wide averages for economic and demographic characteristics may be better or worse measures of the plant's immediate community, depending on the specific location of a plant within the reporting area.

**Plant-Community Profile:
Auto Alliance Intl.
Flat Rock MI**

12/2/97

LOCATION	Address	1 International Drive, Flat Rock MI 48134		DESCRIPTION	Plant opened by Mazda in 1985; became joint venture of Ford and Mazda in 1992.	
	Lat/Long:	latitude (degrees N)	42 5' 55"		Produced Mazda MX6, 626 and Ford Probe in 1994.	
		longitude (degrees W)	83 14' 45"			
	County:	Wayne	MSA:		Detroit MI	
	Other counties within 3 miles of plant:		Monroe	ID NUMBERS	RCRA ID	MID981953912
					AIRS ID	AFS2616303579
OPERATIONS		Production	Employment		NPDES ID	-
	Calendar Year: 1991	165,314			TRI	48134MZDMT1MAZD
	1992	168,859				
	1993	219,096				
	1994	246,991	3,800			

PLANT ENVIRONMENTAL PROFILE

RCRA BIENNIAL REPORT

<i>Waste Code(s)</i>	<i>Wastewater?</i>	<i>Physical Form</i>	<i>Source</i>	<i>Mgd. On/Off-Site</i>	<i>Management Method</i>	<i>Quantity Generated (tons)</i>	<i>Quantity Shipped (tons)</i>	<i>Quantity Mgd. On-Site (tons)</i>
<i>1991</i>								
D001 (ignitable)	Y	B101 inorg. liquids	A29 other surface prep	Off	M111 stabilization	22.2	22.2	0.0
D001 (ignitable)	N	B203 org. liquids	A19 other clean/degr.	Off	M141 transfer facil.	5.5	5.5	0.0
D001 (ignitable)	N	B212 org. liquids	A59 1x/intermittent	Off	M061 fuel blending	2.3	2.3	0.0
D001 (ignitable)	N	B219 org. liquids	A59 1x/intermittent	Off	M061 fuel blending	3.8	3.8	0.0
D001, F001	N	B407 org. solids	A29 other surface prep	Off	M061 fuel blending	0.9	0.9	0.0
D008 (lead)	N	B310 inorg. solids	A21 painting	Off	M119 stabilization	12.7	12.7	0.0
F001 (halog. solvents)	N	B601 org. sludges	A07 vapor degreas	On/Off	M021 solvents recov.	18.9	18.9	18.9
F003 (nonhalog. solvents)	N	B209 org. liquids	A21 painting	Off	M061 fuel blending	7.2	7.2	0.0
F003 (nonhalog. solvents)	N	B210 org. liquids	A09 clean out equip	Off	M061 fuel blending	0.2	0.2	0.0
F003 (nonhalog. solvents)	N	B310 inorg. solids	A78 air poll cntl device	Off	M061 fuel blending	0.5	4.6	0.0
F003 (nonhalog. solvents) D001 (ignit.)	N	B211 org. liquids	A09 clean out equip	Off	M022 solvents recov.	122.2	122.2	0.0
F003 (nonhalog. solvents) D001 (ignit.)	N	B211 org. liquids	A09 clean out equip	Off	M061 fuel blending	16.8	16.8	0.0
F005 (nonhalog. solvents) D001 (ignitable)	N	B211 org. liquids	A09 clean out equip	Off	M022 solvents recov.	472.1	472.1	0.0
F005 (nonhalog. solvents) D001 (ignitable)	N	B211 org. liquids	A09 clean out equip	Off	M061 fuel blending	164.8	164.8	0.0
F005, F003 (nonhalog. solvents)	N	B409 org. solids	A21 painting	Off	M061 fuel blending	9.8	9.8	0.0
F005, F003 (nonhalog. solvents)	N	B409 org. solids	A21 painting	Off	M125 other treat.	2.4	2.4	0.0
TOTAL - 1991						862.2	866.3	18.9

(continued)

**Plant-Community Profile:
Auto Alliance Intl.
Flat Rock MI**

12/16/97

PLANT ENVIRONMENTAL PROFILE (continued)

RCRA BIENNIAL REPORT (continued)

<i>Waste Code(s)</i>	<i>Wastewater?</i>	<i>Physical Form</i>	<i>Source</i>	<i>Mgd. On/Off-Site</i>	<i>Management Method</i>	<i>Quantity Generated (tons)</i>	<i>Quantity Shipped (tons)</i>	<i>Quantity Mgd. On-Site (tons)</i>
1993								
D001 (ignitable)	N	B203 org. liquid	A19 other clean/degr.	Off	M121 neutralization	44.0	44.0	0.0
D001 (ignitable)	N	B207 org. liquid	A56 1x/intermittent	Off	M061 fuel blending	5.1	5.1	0.0
D001 (ignitable)	N	B210 org. liquid	A08 physical scraping	Off	M061 fuel blending	8.1	8.1	0.0
D001 (ignitable)	N	B210 org. liquid	A08 physical scraping	Off	M111 stabilization	58.2	58.2	0.0
D001 (ignitable)	N	B210 org. liquid	A57 1x/intermittent	Off	M061 fuel blending	0.9	0.9	0.0
D001 (ignitable)	N	B210 org. liquid	A57 1x/intermittent	Off	M111 stabilization	22.0	22.0	0.0
D001 (ignitable)	N	B211org. liquid	A04 flush rinsing	Off	M022 solvents recov.	124.7	124.7	0.0
D001 (ignitable)	N	B211org. liquid	A04 flush rinsing	Off	M061 fuel blending	64.9	64.9	0.0
D001 (ignitable)	N	B212 org. liquid	A59 1x/intermittent	Off	M061 fuel blending	1.2	1.2	0.0
D008 (lead)	N	B310 inorg. solids	A21 painting	Off	M111 stabilization	1.8	1.8	0.0
F001 (halog. solvents)	N	B601org. sludges	A07 vapor degreas	Off	M021 solvents recov.	14.1	14.1	0.0
F003 (solvents) D001(ignitable)	N	B209 org. liquid	A21 painting	Off	M043 incineration	3.6	3.6	0.0
F003 (solvents) D001(ignitable)	N	B211org. liquid	A09 clean out equip	Off	M021 solvents recov.	24.6	24.6	0.0
F003 (solvents) D001(ignitable)	N	B310 inorg. solids	A78 air poll cntl device	Off	M061 fuel blending	0.5	0.5	0.0
F003 (solvents) D001(ignitable)	N	B409 org. solids	A21 painting	Off	M061 fuel blending	1.9	1.9	0.0
F005, F003, D001	N	B203 org. liquid	A19 other clean/degr.	Off	M022 solvents recov.	1.4	1.4	0.0
F005, F003, D001	N	B210 org. liquid	A09 clean out equip	Off	M061 fuel blending	2.2	2.2	0.0
F005, F003, D001	N	B211org. liquid	A04 flush rinsing	Off	M022 solvents recov.	306.0	306.0	0.0
TOTAL - 1993						685.2	685.2	0.0

TOXICS RELEASE INVENTORY

	<i>Air-Fugitive Emissions</i>	<i>Air-Stack Emissions</i>	<i>Total Releases</i>	<i>Discharge to POTW</i>	<i>Off-Site Energy Recovery</i>	<i>Off-Site Recycling</i>	<i>Off-Site Treatment</i>	<i>Off-Site Disposal</i>	<i>Total Transfers</i>
Total lbs of TRI chemicals:									
1991	153,778	1,587,556	1,743,768	5,463	7,054	709,838	9,671	22,001	754,027
1992	173,038	1,283,340	1,459,462	12,287	10,620	608,828	7,962	21,566	661,263
1993	254,435	2,753,559	3,009,116	536	2,900	143,967	27,600	23,866	198,869
1994	262,895	1,775,345	2,046,534	496	6,959	629,646	2,780	15,868	655,749
Lbs. per vehicle produced:									
1991	0.93	9.60	10.55	0.03	0.04	4.29	0.06	0.13	4.56
1992	1.02	7.60	8.64	0.07	0.06	3.61	0.05	0.13	3.92
1993	1.16	12.57	13.73	0.00	0.01	0.66	0.13	0.11	0.91
1994	1.06	7.19	8.29	0.00	0.03	2.55	0.01	0.06	2.65

**Plant-Community Profile:
Auto Alliance Intl.
Flat Rock MI**

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PLANT ENVIRONMENTAL PROFILE (continued)

1994 TRI Emissions/Releases by Chemical (lbs.)

Chemical Name	Air-Fugitive Emissions	Air-Stack Emissions	Total Releases	Discharge to POTW	Off-Site Energy Recovery	Off-Site Recycling	Off-Site Treatment	Off-Site Disposal	Total Transfers
METHANOL	250	24,344	24,594	0	0	0	0	10	10
N-BUTYL ALCOHOL	250	70,889	71,139	5	0	0	0	10	15
BENZENE	5	250	255	0	0	396	0	10	406
1,1,1-TRICHLOROETHANE	260,130	750	260,880	2	0	0	0	0	2
1,2,4-TRIMETHYLBENZENE	250	84,018	84,268	5	0	19,827	0	0	19,832
ETHYLBENZENE	250	30,774	31,024	0	7	250	0	10	267
METHYLENEBIS(PHENYLISOCYANATE)	5	0	5	0	6,435	24,994	0	0	31,429
ETHYLENE GLYCOL	250	0	250	0	0	0	250	10	260
METHYL ISOBUTYL KETONE	250	39,144	39,404	5	0	0	0	10	15
TOLUENE	250	399,263	399,513	0	0	250	0	124	374
CYCLOHEXANE	250	250	500	5	17	433,929	0	10	433,961
XYLENE (MIXED ISOMERS)	250	792,594	792,844	0	250	0	0	10	260
METHYL TERT-BUTYL ETHER	250	250	8,764	0	250	150,000	0	5	150,255
GLYCOL ETHERS	5	332,569	332,584	5	0	0	250	10	265
LEAD COMPOUNDS	0	0	10	5	0	0	1,780	250	2,035
NICKEL COMPOUNDS	0	0	0	459	0	0	0	3,073	3,532
ZINC COMPOUNDS	250	250	500	5	0	0	500	12,326	12,831
TOTAL	262,895	1,775,345	2,046,534	496	6,959	629,646	2,780	15,868	655,749

**VOC/NOx Emissions:
(lbs/year)**

	VOCs	NO2
1990	3,524,228	8,120
1991	3,576,638	9,284
1992	3,412,312	9,284
1993	2,516,654	9,284
1994	2,863,982	9,284

**Plant-Community Profile:
Auto Alliance Intl.
Flat Rock MI**

12/2/97

COMMUNITY ENVIRONMENTAL PROFILE

TRI Chemical Releases & Transfers from Sources Within 3 Miles of Auto/LDT Plant (lbs.)

<i>Facility (w. map #)</i>	<i>Air-Fugitive Emissions</i>	<i>Air-Stack Emissions</i>	<i>Total Releases</i>	<i>Discharge to POTW</i>	<i>Off-Site Transfers</i>	<i>Total Transfers</i>
1 FORD MOTOR CO. WOODHAVEN STA	250	0	250	0	250	250
2 MCLOUTH STEEL GIBRALTAR PLANT	0	0	0	0	0	0
3 PPG IND. INC.	0	0	0	0	0	0
5 BENCKISER CONSUMER PRODUCTS	0	0	0	0	0	0
Total	250	0	250	0	250	250

**Air Quality Attainment Status
(as of 1994)**

ozone - nonattainment (moderate)*
carbon monoxide - attainment or unclassifiable
particulates - unclassifiable
lead - unclassifiable
NO2 - cannot be classified or better than national standards
SO2 - attainment

* Redesignated attainment effective 4/6/95 (60 FR 12459)

**Plant-Community Profile:
Auto Alliance Intl.
Flat Rock MI**

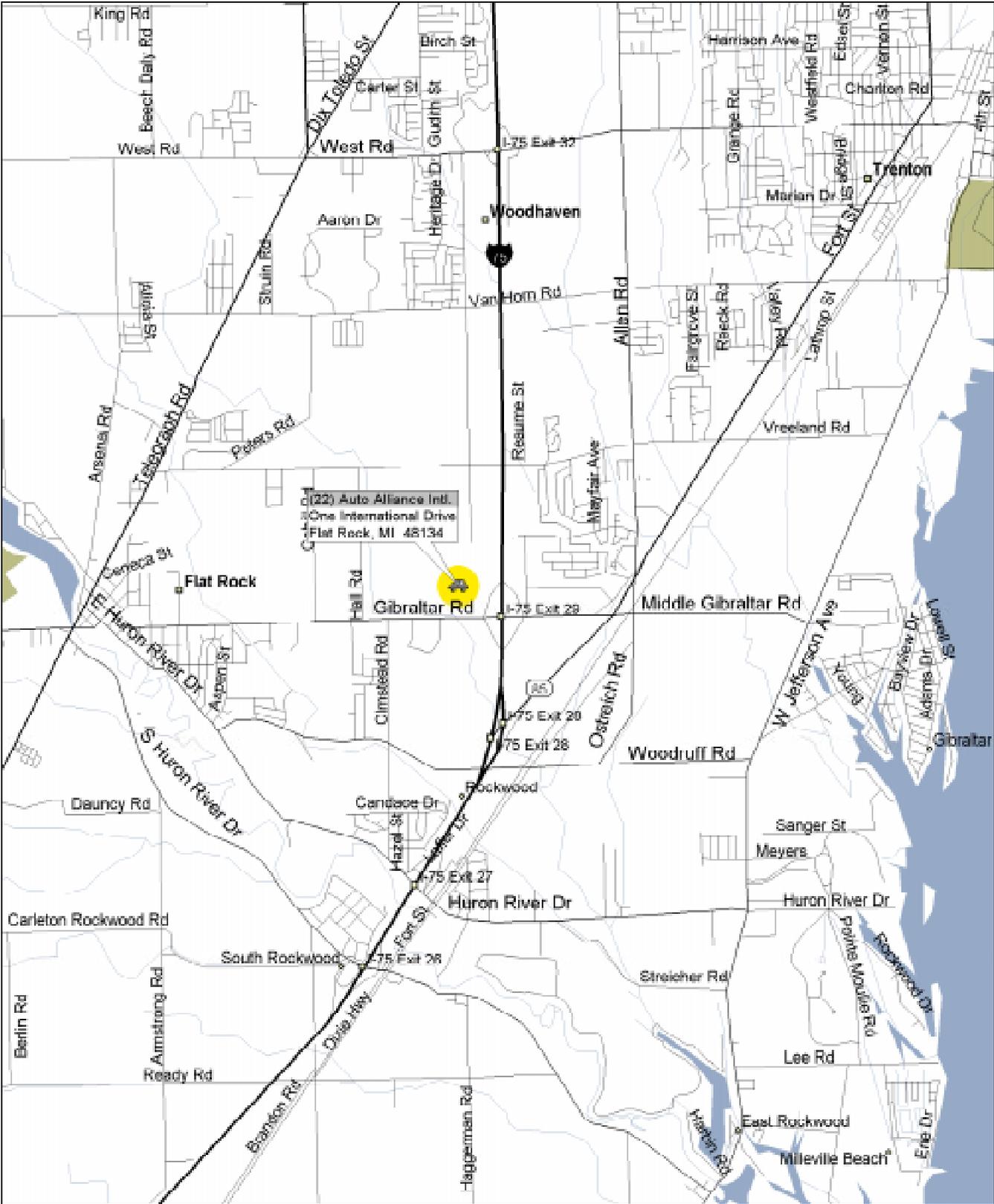
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COMMUNITY DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS

	<i>Census Block</i>	<i>0-1 Mile</i>	<i>0-3 Miles</i>	<i>1-3 Miles</i>	<i>3-5 Miles</i>	<i>County</i>	<i>State</i>	<i>U.S.</i>
Total Population (1994)	NA	NA	NA	NA	NA	2,064,819	9,496,539	260,340,990
Total Population (1990)	1,377	3,810	34,134	30,324	46,819	2,111,687	9,295,297	248,709,873
% Change 1990-1994	NA	NA	NA	NA	NA	-2	2	5
Total Area (sq. mi.) (1990)	3.7	3.1	28.2	25.1	50.2	614.1	56,809.2	3,536,278.1
Population/sq. mi. (land area) (1990)	370	1,219	1,328	1,343	1,234	3,438	164	70
Median Household Income (1994)						NA	35,284	32,264
Median Household Income (1989)						27,997	31,020	30,056
% Change 1979-1989 (constant \$)						-10	-4	7
% Change 1989-1994 (constant \$)						NA	14	7
Per Capita Personal Income (1993)						19,912	20,584	20,800
Per Capita Personal Income (1989)						17,104	17,546	17,690
% Change 1989-1993 (current \$)						16	17	18
Minority Percentage (1990)	2	2	2	2	1	42	16	20
Pct. of Households Below Poverty Level (1989)	19	9	10	10	9	25	23	20
Pct. Not Completing High School (1990)	27	16	18	19	18	30	23	25
Total Employment (1994) (civilian nonfarm)						929,642	4,753,000	131,056,000
Unemployment Rate (1994)						7	6	6
Manufacturing Employment (1993)						182,126	906,672	18,183,381
Mfgr. as % Total Employment (1993)						26	26	19
Manufacturing Employment (1992)						187,100	917,000	18,253,000
Production Workers (1992)						93,500	574,000	11,654,000
% Change in Mfgr. Employment 1987-1992						-19	-7	-4
Assembly Plant as % Total Mfgr. Workers						2		

Data sources used were not always complete or current.
Attempts have been made to verify data, but errors may still exist.

Flat Rock, MI, Auto Alliance Intl. Plant



Microsoft MapData
Streets98

AUTOALLIANCE INTL INC
1 INTL DR
FLAT ROCK MI
Tri Number: 48134MZDMT1MAZD

Map #	SIC	Name	Address	City	State
0	3710	AUTOALLIANCE INTL. INC. INC.	1 INTL. DR.	FLAT ROCK	MI
1	3465	FORD MOTOR CO. WOODHAVEN STAMPING PLANT	20900 WEST RD.	WOODHAVEN	MI
2	3316	MCLOUTH STEEL GIBRALTAR PLANT	28000 RIVER RD.	GIBRALTAR	MI
3	2851	PPG IND. INC.	21500 GIBRALTAR RD.	FLAT ROCK	MI
5	2841	BENCKISER CONSUMER PRODUCTS INC.	21702 E. HURON RIVER DR.	ROCKWOOD	MI

AREA WIDE 1994 TRI EMISSION PROFILE

AUTOALLIANCE INTL INC
WAYNE COUNTY, Michigan

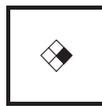
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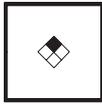
Map Key:
Auto
Plant
Truck



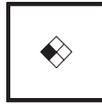
Air
Release



Land
Release

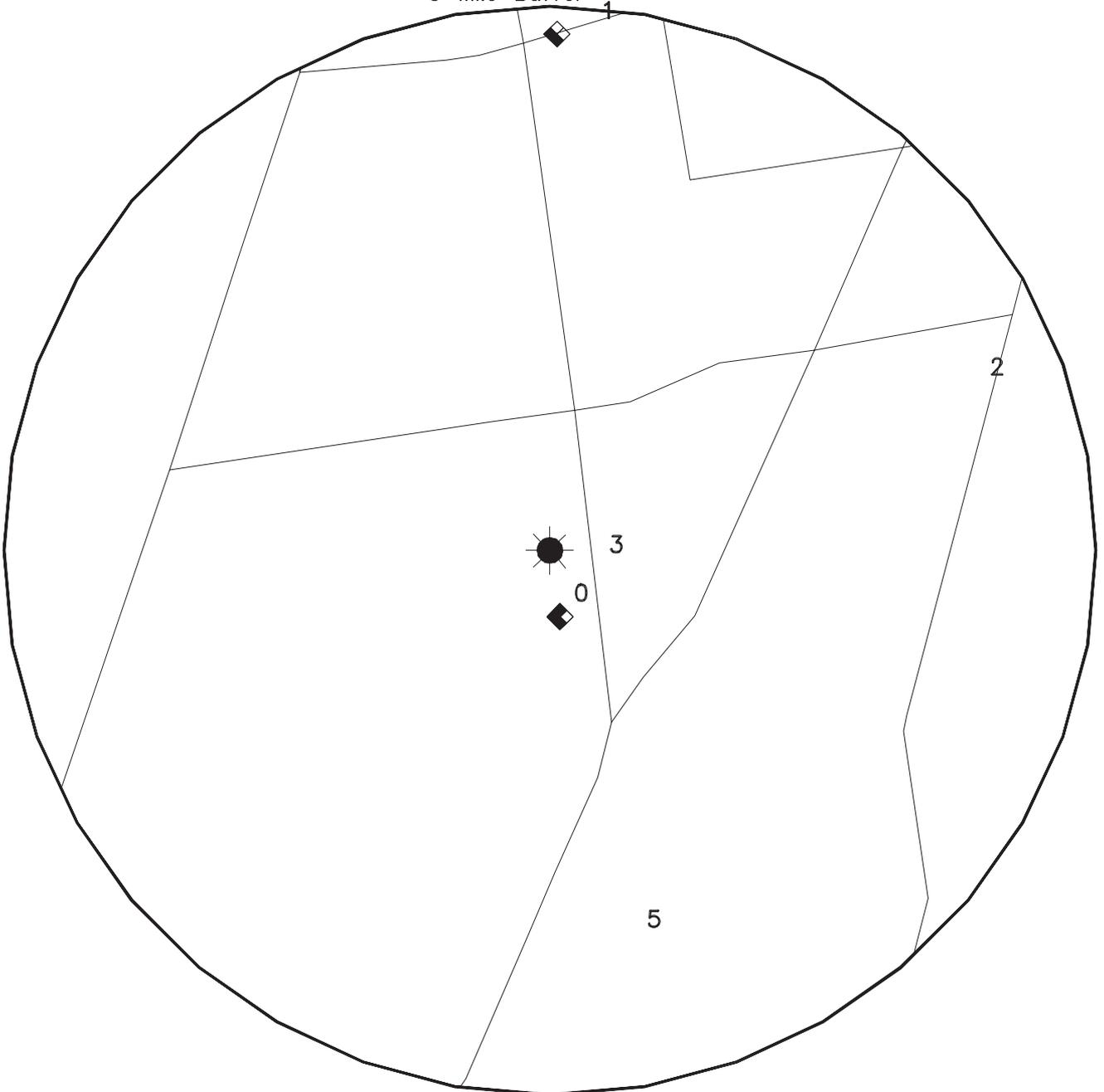


Water
Release



Transfer
location
To offsite

3 Mile Buffer



Number without a Symbol denotes no reported emissions over 0.5 pounds per year

1994 TRI EMISSIONS (LB/YEAR) AT FACILITIES WITHIN THREE MILES OF
 AUTOALLIANCE INTL INC TRI NO: 48134MZDMT1MAZD

Chemical Name	Air Fugitive (Non-Point Source) Emissions	Air Stack (Point Source) Emissions	Discharge to Surface Water	On-Site Land Disposal	TOTAL RELEASES	Discharge to POTW	Transfer	TOTAL TRANSFERS
AUTOALLIANCE INTL. INC. INC.		SIC DESCRIPTION: SIC CODE: 3710			MAP LOCATION NO:		0	
1 INTL. DR. FLAT ROCK	MI 48134							
METHANOL	250	24,344	0	0	24,594	0	10	10
N-BUTYL ALCOHOL	250	70,889	0	0	71,139	5	406	411
BENZENE	5	250	0	0	255	0	10	10
1,1,1-TRICHLOROETHANE	260,130	750	0	0	260,880	2	19,827	19,829
1,2,4-TRIMETHYLBENZENE	250	84,018	0	0	84,268	5	250	255
ETHYLBENZENE	250	30,774	0	0	31,024	0	25,011	25,011
METHYLENEBIS(PHENYLISOCYANATE)	5	0	0	0	5	0	6,435	6,435
ETHYLENE GLYCOL	250	0	0	0	250	0	260	260
METHYL ISOBUTYL KETONE	250	39,144	10	0	39,404	5	260	265
TOLUENE	250	399,263	0	0	399,513	0	434,053	434,053
CYCLOHEXANE	250	250	0	0	500	5	27	32
XYLENE (MIXED ISOMERS)	250	792,594	0	0	792,844	0	150,260	150,260
METHYL TERT-BUTYL ETHER	250	250	8,264	0	8,764	0	255	255
GLYCOL ETHERS	5	332,569	10	0	332,584	5	260	265
LEAD COMPOUNDS	0	0	10	0	10	5	2,030	2,035
NICKEL COMPOUNDS	0	0	0	0	0	459	3,073	3,532
ZINC COMPOUNDS	250	250	0	0	500	5	12,826	12,831
SUBTOTALS	262,895	1,775,345	8,294	0	2,046,534	496	655,253	655,749
FORD MOTOR CO. WOODHAVEN STAMPING PLANT		SIC DESCRIPTION: SIC CODE: 3465			AUTOMOTIVE STAMPINGS		MAP LOCATION NO: 1	
20900 WEST RD. WOODHAVEN	MI 48183							
NICKEL	250	0	0	0	250	0	250	250
SUBTOTALS	250	0	0	0	250	0	250	250

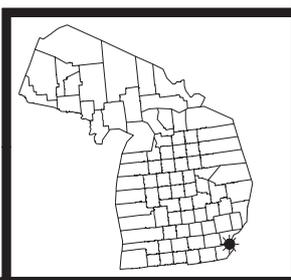
Auto Alliance Intl. Flat Rock Wayne County, Michigan

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Longitude: 83 14 45 W

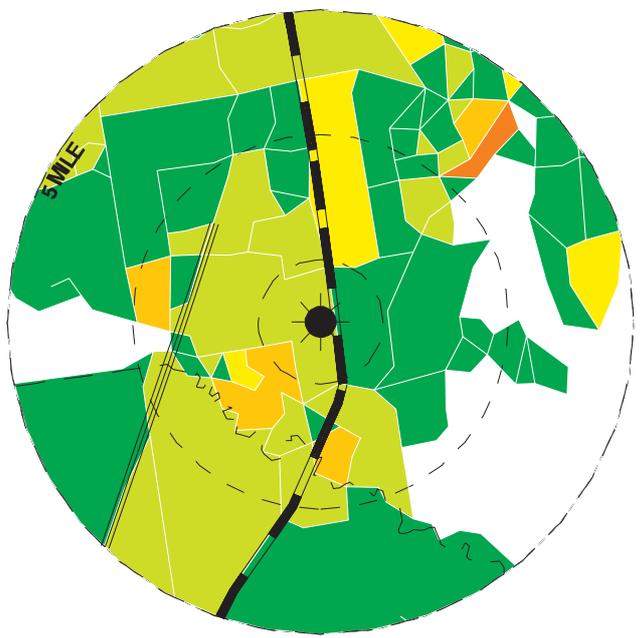
- MAP KEY:**
- County Boundaries
 - Inter State Highway
 - US Highway
 - Rail Road
 - One Mile
 - Three Miles
 - Five Miles

- POPULATION DENSITY / SQ. MILE**
- Greater than 10000
 - 1000 - 10000
 - 100 - 1000
 - 10-100
 - 1-10

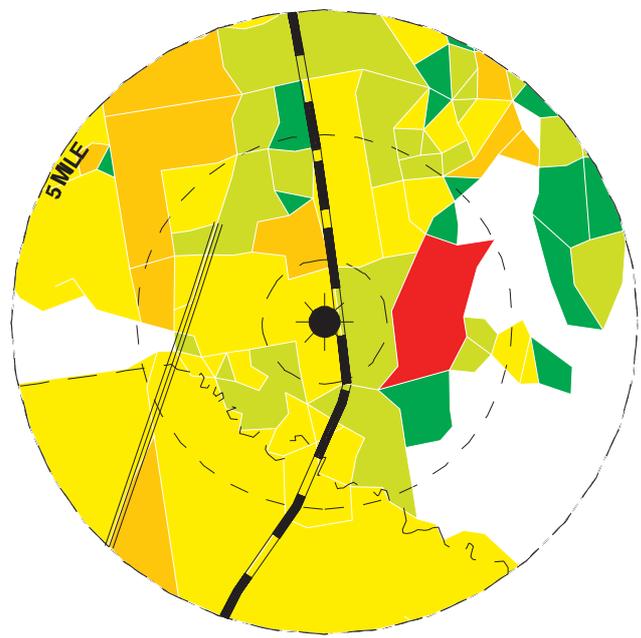
- Minority, poverty, and High School Incomplete percentages**
- Greater than 50
 - 40 - 50
 - 30 - 40
 - 20 - 30
 - 10 - 20
 - 0 - 10



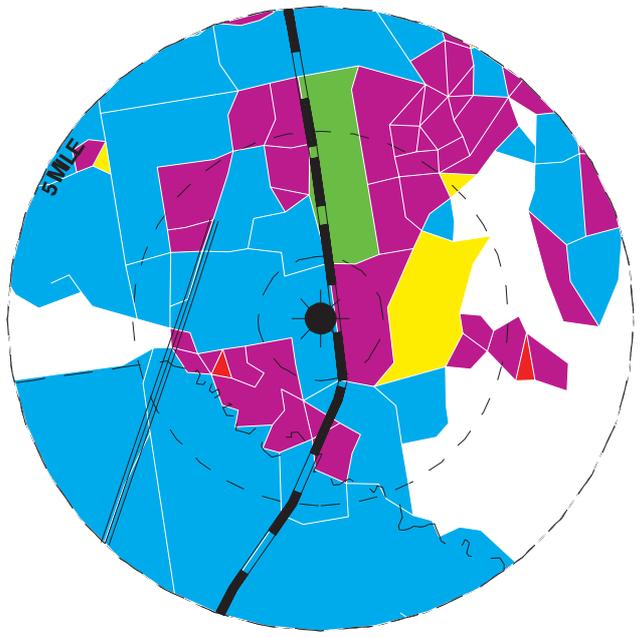
Percentage of Total Population Below Poverty Level



Percentage of Population not Completing High School



Population Density
People Per Sq. Mile



Minority Population
Percent of Total Population

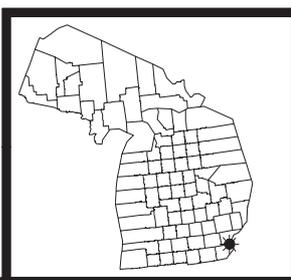


Auto Alliance Intl. Flat Rock Wayne County, Michigan

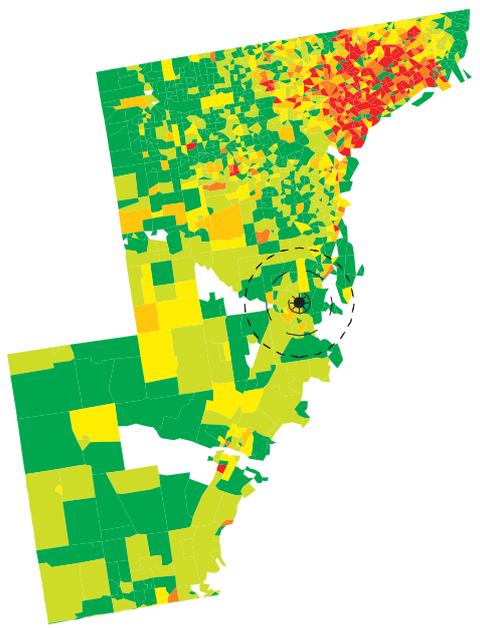
Latitude: 42 5 55 N
Longitude: 83 14 45 W

- MAP KEY:**
-  County Boundaries
 -  Inter State Highway
 -  US Highway
 -  Rail Road
 -  One Mile
 -  Three Miles
 -  Five Miles
- POPULATION DENSITY / SQ. MILE**
-  Greater than 10000
 -  1000 - 10000
 -  100 - 1000
 -  10-100
 -  1-10

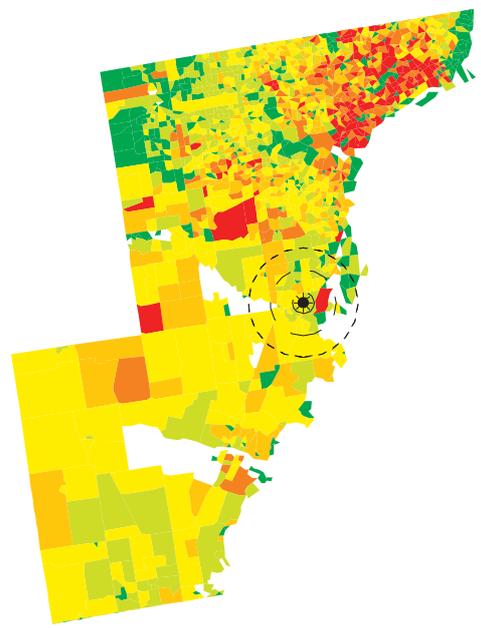
- Minority, poverty, and High School Incomplete percentages**
-  Greater than 50
 -  40 - 50
 -  30 - 40
 -  20 - 30
 -  10 - 20
 -  0 - 10



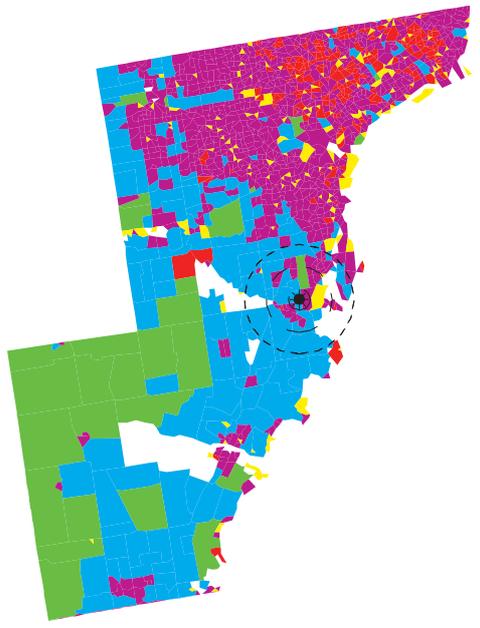
Percentage of Total Population Below Poverty Level



Percentage of Population not Completing High School



Population Density
People Per Sq. Mile



Minority Population
Percent of Total Population

