

EXECUTIVE SUMMARY

MidAmerican Energy Company operates two coal-fired power plants in Siouxland. These plants, George Neal North and George Neal South, pollute the air with harmful substances including sulfur dioxide, nitrogen oxides, fine particulate matter, and other hazardous air pollutants every day they operate. These pollutants can cause harmful diseases and exacerbate existing chronic respiratory and cardiological illnesses including asthma, chronic obstructive pulmonary disease (COPD), coronary heart disease, and lung cancer. The two plants have been associated with 1,400 premature deaths since 1999 and the region's rates of asthma and lung cancer outpace statewide averages, demonstrating their risk to human health. Health impacts from the plants are not experienced equally; Siouxland's racial and economic diversity, and uneven access to health insurance and services, means that the plants' pollution affects historically marginalized communities the most.

Iowa's largest investor-owned electric utility, MidAmerican Energy Company, has not expressed any concern for how these plants harm the health of people in Siouxland and plan to continue operating their polluting facilities for the next 25 years. *Coal in Siouxland: MidAmerican's Legacy of Air Pollution and Health Impacts* documents the harmful legacy of ignoring the health impacts of these plants and must be a wake-up call for MidAmerican Energy.

Emissions from George Neal Coal Plants – This set of contaminants is linked to asthma, COPD, lung cancer, and coronary heart disease.



George Neal North

Year	Plant annual NOx emissions (tons)	Plant annual SO2 emissions (tons)	Plant annual CH4 emissions (lbs)	Plant annual N2O emissions (lbs)
2018	2,498	4,336	565,390	82,214
2019	1,836	3,113	413,147	60,074
2020	1,047	1,660	218,645	31,781
2021	1,963	3,328	440,162	63,995
Total	7,345 tons	12,437 tons	1,637,345 lbs	238,065 lbs
Proven to Cause Cardiological Impacts	<u>YES</u>	<u>YES</u>	<u>YES</u>	<u>YES</u>
Proven to Cause Respiratory Impacts	<u>YES</u>	<u>YES</u>	<u>YES</u>	<u>YES</u>

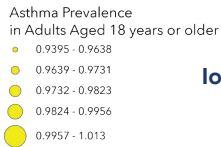
George Neal South

Year	Plant annual NOx emissions (tons)	Plant annual SO2 emissions (tons)	Plant annual CH4 emissions (lbs)	Plant annual N2O emissions (lbs)
2018	2,610	5,341	731,823	106,505
2019	1,331	2,521	369,079	53,724
2020	577	1,103	160,030	23,307
2021	1,243	2,280	335,545	48,855
Total	5,760 tons	11,244 tons	1,596,478 lbs	232,391 lbs
Proven to Cause Cardiological Impacts	<u>YES</u>	<u>YES</u>	<u>YES</u>	<u>YES</u>
Proven to Cause Respiratory Impacts	<u>YES</u>	<u>YES</u>	<u>YES</u>	<u>YES</u>

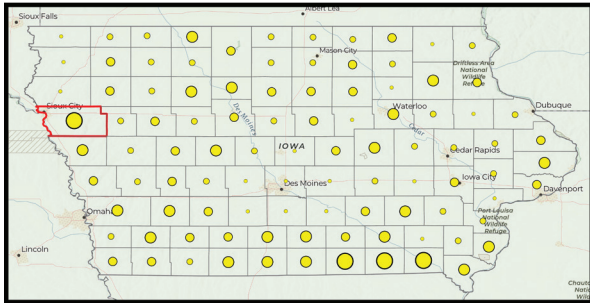
Total Emissions	13,105 tons	23,681 tons	3,233,822 lbs	470,456 lbs
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ASTHMA

Home to Sioux City, Woodbury County has the highest rate of asthma prevalence in adults 18 years or older and outpaces the state average across several age groups for asthma-related emergency department visits.



Iowa County-Level Asthma Rates (Per 10,000 People)



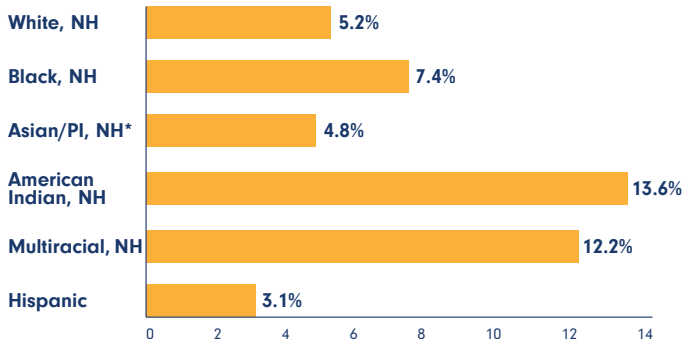
LUNG CANCER

Outdoor air pollution causes about 16% of worldwide lung cancer deaths and Union County's rate outpaces the average for South Dakota. Regardless of other potential causes, such as smoking, coal plant pollution can exacerbate existing lung cancer cases.



DISPARATE RATES OF COPD

Native Americans make up only 1.6% of Nebraska's population, but 13.6% of COPD cases between 2016 and 2020.



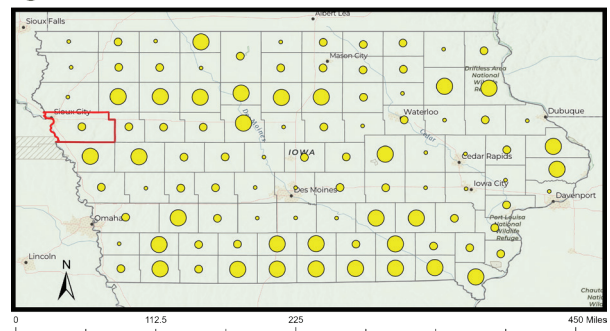
Race/Ethnicity	Sample Size	Percent	95% CI Low	95% CI High
White, NH	66317	5.2%	4.9%	5.4%
Black, NH	1314	7.4%	5.8%	9.4%
Asian/Pi, NH*	509	4.8%	2.4%	9.4%
American Indian, NH	859	13.6%	10.6%	17.2%
Multiracial, NH	649	12.2%	9.2%	16.0%
Hispanic	5033	3.1%	2.4%	4.0%

CORONARY HEART DISEASE

Short- and long-term exposure to particulate pollution are both linked to an increased risk of heart attacks and other forms of heart disease. Notably, Woodbury County displays higher rates than Iowa counties with larger cities, such as Linn and Scott Counties.



Coronary Heart Disease Rates in Iowa (Per 10,000 People)



ECONOMIC INSECURITY HINDERS RESPONSE

Health impacts from air pollution have been shown across many studies to have disparate impacts. Very young and elderly people are more vulnerable to pollution and the consequences it brings. Siouxland residents, including those living in poverty, those without health insurance, and those who are unemployed, have less capacity to respond to the harmful impacts of coal plant pollution.

Economic Disadvantages in Siouxland by County

Indicator	Woodbury County, IA	Dakota County, NE	Union County, SD
Persons in Poverty	13% (13,737 People)	11.7% (2,461 People)	6.0% (1,023 People)
Uninsured Residents <65 Years of Age	8.8% (9,299 People)	13.5% (2,840 People)	8.2% (1,399 People)
Unemployment Rate	3.0%	2.3%	2.5%