

U.S. Environmental Footprint

The U.S. population is projected to grow from 335M in 2023 to 364M by 2060.^{1,2} One way to measure U.S. environmental impact is by estimating how many Earths would be needed if everyone lived like the average American; it would take five Earths to sustain that level of consumption globally.² Without major shifts in consumption, growing pressure on finite natural resources will accelerate environmental degradation. See other CSS Factsheets that expand on the topics below.

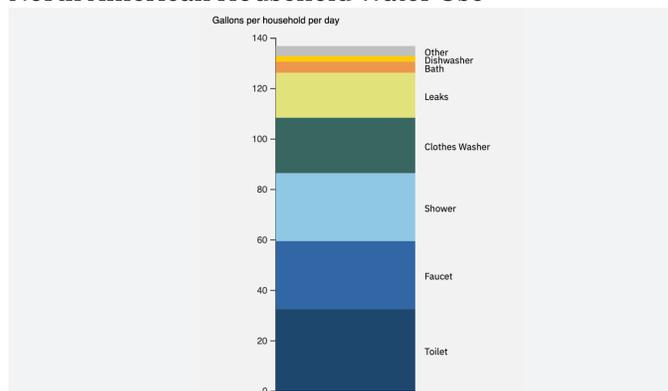
Food

- From 1970 to 2010, average daily calorie consumption in the U.S. rose from 2,054 to 2,501.³ Per capita fat consumption increased by 66%³ while milk consumption decreased 51% to 10.6 gal/yr.⁴
- Americans consume about 360 calories of added sugars and sweeteners per day.³ The American Heart Association recommends no more than 100–150 calories of added sugars daily for an average adult.⁵
- In 2023, the average American consumed 43 gal of soft drinks, a 300% increase since 1947.⁶
- Diets in the top 20% for carbon footprint emit 8 times the GHG of those in the bottom 20%.⁷
- 41% of U.S. adults and over 20% of adolescents (ages 12–19) are obese (BMI > 30).⁸
- 30–40% of food in the U.S. is wasted—making it the most commonly landfilled and incinerated material.⁹ The average American wastes 50% more food than in 1970.¹⁰
- Food waste accounts for 22% of municipal solid waste¹¹ and costs of \$450 per person annually.¹⁰ See [U.S. Food Systems factsheet](#).

Water

- In 2015, U.S. water withdrawals totaled 322B gal/day, down 9% from 2010.¹² The largest uses were thermoelectric power (41%), irrigation (37%), and public supply (12%).¹²

North American Household Water Use¹³



- Western states used 48% more water per person than eastern states in 2015—primarily due to crop irrigation. Over 50% of water withdrawals occur in just 12 states, California alone accounts for 9%.¹²
- The average North American household uses 240 gal of water daily for indoor and outdoor uses. With efficient fixtures and no leaks, usage can drop to 40 gal/day per person.¹³ See [U.S. Food Systems factsheet](#).

Material Use and Waste Management

- In 2000 per capita material use in the U.S. was 23.7 t—52% more than the EU average.¹⁴

Average American Lifetime Material Consumption²⁰

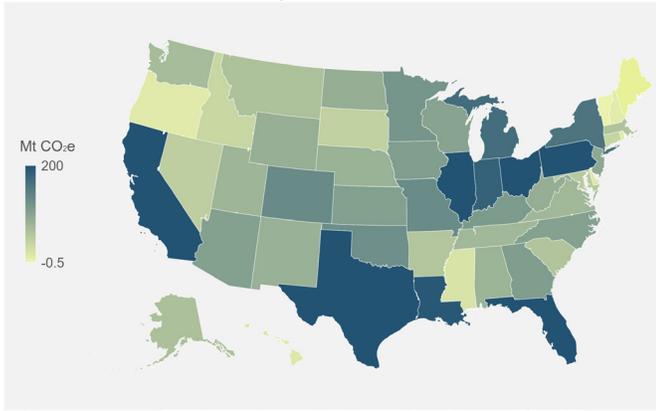


- In 1900, U.S. material use was under 2 t/person. It peaked in 2006 at over 13 t/person.^{15,16} See [U.S. Material Use Factsheet](#).
- In 2018, the average American generated 4.9 lbs of municipal solid waste (MSW) daily, only 1.6 lbs were recycled or composted.¹¹ MSW daily generation was 2.4 lbs/person in Sweden, 3.6 in Germany, and 2.6 in the U.K.¹⁷
- In 2018, 32.1% of U.S. MSW was recycled or composted, diverting 94 Mt from landfills—twice as much as in 1990.¹¹ See [U.S. MSW Factsheet](#).
- Only 53% of Americans are automatically enrolled in curbside recycling programs.¹⁸ In 2016, 82% of cities with curbside recycling used single-stream collection, where materials such as glass and paper are separated are sorted at the facility.¹⁹

Greenhouse Gases (GHG)

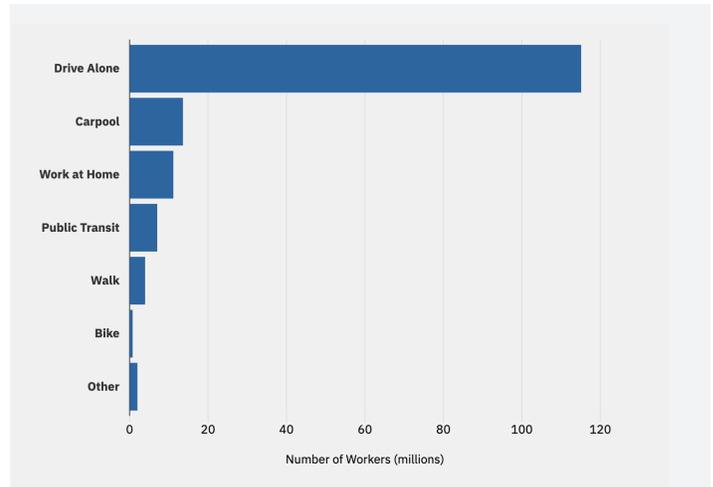
- In 2023, U.S. GHG emissions were 17.6 t CO₂e/person.⁴⁰ Electricity generation accounts for 25% of the U.S. total.²¹
- From 1990–2019, emissions increased by 0.8%. In 2020, they fell by 9% due to the COVID-19 pandemic, then rose 6% in 2021—but remained below 1990 levels.²¹
- In 2023, the Intergovernmental Panel on Climate Change (IPCC) concluded that human activities—principally through GHG emissions—have unequivocally caused global warming, with global surface temperatures reaching 1.1 °C above pre-industrial levels in 2011 to 2020.²²
- Individuals can immediately reduce personal GHG emissions by using energy-efficient products and low-emission transportation.

U.S. GHG Emissions by State, 2022 (Mt CO₂e)²¹



- Average vehicle occupancy is 1.5 people for a passenger car, 7.5 for a transit bus and 26.1 for a train.³²
- In 2022, congestion caused an additional 8.5B hours of travel time, 3.3B gallons of fuel use, and 64.7B lbs of CO₂ emissions in the U.S.³³

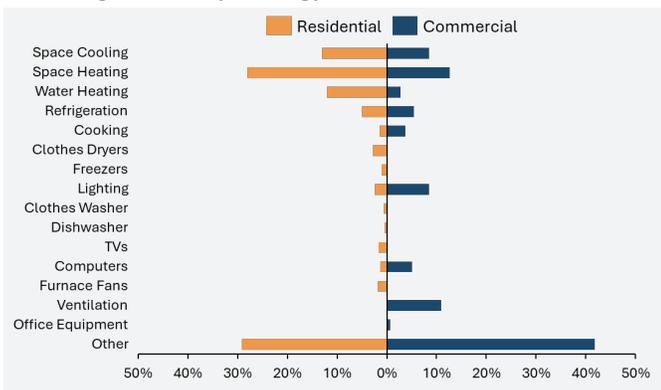
U.S. Modes of Transportation to Work, 2020³²



Residential and Commercial Buildings

- From the 1970s to the 2010s, U.S. houses became larger with fewer occupants; House size increased 21.4%²³ while occupants per house decreased 14%.²⁴ Living space per person rose 41%.^{23,24} See [Residential Buildings Factsheet](#).
- Significant energy savings are possible by improving insulation, upgrading to efficient appliances, and using better lighting in both residential and commercial buildings.
- Average site energy intensity in commercial buildings fell by 19%, from 115,000 BTU/ft² in 1979²⁵ to 96,500 BTU/ft² in 2022.²⁵ See [Commercial Buildings Factsheet](#).
- Developed land in the U.S. increased by 61% from 1982 to 2017, covering 6% of U.S. land area by 2017.²⁷

Buildings Primary Energy Use, 2024²⁶



Energy

- In 2022, the U.S. spent \$1.7T on energy—about \$5,519 per person, or 6.68% of GDP.³⁴
- More U.S. energy comes from petroleum than any other source, comprising nearly 38% of consumption.³⁵
- Daily U.S. per capita energy use included 2.55 gal of oil, 7 lbs of coal, and 267 ft³ of natural gas.^{35,39}
- Residential electricity use was 12 kWh/person daily.³⁵
- In 2022, with less than 5% of the world’s population,^{36,39} the U.S. consumed 16% of the world’s energy³⁷ and generated 15% of world GDP.³⁸
- The EU had 6% of the world’s population,³⁹ used 10% of global energy, and accounted for 15% of world GDP.³⁸ While China had 18% of the world’s population,³⁶ used 29% of its energy,³⁷ and contributed 18% of world GDP.³⁸

Transportation

- In 2023, there were 284.6M vehicles in the U.S. and 237.7M licensed drivers.²⁸
- Drivers traveled over 3.2T vehicle-miles—more than double the amount traveled in 1980.²⁸ This is equivalent to 6.5M round-trips to the moon.²⁹
- Compared to 1990 models, the average 2024 vehicle has 29% more weight, 98% more horsepower, and 36% faster acceleration (0–60 mph time).³⁰
- In 2009, fuel economy surpassed 1988 levels after years of decline.³¹