

It all adds up to cleaner air

Federal Highway Administration
Seasonal Theme Program Materials: Winter

FACT SHEET

Trip Chaining

Remember when you got your chores done all at once so you could go out and play? Trip chaining is the same idea...only you'll save the air in addition to saving time.

When you start your car after it's been sitting for more than an hour, it pollutes about five times more than when the engine is warm¹. That's why combining your errands into one trip means more time in your life, less traffic congestion, and less pollution...which all adds up to cleaner air.

So make a list, plan your route, and trip chain. You'll be saving a lot more than just time.

Here are some trip chaining facts to consider:

- Family and personal business—including window shopping, purchasing goods and services, doctor visits, picking up or dropping off someone, and other personal reasons, such as haircuts, banking, and car repair—account for about 45% of all trips.²
- Combining three separate short trips (such as to a nearby bank, post office, and grocery store) into one trip every week could eliminate about 200 miles on your vehicle, and save you 10 hours and 10 gallons of gas every year.³
- Emissions are highest when a vehicle is started “cold.” For example, starting a 5-mile trip when the engine is cold generates about 17% more nitrogen oxides and 50% more volatile organic compounds than the same trip when the car is started warm.¹
- Eliminating five separate 1-mile trips reduces about the same amount of ozone-related pollution as eliminating one 15-mile trip.¹
- Between 1995 and 2001, there was a 21% increase in the number of commuters who trip chained in the home-to-work direction and a 12% increase in commuters who trip chained in both directions.⁴

Telecommuting

People are finding out why it makes sense to telecommute. You have more time on your hands if they aren't on the wheel! Instead of fighting traffic, you have more time for your family and hobbies...or for work. Plus, you'll help to reduce traffic congestion and air pollution, which means you'll save more than just time and money.

Here are some telecommuting facts to consider:

- Americans spend more than 100 hours commuting from home to work each year, equal to 2½ weeks of vacation! If you consider a round-trip, this doubles. (The average daily one-way commute takes about 25 minutes.)⁵
- Telecommuting—just **one day a week** for a year—can save the typical commuter about 1,200 miles on his or her vehicle and more than 58 gallons of gas. If your commute is more than the average 25 miles roundtrip, you could save even more time, money, and gas!³
- The typical “peak period” traveler uses an extra 28 gallons of fuel per year due to inefficient vehicle operation in congested conditions.⁶
- A National Household Travel Survey showed that commuting has declined as a share of all vehicle trips—from nearly 33% in 1969 to less than 15% 30 years later—so it’s important to look beyond your commuting trips for ways to reduce driving.²

There’s a nationwide initiative to encourage employers to offer their employees a broad range of commuting options, including telecommuting. It’s called Best Workplaces for Commuters (BWC). In addition to saving time and money, BWC employers and employees report high rates of productivity, strong morale, and less stress trying to juggle family and work commitments. So, ask about it at work. (Visit <http://www.bestworkplaces.org/index.htm> for more information.)

To view and download the *It All Adds Up to Cleaner Air* winter messages and materials, please visit http://www.italladdsup.gov/tools/seasonal_materials.asp

¹ U.S. Environmental Protection Agency MOBILE6 model run performed by the Federal Highway Administration on September 24, 2003.

² Federal Highway Administration, National Household Travel Survey 2001: Highlights Report, BTS03-05 (Washington, DC: 2003) http://www.bts.gov/publications/highlights_of_the_2001_national_household_travel_survey/ (Table A-11).

³ Original research done for the Federal Highway Administration (FHWA) using data from FHWA’s Highway Statistics 2001 (October 2002), Pub #FHWA-PL-02-008 (Table VM-1 <http://www.fhwa.dot.gov/ohim/hs01/pdf/vm1.pdf>), and National Household Travel Survey 2001 <http://nhts.ornl.gov/2001/index.shtml>. Gas savings calculated using the average commuting distance of 12.19 miles each way multiplied by 96 eliminated trips (one trip each way for 48 weeks), then divided by the average vehicle’s 20 MPG fuel economy. Substitute your own commute and fuel economy to estimate your gas savings.

⁴ U.S. Department of Transportation, Federal Highway Administration; Our Nation’s Travel: Current Issues, FHWA-PL-05-015, p. 29.

⁵ U.S. Census Bureau, American Community Survey; http://www.census.gov/Press-Release/www/releases/archives/american_community_survey_acs/004489.html

⁶ Schrank, David and Lomax T., 2005 Urban Mobility Report, Texas Transportation Institute, <http://mobility.tamu.edu/ums/>.