

HOUSEHOLD CARBON REDUCTION WORKSHEET

BRING COMPLETED WORKSHEET TO THE GATHERING to post totals on large wall chart and see what we can accomplish together.

WHY EVERYONE'S PARTICIPATION IS IMPORTANT. The primary greenhouse gas contributing to global warming is CO₂, carbon pollution caused primarily from our use of fossil fuels. **Our goal is to work together so that we can offset the carbon pollution from the travel of our speakers to the Gathering.** The more people who complete this worksheet, the better chance we have of achieving this goal. **AND, we all need to be making these changes because we love the earth and all that lives here.** Let's work together for a more sustainable future.

WORKSHEET FAQ's:

- 1) This worksheet is designed to be completed by an entire household.
- 2) Each person can decide which of the new carbon-reducing actions they want to do, and for how many weeks; then add up the household total and enter that.
- 3) If you also choose to do one of the items that affect the entire household, the units are pre-entered as "1 each", so simply enter the weeks from the date you plan to start or install this item to the end of 2009.
- 4) Everything in this calculator is rationalized into weeks. For example if you only have one "load" (or other unit of measure) every two weeks, you would enter 0.5 loads/week.
- 5) The worksheet does not begin to accomodate every situation. Don't worry, just make a reasonable interpretation of the worksheet and commit to some new carbon-reducing actions that your household is going to take between now and the end of 2009. (Pick the item that is most similar to what you plan to do and don't worry if it seems too much or too little because they will average out as we all participate.)
- 6) **CAVEAT:** The focus of this worksheet is on awareness, not on precision and not on trying to include every possible way to reduce your footprint. Seasonal items (like lawn mowing) are prorated across entire year. The differing effects of energy source (whether you have gas, electric, or oil furnace for example) are combined into an average. Variations for different geographic locations(such as temperature ranges) are also combined into an average. The science behind each number depends on complex variables that cannot be reduced to this kind of simple spreadsheet. And different studies produce variations in results. **So the carbon quantities in this worksheet are broadly generalized averages, but the tasks are real and doing them will have real effects, and real benefits to the environment.**

Carbon saved between 3/1/2009 and 12/31/2009

	How Many Units/Week		How Much CO ₂ /Unit	How Many Applicable Weeks		CO ₂ Saved
BUILDINGS - roughly 40% of human contribution to global warming						
HOT WATER						
Reduce length and/or number of showers. How many minutes/week can you save? (Total up what each person agrees to do.)	minutes	x	3.3 lbs/week	x	=	0.0
Install a low-flow showerhead. (How many people/week does this affect?)	persons	x	4.8 lbs/week	x	=	0.0
Dishwasher						
Use dishwasher (full load, minimal hand rinsing, energy saver setting) for a load that you would previously washed by hand.	loads /week	x	3.8 lbs/week	x	=	0.0
Reduce dishwashing by one load per week (be more efficient in use of dishes.)	loads /week	x	3.4 lbs/week	x	=	0.0
Replace old dishwasher with EnergyStar dishwasher	1 each	x	1.9 lbs/week	x	=	0.0
Laundry						
Switch one load of laundry from hot to cold water (Target using cold for all loads.)	loads /week	x	5.3 lbs/week	x	=	0.0
Replace old top load washer with EnergyStar front-loading washer	1 each	x	9.6 lbs/week	x	=	0.0
Switch one load of laundry from dryer to clothes line	loads /week	x	3.6 lbs/week	x	=	0.0
Water Heater						
Reduce water heater thermostat. (Target 120 F.) For each degree reduced:	degrees	x	0.3 lbs/week	x	=	0.0
Install a water heater insulating blanket	1 each	x	3.4 lbs/week	x	=	0.0
Install solar water heater	1 each	x	48.1 lbs/week	x	=	0.0

HEATING AND COOLING

Air Conditioning

If you don't routinely do this this, Replace or clean the air conditioner(s) filter and maintain annually as recommended

Raise air conditioner(s) thermostat. (Target 78 degrees F.) For each degree increased:

Replace air conditioner(s) with EnergyStar model

Heat

Lower heating thermostat. (Target 66 degrees F, wear sweater). For each degree decreased:

If you don't routinely do this this, Replace or clean the furnace filter and maintain annually as recommended

Seal and insulate warm-air heating ducts

Replace furnace with high-efficiency sealed-combustion model

Sealing and Insulation

If you haven't already done this, Thoroughly seal exterior air leaks in your home

Increase insulatation of walls by at least 2" (R-6) and attic by at least 4" (R-12)

ELECTRICAL

Install compact fluorescent light (CFL) bulbs (available in 3 different color ratings, dimmable versions and a wide variety of shapes, sizes, and lumen levels). **Note that the typical replacement number of 45 bulbs/household, results in saving 86.5 lbs/week!**

Purchase green electricity - many utility companies have program where you can request a percentage of your electricity be from wind or solar.

Replace pre-2001 refrigerator with EnergyStar model

Computer: Switch off power strip feeding computer and peripherals when not in use for more than a few hours.

Entertainment Center: Switch off power strip feeding entertainment center and peripherals when not in use for more than a few hours.

OTHER HOUSEHOLD AND YARD ITEMS

Trash: Reduce your amount of weekly trash. What is in your trash that you could avoid bringing home? What is in your trash that you could recycle or find uses for? How many gallons/week can you reduce?

Printer Paper: If you don't already do so, Use 100% recycled paper, per ream:

Hand mow lawn, instead of power mower.

Hand rake leaves (hand sweep clippings) instead of power blower

Plant a tree (varies greatly with species, size and care)

1	each	x	3.3 lbs/week	x	=	0.0
	degrees	x	2.3 lbs/week	x	=	0.0
1	each	x	11.5 lbs/week	x	=	0.0
	degrees	x	6.1 lbs/week	x	=	0.0
1	each	x	6.7 lbs/week	x	=	0.0
1	each	x	15.4 lbs/week	x	=	0.0
1	each	x	46.2 lbs/week	x	=	0.0
1	each	x	15.4 lbs/week	x	=	0.0
1	each	x	23.1 lbs/week	x	=	0.0
	/bulb	x	1.9 lbs/week	x	=	0.0
	100 kWh	x	3.8 lbs/week	x	=	0.0
1	each	x	9.6 lbs/week	x	=	0.0
1	each	x	1.0 lbs/week	x	=	0.0
1	each	x	4.6 lbs/week	x	=	0.0
	gallons	x	1.9 lbs/week	x	=	0.0
	reams /week	x	0.1 lbs/week	x	=	0.0
1	each	x	1.5 lbs/week	x	=	0.0
1	each	x	1.2 lbs/week	x	=	0.0
	trees	x	0.5 lbs/week	x	=	0.0

FOOD - roughly 30% of human contribution to global warming (of which more than half is from livestock industry, 18% of total)	How Many Units/Week	How Much CO2/Unit	How Many Applicable Weeks*	CO2 Saved
Reduce your consumption on a "per serving" basis below (or skip down to the "generalized" basis, but don't do both) [Note: this is for typical supermarket food. For reference, one 4oz serving of fresh vegetables is 0.5 lbs/week.]				
One serving (4 oz) of beef	servings /week x	5.0 lbs/week	x	= 0.0
One serving (2.5 oz) of cheese	servings /week x	1.7 lbs/week	x	= 0.0
One serving (2.5 oz) of ice cream	servings /week x	0.8 lbs/week	x	= 0.0
One serving (12 oz) of beer	servings /week x	0.9 lbs/week	x	= 0.0
One serving (5 oz) of wine	servings /week x	3.5 lbs/week	x	= 0.0
One serving (2.5 oz) of spirits (alcohol)	servings /week x	5.5 lbs/week	x	= 0.0
One serving (4oz) of chicken	servings /week x	0.9 lbs/week	x	= 0.0
One serving (4 oz) of greenhouse tomatoes	servings /week x	0.7 lbs/week	x	= 0.0
One serving (8 oz) of farm raised salmon	servings /week x	3.0 lbs/week	x	= 0.0
One serving (8 oz) of ocean salmon (typical fish)	servings /week x	1.5 lbs/week	x	= 0.0
Reduce your consumption on a "generalized" basis below (or return above to the "per serving" basis, but don't do both). [Note: the cumulative effects of these generalized changes are significant. From typical American diet, change to organic vegetarian saves 119.8 lbs CO2/wk, and change to organic vegan diet saves 155.3 lbs CO2/wk.]				
Buy local as much as possible	1 each	x 7.5 lbs/week	x	= 0.0
Buy organic as much as possible, Note: several recent studies in US and other countries have confirmed that buying local only accounts for 2-4% of food's carbon footprint compared with buying organic which addresses 8-10 times larger percentage of our industrial food production's contribution to global warming.	1 each	x 60.1 lbs/week	x	= 0.0
Delete red meat from typical American diet. Note: 18% of human contribution to global warming is from livestock industry - for comparison, the airline industry is 2.5%.	1 each	x 41.5 lbs/week	x	= 0.0
Delete poultry from typical American diet	1 each	x 18.3 lbs/week	x	= 0.0
Delete dairy (milk products, not eggs) from typical American diet	1 each	x 35.5 lbs/week	x	= 0.0

	How Many Units/Week		How Much CO2/Unit	How Many Applicable Weeks*	CO2 Saved
TRANSPORTATION - roughly 25% of human contribution to global warming					
If you don't routinely do this this, Annual engine tune-up and maintain tire pressure	vehicles	x	28.8 lbs/week	x	= 0.0
Implement fuel efficient driving practices: Reduce idling time Rid your car of unnecessary weight Maintain a steady speed Ease into stops and slowdowns Drive between 45 and 55 mph when possible Turn off your engine when you stop for more than 2 minutes	1 vehicles	x	23.1 lbs/week	x	= 0.0
Reduce number of vehicle miles traveled. <u>Consolidate trips, walk, bike, take public transportation, ride with others.</u> Benefit varies with efficiency of car: enter your mileage reductions on the line that has the car most similar to the one you drive:					
15-20 mpg	miles	x	1.6 lbs/week	x	= 0.0
20-30 mpg	miles	x	1.3 lbs/week	x	= 0.0
30-40 mpg	miles	x	0.9 lbs/week	x	= 0.0
40-50 mpg	miles	x	0.6 lbs/week	x	= 0.0
Increase the number of your passengers (car pool). <u>Commuters, transporters of school-kids : how many additional riders can you add?</u>					
add 1	miles	x	0.6 lbs/week	x	= 0.0
add 2	miles	x	0.7 lbs/week	x	= 0.0
add 3	miles	x	0.7 lbs/week	x	= 0.0
add 4	miles	x	0.8 lbs/week	x	= 0.0
Change Mode of Major Travel - see separate Major Travel Worksheet	Total Lbs CO2 saved from Major Travel:				

TOTAL POUNDS CARBON SAVED

0.0
Bring this worksheet to the Gathering, so you can add this amount to the wall chart.