



Talking Points for NPS Staff

Climate Change and Greenhouse Gas Emissions¹

Over the past 200 years, deforestation and the burning of fossil fuels like coal and petroleum have caused the concentration of greenhouse gases (GHGs) to increase significantly in our atmosphere. The levels of these gases are increasing at a faster rate than at any time in hundreds of thousands of years. If human activities continue to release GHGs at or above the current rate, we will continue to increase average temperatures around the globe.

Climate change affects national parks and the treasures they protect, including scenic wonders, cultural heritage, and plants and animals. [Provide examples of climate change impacts to local habitats, water supplies, snowpack, etc.] The NPS is working to reduce its GHG emissions in an effort to preserve the iconic landscapes and cultural heritage entrusted to our care.

Greenhouse Gases and Transportation^{2,3}

Transportation sources emit GHGs that contribute to climate change. According to the U.S. Environmental Protection Agency, transportation contributed about 27% of total GHGs in the United States in 2010. Highway vehicles release about 1.6 billion metric tons of GHGs into the atmosphere each year, mostly in the form of CO₂. Each gallon of gasoline you burn creates 20 pounds of CO₂. That's about 5 to 9 tons of CO₂ each year for a typical vehicle.

Vehicles also emit air pollutants—such as particulate matter, nitrogen oxides, and hydrocarbons—which are known or suspected to have serious health and environmental effects.⁴ In many national parks, these air pollutants (from transportation and other sources) reduce visibility and adversely impact natural and historical resources.⁵

Vehicle Idling: A Major Culprit⁶: Idling a vehicle truly gets you nowhere. Idling reduces your fuel economy, costs you money, produces pollutants, and wastes resources. Idling a car wastes ¼ to ½ gallon per hour, and idling a heavy-duty vehicle wastes about 1 gallon per hour. Researchers estimate that vehicle idling in the U.S. wastes about 6 billion gallons of fuel annually. That translates to 60 million tons of CO₂ and \$22 billion per year.

[Note common idling spots, e.g., overlooks, wildlife crossings, cone zones, campsites, parking lots.]

¹ U.S. Environmental Protection Agency (EPA): <http://www.epa.gov/otaq/climate/basicinfo.htm>

² EPA: <http://www.epa.gov/otaq/climate/basicinfo.htm>

³ EPA, U.S. Department of Energy (DOE). FuelEconomy.gov: <http://www.fueleconomy.gov/feg/climate.shtml>

⁴ EPA: <http://www.epa.gov/otaq/toxics.htm>

⁵ NPS: <http://www.nps.gov/yose/naturescience/airquality.htm>, <http://www.nps.gov/jotr/naturescience/airquality.htm>, <http://www.nps.gov/grsm/naturescience/air-quality.htm>

⁶ DOE's Clean Cities (2012). Idling is Not the Way to Go: http://www.afdc.energy.gov/pdfs/idling_is_not_the_way.pdf

Be Part of the Solution

There are many opportunities to cut emissions in transportation. Alternative and renewable fuels, advanced vehicle technologies, reductions in the number of vehicle miles traveled, idle reduction, and fuel economy improvements are all approaches to reducing transportation-related GHGs.

Idle Reduction⁷: Modern vehicles do not need to idle. Advances in vehicle technologies have eliminated much of the need for idling. Computerized controls in today's vehicles bring the engine up to operating temperature faster when the vehicle is moving than when it is idling. Even on the coldest day, it takes a modern vehicle less than 5 minutes to warm the engine if the car is moving. It takes the engine almost twice as long to warm up if the car is just idling.

Contrary to some myths out there, turning your car off and back on again does not use more fuel than idling. And idling can actually increase engine wear and shorten vehicle life.

Fuel-Efficient Driving⁸: Efficient driving practices can improve your fuel economy by more than 30%.

- Drive sensibly: Jackrabbit starts, rapid acceleration, and hard braking waste fuel unnecessarily.
- Observe the speed limit: Fuel economy usually decreases at speeds higher than 50 mph.
- Remove excess weight: Carry only what you need.
- Keep your engine tuned: Delaying maintenance can impact fuel efficiency.
- Keep tires inflated: Check the sticker in your glove box or door jamb to find the proper pressure. Do not use the maximum pressure printed on the tire sidewall.
- Remove rooftop boxes and racks when not in use: Increased drag reduces fuel economy.
- Combine and coordinate trips: Several short trips use more fuel than one multipurpose trip.

Reduce Vehicle Miles Traveled: You can make significant reductions in vehicle emissions and fuel use by carpooling, walking, taking a bus, or bicycling. Many of these options are also healthier for you and more enjoyable. [Note this park's pedestrian pathways, bike routes, bike rentals, shuttle bus systems, etc., and note short walking distances between nearby destinations.]

Alternative Fuels and Advanced Vehicles⁹: Many alternative fuels and advanced vehicles can significantly reduce emissions, fuel costs, and reliance on petroleum. The National Park Service has teamed up with the U.S. Department of Energy to support projects that increase the use of these fuels and technologies in our national parks. Across the country, parks are operating buses that run on compressed natural gas or propane; conventional ranger vehicles are being replaced with fuel-efficient hybrid electric vehicles; and plug-in electric vehicles are being deployed in parks in Alaska, Tennessee, California, and other locations.¹⁰

[Describe this park's green transportation strategies and resulting fuel, emissions, and cost savings.]

⁷ DOE's Clean Cities (2012). Idling is Not the Way to Go:

http://www.afdc.energy.gov/pdfs/idling_is_not_the_way.pdf

⁸ EPA, DOE. FuelEconomy.gov: <http://www.fueleconomy.gov/feg/driveHabits.shtml>

⁹ DOE, Alternative Fuels Data Center: <http://www.afdc.energy.gov/>

¹⁰ DOE Clean Cities: http://www1.eere.energy.gov/cleancities/national_parks.html