

Low-Income Residents and People of Color in Michigan Are Living Near Chemical Dangers

The Center for Effective Government graded states based on the dangers faced by people of color and residents with incomes below the poverty line living within one mile of dangerous facilities, compared to white and non-poor people in these areas. **Michigan scored poorly with a “D” grade.**

Nationally, 7.5 percent of the population lives within one mile of a hazardous facility.

Key Findings

- More than 500,000 Michiganders (5.4 percent) live within one mile of a facility storing large amounts of extremely hazardous chemicals. These “fenceline communities” face potential chemical leaks and explosions on a daily basis.
- **Children of color under age 12 are roughly twice as likely to live in the shadow of a hazardous chemical facility compared to white children.**
- **Poor Latino children are over three times more likely to live near facilities than white children not in poverty.**

Chemical dangers are real, and Michigan has experienced recent industrial incidents.

Michigan has witnessed several industrial incidents in recent years. In one example, a July 2011 leak at Dow Corning's Midland facility released toxic methyl chloride. The flammable chemical can cause dizziness, breathing difficulties, seizures, and coma, and long-term exposure may cause birth defects. The incident also released hydrochloric acid, which can cause severe chemical burns. Thankfully, no one was injured.

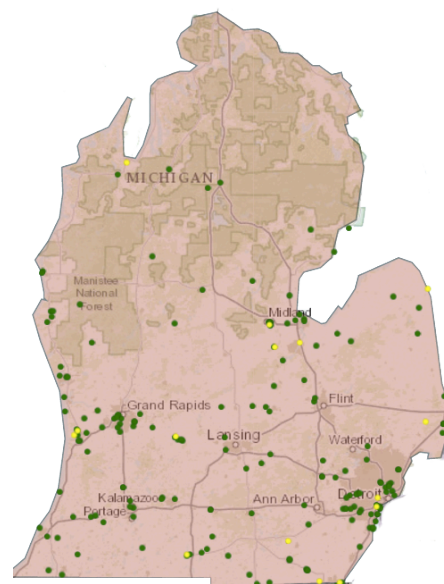
Michigan’s 197 high-risk facilities are scattered across the state, with the highest concentrations around Detroit, Grand Rapids, and Dow Chemical's Midland headquarters. They include everything from chemical manufacturing plants, food production facilities, auto parts factories, and water treatment plants in cities and suburbs to rural fertilizer and chemical distribution facilities.

These facilities use and store a variety of chemicals, including **anhydrous ammonia**, which is sold as a fertilizer and is also used in commercial refrigeration. Water treatment plants and other industrial facilities store **chlorine gas**, a deadly substance that can be used as a chemical weapon.

But the plants themselves aren't the only risk. **Companies ship these dangerous chemicals** to the facilities, often by train or by truck, and accidents in transit can also lead to fatal releases.

Are people of color and low-income residents of Michigan safe from chemical hazards?

More than 11 percent of Latinos live in fenceline communities, compared to fewer than five percent of white residents — meaning they are two-and-a-half times more likely than whites to live near chemical hazards. **Nearly nine percent of**



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kids of color under age 12 live near potentially dangerous facilities, compared to about five percent of white kids in this age group. Roughly eight percent of children of color attend public schools close to a risky industrial facility, while fewer than five percent of white students do. These children face acute dangers and daily exposures to toxic chemicals that put them at a distinct disadvantage because young children are much more susceptible to chemical hazards than adults.

Poor children under age 12 also face unequal chemical dangers; almost nine percent live in a fenceline community, compared to five percent of non-poor children. **Poor Latino children fare even worse, being more than three times more likely to live close to these dangerous facilities compared to non-poor whites.** Living in the shadow of an industrial facility increases stress on poor communities as they worry about the potential for a catastrophic disaster and daily exposures to toxic emissions. Living near these facilities can also decrease home values, meaning many poor families can't afford to move to safer neighborhoods if they want to do so.

Inequities in Likelihood of Living in a Fenceline Community

Racial Inequities	Score	Grade	Income (Poverty) Inequities	Score	Grade
Percentage of People of Color Who Live in Fenceline	8.5%	C	Percentage of Poor People Who Live in Fenceline	8%	C
Likelihood of People of Color to Live in Fenceline (compared to whites)	1.9 times more likely	D	Likelihood of Poor People to Live in Fenceline (compared to those not in poverty)	1.6 times more likely	D
Percentage of Children of Color Under 12 Who Live in Fenceline	8.9%	C	Percentage of Poor Children Under 12 Who Live in Fenceline	8.9%	C
Likelihood of Children of Color Under 12 to Live in Fenceline (compared to white children under 12)	1.9 times more likely	D	Likelihood of Poor Children Under 12 to Live in Fenceline (compared to children under 12 not in poverty)	1.7 times more likely	D
Percentage of Children of Color Who Attend Public Schools in Fenceline	7.9%	B	Percentage of Children Receiving Free Lunch Who Attend Schools in Fenceline	7.8%	B
Likelihood of Children of Color to Attend Public Schools in Fenceline (compared to white children)	1.7 times more likely	D	Likelihood of Children Receiving Free Lunch to Attend Schools in Fenceline (compared to children not receiving free lunch)	1.5 times more likely	D
Percentage of Elderly of Color Who Live in Fenceline	8.3%	C	Percentage of Elderly Poor People Who Live in Fenceline	6.8%	C
Likelihood of Elderly of Color to Live in Fenceline (compared to elderly whites)	2 times more likely	D	Likelihood of Elderly Poor People to Live in Fenceline (compared to elderly people not in poverty)	1.5 times more likely	D
People of Color Grade		D	Poverty Grade		D
Overall Grade: D					

What you can do to protect your community from dangerous chemicals.

Michiganders like you can help. You can organize people in your community and educate others about these dangers. You can learn about your local zoning process (if your state gives local governments zoning authority) and whether it protects community members from nearby industrial plants that use hazardous chemicals – and share what you learn with your friends and neighbors. You can attend public meetings and planning hearings and urge decision makers to think carefully about the sites chosen for new industrial facilities, and you can write, call, and meet with other state, county, and city officials to send the message that **all** Michiganders deserve to be protected from chemical dangers.

You can also demand that the federal government require facilities to switch to safer chemicals and alternatives whenever feasible and urge the Michigan Department of Environmental Quality and the state-level OSHA to conduct more thorough and frequent inspections to spot problems before they cause disasters. And Michiganders can push local governments to require buffer zones around new and expanded chemical facilities to ensure homes and schools are not built nearby.

Table 1: Percentage of Population Who Live in Fenceline Communities, by Age and Race

	Black	Latino	American Indian/ Alaskan Native	Asian/Pacific Islander/ Native Hawaiian	White Not Hispanic	All Races
All Ages	8.6%	11.1%	6.7%	5.8%	4.5%	5.4%
0-17	8.6%	11.3%	7.4%	6.4%	4.5%	5.8%
18-64	8.5%	11.1%	6.5%	5.5%	4.5%	5.4%
65+	8.8%	8.6%	5.5%	6.2%	4.1%	4.7%
Total # in fenceline	114,177	48,284	3,536	14,204	331,179	522,675
Likelihood of living in fenceline, compared to whites	1.9	2.5	1.5	1.3	---	---

Table 2: Percentage of Poor Population Who Live in Fenceline Communities, by Age and Race

	Black	Latino	American Indian/ Alaskan Native	Asian/Pacific Islander/ Native Hawaiian	White Not Hispanic	All Races
All Ages	10.1%	13.2%	8.3%	11.4%	6.1%	8.0%
0-17	9.9%	13.1%	9.6%	17.4%	6.6%	8.8%
18-64	10.2%	13.4%	7.7%	8.6%	5.9%	7.7%
65+	9.5%	9.2%	7.5%	16.6%	5.7%	6.8%
Total # in fenceline	46,824	16,685	1,126	4,036	56,999	129,401
Likelihood of living in fenceline, compared to whites in poverty	1.7	2.2	1.4	1.9	---	---
Likelihood of living in fenceline, compared to same race not in poverty	1.3	1.3	1.4	2.4	1.4	1.6
Likelihood of living in fenceline, compared to whites not in poverty	2.4	3.1	2.0	2.7	1.4	---

Table 3: Percentage of Children Who Attend Public School in Fenceline Communities, by Grade and Race

	Black	Latino	American Indian/ Alaskan Native	Asian/Pacific Islander/ Native Hawaiian	White Not Hispanic	All Races
All Grades	7.2%	11.7%	3.2%	5.2%	4.5%	5.6%
Pre-K - 2	7.7%	13.9%	2.8%	5.9%	5.0%	6.3%
3-7	7.7%	13.2%	2.5%	6.0%	4.6%	5.9%
8-12	6.6%	8.4%	3.9%	4.0%	4.2%	4.8%
Total # in fenceline	19,887	11,271	365	2,334	47,417	84,120
Likelihood of attending schools in fenceline, compared to white students	1.6	2.6	1.4 times less likely	1.2	---	---

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