GREEN TIPS GUIDE
TAking IT PERSONALLY ...simple steps to a greener life
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About NAEM

NAEM is the largest professional community of corporate environmental, health and safety, and sustainability decision makers. For more than 20 years, we have been dedicated to empowering corporate environmental leaders to advance environmental stewardship, create safe and healthy workplaces and promote global sustainability.
Introduction
It has been said that every journey begins with a single step. When it comes to sustainability, the small steps we take today toward a greener life will make a big difference tomorrow. We hope this guide will help you start your sustainability journey.

What is the Green TIPS guide and how can you use it?
With everyone looking for information about how to “go green,” NAEM recognized a need to provide an easy-to-read guide to help you on your way. This guide is designed to:

- Give you a basic understanding of the most pressing and important environmental issues facing our world.
- Suggest easy—yet effective—steps you can take to make a difference.
- Provide you with the most credible information and useful resources for learning more about the issues.

Try adopting one tip from each section each week. Then, collaborate with coworkers to form a green team. Wherever your efforts take you, we hope you will use this guide’s practical and easy methods to help make a positive environmental impact at home and at work.
Where does our water come from?

The five Great Lakes—Huron, Ontario, Michigan, Erie and Superior—along with Lake Mead are the largest surface fresh water sources on earth. These lakes hold more than 20 percent of the world’s fresh water supply. Our other sources of water include local rivers, lakes and underground aquifers that supply water to wells.

Is clean, safe drinking water an infinite resource?

No. While it appears we have an abundance of water, it’s sobering to realize that only three percent of the earth’s water is fresh, of which only one percent is available for human use.

According to the United Nations, 1.1 billion people lack access to safe water and climate change is making it worse. By 2025, it’s estimated that 2.8 billion people on earth will face freshwater “stress” or “scarcity.”

In North America, the U.S. and Canada have identified multiple “Areas of Concern” in and around the Great Lakes and Lake Mead. The trouble spots indicate a change in chemical, physical or biological integrity, including contamination, impaired wildlife communities and other environmental degradation. Each year, rain and snow replenish only a small fraction of the water that we use. Because of the imbalance, both surface and underground sources have been significantly diminished. If we continue to pollute and overuse our clean, affordable water sources, we will run out.
10 Easy Ways to Reduce Your Water Use

1. **Prepare drinking water:** Keep a pitcher in your refrigerator so you won’t have to let the faucet run for a cool glass of drinking water.

2. **Run a full load:** Only run full loads of laundry and dishes. Choose the short cycle at low water levels whenever possible. If you buy a new appliance, switch to a water-conserving model. (A front-loading washer is a good example.)

3. **Green your carwash:** Try a car wash that recycles water. If you wash your car yourself, use a bucket and sponge and rinse sparingly. Try a waterless carwash.

4. **Time your sprinklers:** Water your garden at night, or early in the morning to minimize evaporation.

5. **Flush with care:** Switch to low-flow or dual flush toilets. Or, for a do-it-yourself approach, see our quick tip.

6. **Take quick showers:** Replace existing shower heads with the lowest flow product you can find. Shower heads with a mist setting let you reduce water flow even further. Consider setting a timer to keep your shower short. Also, try turning the water off while you shave or lather up.

7. **Find and fix leaks:** The EPA’s water division estimates that the average household wastes 14 percent of its water due to drips and leaks. For a do-it-yourself leak finder, see our quick tip.

8. **Stem the flow:** Install flow restrictor aerators inside all faucets. This simple move will save up to four gallons per minute per faucet.

9. **Catch and release water:** If you have house plants, water them with leftover water from drinking, cooking and showering. Keep a water pitcher near your sink or bathtub to collect unused water running from the tap.

10. **Go native:** Landscape with native plants. This will cut down significantly on watering requirements and, in the process, provide much needed food and shelter to local wildlife. Learn more about green landscaping.

**Learn More:**

1. Learn how to use less and save more in this [Chelsea Green Guide to protecting your Water](#).
2. Learn more about your drinking water at [EPA’s Ground Water and Drinking Water](#) site.
3. Protect our water supply by following the steps outlined in [How to Clean Up Our Water: 12 Simple Actions to Help Stem the Tide of Polluted Runoff](#).
4. Calculate your [water footprint](#).
5. Learn from scientists at the [American Water Works Association](#) about your tap water.
**Q:** What’s on your plate?

**A:** Did you know that eating one pound of meat emits the same amount of greenhouse gasses (GHGs) as driving an SUV 40 miles? Meat is not the only high-carbon item on your plate, though. Most factory-farmed foods have a large carbon footprint, due to long-distance transportation and refrigeration. To minimize your impact, try locally grown foods. Fruits and vegetables grown in your area will taste just as good—if not better.

**Q:** How are you storing your leftovers?

**A:** Although it’s common practice to store leftover food in plastic containers, it’s not the healthiest choice. Plastic containers often include harmful chemicals such as Bisphenol-A (BPA) and other carcinogens that can leech into your food and into your body. The waste generated by plastic containers also introduces millions of tons of chemicals and plastics into landfills each year, leaving a permanent mark on the environment.

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**10 Easy Ways To Green Your Diet And Kitchen**

1. **Eat local food:** Buy food from local sources whenever possible. Shop at your area farmer’s market or food cooperative, where you can learn how the crops and livestock are grown. Each pound of local food you purchase prevents a quarter pound of GHG emissions. Becoming a “localvore” minimizes the time and distance from the farm to your table. Check out [localharvest.org](http://localharvest.org) to find local farmers’ markets and family farms in your area.

2. **Switch to glass:** Choose glasses over plastic cups and beware what you use to store food or put in the microwave. Health officials recommend using glass or BPA-free containers.

3. **Consider organic:** Food that is [Certified Organic by the USDA](https://www. OrganicFacts.net) means that food is produced without the use of chemical pesticides and uses organic fertilizers.

4. **Drink local water:** Drink water from the tap, and take it with you in a reusable bottle. Filling your reusable water bottle from the tap reduces waste and pollution from plastic water bottles.
5. **Eat less meat:** Meat production uses more land and energy than vegetable crops. If you eat one meat-free meal a week, you can reduce your contribution to GHG emissions and help ensure that everyone has enough to eat. For alternate sources of protein, try legumes, grains, vegetables, fruits, nuts, and seeds.

6. **Just say no to GMOs:** GMOs are genetically modified organisms. The [United States Office of Science Genome Project](https://sciencegenomelab.org) says that while genetically engineered food crops provide larger and more resilient yields, they have the potential to reduce the long term viability of our food supply. By hindering natural selection and adaptation of plants and animal, GMO production could make our food supply susceptible to disease and adverse weather conditions. Educate yourself about GMOs to make an informed decision about your food at [GMO-Compass.org](https://gmo-compass.org).

7. **Try composting:** By composting or putting organic waste down a garbage disposal, you can reduce the amount of organic matter that enters the waste stream. Composting returns the valuable nutrients from vegetable wastes (peels, seeds, cores, rotten produce) back to your own yard and garden.

8. **Don’t double wash:** Conserve water by not pre-washing dishes that are going in the dishwasher. While some dishes require an extra scrub, pre-washing everything is unnecessary and wasteful.

9. **Be picky about seafood:** Fish are threatened by over fishing. Learn more about smart seafood choices and the dangers of mercury contamination at [Earth Easy](https://www.eartheasy.com). Choose tuna that’s labeled “dolphin safe”. When purchasing seafood at the grocery store, consider whether it’s domestic (less transit) or foreign, wild or farm-raised (more sustainable).

10. **Keep it natural:** Products found in most kitchens (including vinegar, baking soda and lemon juice) can be used as powerful natural cleaning agents in the kitchen. Consider buying and using [natural cleaning products](https://www.ewg.org/safecleaning) to keep your home and kitchen clean and smelling fresh.

**Learn More**

1. Find a local farmers market or co-op at [localharvest.org](http://localharvest.org).
2. Find out more about nutrition and what nutrients we need.
3. Learn how to make your table sustainable at [sustainabletable.org](http://sustainabletable.org).
4. Learn about environmentally friendly products from the [Great Green List](https://www.greengreenlist.com).
5. Watch what you eat with the [Food and Water Watch](https://www.foodandwaterwatch.org).
Q: When you throw something away, where does it go?

A: There is no “away”. According to the U.S. Environmental Protection Agency, more than 80 percent of our trash goes to a landfill. Only 20 percent is burned in incinicators with energy recovery. Most of the garbage you’ve thrown away, therefore, is still out there and will stay there for many years to come. The Clean Air Council estimates that in 2007, U.S. residents, businesses and institutions produced more than 251 million tons of solid waste. That’s about 4.6 pounds of garbage per person per day.

A team of students from the Massachusetts Institute of Technology started a project called “Trash Track”, which aims to get people thinking about what they choose to throw away and hopefully make us think twice about buying disposable items such as water bottles and Starbucks coffee cups. Find out more information about the “removal chain” on their website: http://senseable.mit.edu/trashtrack.

**10 Easy Ways to Reduce Your Waste**

1. **Practice the three R’s**: By reducing, reusing and recycling, you can greatly reduce how much waste you produce. Try selling or donating things like clothing, appliances and furniture that you no longer use. Always try to recycle before sending anything to a landfill.

2. **Bring a bag**: While shopping, if you only buy a few products skip the shopping bag. For larger purchases, bring your own reusable bag. Learn about the dangers of plastic bags.

3. **Pass up Trash**: Don’t accept “free” promotional products or utensils/containers that you don’t need or want. Look for products with the least amount of packaging. Every little bit of trash avoided does make a difference!

4. **Buy in bulk**: Purchasing things in bulk containers can save money and reduce packaging waste. Whenever possible, avoid products that are individually packaged for single use. Instead, buy in bulk and transfer the products to your own reusable containers.

**Quick Tip!**

Always try to buy products made with recycled material, especially disposable paper products like paper towels, plates, tissues and toilet paper.
5. **Try e-cycling:** Donate old electronics such as computers and TVs. Many electronics contain materials that are toxic when tossed in a landfill. If your community doesn’t have a recycling program or center for used electronics, contact the product manufacturer (or the manufacturer of the new unit you purchase) to see if they have a recycling program.

6. **Pack a waste-free lunch:** Use a bamboo lunchbox or reusable bag. Bring a mug or thermos with you instead of using disposable cups.

7. **Swap your bins:** Strive for bigger recycling bins and smaller trash cans. Pay attention to what you can reuse before buying something new. When comparing products, consider how they’re packaged. Encourage recycling by buying products made and packaged with recycled materials.

8. **Ditch disposables:** Whether it’s paper plates and plastic utensils or a safety razor, disposable products produce a ton of waste. Choose durable, reusable products instead that will last longer. Consider using metal utensils, washable plates and rechargeable batteries.

9. **Stop junk mail:** Stop unwanted mailings and recycle any that you do receive. Join the junk mail revolution at donotmail.org and get rid of catalogs at catalogchoice.org. If you still wish to get information from your favorite retailers, sign up for their email list.

10. **Give waste-free gifts:** Ask for gifts that don’t produce waste. Examples include donations to charity, seeds from your garden, tickets to an event (lecture, play, concert, etc.) or gift certificates for spas and media downloads.

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**Learn More:**

1. Find out where to recycle almost anything at earth911.com.
3. Explore the World Health Organization’s database about what to do with old and unwanted materials.
4. Check out easy ways to reduce your waste in the Chelsea Green Guide.
5. Consult the EPA’s web page on waste.
Q: Is it easy to become a sustainable shopper?

A: Yes. Almost every item you purchase on a regular basis now has a more sustainable, "greener" substitute. From food to home decor, today’s world offers shoppers environmentally friendly options with reduced carbon impact. Some cities are banning or taxing the use of non-reusable shopping bags. By joining this movement, you’re contributing to a more sustainable shopping experience. As an added bonus some grocery stores will give you credit towards your purchase for bringing your own bag. When buying something new, ask about recycling incentives for proper disposal of your old stuff, such as ink cartridges, cell phones and even cars.

Q: How do you know if a product is good for the environment?

A: Labels can help you make Earth-friendly decisions when you shop. There’s valuable information about how that item was grown, harvested, produced, synthesized, processed, tested and packaged. Knowing how to interpret labels and environmental logos helps us make informed decisions at the checkout register. Consumer Reports has recently launched a web site, GreenerChoices.org, devoted to helping you interpret and understand “green” labels and logos.

Q: Do you have any power?

A: Yes, it’s how supply and demand—the basis of our economic system—works. If you ask for more sustainable products, you are influencing demand. Buying a product is like casting a vote for it. The more times you ‘vote’ for sustainable products, the more likely and quickly more options (supply) will increase. Your voice is your wallet, and retailers will listen. The choice to buy environmentally responsible products is not always the lowest cost or easiest solution, but that will change with time. As more people buy green products, the availability will increase, and the cost will decrease.

Quick Tip! Learn to shop strategically. Make a list and only buy what you need. Overbuying—especially of perishable items—leads to unnecessary waste of food, goods and money.
Savvy Ways to be a Sustainable Shopper

1. **Bring your own bag:** When shopping, skip the paper or plastic question by bringing your own reusable bag.

2. **Consider free-range and organic:** "Free-range" animal products are raised and processed in more humane ways. Find out more about meat labels.

3. **Buy less:** Part of being a responsible consumer is resisting the temptation to buy. Figure out what you’ll use; buy only what you’ll need.

4. **Invest a little:** Spend a little more for something that will last longer. In many cases, spending more for quality will save money in the long run, especially when it comes to appliances, vehicles and building materials.

5. **Give it a second life:** Use or donate old clothes, books, sports equipment, toys, household goods and appliances. Consider purchasing these items second-hand, too.

6. **Ask your grocer:** Let your grocer know you want more sustainable, local goods. Check out your local food co-op and support local vendors when they’re available.

7. **Get eco-electronics:** When choosing electronics, try to buy from a manufacturer that has a program in place to take the product back and recycle it after it has reached the end of its useful life. Take advantage of recycling programs for printer cartridges and dispose of hazardous old electronics at community recycling days.

8. **Play fair:** Fair Trade Certified products are grown, harvested and processed under strict regulations to guarantee sustainable farming. It also means that the farmers and workers work under fair labor conditions and are paid a fair price for their goods.

**Learn More**

1. Check out this guide to greening your home.
2. Buy everyday necessities that are better for you and the environment at buygreen.com.
3. Eco Logo has great references for environmentally friendly purchasing.
4. Sustainablestyle.org has great ideas on how to stay in style and be sustainable.
5. Check out National Geographic’s buying guide, and learn more about fair trade at transfairusa.org.
**Q:** What’s your impact on the great outdoors?

**A:** Outdoor recreation is good for human health and wellbeing, but it also affects our planet’s forests, streams, wildlife and oceans. When you hike off the trails, for instance, you risk destroying plant root systems or causing soil erosion and compaction. Even going for a swim or taking a bath outdoors can have a negative impact on the environment because bug sprays and shampoos can alter plant life, reduce oxygen in the water and harm fish. By learning more about where you camp, hike, climb and swim, you can do your part to protect the natural resources we all use for recreation. To learn more about minimum-impact camping and recreation techniques, go to [acamps.org](http://acamps.org).

**Q:** What are your options for an eco-friendly vacation?

**A:** Eco-tourism is a rapidly growing industry that gives travelers the option to tour the world in a more sustainable manner. From buying carbon offsets for your air travel to staying in a eco-lodge in the jungle of Ecuador, there are thousands of options available to travelers today. Resorts and activities for eco-tourists tend to have a minimal impact on the environment, and in most cases, work on making a positive impact in their region.
8 Easy Ways To Protect the Great Outdoors

1. **Go outside:** When the weather is nice, get outside and try canoeing, kayaking, hiking, climbing or rowing. You will learn more about the great outdoors by enjoying it.

2. **Learn something:** Take a class from your local parks department or community center to learn more about the outdoors.

3. **Leave no trace:** Abide by "Leave No Trace" principles, which outline a way to camp and hike without having a negative impact on the natural environment. When you are out hiking, pick up trash along the way and dispose of it properly so you are packing out more than you pack in. Leave natural things as they are so that others can enjoy them after you leave.

4. **Don’t pollute:** Use natural [bug repellents](https://example.com) and [sunscreens](https://example.com) that are better for you and the environment. Before diving into a body of water, make sure you rinse off any bug sprays or lotions that could pollute or harm delicate water ecosystems.

5. **Use muscle power, not motor power:** Choose a rowboat on your next fishing trip. Ride your bike to the park instead of driving. Park your car in designated spaces and walk a little farther. Get gear that’s lightweight and easy to carry. Soft-sided [coolers](https://example.com) and [picnic backpacks](https://example.com) can be a big help.

6. **Ditch disposables:** Pack your picnic in reusable containers instead of disposables, or save and wash disposables for multiple uses. It’s easy and cheap, and it makes a difference.

7. **Watch wildlife:** In North America, help track bird and frog populations for scientific studies with [Frogwatch USA](https://example.com) and [Citizen Science](https://example.com). You can contribute to important scientific research while watching animals and experiencing nature.

8. **Buy good gear:** When you need to replace a piece of equipment that can’t be repaired, keep in mind what you are buying. Look for snowboards made of bamboo, kayaks made from fossil fuel by-products or surfboards made of balsa wood certified by the [Forest Stewardship Council](https://example.com).

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**Learn More**

1. Learn about [ecotourism](https://example.com).

2. Learn more about the [global effects of ecotourism](https://example.com).

3. Consider volunteering with [American Trails](https://example.com) to plan, build, maintain, and manage trails in your area.

4. Visit and help support local parks. In the U.S., reserve a campsite at a National Park through the [U.S. National Park Service Reservation Center](https://example.com) or [Reserve America](https://example.com) [includes some state parks](https://example.com).

5. Check out [Leave No Trace Center](https://example.com) for tips on camping, climbing, and hiking, and environmental stewardship and ethics.
**Q:** Why does your backyard matter?

**A:** Seemingly small decisions in how your care for your personal environment eventually affects the local ecosystem and watershed. Your yard and garden is an important part of that. Although you may want to have the greenest lawn on your block, you should avoid using chemical fertilizers, pesticides and other lawn treatments, which could harm the environment and your health. A good alternative to artificial treatments is to leave lawn clippings on the grass after mowing or to spread soil-enriching compost in your garden.

**Q:** How can you have the “greenest” yard on the block?

**A:** Of course, the simplest and healthiest approach to yard management is surprisingly the easiest: Maintain it in its most natural state. We often sculpt our yards into unnatural areas, planting attractive flowers before we understand how much energy, water and artificial support they require to survive. Think about what would happen to your yard if you just let it run wild. What types of plants (shrubs, trees, grasses, flowers) would grow naturally? Whenever possible, plant native trees, shrubs and grasses in the appropriate positions in your yard according to sunlight. Native plants and trees will thrive with little need for maintenance work, watering or fertilizers.

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**10 Easy Ways to Go Green in Your Backyard:**

1. **Grow your own food:** Growing your own fruits and vegetables is a great way to save money, reduce pollution and help your family eat better.

2. **Start composting:** Composting provides key nutrients for your organic garden. It’s a great way to dispose of organic waste and replace chemical fertilizer. Learn more at [The Composting Council of Canada](https://www.compostcouncil.ca).

3. **Catch rainwater:** Keep an empty barrel or tub under a downspout to collect rainwater. This water would otherwise be lost in sewers or storm drains, but instead you can use it to water your garden. Consult local laws and regulations about rainwater collection and usage to learn your rights.

4. **Skip pesticides and herbicides:** Harsh chemicals that control insects and weeds should be avoided. They’re dangerous to pets and people, especially children. When applied to plants and lawns, these chemicals also pollute groundwater and have serious environmental consequences beyond your yard. Try using some of the natural alternatives available at [Gardens Alive](https://www.gardensalive.com).
5. **Mind your mowing**: Make sure to keep mower blades sharp to increase efficiency. Consider using an old-fashioned push mower, which can help you burn calories while eliminating the use of fuel or electricity to power conventional mowers.

6. **Go native**: Get to know the specific ecosystem your home is located in and pick native plants. This important step can determine the success or failure of your yard. Choosing native plants can minimize water consumption, provide food and habitat to local wildlife and thrive with the least human maintenance. Learn about creating a native garden from eNature.

7. **Try mulching**: Mulching your garden reduces water evaporation around plants, keeps out weeds and builds healthy soil. Leave grass clippings on your lawn instead of bagging them. It helps keep your yard naturally fertilized and maintains moisture in the soil.

8. **Learn about xeriscaping**: The climate and weather conditions of your area should largely determine the kind of plants in your yard. If you live in a dry area with limited water, like much of the American southwest, consider xeriscaping.

9. **Create a “naturescape”**: You can create a “naturescape” or wildlife habitat in your own backyard. Basic elements include fresh water, feeders, rocks, trees, bushes and bird houses.

10. **Plant a tree**: If you have the means to plant a tree, start digging. During photosynthesis, trees and other plants absorb carbon dioxide and give off oxygen. A single tree will absorb approximately one ton of carbon dioxide during its lifetime. If you are unable to do it yourself, organizations such as the Arbor Day Foundation will plant trees on your behalf, and many local conservation organizations have programs to plant trees in parks and urban areas.

**Learn More:**
2. Backyard Wildlife Habitat Information from The National Wildlife Federation.
3. Learn more about organic gardening at organicgardening.com.
4. Toxicity and regulatory information for pesticides at pesticideinfo.org.
TRANSPORTATION

Q: What’s the impact of your daily commute?

A: It’s bigger than you think. Your individual gas-powered vehicle creates large amounts of air pollution and greenhouse gases that contribute to global warming. The average commute to work is about 12 miles, and roughly 90 percent of us drive to work alone. In most urban areas, automobile emissions contribute to poor air quality and smog problems that can have potentially severe health effects for you, your family and your neighbors.

Q: Could one less day of driving really help?

A: Yes. A third of carbon dioxide (CO₂) emissions in the U.S. come from daily driving. An average car driven 12,000 miles per year emits about six tons of CO₂. It would take 500 mature trees to absorb this amount of CO₂. If all 230 million cars operated in the U.S. were driven one less day per year, the nation would reduce its fuel consumption by 170 million gallons per year.

Q: How does flying affect the environment?

A: Initial estimates of carbon dioxide emissions from aviation were low but researchers, environmentalists and economists have changed their minds. They now say air travel is responsible for about 12 percent of transportation emissions.

Quick Tip!
Keep your car tires properly inflated. It’ll greatly increase efficiency and save you money.

10 Easy Ways to Reduce Your Driving Impact

1. Take public transportation: Americans in metropolitan areas save thousands of dollars each year by taking public transit. You can also integrate public transportation into your commute by driving to a commuter parking lot and taking a bus or train. Find out if your employer will reimburse you for weekly or monthly transit passes. Locate public transportation service in your area.

2. Form a carpool: Learn your carpooling options. Are any offered by your employer? Can you organize one with your co-workers? Carpooling saves money while reducing air pollution, road congestion and fuel use. Try organizing a carpool for your family’s sports and activities, too.
3. **Work from home:** Do business from your desk or home office instead of flying and driving to meetings by using online solutions that let you chat, video conference, give presentations and share/edit documents around the world. It saves time, money and energy while reducing emissions. Plus, it’s convenient. Learn more about telecommuting.

4. **Use your own steam:** By simply walking or riding a bike, you have a positive impact on the environment and your health. While improving your cardiovascular health, you’ll generate zero emissions.

5. **Plan your trips:** When you’re running errands, plan your stops before you leave the house. Map out your most efficient route and combine trips when possible.

6. **Get regular service:** A well-maintained car improves performance by 40 percent. Get the oil changed, check the brakes, exhaust and tire pressure. A well-kept car will consume less fuel, pump out fewer GHGs and last longer, which helps the environment long-term.

7. **Try an efficient option:** Look for fuel efficiency when choosing your next car. Consider fuel-efficient hybrid vehicles that run on electricity and gasoline. Check out the EPAs Green Vehicle Guide and learn more about hybrid vehicles at HybridCars.org.

8. **Be smart about the A/C:** Don’t use air conditioning when you don’t have to. When you do, make fuel-conscious decisions. On short trips around town, you’ll use less gas if you keep the A/C off and roll down the windows instead. But when you get on the highway it’s the opposite. Driving with the windows up will reduce drag. Using the A/C on long trips will actually save gas.

9. **Don’t idle the engine:** An idling car emits up to 20 times more carbon than a car going 32 MPH. Idling wastes up to half a gallon of gas per hour. If you know you’ll be waiting in one place, find a parking place and turn off your engine.

10. **Remove roof racks:** If you have roof racks or cargo carriers on your car, remove them when they aren’t in use. They reduce aerodynamic efficiency, which increases fuel consumption.

**Learn More:**

2. Find out more about the impact of your car and commute at fueleconomy.gov.
3. Learn about the impacts of transportation on water at cwac.net/transportation.
5. Find out how your commute affects the air from the Clean Air Council.
Q: Do you know where your energy comes from?

A: If you live in North America, odds are that your home and office depend on fossil fuels for electricity. In 2011, 68 percent of energy in the U.S. came from fossil fuels, 19 percent came from nuclear fuel, and 13 percent from renewable sources such as solar, hydroelectric and wind. Fossil fuels are finite, non-renewable resources and their combustion creates large concentrations of CO2 in the atmosphere. Clean energy, such as nuclear and renewables, reduces or eliminates the generation of greenhouse gases that are believed to be causing widespread climate change.

Q: What is Climate Change?

A: Over the past 200 years, burning fossil fuels such as coal and oil, coupled with massive deforestation, has caused concentrations of heat-trapping “greenhouse gases” (GHGs) to collect in our atmosphere. These gases, which include carbon dioxide (CO2) and methane (CH4), prevent heat from escaping into space. This trapped heat has caused the earth’s temperature to rise, a warming that’s responsible for more severe storms, altered growing seasons, melting polar ice caps and rising sea levels. Collectively, these changes are called climate change.

Q: What is your carbon footprint?

A: Your carbon footprint is the amount of greenhouse gases that you release into the atmosphere each day. These GHGs are released by burning fossil fuels for electricity, heating and transportation. While this may not seem like a large impact, imagine the carbon footprint for each of the items you consume or purchase on a day-to-day basis. You can calculate your daily carbon footprint online at SafeClimate.net. There are many things you can do to reduce your daily carbon footprint that makes a large impact.

Quick Tip! It’s really quite simple: If you can measure it, you can manage it. You can make small adjustments throughout the day and see how the savings add up. To measure power use at home, consider purchasing a power meter such as the TheEnergyDetective.com or Kill-A-Watt to monitor the electricity usage of your appliances.
12 Easy Ways to Minimize Your “Carbon Footprint”

1. **Turn it off**: When you leave a room, turn off the lights. Remember to turn off your television, DVD player, stereo and computer when you’re not using them.

2. **Do a home energy audit**: Many utility companies provide free home energy audits to help you identify which areas of your home are not energy efficient. Many utility companies offer rebate programs to subsidize the cost of energy efficiency upgrades.

3. **Control the thermostat**: Setting your thermostat to 78 degrees Fahrenheit in the summer and 68 degrees Fahrenheit in the winter can translate to a big difference in energy use without dramatically affecting your comfort level. Installing a programmable thermostat can significantly cut your energy use without sacrificing comfort. Ceiling fans are a great way to cut your cooling costs, too.

4. **Drive less**: Less car time means fewer emissions. Try public transit and explore your carpooling options. If you can, try working from home once a week.

5. **Buy efficient**: When you buy anything—from cars to appliances—consider efficiency. Look for the EPA “Energy Star” rating on new appliances.

6. **Replace your light bulbs**: As regular light bulbs burn out, replace them with compact fluorescent lights (CFLs). Replacing one 60-watt incandescent light bulb with a CFL will save you $30 over the life of the bulb and use 66 percent less energy. If you install new lights, consider buying energy efficient light-emitting diodes (LEDs). An LED’s average life span is 100,000 hours (vs. 1,500) and they reduce energy consumption by up to 90 percent.

7. **Unplug the power**: Standby power is the energy wasted by an appliance that’s plugged in but switched off. The easiest solution is to unplug appliances you’re not using.

8. **Weatherize your home**: Once you know where the problem spots are, there are several small steps you can take to reinforce the envelope of your home, such as installing weather stripping, covering your windows with shrink wrap sheeting, insulating your hot water pipes and plugging gaps around outlets. In hotter climates, use window tints, blinds, bushes, trees or trellises to help keep heat out during the summer months.

9. **Cut your waste**: Reducing your household garbage by 10 percent can save 1,200 pounds of carbon dioxide emissions per household each year.

10. **Use less hot water**: Wash clothes in warm or cold water. About 90 percent of a conventional top-load washing machine’s energy is heating the water. Also, consider turning down your water heater to around 120 degrees.

11. **Hang your clothes out to dry**: After your HVAC system and your refrigerator, your clothes dryer is the biggest energy hog in your home. Using the sun and wind to dry your clothes can save 1,400 lbs of CO₂ per year.

12. **Buy carbon offsets**: If you’re flying, consider buying carbon emission offsets. They help fund projects that capture and reduce the amount of GHGs entering the atmosphere and encourage clean, renewable energy production.

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According to NASA, the Earth’s average surface temperature has increased by about 1.2 to 1.4 degrees Fahrenheit in the last 100 years. The eight warmest years on record (since 1850) have all occurred since 1998 with the warmest year being 2007.
Replacing one regular light bulb with a CFL will prevent 1 ton (2,000 lbs) of CO₂ emissions over its lifetime.

Quick Tip!

ENERGY & CLIMATE CHANGE

Learn More:

1. Visit the Powerhouse web page to read about 101 things you can do to reduce energy use and costs at your home.
2. Calculate your own contribution to climate change with this Carbon Footprint Calculator.
3. Learn some healthy habits to reduce your energy consumption on the NRDC website.
4. Learn how to live smart and green with these smart energy living resources.
5. The Department of Energy has some tips to reduce your consumption.
6. Learn more about climate change and the action being taken to deal with it from the world’s leading scientists at the Intergovernmental Panel on Climate Change.

Quick Tip!

To reduce standby power, plug multiple appliances into a surge protector strip. When you’re not using the appliances, unplug them.
What’s the best way to go green at work?

Assemble a team of co-workers who want to reduce waste and improve the energy efficiency in your office.

To build a “green team,” first get approval from management. Let them know about the team to see how your company might support it. Then:

Recruit: Spread the word to coworkers and get members from all departments and levels in the company, including executives and interns.

Launch: Organize a meeting to develop a strategy for your green team. Encourage participation by accepting suggestions from any employee, as each department may have unique ideas or ways they can make a difference.

Execute: Start small by changing the things you can. Add recycling bins to the kitchen. Swap out styrofoam cups for ceramic mugs. Educate coworkers about reusable lunch containers. Turn on energy saving settings for your copy machines, encourage double-sided printing or, best yet, try going paperless.

9 Easy Ways to Be Green at Work

1. **Conserve energy**: Use power save settings on computers, monitors, and copy and fax machines. Use a power strip with a central power switch—it’ll make it easier to turn off power when you’re done for the day.

2. **Print less**: Set printers and copiers to double-sided printing and check with procurement or operations to see if printer and copy paper has post-consumer content. Encourage coworkers to distribute office publications, forms and surveys electronically to save paper and ink.

3. **Buy green**: Meet with janitorial staff and office management to encourage green choices for energy-efficient fluorescent light bulbs, accessible recycling options and eco-friendly cleaning supplies.

4. **Manage waste**: Encourage recycling by making sure every room in your office has recycling containers. Raise money for company sponsored, re-usable water bottles to reduce use of plastic bottles and paper cups.

Quick Tip!

When negotiating your benefits package, ask about opportunities to work from home. You’ll save fuel and time by skipping your commute one day a week.
5. **Do lunch:** Meet with your organization’s cafeteria staff or office manager to discuss ways to increase sustainability such as setting up a compost bin, purchasing biodegradable utensils and reusable dishes.

6. **Change your commute:** Telecommute, ride a bike or take public transportation to work. If this isn’t possible, consider setting up a carpool with coworkers. Ask management to provide bike parking. Start an annual or monthly alternative transportation day (e.g. Ride-your-bike-to-work day.)

7. **Host a green competition:** Encourage participation by promoting in-house competitions that reward the individual or department that makes the most progress in energy efficiency. Put up a poster board or create a wiki to track progress and update it weekly.

8. **Spread the word:** Set up green training sessions to get your coworkers involved in greening your workplace.

9. **Share the wealth:** Make sure everyone has a copy of this TIPS guide so they can see how the small steps they take can help make progress toward a big solution. NAEM is also a valuable resource. Our members have a wealth of information on going green at work and successful green team projects.

**Learn More**

1. Read the business case for employee engagement and training at neefusa.org.
2. Conduct an environmental audit of your office at sustainability.duke.edu.
3. Print tip cards or awareness posters for your office at energystar.gov.
4. Check out a green team tool kit at fs.fed.us/sustainableoperations.
5. Ask your procurement staff to purchase green office supplies at thegreenoffice.com.
**Q:** How can a strong community improve the environment?

**A:** One of the best ways to support a sustainable world is to get involved in your own community. Local groups such as political organizations and homeowner associations have the power to improve the environment where we live, work and play. You start by building strong relationships with your friends, neighbors and co-workers. Then, by working together to understand the issues and determining how to make improvements, you’re essentially forming a group that will make a difference, similar to forming a community or neighborhood green team.

**Q:** How can a joint effort led by your community could help reduce the effects of an environmental disaster?

**A:** In 1978, an ordinary citizen named Lois Gibbs kick-started community-led environmental activism after learning her children’s school had been built on top of the Love Canal waste dump. Suspecting that the toxic site was responsible for her children’s serious, unexplained illnesses—including asthma, epileptic seizures, liver and urinary tract problems—she began a public awareness campaign that resulted in major policy change. In 1980, Congress passed the Comprehensive Environmental Response, Compensation and Liability Act, which is used to identify and remove all toxic waste dumps around the United States.

And her spirit of activism lives on today. After crude oil from the BP spill began washing ashore, many Gulf Coast communities came to together to help with the cleanup efforts. Ordinary citizens from around the country also have volunteered to help, donating their time to restore the beaches and wildlife affected by the disaster.

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**8 Easy Ways To Get Involved Locally**

1. **Connect with your community:** The first step in promoting a sense of community is getting to know your neighbors. Connect with people in your area with shared interests, professions, hobbies and causes. If you have trouble finding a group that matches your interests, check out [this guide](#) to learn about starting your own.

2. **Learn about your local environment:** Do you and your neighbors know the local environmental qualities? Is it safe to swim at your favorite beaches? How can you help protect your drinking water? Find out more at [EPA’s community website](#).
3. **Do restoration work**: Help a community group clean up a local stream, highway, park or beach. Check out VolunteerMatch.org for opportunities to do restoration work or talk to your employer about integrating environmental service projects into your company’s social responsibility and sustainability initiatives.

4. **Start a community garden**: If space or agricultural knowledge is an issue, consider joining a community garden. None in your area? Check out the American Community Gardening Association’s web site for resources on how to start your own community garden. Talk to your child’s school or your employer about starting a garden on their property.

5. **Plant a tree**: Form a tree-planting group with family, friends, neighbors and coworkers. Plan regular gatherings for tree-planting and watering. Record your contributions with the United Nations Billion Tree Campaign.

6. **Get involved**: Participate in local politics and have a say in how your community is run. Whether you’re campaigning against poorly planned development, saving a local farm or changing local policy, it’s vital that you have a voice. Attending city or county meetings is a great start.

7. **Create a monthly swap meet**: Arrange a once-a-month get-together with your friends and neighbors to exchange anything you’re not using. It’s a great way to save money, recycle items and keep unnecessary waste out of landfills.

8. **Get your company to give back**: Ask your employer to invest in environmentally and socially sustainable development both locally and abroad.

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**Learn More**

2. Check out EPA’s resources for concerned citizens.
3. See if there’s a conservation project near you at Nature Serve’s website.
4. Find volunteer opportunities at Volunteer America.
5. If you are a home owner, join Community Green to get tips on environmental leadership through home owner’s associations.
CO₂ emissions is fossil fuel combustion. The major source of man-made greenhouse gas and contributes to global warming and climate change. CO₂ is the primary greenhouse gas and contributes to global warming and climate change. CO₂ emissions are fossil fuel combustion. CO₂ is the primary greenhouse gas and contributes to global warming and climate change.

Backyard wildlife habitat—Using plants and water in a way that allows wildlife to live, play and use your yard as a habitat.

Biodegradable—Ability of a material to decompose through natural processes and eventually be reabsorbed by the natural environment. Biodegradable products include all plant and animal material, paper, food waste and fibers. Plastic, glass and metals are not biodegradable. Composting provides optimal conditions for biodegradation, while landfill conditions slow or prevent it.

Biomass—The total quantity of organic material derived from living organisms in a particular area at a given time. In terms of energy production, includes wood or other plants that may be burned to produce energy.

Carbon dioxide (CO₂)—Colorless, odorless gas that naturally exists in the earth’s atmosphere. The major source of man-made CO₂ emissions is fossil fuel combustion. Carbon dioxide is the primary greenhouse gas and contributes to global warming and climate change.

Carbon footprint—Calculation of an individual’s or entity’s impact on the environment creating climate change. Often expressed as tons of carbon dioxide or tons of carbon emitted, usually on an annual basis.

Carbon offset—Payment to fund projects that reduce overall greenhouse gas emissions, thereby offsetting the greenhouse gas emissions you produce from your activities, including transportation and energy use.

Carpool—Arrangement where two or more people share a vehicle for transportation.

Climate change—Defined by the United Nations Convention on Climate Change as “change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods” and includes the long-term fluctuations in temperature, precipitation, wind, and all other aspects of Earth’s climate.

Community—Interacting population of individuals living in a specific area, interested in a specific issue or otherwise connected.
**Groundwater**—Water beneath the Earth’s surface in the spaces between soil particles and rock surfaces.

**Habitat**—Environmental conditions and location in which a particular organism normally lives.

**Hazardous waste**—Harmful substances that have been released or discarded into the environment.

**Hybrid vehicle**—Vehicle that uses both an electrical motor and a gas-powered engine working in tandem to decrease fuel consumption, resulting in higher gas mileage and lower emissions.

**Hydroelectric power**—Electricity that is produced when falling water turns generators. It’s a renewable energy source derived from gravity and rain and is most often employed in dams.

**Landfill**—Engineered facilities where household and industrial waste can be dumped and buried.

**Leadership in Energy and Environmental Design (LEED)**—Rating system for commercial buildings, homes and neighborhood developments, and the nationally accepted benchmark for green buildings. Ratings reflect sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality.

**Life-cycle cost (LCC)**—Total cost of acquiring, owning, operating and disposing of a building over its entire useful life. LCC includes the cost of land acquisition, construction, energy, maintenance, service and repair for the building and its systems, costs of system replacement, financing costs, and residual or salvage value at the end of the building’s useful life.

**Light emitting diodes (LEDs)**—Energy-efficient lights that consume 80 percent less energy than conventional, incandescent bulbs. Common in digital clocks, remote controls, watches and appliances, they are now being produced in bulb form as a home lighting alternative.

**Organic**—Refers to agricultural methods designed to sustain soil life and biodiversity. Organic regulations forbid the use of pesticides and fertilizers, genetically modified organisms, irradiation, sewage sludge, antibiotics and hormones (in livestock) and other practices. Organic foods and personal care products are labeled “Made with Organic Ingredients” for items that contain 70 percent or more organic ingredients, “USDA Organic” for items containing 95 percent or more organic ingredients, and “100% organic”.

**Organic waste**—Waste originating from plant or animal sources that can be broken down by other living organisms. Examples include fruit and vegetable peels, skins and husks.

**Photosynthesis**—Process by which plants use solar energy to convert water and carbon dioxide into carbohydrates and oxygen.

**Pollution**—Generally, the presence of a substance in the environment that, because of its chemical composition or quantity, prevents the functioning of natural processes and produces undesirable environmental and health effects.

**Post consumer recycled content**—Product that’s composed of material that has been reclaimed from another old, no-longer useful product.

**Recycling**—Process by which materials that would otherwise become waste are collected, separated, processed and returned to the economic mainstream to be reused as raw materials or finished goods. Commonly recycled items include cans, bottles, paper and industrial solvents.

**Renewable energy sources**—Energy sources that replenish themselves naturally within a short period of time. Sources of renewable energy include solar energy, hydroelectric power, geothermal energy, wind power, ocean thermal energy, wave power, wind power and fuel wood.

**Sustainability**—Meeting the needs of the present without compromising the ability of future generations to meet their needs. Practices that ensure the continued viability of a product or practice.

**Sustainable**—Adhering to practices that ensure the continued viability of a product or practice.

**Water shed**—Geographical area drained by a river and its tributaries; an area characterized by all runoff being conveyed to the same outlet.

**Xeriscaping**—Landscaping design that conserves water by using drought-tolerant plants.

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