

MARK OLESZCZAK

This is the methodology I have concocted over the years to help me figure out how much carbon I have personally contributed to the atmosphere. It's a continual work in progress.

How much carbon was emitted because of me?

Total estimated tons of carbon emitted annually ⓘ

2022	0.4
2021	4.6
2020	9.4
2019	10.9
2018	10.4

Electricity

Estimated tons of carbon emitted in 2022 ⓘ

1.6

Kilowatt hours per year	On	Mid	Off	kWh	Carbon (tons)
2022 (Smart-meter installed)	13%	6%	81%	5,986	2.6
2021 (Fixed wiring issue + new A/C installed)	—	—	—	5,657	2.4
2020	—	—	—	5,890	2.5
2019	—	—	—	7,443	3.2
2018	—	—	—	7,451	3.2

Energy provider ⓘ	Fossil fuels	Carbon free	Carbon (tons)
2022 (Xcel Energy)	63%	37%	-1.0
2021 (Xcel Energy)	65%	35%	-0.8
2020 (Xcel Energy)	69%	32%	-0.8
2019 (Xcel Energy)	70%	30%	-1.0
2018 (Xcel Energy)	72%	28%	-0.9

Natural gas

Estimated tons of carbon emitted in 2022 ⓘ

2.6

Therms per year	Therms	Carbon (tons)
2022	492	2.6
2021	482	2.6
2020	474	2.5
2019	537	2.8
2018	482	2.6

Transportation

Estimated tons of carbon emitted in 2022 ⓘ

3.8

Miles per year	Gas (gallons)	Drive	Fly
2022 (Average vehicle MPG: 23 MPG)	310	7,191	6,644
2021 (Average vehicle MPG: 15 MPG)	412	6,307	2,048
2020	—	4,507	3,402
2019	—	9,154	6,964
2018	—	8,650	4,229
2017	—	9,550	5,000
2016	—	10,833	5,000
2015	—	9,967	5,000
2014	—	35,000	10,000
2013	—	45,000	40,000
2012	—	45,000	65,000

Offsets

Estimated tons of carbon absorbed in 2022 ⓘ

-7.7

Trees planted ⓘ	This year	Cumulative	Carbon (tons)
2022	350	691	-7.6
2021	321	341	-3.8
2020	20	20	-0.2

Direct air capture (DAC) ⓘ	Carbon (tons)
2022 (62 kg carbon via ClimeWorks)	-0.068
2021 (55 kg carbon via ClimeWorks)	-0.061

Permanent underground mineralization ⓘ	Carbon (tons)
2022 (0 kg carbon via DNV + Carbfix)	—

Seaweed / algae farming ⓘ	Carbon (tons)
2022 (0 kg carbon via —)	—

Waste

Estimated tons of carbon emitted in 2022 ⓘ

TBD 2023

Pounds of material ⓘ	2020	2021	2022
Aluminum	—	—	5
Corrugated cardboard	—	—	25
Electronics	—	65	—
Generic recyclables	123	172	—
Glass	—	—	64
Landfill	37	93	58
Organic (Off-site)	289	234	208
Organic (On-site)	—	—	5
Paper	—	—	45
Plastics (#1 PET and #2 HDPE)	—	—	17
Plastics (#4 LDPE grocery bags)	—	—	4
Plastics (#5 PP)	—	—	6
Scrap metal	—	100	34
Tetra Paks	—	—	0.5
Tires	—	96	—
Total	449	760	473

Pounds diverted from places it shouldn't have been ⓘ	2021	2022
Organic waste in landfills (via —)	—	—
Plastics in oceans & rivers (via The Ocean Cleanup)	30	120

Water

Estimated tons of carbon emitted in 2022 ⓘ

TBD 2023

Gallons per year ⓘ	Municipal	Rain barrel
2022 (New raised-bed gardens + re-seeded front yard)	21,217	627
2021	14,853	300
2020 (New water meter installed + rain barrel)	43,729	45
2019	88,000	—
2018	125,000	—

My Charity: water donations provided clean water for ⓘ	People
2022	2