



CHALLENGE 2

Be a Green Leader!

GREEN LEADER

H A N D B O O K



Frederick County Office of Sustainability
and Environmental Resources
Ensuring Our County's Future

A sustainable community starts at home . . .





Frederick County Green Homes Challenge Green Leader Handbook

Frederick Board of County Commissioners

2010 – 2014

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Green Leader Handbook Guide

What is the Green Homes Challenge?

The Green Homes Challenge guides, rewards, and recognizes households for saving energy, adopting green lifestyle practices, and using renewable energy. Use the Green Homes Challenge to make a difference, certify your home, be recognized, and earn rewards. Three corresponding Challenges make up the overall Green Homes Challenge:

Challenge 1: Be a Power Saver!

Challenge 2: Be a Green Leader!

Challenge 3: Be a Renewable Star!



The Green Leader Challenge

- The Green Leader Challenge helps households adopt lifestyle practices that improve health and safety at home, reduce environmental impacts, and save money on utilities, fuel, and goods.
- To become a Certified Green Leader, complete the 3 Required Green Leader Steps on the next page.
- Certified Green Leaders receive recognition and rewards for their efforts, including certified household signage, entry into drawings for high-value prizes, recognition by public officials, and opportunities for media interviews and profiles.

We're Here to Help

- Our goal is to provide enough structure, support, and follow-up to help you stay motivated and on track – we understand that all of your household members are engaged in lots of other pressing matters and activities.
- Request a Navigator, a personal coach who can help you take action, stay motivated, and complete certification.
- Have questions or need help? Contact the Green Homes Challenge staff at 301.600.7414 or GreenHomes@FrederickCountyMD.gov.

Get started today. Make a difference and Be a Green Leader!

Already a Green Leader?

If you think your household is already living an exemplary green lifestyle, you can use the Green Leader Challenge to certify your home, be recognized, and earn rewards. Register with the Green Homes Challenge, complete the required steps, check off actions already taken that total 70 Green Points, and submit your certification form.



Turn to page 44 to meet these Green Leaders, the Superczynski Family.

Required Green Leader Steps

Step 1: Register with the Green Homes Challenge

Complete and submit the Green Homes Challenge Registration Form on page 51 or online at www.FrederickCountyMD.gov/GreenHomes or <http://tinyurl.com/ca7m9b9>.



Take the Green Homes Challenge Pre-Survey

This online survey will help to gauge your level of awareness and action in the areas of energy efficiency, green living practices, and renewable energy options. Take the Pre-Survey *if you haven't already taken it for the Power Saver Challenge*. This is an important required step; by taking this survey you'll also be helping to evaluate the effectiveness of the Green Homes Challenge! Complete the survey at www.FrederickCountyMD.gov/GreenHomes or <http://tinyurl.com/3c86c2v>



My Pre-Survey
Score is

Step 2: Implement Green Actions

Turn to page 6 and start selecting actions from the Green Actions Catalog. Earn 70 points by implementing any combination of actions from the 9 action categories:

- Waste Management,
- Transportation & Travel,
- Food,
- Indoors & Cleaning,
- Indoor Water Conservation,
- Outdoor Water Conservation,
- Outdoors & Yard,
- Home Office, and
- Community Involvement, Education, & Leadership

Use the Green Leader Certification Form on page 38 to track your actions as you go. See Step 3 for details.



Total Points Available: 168

Step 3: Submit your Green Leader Certification Form

Turn to page 38 to complete your Green Leader Certification Form. The form is also available online as a PDF and as an Excel spreadsheet that calculates energy, financial, greenhouse gas emissions, water, and fuel savings at <http://tinyurl.com/7r5nbol>. Once you have completed Step 1 and Step 2 of the Challenge, you are ready to submit your Green Leader Certification Form.

Submit the form by email, mail, or fax to:

Green Homes Challenge Coordinator
Frederick County Office of Sustainability
and Environmental Resources
30 North Market Street
Frederick, MD 21701
GreenHomes@FrederickCountyMD.gov
Fax: 301.600.2054



How to use your Green Actions Catalog

The Green Actions Catalog lists actions that your household can take to reduce its impact on the environment. Each action has a “Green Point” value based on its relative environmental benefits. You may be curious about why certain actions have a higher or lower point value assigned. Point values were based on the priority environmental benefits identified by our funders and office including emission reductions, energy savings, water conservation, waste reduction, and improvement to water quality. In order to achieve Green Leader Certification, your household must complete the required steps listed on page 5 and earn 70 points by completing any combination of actions from the Green Actions Catalog. You can also earn points for actions that you have already completed.

The Green Actions Catalog Online

You can use this hard copy handbook in conjunction with our **Online Handbook** in order to access great links to online resources, such as how-to videos, instructional guides, new actions, and additional information for each action: www.FrederickCountyMD.gov/GreenHomes

Symbols used in the Green Leader Handbook



Hammers denote the relative amount of effort needed to implement a Green Action.

Dollar signs denote the relative cost of implementing a Green Action.



No cost



<\$100



\$100 - \$500



\$501 - \$2,000



>\$2,000



A key denotes a Renter-Friendly Green Action.

Waste Management



1. Use **reusable bottles** while on-the-go.

Disposable plastic water bottles are one of the most common forms of litter, and the plastic bottle industry consumes a huge amount of energy and resources. Instead of using disposable bottles, take a travel coffee mug to cafes and a reusable bottle to the gym, to work, on walks, and on drives. There are several options for water bottle materials, including glass, aluminum, and plastic. If you choose plastic, make sure that it is BPA-free. BPA (bisphenol a) is a potentially harmful organic compound that can leach from certain plastics¹. Many containers provide information on their product’s BPA content. To learn more about the impacts of drinking bottled water, search for “The Story of Bottled Water video” with your web browser.



	 <p>2. Use tap water instead of purchasing bottled water.</p> <p>Many people believe that bottled water is safer than tap water. In reality, tap water is more tightly regulated than bottled water. When you take into account the additional trash problems that disposable plastic bottles create and the resources required to produce them, tap water is the obvious environmentally-friendly choice. You can even buy a water filter that fits on your tap or a filtering pitcher if you want to improve the taste of your tap water.</p>	
	 <p>3. Shop with reusable bags.</p> <p>Each year, the United States consumes about 100 billion plastic bags made from approximately 12,000,000 barrels of oil². Most of these bags end up in landfills or in the environment, causing pollution and endangering wildlife. Reusable bags can cut back on this waste. To help yourself remember to take them to the store, try leaving a few in your car or by your front door. If you have plastic bags to get rid of, stuff them in one or more bags and tie them up. Then drop them in your recycling bin or the plastic bag recycling bins provided by many local grocery stores. For more information, check out the trailer for a movie about the harmful effects of plastic on the environment by searching for “Bag It movie trailer” with your web browser.</p>	
	 <p>4. Use reusable dishes, utensils, and/or napkins.</p> <p>Avoid using disposable dishes, utensils, and napkins. Instead, use reusable dishes at home, wash and reuse cloth napkins, pick up a set of washable items to keep at work, and purchase reusable containers to store food in the refrigerator. Going to a potluck or picnic? Take a set of your own dishes, utensils, and reusable containers rather than using disposable products. You can even consider investing in some reusable glass containers for leftovers, which are safer for microwaving and dishwashing repeatedly. Set a good example for kids by packing them “waste-free lunches.” To learn more about the Waste Free Lunches program, search for “Waste Free Lunches” with your web browser.</p>	
	 <p>5. Reduce packaging waste by buying goods in bulk.</p> <p>Pre-packaged items generate a lot of waste and are often more expensive than buying in bulk. Take a moment to search for “sustainable packaging” with your web browser. You will find tips for avoiding items like plastic-wrapped bananas, individually wrapped prunes, and beverages in Styrofoam containers. Take the same approach when purchasing food for packed lunches. Instead of buying a pack of mini chip bags, buy a single large bag and put a portion into a small reusable container for each lunch. Buying in bulk and buying products that use recyclable, recycled, and biodegradable packaging can reduce the amount of material going into landfills. But make sure to only buy items in bulk that you will actually use before they go bad. Overbuying can lead to increased food waste.</p>	

	 <p>6. Dispose of cooking grease properly.</p> <p>Instead of pouring your grease down the drain, collect it in a glass or metal container. Use caution as grease can be very hot. This method of cleaning your pots and pans prevents grease from clogging your pipes and lessens the load on the wastewater system. When the container is full, throw it away or scoop out the solid grease and recycle the container. You can even use leftover animal fat for seasoning cast iron pots or for cooking, as a replacement for butter.</p>	
	 <p>7. Use wrapping paper alternatives.</p> <p>Alternatives to wrapping paper include the Sunday comics, reused tin boxes, a reusable canvas bag, or a handkerchief. The Japanese furoshiki is a popular wrapping cloth that is frequently used in Eastern Asia to decorate presents. Reusable baking dishes and flower pots are also eco-forward alternatives to traditional gift-wrapping.</p>	
	 <p>8. Reduce paper mail by using a junk mail opt-out service.</p> <p>To reduce your junk mail, search for “41 pounds” or “Catalog Choice” with your web browser.</p>	
	 <p>9. Dispose of cigarette butts properly, if applicable.</p> <p>Cigarette filters are made of a fibrous material called cellulose acetate that takes many years to decompose. Cigarettes that are flicked on the ground or flushed down a drain are eventually carried to the Chesapeake Bay by storm drains and wastewater systems. This “marine debris” is harmful to many plants and animals in the environment. According to the Ocean Conservancy’s annual International Coastal Cleanup reports, cigarette butts are the most common form of ocean debris. In 2007, cigarette filters, cigar tips, and tobacco packaging accounted for 38% of the marine debris collected worldwide³.</p>	
	 <p>10. Use cloth, hybrid, organic, or chlorine-free diapers or feminine products.</p> <p>Approximately 27.4 billion disposable diapers are thrown away in the United States each year⁴, and the average woman disposes of 300 lbs of feminine products in a lifetime⁵. Disposable diapers and feminine products contain toxic materials that endanger consumers and the environment^{4,5}. Cloth products are the most environmentally-friendly, as they can be washed and reused. If you prefer a disposable product, consider using hybrid or bleach-free disposable diapers or organic feminine products. Hybrid diapers are cloth exteriors with a disposable liner.</p>	

	 <p>11. Pledge to dispose of pet waste properly.</p> <p>When pet waste is left on the ground, rain water can wash it into storm drains and surface waters, contributing to nutrient pollution of local waterways. Nutrient pollution often leads to algae blooms and decreased oxygen concentration, which harm aquatic plant and animal species⁶.</p> <p>Remember to take a bag with you to pick up your pet’s waste when you go for a walk. Leave some bags in your purse, car, or by the front door to help you remember. While pet waste can be thrown away with the trash, it adds unnecessary volume to landfills, uses plastic bags, and causes problems for trash collectors. The most environmentally friendly options are flushing the pet waste down the toilet, burying it away from food crops, or using an outdoor pet waste compost.</p>	
	 <p>12. Minimize stockpiling of excess paint.</p> <p>In order to cut down on paint stockpiling, donate unwanted usable paint, properly dispose of outdated paint, and be sure to buy only the paint that you absolutely need. To properly store paint, close it tightly and write down the date that you opened it. Donate unwanted paint in usable condition to friends or charity organizations. Unopened paint cans can be donated at the Frederick Habitat for Humanity ReStore at 622 North Market Street, Frederick.</p> <p>Unwanted paint must be dried before being disposed of at a landfill or in the trash. To dry paint, add paint hardener available at home improvement stores or add a clumping agent such as sand, mulch, or kitty litter and allow to air dry in a well-ventilated area⁷.</p>	
	 <p>13. Properly dispose of used fluorescent light bulbs.</p> <p>Incorrect disposal of CFL bulbs and fluorescent tubes can result in mercury being released into the environment. The Common Market in Frederick and chains such as The Home Depot, Lowe’s, IKEA, and MOM’s Organic Market provide free CFL recycling to customers. In addition, fluorescent bulbs can be disposed of at free Frederick County Household Hazardous Waste Drop-Off Days held at 5370 Public Safety Place, Frederick. For more information on drop-off days, call 301.600.1848.</p> <p>If you break a fluorescent bulb, it must be cleaned up properly. For instructions on cleaning up a broken bulb, search for “cleaning up a broken CFL” with your web browser.</p>	



14. Recycle using curbside pick-up or recycling center drop-off.

The average American produces about 4.5 pounds of trash each day, adding up to 1.5 tons each year. Though 75% of this waste is recyclable, only 30% is recycled⁸. Many common trash items can be recycled, including paper, cardboard, glass, and appropriate plastics. But, some of these items cannot be included with curbside collection, such as snack food bags, plastic wrapping material, Styrofoam, PVC, and plastics without a recycling code.

Some Frederick County renters are not eligible for curbside pick-up recycling. Recyclable items can also be dropped off at the Frederick recycling center at 9031 Reich’s Ford Road open Monday through Saturday from 7:00 a.m. – 4:30 p.m. For more information on Frederick County recycling, visit: tinyurl.com/6o3pyvg



15. Recycle specialty items, such as tires and electronics.

Some items cannot be included with your single stream curbside collection due to material make-up or safety issues. The Frederick recycling center at 9031 Reich’s Ford Road accepts oversized rigid plastics, flexible foam, appliances, air conditioners, scrap metal, automotive materials, yard waste, clothing, antifreeze, car batteries, and motor oil Monday through Saturday from 7:00 a.m. - 4:30 p.m. Exceptions include electronics and tires which must be brought into the main landfill entrance or other specialty recycling centers⁹. For more information on recycling specialty items at the Reich’s Ford Road center, visit: tinyurl.com/6wwb5j9. For information on tire disposal, visit: tinyurl.com/7m3yfnr

The Department of Solid Waste Management hosts free Household Hazardous Waste Drop-Off Days each year for Frederick County residents at 5370 Public Safety Place, Frederick. Hazardous waste drop-off items include: medicines, fuels, solvents, pesticides, mercury thermometers, and more. For more information on drop-off days, call 301.600.1848 or visit: tinyurl.com/83kyoqg

Electronics can be recycled at chain stores such as Best Buy, hgregg, Office Depot, and Staples. Select computer manufacturers and cell phone stores also accept electronics for recycling. To find other Maryland locations for specialty recycling, call 1.800.CLEANUP.





16. Donate and purchase used items, participate in swapping, and/or borrow items.

Approximately 12 million tons of textile waste, including used clothing, shoes, blankets, and more, are generated each year in the United States¹⁰. You can reduce the contribution of used, but perfectly usable, items to landfills by donating and purchasing used items, swapping, and borrowing whenever possible. Visit a local thrift or consignment shop to find used items like books, clothes, furniture, and toys that are inexpensive compared to new purchases. Check out online and printed resources such as newspaper classifieds for specific items, or try a swapping website.

To donate or purchase overstocked, discontinued, and used building supplies, appliances, cabinets, windows, doors, tools, electrical items, furniture, and water fixtures, check out the Frederick Habitat for Humanity ReStore located at 622 North Market Street, Frederick. To find thrift store locations, search for “Frederick MD Consignment Stores” with your web browser. To learn more about the impacts of buying new “stuff,” search for “Story of Stuff” with your web browser.



17. Use salvaged, recycled, or renewable materials for home improvement projects.

Why use building materials made from virgin materials when you can choose salvaged, recycled, or renewable materials, often for less money? Many second chance building material stores have salvaged and discontinued, never used items, such as appliances, mirrors, cabinets, furniture, sinks, lumber, paint, lighting, windows, doors, plumbing fixtures, and more. Local and regional second chance non-profits include Habitat for Humanity Restore located at 622 North Market Street, Frederick (301.662.2988); Community Forklift in Edmonston (301.985.5180); and The Loading Dock (410.558.DOCK) and Second Chance in Baltimore (410.385.1101). All of these businesses also offer donation pick-up for large loads.

Products made from recycled materials, such as recycled bottle carpeting and recycled glass countertops, can help reduce the flow of waste into landfills. The use of renewable resources can also alleviate the demand for nonrenewable products, such as rare woods and vinyl flooring. Some renewable materials include bamboo and cork flooring.



The Average American produces 1.5 tons of trash each year. Though 75% of this waste is recyclable, only 30% is recycled⁸.





18. Compost at least 50% of your kitchen and yard waste.

Composting is a beneficial way to use kitchen and yard waste that would otherwise contribute to a landfill. Instead, your nitrogen-rich kitchen scraps and grass trimmings mixed with sources of carbon, such as dead leaves and paper bags, can be turned into rich soil in a compost pile. Finished compost can then be used to enrich your garden soil¹¹. To get composting instructions from the Frederick County Department of Solid Waste Management, visit: tinyurl.com/d2xzk2p. The department also offers composting bins and workshops. Call 301.600.7405 for details.

Interested in composting, but don't have a lot of outdoor space? Vermiculture, or vermicomposting, is a method of composting that uses worms to break down organic waste. Kept in a small bin indoors, the worms produce castings, a rich fertilizer for house and garden plants. Bins can be home-made or purchased. For more information, search for "vermicomposting" with your web browser.

You also have the option of leaving newly cut grass on the yard after mowing as a type of composting. Known as "grasscycling," this practice allows nutrients to be absorbed back into the soil so that your yard can stay healthy.



Total "Waste Management" Green Points:

/23

Transportation & Travel



19. Do not "top off" gas tanks.

Make sure not to "top off" your tank because it can result in paying for gasoline that is fed back into the station's tanks when your tank is full. It also leads to more air pollution due to evaporation of excess gas¹².



20. One or more household members live within 15 miles of the workplace.

According to the U.S. Census Bureau, the average American spends more than 100 hours a year commuting to work. Residents of Maryland have the second longest commute time of all the states, averaging 30.2 minutes¹³. Long commutes take more money, energy, and time and generate more air pollution. When choosing a new job or a place to live, make sure to take your commute time into account.



	 <p>21. Calculate and track your vehicle’s gas mileage.</p> <p>Tracking your average miles per gallon (mpg) can alert you to possible problems, such as low tire pressure or dirty filters. It can also motivate you to adopt efficient driving practices. If your vehicle does not automatically calculate your mpg, you can do so by writing down the mileage and gallons of gas purchased each time you refuel. Calculate the miles driven between each refueling and then calculate your mpg using this formula:</p> <p>_____ Miles per gallon = _____ Miles driven ÷ _____ Gallons of gas used</p>	
	 <p>22. Use fuel efficient driving practices.</p> <p>The way you drive makes a big difference in the amount of fuel you consume and emissions you create. Use at least 3 of the following practices to save fuel:</p> <ul style="list-style-type: none"> • Choose routes that have fewer lights and stop signs. Driving on highways is more fuel efficient. • Avoid aggressive driving. The constant braking and accelerating can increase your fuel consumption by as much as 40%. • Drive steadily and follow posted speed limits. Driving at 55 rather than 65 mph can reduce your fuel consumption by 10-15%. • In a manual vehicle, get into top gear quickly without accelerating harder than necessary. In an automatic, ease off of the accelerator once you gain momentum. • Reduce your use of air conditioning. Instead try flow-through ventilation or open your windows when driving at low speeds. Driving with windows open at high speeds can actually decrease your fuel efficiency due to increased wind resistance. • Run errands in the least amount of trips possible. Keep a list of errands that need to be done and do them during your daily commute or during a single trip. • Use cruise control on flat sections of road but not in hilly areas. • Remove excess weight, bike racks, and trailers from your vehicle when possible. • Try to avoid high-traffic times of the day when planning trips¹⁴. 	
	 <p>23. Refrain from idling your car.</p> <p>Allowing your car to idle for more than 10 seconds burns more fuel than stopping and restarting the car¹⁵. Idling also releases toxic fumes like sulfur oxides, ground-level ozone, and nitrogen oxides which are detrimental to human health. Instead of allowing your car to idle or starting it early to warm it up, shut off your engine when going to a drive-through, waiting for a passenger, or waiting in line at the gas station¹⁶.</p>	



24. Maintain proper tire pressure.

Maintaining proper tire pressure makes your tires last longer and improves gas mileage, saving you gas and money. Most cars display a required tire pressure on the inside of the driver’s door, inside the glove compartment, under the center console cover, or in the owner’s manual. Tire pressure should be checked monthly or at least seasonally and before long trips. When you take your car in to a shop for any kind of maintenance, ask them to check your tire pressure. Most places will do it for free¹⁷.



25. Perform regular vehicle maintenance.

Keeping vehicles properly maintained improves their gas mileage, saving you energy and money. Get an oil change approximately every 3 months or 3,000 miles, or as recommended for your vehicle¹⁸. Other vehicle maintenance items may include air filter change, battery change, engine flush, tire rotation, and more. For maintenance information specific to your vehicle type, browse the web for information about your vehicle model, or ask your local mechanic.



26. Use low rolling resistance tires.

Friction between tires and the road is responsible for 5-15% of a light-duty vehicle’s fuel consumption. Low rolling resistance tires are made of a unique rubber compound that minimizes friction, thereby increasing fuel efficiency. Switching to low rolling resistance tires often increases fuel efficiency by 1.5-4.5%¹⁹. While this may not seem like a lot, it can save you a few tanks of gas each year, which adds up to bigger savings over the lifetime of the tires. Next time you need to replace your car’s tires, ask your repair shop for advice and do your own research to choose a low rolling resistance tire that is right for your car.



27. Purchase carbon offsets for travel.

Traveling by air, train, or bus consumes a large amount of petroleum fuel and generates pollutants and greenhouse gases. You can purchase carbon offsets for travel; the funds generated support a variety of environmental initiatives that compensate for the negative environmental impacts of travel. There are many carbon offset providers, and you can often choose which projects you want your purchases to support. Some travel providers, such as Amtrak, even allow you to purchase offsets when you purchase your tickets²⁰. To learn more, search for “carbon offsets” with your web browser.



	 <p>28. Choose a “staycation” instead of flying to a vacation destination.</p> <p>The staycation, or vacation at or near your hometown, has become very popular in recent years. The benefits of a staycation include saving fuel and electricity, eating more healthy and local foods, supporting local businesses, and gaining appreciation for attractions near your hometown²¹.</p>	
	 <p>29. Telecommute at least once a week.</p> <p>Telecommuting is a term that means simply, “working from home.” The EPA states that telecommuting improves customer service, reduces traffic congestion, and reduces energy consumption²².</p>	
	 <p>30. Carpool at least once a week.</p> <p>If you carpool to work every day with a co-worker, you could cut your gas consumption and vehicle emissions in half! Talk to your neighbors about sharing rides to common or nearby destinations. Ask the parents of your children’s friends and teammates if you can share driving duty for school and extracurricular activities. To learn about the Commuter Choice program, which can help you start your own carpool, search for “Commuter Choice Maryland” with your web browser.</p>	
	 <p>31. Use public transportation at least once a week.</p> <p>Instead of driving a car to work and school every day, use buses, metros, trains, and other forms of public transportation as much as possible. For more information on public transportation in Frederick County, visit: tinyurl.com/6lj2bsd. To learn about Commuter Choice, a program that provides incentives for Marylanders using public transportation and carpooling to get to work, search for “Commuter Choice Maryland” with your web browser.</p>	
	 <p>32. Use alternate transportation such as walking and biking to get to work, school, and other locations at least once a week.</p> <p>You can eliminate your fuel consumption and carbon dioxide emissions related to transportation by walking or biking to work or school every day. For more information on biking and pedestrian transit in Frederick County, visit: tinyurl.com/7f6keft.</p>	



33. Drive a hybrid, electric, or alternative fuel vehicle.

A hybrid electric vehicle contains an electric engine which allows a smaller and more efficient combustion engine to be used. Hybrids emit fewer tailpipe pollutants than vehicles with traditional combustion engines, and they use less fuel²³. An electric vehicle uses an electric engine powered by a rechargeable battery pack. While electric vehicles often use electricity that is generated by burning coal and other fossil fuels, they do not emit tailpipe pollutants, and they have the potential to run on electricity generated by renewable sources, such as solar, wind, and geothermal²⁴. Other alternatives to traditional gasoline fuel include: diesel, biofuel, liquefied petroleum gas (LPG), compressed natural gas, and hydrogen fuel cells (still in developmental stages)²⁵.



Total “Transportation & Travel” Green Points:

/33

Food



34. Buy minimally processed foods.

Foods such as whole grains, fresh or frozen fruits and vegetables, and fresh meats and fish retain their nutritional value if eaten right away, while most processed and boxed foods contain undesired preservatives and may contain fewer nutrients. Make sure that, when you purchase fresh foods, you only purchase what you can consume in a short period of time. Also consider preserving excess food at home by freezing, drying, or canning.



35. Preserve foods by freezing, drying, or canning.

By freezing, drying, or canning home-grown or local foods during growing seasons, you can reduce your consumption of non-local produce in the winter. Despite worldwide food shortages, 40% of all food produced in the U.S. ends up in the trash²⁶. The average American wastes 253 lbs of food each year²⁷! Preserving your food is a great way to reduce the amount of food that your household wastes.



The average American wastes 253 lbs of food each year²⁷. Try freezing, drying, or canning, and compost your food waste.



	 <p>36. Purchase sustainable seafood and/or wild-caught salmon.</p> <p>An estimated 90% of large fish, such as shark, swordfish, and cod, has been removed from the world’s oceans²⁸. The Monterey Bay Aquarium Seafood Watch program, Blue Ocean Institute Seafood Guide, and Marine Stewardship Council offer guidelines that help consumers and businesses make informed choices about seafood purchases. Sustainable fishing allows the consumer to purchase seafood from sources, either fished or farmed, that can exist over the long-term without compromising species’ survival or the health of the surrounding ecosystem²⁹.</p> <p>Check the “Country of Origin” label when you’re at the grocery store. Farm raised salmon has ten times the amount of dioxins and polychlorinated biphenyls (carcinogens) than their wild-caught counterparts. Wild salmon bear less environmental stress because they are not concentrated in a small area that has hazardous nitrogen levels and do not transfer diseases as rapidly as farmed salmon. Most Atlantic salmon is farm-raised. The best choice is wild Alaskan salmon, while good alternatives are wild salmon from Washington, Oregon, and California³⁰.</p>	
	 <p>37. Replace meat-based meals with vegetarian meals at least once a week.</p> <p>The benefits of eating vegetarian for just one day can be startling, especially if everyone in the U.S. does it! Collectively, the benefits include saving 100 billion gallons of water, 70 million gallons of gasoline, 1.2 million tons of CO₂ emissions, and much more. According to Environmental Defense, if every American skipped one meal of chicken per week and substituted vegetarian foods instead, the carbon dioxide savings would be the same as taking more than half a million cars off of U.S. roads!³¹</p>	
	 <p>38. One or more household members eat a vegetarian or vegan diet.</p> <p>Eating a vegetarian or vegan diet helps reduce the negative impacts of industrial animal production, such as excessive energy use, animal waste pollution, gaseous methane emissions, and animal cruelty^{32, 33}. There are also many health benefits including lower body mass indices, lower levels of cholesterol, lower blood pressure, and less incidence of heart disease, hypertension, type 2 diabetes, renal disease, osteoporosis, metabolic syndrome, and dementias such as Alzheimer’s disease. Studies have shown significant differences between vegetarians and non-vegetarians in mortality from cerebrovascular disease, stomach cancer, colorectal cancer, breast cancer, and prostate cancer³⁴.</p> <p>Looking for tasty vegetarian cuisine in Frederick County? Search for “Veg Frederick” with your web browser.</p>	



39. Buy organic, free-range, and/or grass-fed food at least 25% of the time.

Buying organic food lessens the impact of pesticides and fertilizers on the environment and the consumer. Foods labeled “100 percent organic” cannot contain any non-organic ingredients. “Organic” foods must contain at least 95% organic ingredients, and foods “made with organic ingredients” must contain at least 70% organic ingredients.³⁵ “Organic” animals may be grain-fed but are also required to have access to pasture³⁶.

Free-range and grass-fed (in comparison to grain-fed) animal products contain far more essential nutrients, such as omega-3s, which are vital to brain and heart health and have even been shown to reduce risk of cancer, heart attack, depression, attention deficit disorder, and Alzheimer’s disease. They also contain more beta-carotene, vitamin A, vitamin D, vitamin E, conjugated linoleic acid (CLA), alpha-linoleic acid (ALA), and essential minerals³⁷.

Purchasing free-range and grass-fed products cuts down on CO₂ emissions, pesticide use, and synthetic fertilizer use related to industrial grain production. It also reduces manure run-off, disease in animals and consumers, and methane gas emissions from animals. Manure from pastured animals can help build up soil, improving habitat for soil organisms, insects, and other native animals. In addition, the grasses and plants allowed to grow on a pasture sequester CO₂^{38, 39}.



40. Buy local food at least 25% of the time.

Supporting local farmer’s markets, Community Supported Agriculture programs (CSAs), natural food stores, and wineries decreases food transportation costs, boosts the local economy, and provides healthy, fresh food. For locations and operating hours of Frederick County Farmers Markets, search for “Frederick Farm Fresh” with your web browser. You can also sign up for a Community Supported Agriculture program, which provides you with a weekly supply of fresh produce or other farm products from an individual farmer for an entire growing season. To find a CSA farm near you, search for “Frederick County Virtual Farmer’s Market” with your web browser. You can also find local food at natural food stores and some grocery stores.





41. Grow at least 15% of **your own produce and/or raise **your own animals** for food.**

Growing your own food is just about as local as food production can get. Not only does it cut down on the fossil fuel consumption and synthetic fertilizer and pesticide use associated with industrial agriculture and food transportation, it also provides you with fresher food, exercise, and a closer connection to the land.

Cultivating a perennial polyculture garden is especially beneficial for the environment. Perennial polyculture gardens include a variety of plants that last from year to year and do not need to be replanted. While perennial polyculture requires a larger initial investment of time and money, it pays off with less required labor and expense in subsequent years. It can also increase plant diversity, increase disease and pest resistance in plants, sequester more CO₂, filter more rain water, fix more nitrogen, prevent erosion, and build soil^{40, 41}. Try growing some edible Maryland natives, such as pawpaw and blueberries, in your garden.

Depending on where you live in Frederick County, you may be able to raise your own chickens, guinea fowl, ducks, goats, pigs, sheep, rabbits, or cows. The industrial production of animals can be very harmful to the environment, livestock animals, and consumers³⁸. You can reap the nutritional benefits of naturally-produced animal products and reduce environmental impacts by raising them yourself. In addition to food, animals can provide pest management, grass trimming, wool, hides, furs, and natural fertilizer⁴².



Total “Food” Green Points:

/12

Indoors & Cleaning



42. Clean with **reusable cloth instead of paper towels.**

The pulp and paper industry, required to make disposable products such as paper towels, is the third largest producer of global warming pollution in the world⁴³. In comparison to paper towels, cloth is reusable, washable, and often biodegradable when it comes time to replace it. You can even use your old clothes that are too worn to donate as cloth for cleaning purposes. Mirrors and windows will be streak and lint-free when using lint-free cloth and a non-toxic, biodegradable cleaner. A cheap non-toxic formula for streak-free glass surfaces: 1 part water, 1 part distilled white vinegar, 2-5 drops dish soap. Mix contents in a spray bottle, spray, and wipe.



	 <p>43. Use a “green” dry cleaner.</p> <p>Most dry cleaning services use dangerous chemicals such as perchlorethylene, tetrachloroethylene, and tetrachloroethene, which degrade air quality and pose health risks to dry cleaning workers and consumers⁴⁴. Choose dry cleaners that use phosphorous-free, biodegradable detergents and products. To find out what products your dry cleaner uses, ask them.</p>	
	 <p>44. Use low-VOC paints.</p> <p>Indoor air is often three times more polluted than outdoor air⁴⁵. A major contributor to poor indoor air quality is the use of paints, stains, and finishes in homes. Oil-based paints are particularly dangerous, as they contain VOCs (volatile organic compounds). Many VOCs have been shown to cause cancer, nervous system damage, and allergic reactions. While water-based paints are generally taken to be safer, they may also pose health risks. Many water-based paints contain propylene glycol and glycol ethers, which have been shown to increase asthma and other respiratory problems in children^{46, 47}. To reduce negative health effects, choose low-VOC paint and use caution while painting; ventilate by opening windows, use protective gear specified by the label, keep pregnant women and young children away from freshly painted rooms, close paint cans tightly when not in use, and eliminate all sources of flame when using solvent-based paints⁴⁸.</p>	
	 <p>45. Test your home for radon, lead, and/or asbestos.</p> <p>Radon is a natural radioactive gas that is known to cause cancer in humans. It arises from radioactive breakdown of uranium in soil, rock, and water, and can become airborne in your home⁴⁹. To test for radon, look for a radon test kit at your local hardware store.</p> <p>Lead poisoning is a disease contracted from exposure to lead-based products. Children are particularly vulnerable to the health effects of lead, including aggression, behavioral problems, and deficits in attention span, learning, and memory. Lead exposure in adults may contribute to high blood pressure, impaired kidney function, fertility problems, and cataracts. If your home was built before 1978, there is a high likelihood that it contains lead paint^{50, 51}. Call a local lead inspection service to have your home tested for lead.</p> <p>Asbestos is a mineral that was used extensively in the mid-1900s for floor tiles, insulation, shingles, and more. Asbestos exposure can cause chronic lung diseases including asbestosis, mesothelioma, and lung cancer. Removal of asbestos should be carried out by a professional. Disrupting asbestos products can cause the fibers to become airborne, where they pose a serious health threat. Call a local asbestos inspection service to have your home tested for asbestos⁵².</p>	

	<div data-bbox="324 121 581 172">  </div> <p data-bbox="324 197 1205 264">46. Use cleaners and personal care products that are safe for people, animals, and the environment.</p> <p data-bbox="324 283 1263 415">Many household cleaning products, such as alkalies, acids, and detergents, can cause health problems, decrease indoor air quality, and harm the environment. For instance, fragrances can impact the human endocrine system, and phosphates in detergents contribute to algal blooms which degrade the Chesapeake Bay^{53, 54}.</p> <p data-bbox="324 438 1289 638">Green cleaning product lines, available at natural food stores and most grocery stores, include Simple Green, Seventh Generation, Green Works, and others. Look for seals such as Green Guard, Green Seal, and Green Clean Institute to ensure product safety. Or make your own green cleaners from safe and cheap household products such as vinegar, baking soda, lemon juice, and natural soaps⁵⁵. For recipes, search for “non-toxic cleaner recipes” with your web browser.</p> <p data-bbox="324 661 1273 898">Many personal care products, such as lotions, soaps, hair spray, and make-up, have health risks and negative environmental impacts. To reduce these impacts, use fewer products, make your own products, check out ingredient labels, buy organic, avoid fragrances and dyes, and go easy on the antibacterial products. Sunscreen may contain chemicals with health risks; limit its use by covering your skin with cool clothing in the summer, wearing a hat, and staying under an umbrella when out in the sun⁵⁶.</p>	<div data-bbox="1338 130 1429 222">  </div>
<p align="center">Total “Indoors & Cleaning” Green Points:</p>		<p align="center">/6</p>

<h3>Indoor Water Conservation</h3>		
	<div data-bbox="324 1192 496 1243">  </div> <p data-bbox="324 1268 1153 1306">47. Turn off the water when brushing your teeth or shaving.</p> <p data-bbox="324 1320 1218 1386">You can save up to eight gallons per day by taking this action. That’s a potential savings of almost 3,000 gallons per year!⁵⁷</p>	<div data-bbox="1338 1205 1429 1297">  </div>
	<div data-bbox="324 1474 496 1524">  </div> <p data-bbox="324 1549 1260 1625">48. Reduce washing machine and dishwasher use by at least one load per week by washing full loads only.</p> <p data-bbox="324 1640 1230 1738">Washing full loads of laundry and dishes reduces the number of loads that need to be washed each week. Save even more water and energy by using the “water efficient” or “light load” mode when running the dishwasher.</p>	<div data-bbox="1338 1486 1429 1579">  </div>

	 <p>49. Soak dishes instead of washing them under running water.</p> <p>Instead of leaving your water running while scrubbing each dish, allow your dishes to soak in your sink or a washing basin filled with hot soapy water. You can do any scrubbing required using the water in the sink, and your dishes will only need a quick rinse at the end. Also, make sure to use biodegradable, phosphate-free soap.</p>	
	 <p>50. Thaw frozen foods in the refrigerator instead of using running water.</p> <p>Defrosting frozen foods with running water can waste 50 to 150 gallons of water a month. Instead, place them in the refrigerator overnight or thaw in the microwave⁵⁸.</p>	
	 <p>51. Install faucet aerators.</p> <p>Aerators cut water use by 30% or more and save money on water and energy bills. By installing faucet aerators, the average household can save over 500 gallons of water per year⁵⁷. Low-volume faucet aerators are very inexpensive and can be installed without replacing the entire faucet. Look for products at your local hardware store with the WaterSense label to ensure maximum water savings.</p> <p>If you are a customer of Potomac Edison and have an electric water heater, you can get a free faucet aerator and other valuable water and energy saving components. To reserve your kit, call 1.888.287.7304 or visit: myconservationkit.com/</p>	
	 <p>52. Reduce your shower time by 5 minutes.</p> <p>When showering with a 4.5 gallon per minute showerhead, you use 45 gallons of water every ten minutes. To save water, shorten your showers or turn off the water when you're lathering up, shaving, or washing your hair. Be conscious of the time you take in the shower by using a shower clock, and try to reduce your shower by 5 minutes. By taking 5 minute showers, you can reduce your carbon emissions by 300 lbs each year⁵⁹.</p>	

	 <p>53. Wash your clothes in cold water at least 75% of the time.</p> <p>When you wash your clothes in hot water, only 10% of the required energy goes to running the machine; 90% goes to heating the water⁶⁰. Using cold water greatly decreases energy use.</p>	
	 <p>54. Fix leaks and drips. Keep water pipes, faucets, and toilet gasket seals in good condition.</p> <p>Small leaks in water pipes throughout your home can often go undetected, while a dripping faucet or moisture around the base of a toilet may be noticed but ignored. While the leaks may appear minor, they can waste a lot of water. The average household wastes 10,000 gallons of water per year due to leaks. If you find a leak, fix it right away. Listen for the sound of dripping or for your toilet running longer than normal. You can easily check your home for leaks by shutting off all water usage in your home for an hour then checking to see if your water meter moves⁶¹.</p>	
	 <p>55. Use an ENERGY STAR® washing machine.</p> <p>An ENERGY STAR® washing machine uses about 50% less water than less-efficient types, saving about 43,000 gallons over the machine's lifetime⁶².</p>	
	 <p>56. Use an ENERGY STAR® dishwasher.</p> <p>An ENERGY STAR® dishwasher will save on average 1,300 gallons of water over its lifetime and about \$40 a year on electrical bills⁶³.</p>	

90% of the energy used by your washing machine goes toward heating the water. Wash with cold water whenever possible⁶⁰.





57. Install low-flow showerheads.

Showering accounts for 17% of residential water use in U.S. homes. That’s more than 1.2 trillion gallons of water consumed each year⁶⁴. Federal regulations mandate that new showerhead flow rates cannot exceed 2.5 gallons per minute at 80 pounds per square inch. A low-flow showerhead can achieve water savings of 25-60%⁶⁵. Choosing a low-flow showerhead does not mean that you have to sacrifice the great feeling of a therapeutic shower. There is a wide variety of showerheads available to suit your specific needs. Look for products at your local hardware store with the WaterSense label to ensure maximum water savings.

If you are a customer of Potomac Edison and have an electric water heater, you can get a free low-flow showerhead and other valuable water and energy saving components. To reserve your kit, call 1.888.287.7304 or visit: myconservationkit.com/



58. Reduce toilet water use. Use a high-efficiency/dual flush toilet, composting toilet, or low-flow toilet conversion kit.

Toilets use more water than any other device in your home – about 30% of all your indoor water consumption. When replacing a toilet, consider purchasing a 1.6 gallons per flush (gpf) toilet, high-efficiency toilet (HET) that uses 1.28 gpf, or a dual flush toilet⁶⁶. Dual-flush toilets allow for 2 options when flushing: half-tank or full 1.6 gallon flush. Upgrading to a WaterSense labeled toilet can save 4,000 gallons per year⁶⁷.

For a lower cost, try installing a dual flush conversion kit, “tank bank,” “toilet dam,” “float booster,” or even a sealed bottle of pebbles or sand in your toilet tank. To learn more, search for “dual flush conversion kit” with your web browser.

Alternatives to flushing toilets which avoid the use of water completely include composting toilets and dry toilets. To learn more about flushing toilet alternatives, search for “composting toilet” or “dry toilet” with your web browser.



Total “Indoor Water Conservation” Green Points:

/21

Outdoor Water Conservation



59. Use a watering can or a shut-off nozzle on your hoses.

Running a standard hose for just 10 minutes uses about 100 gallons of water⁶⁸. Using an automatic shutoff nozzle on your garden hose or filling up a watering can saves the water that would otherwise be wasted when the hose is not actually in use or aimed at your desired target.



	 <p>60. Avoid mid-day watering of your lawn and gardens.</p> <p>If the garden or lawn receives water at mid-day, when the temperature is highest, some of the water will evaporate before it has the chance to soak into the ground. Watering in the early morning provides plants with water at their most active period of transpiration, when they are taking up the most water through their roots. It also allows them to dry off before the cool night temperatures set in, reducing the chance of disease⁶⁹.</p>	
	 <p>61. Use a broom, rather than a hose or leaf blower, to clean sidewalks, driveways, patios, and other impermeable surfaces.</p> <p>Running a standard hose for just 10 minutes uses about 100 gallons of water⁶⁸. Make sure to pick up any swept-up waste and put it in a trash can or compost pile, not the gutter or storm drain. Sweeping the waste into the gutter only adds to the pollution in the Chesapeake Bay. Remember, <i>“Only rain down the drain!”</i></p>	
	 <p>62. Use mulch in gardens and landscaping.</p> <p>The use of mulch in gardens and landscaping helps to conserve water by absorbing and storing moisture for plants. It also insulates the ground from hot temperatures during summer months, decreasing the evaporation rate of water. In cool temperatures, the mulch can help keep plants warm; this can be especially useful for protecting seedlings in the spring⁷⁰.</p> <p>You can purchase high quality mulch and compost produced through Frederick County’s yard waste recycling program by visiting the 9031 Reichs Ford Road facility. You can also get lower-quality single-ground mulch at no-charge. For more information, visit: tinyurl.com/7ljysq4</p>	
	 <p>63. Use “grey” water for watering plants.</p> <p>“Grey” water is a term for used water from your shower, bath, washing machine, sinks, cookware, and fish bowls that you can use to water your gardens and reduce your water bills. Grey water does not include water from toilets, which is considered black water⁷¹. Be creative in the ways that you collect your grey water: save water used to boil vegetables, pasta, and eggs. Collect dripping water from your window air conditioning unit. Collect water used to rinse fruits and vegetables.</p>	

	 <p>64. Use slow-drip irrigation for watering plants.</p> <p>Slow-drip irrigation delivers water to plants at a slower rate that better matches their absorption rates, helping to minimize evaporation of water from plants and the soil surrounding them. Slow-drip irrigation can be facilitated through use of a soaker hose or watering bags⁷².</p>	
	 <p>65. Plant drought-resistant plants.</p> <p>Planting drought-resistant plants in your lawn and landscaping reduces the amount of watering required to keep the plants healthy. The EPA estimates that a household can save 20-50% of their outdoor watering needs by converting to a water-efficient landscape through the use of drought-resistant plants and careful design⁷³.</p>	
	 <p>66. Refrain from watering your lawn.</p> <p>30% of the water consumed on the East Coast goes toward watering lawns⁷⁴. The easiest way to cut your household's water use is to stop watering your lawn. Watering your lawn also makes your grass grow faster, and the higher your grass grows, the more often you need to mow your lawn. See action 77 to learn about the environmental impacts of lawn mowing.</p>	
	 <p>67. Install a rain barrel or cistern.</p> <p>Rain barrels and cisterns trap water from your downspouts and store it for future uses like watering your garden. They can also help to reduce the amount of stormwater entering storm drains headed for the Chesapeake Bay.</p> <p>The Scott Key Center located at 1050 Rocky Springs Road, Frederick, is now offering rain barrels made from refurbished olive shipping containers. To purchase one, call 301.600.1600. Rain barrels can also be purchased online and at some hardware and gardening stores.</p> <p>To register for a Rain Barrel Workshop with the Interstate Commission on the Potomac River Basin (ICPRB), call 301.274.8109.</p>	
<p>Total "Outdoor Water Conservation" Green Points:</p>		<p>/13</p>

Outdoors & Yard



68. Use starter fluid alternatives.

Using a metal cylinder charcoal chimney starter or an electric charcoal lighter is better for air quality than using starter fluid. Starter fluid is a mixture of highly flammable, volatile chemicals including butane, propane, and diethyl ether. When combustion occurs, the fumes are released into the atmosphere and breathed in by people around the grill. Health effects can include loss of vision, severe throat and esophagus pain, vomiting, dizziness, and breathing difficulties⁷⁵.



69. Reduce light waste and pollution emitted by outdoor lighting.

The best way to reduce your outdoor light waste and pollution is to turn off lights when not in use, reduce your number of outdoor lights, or install motion sensors. For the lighting that you need, you can reduce glare by positioning adjustable lights downward, reduce spillover by installing fully shielded lights, and reduce sky glow by installing fixtures that have the light bulb tucked into the luminary housing. Ineffective lighting creates nuisances and safety hazards for the community, drivers, and aviators. In addition, wildlife can experience disorientation from excess illumination and are attracted to or repulsed by glare, which affects foraging, reproduction, communication, and other critical behaviors^{76, 77}.



70. De-chlorinate your swimming pool before discharging the water.

Chlorinated water can cause serious harm to surrounding waterways by killing aquatic life. Pool water can be de-chlorinated by uncovering your pool, halting the addition of chlorine for about 10 days, and testing for chlorine before discharging. You can also chemically de-chlorinate your pool. When pool water is discharged, it should enter the sanitary sewer system, not the stormwater system⁷⁸.



71. Use a carwash instead of washing your car at home.

Washing your car at home rather than taking it to a carwash can actually be much more harmful to the environment. Washing a car at home tends to use 80 to 140 gallons of water, as compared to a commercial car wash which uses about 45 gallons⁷⁹. Many car washes even have water recycling systems which significantly reduce their water usage. If you do wash your car at home, use phosphate-free soap and wash your car on the grass rather than the driveway. Phosphate is a nutrient that can run directly into drainage inlets connecting to local waterways, resulting in algal blooms and low dissolved oxygen⁸⁰. Washing your car in the grass helps to minimize run-off of gasoline, oil, and exhaust fumes from your car.





72. Pick up litter in your neighborhood.

Not only is litter unpleasant to the eye, it also degrades water quality and endangers wildlife. Recycle the materials you pick up when possible, and ask your family, friends, and neighbors not to litter.



73. Report illicit discharges and water quality problems in your neighborhood.

The EPA defines an illicit discharge as anything discharged into a storm drain system that is not composed entirely of stormwater. Exceptions to this rule include water from fire fighting activities and discharges by facilities under a National Pollutant Discharge Elimination System (NPDES) permit. Unlike wastewater which is treated before release, illicit discharges enter surface waters without any treatment, often containing pathogens, nutrients, surfactants, and toxic pollutants⁸¹. If you spot an illicit discharge in your community, report it by calling the Frederick County Office of Sustainability and Environmental Resources at 301.600.1413. If the situation is an emergency, call 911.

Check your own property for potential run-off issues. Make sure that all wastewater leaving your property enters either the sanitary sewer or your septic system. Rainwater is the only type of water that should enter your storm drains or run off of your property.



74. Manage mosquitoes using natural methods.

There are several preventative measures that you can take to manage mosquitoes and prevent the spread of West Nile Virus. Make sure that there is no standing water in your yard. Turn buckets, kiddie pools, garbage cans, flower pots, old tires, and other containers upside down so that rainwater does not collect. Keep garbage and recycling bins covered to prevent the collection of stagnant water and scrub the insides if you suspect mosquito eggs were laid. If you have a bird feeder, inspect it often for larvae⁸².

Bats and certain bird species such as the Baltimore Oriole, bluebirds, chickadees, “gnatcatchers”, catbirds, cardinals, and other songbirds feed predominantly on flying insects. Bats are especially good at eating mosquitoes because they are nocturnal, and mosquitoes are most active in the evening hours. Build a bird house or a bat house to encourage nesting of these helpful creatures⁸³.





75. Remove **invasive plants from your property.**

Invasive plant species, also known as non-native, exotic, or alien species, are plants that were introduced to the region from other parts of the world. While some introduced species are not harmful, others cause serious damage to native ecosystems, agriculture, and industries. Harmful invasive plants out-compete native plants for light, space, water, and nutrients, causing many native species to become endangered. And, since native wildlife has evolved to eat native plants, wildlife often cannot feed on invasive plant species. Some invasive plant species of Maryland include the Tree of Heaven, Norway Maple, Japanese Stiltgrass, Mile-a Minute Vine, Purple Loosestrife, and Japanese Honeysuckle⁸⁴.

Invasive plant species can be very difficult to eradicate. The best practices for invasive plant removal vary between manual removal, chemical treatment, and a combination of both depending on the plant, extent of growth, and available means.



76. Reduce your use of **deicing chemicals or use an environmentally-friendly alternative.**

Road salt, or sodium chloride, can be harmful to the environment when it washes off of roads, sidewalks, and driveways into surrounding land and waterways⁸⁵. In order to reduce your use of deicing chemicals, clear as much snow as possible by hand, use only the amount of deicing chemical instructed, or try an environmentally-friendly alternative.



77. Use a **push reel or **electric mower** instead of a gas-powered mower, or **refrain from mowing** sections of your lawn.**

Gas-powered lawn mowers consume gas, emit pollutants, and generate greenhouse gases. A gas-powered lawn mower emits as many pollutants as eight new cars driving 55 mph for the same period of time. Or put another way, mowing your lawn with a typical 3.5 horsepower gas mower for one hour produces the same amount of harmful emissions as driving a car 340 miles! Americans use 800 million gallons of gas each year just to mow their lawns^{86, 87}. The EPA recommends the use of push reel mowers because they do not consume fossil fuels or emit greenhouse gases. If you do use a power mower, use an electric mower with mulching capabilities to reduce grass clippings⁸⁸.

The best alternative to using a gas-powered mower is to not mow your lawn at all! Consider replacing all or a section of your lawn with native plants. See action 79 for more information.





78. Refrain from using pesticides on your lawn and gardens

Exposure to pesticides may contribute to cancer, endocrine disruption, and other human health risks⁸⁹. Pesticides can actually kill beneficial insects and soil organisms that help plants grow; they can also harm wildlife⁹⁰.

Instead of using synthetic pesticides, consider an organic alternative or refrain from pesticide use completely. Before resorting to any type of pest management, identify the pest, whether it is actually harmful, and the degree of harm that it is causing. Start with spot treatments, rather than spraying the whole lawn or garden, and see if it works before using more of it. Try an alternative to synthetic pesticides, such as natural store bought products, homemade recipes, and techniques that don't use any chemicals, like planting marigolds to ward off nematodes or leaving a dish of flat beer outside to kill slugs⁸³.



79. Reduce turf grass. Replace 20% or more of your grass lawn with native plants.

Traditional grass lawns compete for space with native habitat, reduce rainwater absorption, contribute grass trimmings to landfills, and often require harmful chemicals, gas or electricity-consuming machines, and money to maintain. Over 50 million acres of land in the U.S. are covered by turf grass, and 30% of the water consumed on the east coast is used for watering lawns! ⁷⁴ A section of your grass lawn can be converted to nitrogen-fixing plants, native plants, moss, ground cover, clover, flower and shrub beds, or rain gardens⁹¹. You can even attract bees, butterflies, birds, and other pollinators by planting native wildflowers. Pollination promotes biodiversity which reduces occurrences of genetic defects and diseases in plants⁹².

Neighborhood Green is a Frederick County program that provides local homeowners with educational tools, such as workshops and expert advice, to help them convert their lawns into native plant and wildlife havens. For more information, contact the Frederick County Community Restoration Coordinator at 301.600.1741.



80. Plant native trees and shrubs on your property.

Every tree that you plant removes about 48 pounds of carbon from the atmosphere each year upon reaching maturity⁹³, in addition to providing shade, habitat for wildlife, soil stabilization, and water filtration. Native trees and plants require less water and maintenance because they are adapted to the region's climate, and they provide better food and habitat for native wildlife.

See action 79 for information about **Neighborhood Green**, a program that can help you plant native trees on your property.



	 <p>81. Redirect your rooftop run-off.</p> <p>When stormwater flows directly from your roof to impervious surfaces such as your driveway, sidewalk, or street, it enters stormwater drains and eventually surface waters such as streams and rivers. During large storm events, the influx of polluted water from impervious surfaces to natural waterways can harm aquatic ecosystems. “Rooftop Disconnection” simply means redirecting the water that flows from your roof’s gutters to your lawn or other pervious surface. This will allow the stormwater to soak into the ground rather than being carried directly to surface waters⁹⁴.</p>	
	 <p>82. Install a rain garden on your property.</p> <p>Rain gardens are plots of land containing amended soil and native plants that collect water flowing from impervious surfaces and allow it to slowly percolate into the ground. Rain gardens help to filter out pollutants, regenerate ground water, and lessen the load of pollutant-filled water on streams, rivers, and the Chesapeake Bay⁹⁵. To learn more, search for “Rain Gardens Across MD” with your web browser.</p>	
	 <p>83. Install a green roof.</p> <p>A green roof consists of a layer of soil and plants on a roof that filter and absorb rain water, rather than allowing it to run off of an impervious surface and contribute to stormwater run-off. In addition to reducing impervious surface, green roofs also act as insulation for the home, keeping the home cool in the summer and warm in the winter. Buildings must fit certain requirements to be appropriate for a green roof⁹⁶.</p>	
	 <p>84. Replace impermeable surfaces with permeable pavement.</p> <p>In the U.S. alone, an estimated quarter of a million acres are covered by impervious surfaces such as roads and sidewalks⁹⁷. Impervious surfaces contribute to stormwater run-off, which pollutes local waterways and prevents the regeneration of ground water. Permeable alternatives to traditional pavement include porous concrete, porous asphalt, plastic grid systems, reinforced turf, block pavers, and gravel⁹⁸.</p>	





85. Create a Certified Wildlife Habitat or Backyard Buffer on your property.

The National Wildlife Federation’s program for creating wildlife habitats in residential backyards, schools, campuses, commercial properties, and communities has resulted in the creation of almost 140,000 **Certified Wildlife Habitat** sites in the country. The requirements for a Certified Wildlife Habitat are the provision of food, water, cover, and a place for wildlife to raise young⁹⁹. To learn more, search for “Certified Wildlife Habitat” with your web browser.

Residents who have a stream, lake, pond, or other waterway on or adjacent to their property are eligible for participation in the Department of Natural Resource’s **Backyard Buffers** program. By signing up, you can receive 25 free native trees and shrubs. The removal of natural riparian buffers has been a large contributor to nutrient and sediment pollution in the Chesapeake Bay Watershed. Riparian buffers are ecosystems lining waterways that help to hold together soil and remove nutrients and other pollutants from stormwater¹⁰⁰. For more information, call the Frederick program coordinator at 301.791.4010 or search for “Backyard Buffers program” with your web browser.



86. Have your septic system pumped every 3-5 years.

A properly working septic system delivers wastewater to the soil where it is filtered before reaching groundwater. However, a malfunctioning septic system can be a health threat and degrade the quality of groundwater and nearby surface waters. A septic system must be pumped by a licensed septic contractor every three to five years to remove solid waste and grease¹⁰¹.



87. Upgrade your septic system to increase nitrogen removal.

Traditional septic systems do not remove nitrogen from wastewater. Leaking septic tanks are a major contributor to nitrogen nutrient pollution in the Chesapeake Bay watershed. An outdated septic system can be upgraded to a new Pretreatment System which reduces nitrogen by at least 50% and often extends the life of the drainage field¹⁰².

Residents living within 1,000 feet of tidal waters may be eligible to receive funding for a septic system upgrade through the Bay Restoration Fund. To learn more about the program, contact Frederick County’s program contact, the Canaan Valley Institute, at 304.940.3443.



	 <p>88. Test your soil and pledge to use the test results to better manage fertilizer application in your lawn and garden.</p> <p>Overuse of lawn fertilizers is a large contributor to nutrient pollution in the Chesapeake Bay Watershed. Testing your soil can help you determine whether or not you need to fertilize your lawn, and how much fertilizer is appropriate to use. A soil test can also help you to design a rain garden, vegetable garden, xeriscape, tree planting, or other landscaping feature and warn you of dangerous contaminants such as heavy metals¹⁰³.</p> <p>You can also use a soil test as an indicator of how much progress you have made in your yard at home. Compare results from soil tests completed before and after the implementation of outdoor Green Actions to see how much your yard has improved. You may receive a FREE soil test kit by registering for the Green Leader Challenge! To register, visit: www.FrederickCountyMD.gov/GreenHomes or call 301.600.7414. If you have already registered and would like to reserve your kit, call or email the Green Homes Challenge Coordinator at 301.600.7414 or GreenHomes@FrederickCountyMD.gov.</p>	
	 <p>89. Refrain from using fertilizers on your lawn and gardens.</p> <p>The use of lawn fertilizers contributes to nutrient pollution in the Chesapeake Bay Watershed. Excess nutrient loading, or eutrophication, can cause algae blooms, leading to low dissolved oxygen and water turbidity, or cloudy water. Excessive use of fertilizers can also damage beneficial soil life that helps plants grow¹⁰⁴.</p>	
	 <p>90. Become a Master Gardener or a Master Composter.</p> <p>The mission of the Master Gardener program provided by the University of Maryland Cooperative extension is to “educate Maryland residents about safe, effective and sustainable horticultural practices that build healthy gardens, landscapes and communities.”</p> <p>As a Master Composter, you can improve composting techniques and use the knowledge learned from courses about water quality, nutrient management, soil conservation, and recycling towards your own household and to help others¹⁰⁵.</p>	
<p>Total “Outdoors & Yard” Green Points:</p>		<p>/42</p>

Home Office & Finance

	 <p>91. Recycle ink and laser toner printer cartridges.</p> <p>Many printer companies accept used cartridges in the mail, and several businesses in the Frederick area accept drop-offs, including Best Buy and Office Depot. You can even raise money for your school, church, or other community organization by hosting a used printer cartridge drive.</p>	
	 <p>92. Use recycled paper with at least a 30% post-consumer content or tree-free fiber content.</p> <p>Paper comprises 28% of the solid waste generated by Americans¹⁰⁶. Paper recycling helps to direct this common waste away from the landfill and lessens the burden on virgin forests.</p> <p>Currently, 90% of the paper made in the world is produced from wood pulp, but several tree-free fiber alternatives exist, including agricultural wastes like husks and straw, fiber crops such as hemp, textile wastes such as rope and linen scraps, and wild plants like bamboo¹⁰⁷.</p>	
	 <p>93. Purchase non-bleached paper products.</p> <p>Chlorine is commonly used to bleach paper products a pure white color, including such products as coffee filters, paper towels, toilet paper, and more. However, chlorine, chlorine dioxide, and other derivatives used by the paper and pulp industry are harmful to the environment, especially to aquatic organisms. In addition, traces of these bleaching compounds remain in the paper, filters, paper plates, and paper towels that people handle, or even eat off of, every day. Bleaching with chlorine also results in the production of dioxins as carcinogenic byproducts. Less dangerous bleaching substitutes include oxygen, ozone, and hydrogen peroxide¹⁰⁸.</p>	
	 <p>94. Program your machines to photocopy and print on both sides automatically.</p> <p>Automatically printing your documents double-sided can cut paper use in half. For individualized instructions on changing photocopy and print settings, search for instructions specific to your printer model with your web browser.</p>	

	 <p>95. Use online banking, bill paying, and/or paycheck direct deposit.</p> <p>Many banks provide an online billing service to keep financial transactions paperless. Online banking also offers other convenient services that can cut down on bank visits and paperwork, such as bill paying and electronic transfers between accounts.</p>	
	 <p>96. Participate in green and socially responsible investing.</p> <p>When researching companies or mutual funds to invest in, consider options that support sustainability and social responsibility. You may want to invest in companies that provide products and services through environmentally-friendly practices, such as the use of recycled materials. You can consider companies with environmentally-friendly purposes, such as production of renewable energy. You can also support companies that have socially responsible practices, such as providing fair wages. To learn more about green and socially responsible investing, search for “green investing” or “socially responsible investing” with your web browser.</p>	
<p>Total “Home Office” Green Points:</p>		<p>/7</p>

Community Involvement, Education, & Leadership

	 <p>97. Refer 5 Frederick County households to the Green Homes Challenge.</p> <p>Help spread the word by referring 5 of your friends, family members, co-workers, or neighbors to the Green Homes Challenge. Motivate them to register online at www.FrederickCountyMD.gov/GreenHomes or complete the form on page 51.</p> <p>Names: 1. _____ 2. _____ 3. _____ 4. _____ 5. _____</p>	
	 <p>98. Calculate your environmental footprint.</p> <p>Try out at least one of these useful calculators to discover your ecological, carbon, water, or nitrogen footprint. Re-calculate these values once you’ve finished the challenge to see how much you have improved!</p> <p>Calculate your ecological footprint at: myfootprint.org/en/¹⁰⁹ My household’s ecological footprint is: _____ Earths</p> <p>Calculate your carbon footprint at: www.carbonfootprint.com/calculator.aspx¹¹⁰ My household’s carbon footprint is: _____ metric tons CO₂/year</p> <p>Calculate your water footprint at: www.h2oconserve.org/?page_id=503¹¹¹ My household’s water footprint is: _____ gallons/day</p> <p>Calculate your nitrogen footprint at: tinyurl.com/3ofyydm¹¹² My household’s nitrogen footprint is: _____ lb Nitrogen/year</p>	



99. Attend an environmental workshop, seminar, or discussion.

Would you like to learn how to engage in a sustainable practice like composting, gardening, or recycling the proper items? Check the Challenge website at www.FrederickCountyMD.gov/GreenHomes or call the Green Homes Challenge Coordinator at 301.600.7414 for information about upcoming workshops.

You can also attend a workshop or seminar hosted by another organization, such as The Common Market, Maryland Native Plant Society, Friends of Frederick County, Interstate Commission on the Potomac River Basin (ICPRB), and the Department of Natural Resources. To attend a composting workshop hosted by the Frederick County Department of Solid Waste Management, call the Recycling Outreach Coordinator at 301.600.7405. Join the Chesapeake Network for updates about workshops and events by searching for “Chesapeake Network” with your web browser.



100. Volunteer with an environmental organization.

There are many great initiatives within the Chesapeake Bay Watershed that could use an extra helping hand. Use an online volunteer search service to find volunteer opportunities, or connect with a regional organization or program, such as: the Monocacy & Catoctin Watershed Alliance, Hood College’s Monocacy Basin Stream Monitoring Project, DNR Stream Waders, Potomac Conservancy, Friends of Frederick County, Maryland Park Service, Volunteer Maryland, Nature Conservancy, or Maryland Native Plant Society. Join the Chesapeake Network for updates about volunteer events by searching for “Chesapeake Network” with your web browser.

Interested in traveling the world as a volunteer? To find out more about volunteer opportunities and programs around the world, search for “volunteer travel” with your web browser.

You can even organize your own volunteer project, such as a tree planting, community garden, schoolyard habitat, adopt-a-road, rain barrel installation, or used good drive. A few programs that can help include the Certified Wildlife Habitat program, TREE-MENDOUS Maryland program, Clean Up the World program, Potomac River Watershed Clean-up program, or Ocean Conservancy’s International Coastal Cleanup program. To participate in Adopt-a-Road in Frederick County, contact the Office of Highway Operations at 301.600.1564.



101. Become a Green Ambassador.

If you like the idea of inspiring or motivating others to go green, consider becoming a Green Ambassador for your workplace, faith community, or neighborhood organization! Turn to page 46 of your handbook or visit tinyurl.com/7629q3t to learn more.



	<p>Earn bonus points.</p> <p>Has your household completed an action that we didn't think of?</p> <p>Contact the Green Homes Challenge Coordinator at 301.600.7414 or GreenHomes@FrederickCountyMD.gov to tell us about your additional actions and to receive help with assigning an appropriate point value. If you think of a great new action, we may add it to the next version of our handbook!</p> <p style="text-align: center;">Bonus Actions:</p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p>	
<p>Total "Community Involvement, Education, & Leadership" Green Points:</p>		<p>/11</p>

<p>Total Green Points from Sections in the Green Actions Catalog Note here and on your Green Leader Certification Form (page 38)</p>	<p>/168</p>
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Green Homes Challenge

Green Leader Certification Form

(PDF form and Excel spreadsheet also available at www.FrederickCountyMD.gov/GreenHomes)

Use this form to check off each Green Leader Step and to enter your total Green Points earned for completing Green Actions. You can earn Green Points for actions completed before or during the Green Homes Challenge. If you complete the required steps and your Total Points add up to at least 70, then you are ready to submit your Green Leader Certification form! The values you submit will be used to track energy savings and greenhouse gas emissions reductions achieved through the Green Homes Challenge.

Household Name (as you would like it to appear on recognition materials): _____

Contact Person: _____ Daytime Phone: _____ Email Address: _____

	Completed Before GHC	Completed During GHC	Green Points
(Check one or both in each row)			
Green Leader Steps:			
1. Register and Take the Pre-Survey	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Implement Green Actions to earn 70 points	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Submit Green Leader Certification Form (this form)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Green Actions:

Waste Management

1. Use reusable bottles while on-the-go.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="1"/>
2. Use tap water instead of purchasing bottled water.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="1"/>
3. Shop with reusable bags.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="1"/>
4. Use reusable dishes, utensils, and/or napkins.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="1"/>
5. Reduce packaging waste by buying goods in bulk.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="1"/>
6. Dispose of cooking grease properly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="1"/>
7. Use wrapping paper alternatives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="1"/>
8. Reduce paper mail by using a junk mail opt-out service.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="1"/>
9. Dispose of cigarette butts properly, if applicable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="1"/>
10. Use cloth, hybrid, organic, or chlorine-free diapers or feminine products.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="1"/>
11. Pledge to dispose of pet waste properly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="1"/>
12. Minimize stockpiling of excess paint.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="1"/>
13. Properly dispose of used fluorescent light bulbs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="1"/>
14. Recycle using curbside pick-up or recycling center drop-off.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="2"/>
15. Recycle specialty items, such as tires and electronics.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="2"/>
16. Donate and purchase used items, participate in swapping, and/or borrow items.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="2"/>
17. Use salvaged, recycled, or renewable materials for home improvement projects.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="2"/>
18. Compost at least 50% of your kitchen and yard waste.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="2"/>

TOTAL EARNED /23
Continued

	Completed Before GHC	Completed During GHC	Green Points
	(Check one or both in each row)		
Transportation & Travel			
19. Do not “top off” gas tanks.	<input type="checkbox"/>	<input type="checkbox"/>	1
20. One or more household members live within 15 miles of the workplace. <i>How many of your household members live within 15 miles of their workplace(s)? _____</i>	<input type="checkbox"/>	<input type="checkbox"/>	1
21. Calculate and track your vehicle’s gas mileage.	<input type="checkbox"/>	<input type="checkbox"/>	1
22. Use fuel efficient driving practices. <i>How many of your household’s vehicles are driven using fuel efficient driving practices? _____</i>	<input type="checkbox"/>	<input type="checkbox"/>	2
23. Refrain from idling your car. <i>How many of your household’s vehicles are not idled? _____</i>	<input type="checkbox"/>	<input type="checkbox"/>	2
24. Maintain proper tire pressure. <i>How many of your household’s vehicles are kept at proper tire pressure? _____</i>	<input type="checkbox"/>	<input type="checkbox"/>	2
25. Perform regular vehicle maintenance. <i>How many of your household’s vehicles are regularly maintained? _____</i>	<input type="checkbox"/>	<input type="checkbox"/>	2
26. Use low rolling resistance tires. <i>How many of your household’s vehicles have low rolling resistance tires? _____</i>	<input type="checkbox"/>	<input type="checkbox"/>	2
27. Purchase carbon offsets for travel. <i>How many pounds of carbon offsets has your household purchased in the past year? _____</i>	<input type="checkbox"/>	<input type="checkbox"/>	2
28. Choose a “staycation” instead of flying to a vacation destination.	<input type="checkbox"/>	<input type="checkbox"/>	2
29. Telecommute at least once a week. <i>Approximately how many miles each week do your household members NOT drive by telecommuting? _____</i>	<input type="checkbox"/>	<input type="checkbox"/>	3
30. Carpool at least once a week. <i>Approximately how many miles do your household members travel by carpool per week? _____</i>	<input type="checkbox"/>	<input type="checkbox"/>	3
31. Use public transportation at least once a week. <i>Approximately how many miles do your household members travel by public transportation per week? _____</i>	<input type="checkbox"/>	<input type="checkbox"/>	3
32. Use alternate modes of transportation at least once a week. <i>Approximately how many miles do your household members travel by alternate transportation per week? _____</i>	<input type="checkbox"/>	<input type="checkbox"/>	3
33. Drive a hybrid, electric, or alternative fuel vehicle. <i>How many hybrid, electric, or alternative fuel vehicles does your household drive? _____</i>	<input type="checkbox"/>	<input type="checkbox"/>	4
TOTAL EARNED			/33
Food			
34. Buy minimally processed foods.	<input type="checkbox"/>	<input type="checkbox"/>	1
35. Preserve foods by freezing, drying, or canning.	<input type="checkbox"/>	<input type="checkbox"/>	1
36. Purchase sustainable seafood and/or wild-caught salmon.	<input type="checkbox"/>	<input type="checkbox"/>	1

Continued

	Completed Before GHC	Completed During GHC	Green Points
	(Check one or both in each row)		
37. Replace meat-based meals with vegetarian meals at least once a week.	<input type="checkbox"/>	<input type="checkbox"/>	1
38. One or more household members eat a vegetarian or vegan diet. <i>How many of your household members eat a vegetarian or vegan diet? _____</i>	<input type="checkbox"/>	<input type="checkbox"/>	2
39. Buy organic, free-range, and/or grass-fed food at least 25% of the time. <i>Of the food your household purchases, approximately what percentage is organic, free-range, and/or grass-fed? _____</i>	<input type="checkbox"/>	<input type="checkbox"/>	2
40. Buy local food at least 25% of the time. <i>Of the food your household purchases, approximately what percentage is local? _____</i>	<input type="checkbox"/>	<input type="checkbox"/>	2
41. Grow at least 15% of your own produce and/or raise your own animals for food. <i>Of the produce your household eats, approximately what percentage is homegrown? _____</i> <i>Of the animal products your household eats, approximately what percentage is homegrown? _____</i>	<input type="checkbox"/>	<input type="checkbox"/>	2

TOTAL EARNED **/12**

Indoors & Cleaning

42. Clean with reusable cloth instead of paper towels.	<input type="checkbox"/>	<input type="checkbox"/>	1
43. Use a “green” dry cleaner.	<input type="checkbox"/>	<input type="checkbox"/>	1
44. Use low-VOC paints.	<input type="checkbox"/>	<input type="checkbox"/>	1
45. Test your home for radon, lead, and/or asbestos.	<input type="checkbox"/>	<input type="checkbox"/>	1
46. Use cleaners and personal care products that are safe for people, animals, and the environment.	<input type="checkbox"/>	<input type="checkbox"/>	2

TOTAL EARNED **/6**

Indoor Water Conservation

47. Turn off the water when brushing your teeth or shaving.	<input type="checkbox"/>	<input type="checkbox"/>	1
48. Reduce washing machine and dishwasher use by at least one load per week by washing full loads only.	<input type="checkbox"/>	<input type="checkbox"/>	1
49. Soak dishes instead of washing them under running water.	<input type="checkbox"/>	<input type="checkbox"/>	1
50. Thaw frozen foods in the refrigerator instead of using running water.	<input type="checkbox"/>	<input type="checkbox"/>	1
51. Install faucet aerators.	<input type="checkbox"/>	<input type="checkbox"/>	1
52. Reduce your shower time by 5 minutes.	<input type="checkbox"/>	<input type="checkbox"/>	2
53. Wash your clothes in cold water at least 75% of the time.	<input type="checkbox"/>	<input type="checkbox"/>	2
54. Fix leaks and drips. Keep water pipes, faucets, and toilet gasket seals in good condition.	<input type="checkbox"/>	<input type="checkbox"/>	2
55. Use an ENERGY STAR® washing machine.	<input type="checkbox"/>	<input type="checkbox"/>	2
56. Use an ENERGY STAR® dishwasher.	<input type="checkbox"/>	<input type="checkbox"/>	2
57. Install low-flow showerheads.	<input type="checkbox"/>	<input type="checkbox"/>	3

	Completed Before GHC	Completed During GHC	Green Points
	(Check one or both in each row)		
58. Reduce toilet water use. Use a high efficiency/dual flush toilet, composting toilet, or low-flow toilet conversion kit.	<input type="checkbox"/>	<input type="checkbox"/>	3
TOTAL EARNED			/21
Outdoor Water Conservation			
59. Use a watering can or a shutoff nozzle on your hoses.	<input type="checkbox"/>	<input type="checkbox"/>	1
60. Avoid mid-day watering of your lawn and gardens.	<input type="checkbox"/>	<input type="checkbox"/>	1
61. Use a broom, rather than a hose or leaf blower, to clean sidewalks, driveways, patios, and other impermeable surfaces.	<input type="checkbox"/>	<input type="checkbox"/>	1
62. Use mulch in gardens and landscaping.	<input type="checkbox"/>	<input type="checkbox"/>	1
63. Use “grey” water for watering plants.	<input type="checkbox"/>	<input type="checkbox"/>	1
64. Use slow-drip irrigation for watering plants.	<input type="checkbox"/>	<input type="checkbox"/>	1
65. Plant drought-resistant plants.	<input type="checkbox"/>	<input type="checkbox"/>	1
66. Refrain from watering your lawn.	<input type="checkbox"/>	<input type="checkbox"/>	3
<i>What is the square footage of the area of lawn that you do not water? _____</i>			
67. Install a rain barrel or cistern.	<input type="checkbox"/>	<input type="checkbox"/>	3
<i>What is the capacity (in gallons) of your rain barrel(s) and cistern(s)? _____</i>			
TOTAL EARNED			/13
Outdoors & Yard			
68. Use starter fluid alternatives.	<input type="checkbox"/>	<input type="checkbox"/>	1
69. Reduce light waste and pollution emitted by outdoor lighting.	<input type="checkbox"/>	<input type="checkbox"/>	1
70. De-chlorinate your swimming pool before discharging the water.	<input type="checkbox"/>	<input type="checkbox"/>	1
71. Use a carwash instead of washing your car at home.	<input type="checkbox"/>	<input type="checkbox"/>	1
72. Pick up litter in your neighborhood.	<input type="checkbox"/>	<input type="checkbox"/>	1
73. Report illicit discharges and water quality problems in your neighborhood.	<input type="checkbox"/>	<input type="checkbox"/>	1
74. Manage mosquitoes using natural methods.	<input type="checkbox"/>	<input type="checkbox"/>	1
75. Remove invasive plants from your property.	<input type="checkbox"/>	<input type="checkbox"/>	1
76. Reduce your use of deicing chemicals or use an environmentally-friendly alternative.	<input type="checkbox"/>	<input type="checkbox"/>	2
77. Use a push reel or electric mower instead of a gas-powered mower, or refrain from mowing sections of your lawn.	<input type="checkbox"/>	<input type="checkbox"/>	2
<i>Do you either use a push reel mower or refrain from mowing your lawn completely? (yes or no) _____</i>			
78. Refrain from using pesticides on your lawn and gardens.	<input type="checkbox"/>	<input type="checkbox"/>	2
<i>What is the square footage of your lawn? _____</i>			
79. Reduce turf grass. Replace 20% or more of your grass lawn with native plants.	<input type="checkbox"/>	<input type="checkbox"/>	2
<i>What square footage of your lawn did you convert to native plants? _____</i>			

Continued

	Completed Before GHC	Completed During GHC	Green Points
80. Plant native trees and shrubs on your property.	<input type="checkbox"/>	<input type="checkbox"/>	2
<i>What is the square footage of your native tree planting project? _____</i>			
<i>What is the square footage of your native plant/shrub planting project? _____</i>			
81. Redirect rooftop run-off.	<input type="checkbox"/>	<input type="checkbox"/>	2
<i>How many drains did you disconnect? _____</i>			
82. Install a rain garden on your property.	<input type="checkbox"/>	<input type="checkbox"/>	2
<i>What is the square footage of your rain garden? _____</i>			
83. Install a green roof.	<input type="checkbox"/>	<input type="checkbox"/>	2
<i>What is the square footage of your green roof? _____</i>			
84. Replace impermeable surfaces with permeable pavement.	<input type="checkbox"/>	<input type="checkbox"/>	2
<i>What is the square footage of your permeable pavement? _____</i>			
85. Create a Certified Wildlife Habitat or Backyard Buffer on your property.	<input type="checkbox"/>	<input type="checkbox"/>	2
86. Have your septic system pumped every 3-5 years.	<input type="checkbox"/>	<input type="checkbox"/>	2
87. Upgrade your septic system to increase nitrogen removal.	<input type="checkbox"/>	<input type="checkbox"/>	3
88. Test your soil and pledge to use the test results to better manage fertilizer application in your lawn and garden.	<input type="checkbox"/>	<input type="checkbox"/>	3
<i>What is the square footage of your lawn? _____</i>			
89. Refrain from using fertilizers on your lawn and gardens.	<input type="checkbox"/>	<input type="checkbox"/>	3
<i>What is the square footage of your lawn? _____</i>			
90. Become a Master Gardener or a Master Composter.	<input type="checkbox"/>	<input type="checkbox"/>	3

TOTAL EARNED /42

Home Office & Finance

91. Recycle ink and laser toner printer cartridges.	<input type="checkbox"/>	<input type="checkbox"/>	1
92. Use recycled paper with at least a 30% post-consumer content or tree-free fiber content.	<input type="checkbox"/>	<input type="checkbox"/>	1
93. Purchase non-bleached paper products.	<input type="checkbox"/>	<input type="checkbox"/>	1
94. Program your machines to photocopy and print on both sides automatically.	<input type="checkbox"/>	<input type="checkbox"/>	1
95. Use online banking, bill paying, and/or paycheck direct deposit.	<input type="checkbox"/>	<input type="checkbox"/>	1
96. Participate in green and socially responsible investing.	<input type="checkbox"/>	<input type="checkbox"/>	2

TOTAL EARNED /7

Community Involvement, Education, and Leadership

97. Refer 5 Frederick County households to the Green Homes Challenge.	<input type="checkbox"/>	<input type="checkbox"/>	1
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Names:

1. _____
2. _____
3. _____
4. _____
5. _____

Continued

	Completed Before GHC	Completed During GHC	Green Points
	(Check one or both in each row)		
98. Calculate your environmental footprint.....	<input type="checkbox"/>	<input type="checkbox"/>	1
<i>My household's:</i>			
<i>Ecological footprint is _____ Earths</i>			
<i>Carbon footprint is _____ metric tons CO₂/year</i>			
<i>Water footprint is _____ gallons/day</i>			
<i>Nitrogen footprint is _____ lbs Nitrogen/year</i>			
99. Attend an environmental workshop, seminar, or discussion.....	<input type="checkbox"/>	<input type="checkbox"/>	2
100. Volunteer with an environmental organization.	<input type="checkbox"/>	<input type="checkbox"/>	3
101. Become a Green Ambassador.	<input type="checkbox"/>	<input type="checkbox"/>	4
Earn Bonus Points.	<input type="checkbox"/>	<input type="checkbox"/>	
<i>(See page 37 of Green Actions Catalog for details)</i>			
<i>Actions (specify):</i>			
1. _____			
2. _____			
3. _____			
TOTAL EARNED			/11

Total Points for Green Leader Certification:  **TOTAL EARNED** /168

MAIL, FAX OR EMAIL TO:
Green Homes Challenge Coordinator, 30 North Market Street, Frederick, MD 21701
Fax: 301.600.2054 • Email: GreenHomes@FrederickCountyMD.gov

Meet Some Frederick County Green Leaders



Denis and Brienne Superczynski moved into their Thurmont home in 2005, excited to be in a location where their sons could walk and bike to school. They chose the house knowing that it would need some serious renovation to make it more comfortable and energy efficient. Now, six years later, the family is pleased to own an efficient home with personalized family gathering spaces. Despite a limited budget, the family created their dream home by focusing on the qualities that were most important to them and by saving money on salvaged materials and utility bills. They increased the usable space in the house by 50% without increasing its physical footprint or energy usage by 50%. The Superczynskis have proven to be model Green Leaders by making their home and lifestyles more environmentally-friendly.

You can choose to complete the Green Leader Challenge in whatever way best fits your household's lifestyle.

Here's how the Superczynskis did it:

1. Waste Management

- They compost kitchen and yard waste,
- Use biodegradable bags instead of plastic,
- Use cloth instead of disposable paper products,
- Recycle everything possible,
- Reduced their trash volume to one can every other week, and
- While remodeling their home, they recycled unwanted building materials, used salvaged materials, and installed renewable flooring materials, including natural linoleum, bamboo, and cork.



Three hens provide the family with 2-3 fresh eggs each day.

2. Transportation

- They walk or ride bikes to school and the bus stop,
- Walk to town, the farmers market, and the park, and enjoy getting more exercise by doing so.

3. Food

- They eat mostly vegetarian meals in order to save money, avoid processed and fried foods, and reduce the negative impacts of industrial meat production,
- House three hens that provide them with 2-3 eggs/day, bedding and waste for composting, and grass trimming,
- Built two raised beds for growing annual vegetables,
- Preserve extra produce by canning for use during the cold months,
- Purchase milk from a local creamery and buy produce and household goods from local farmers markets and The Common Market, and
- Create a meal plan each week in order to waste less food and have more family time.



The Superczynskis grow vegetables in their raised bed garden.

"We've made conscious living choices to make sure that [we] have that time to just sit and talk and exchange what we've done during the day. We have the time and the space to be a family together, and that's important."

-Denis Superczynski

4. Indoors & Cleaning

- They avoid products containing bleach, fragrances, and additives,
- Make their own vegetable-based soaps,
- Use only low- or zero-VOC paint for walls and furniture,
- Used polyacrylic instead of polyurethane countertop treatment, and
- Use no carpeting for the sake of allergies, air quality, and non-recyclability.

5. Indoor Water Conservation

- They installed low-flow water fixtures and dual-flush toilets,
- Purchased a high efficiency washing machine,
- Reduced laundry to 6-7 loads/week, and
- Only run the dishwasher when it's full.



A pellet stove helps heat the family's home.

6. Yard & Outdoor Water Conservation

- They allow grass clippings to sit on their lawn,
- Remove invasive species and plant native plants in their yard,
- Purchased rain barrels, and
- Installed a rain garden that collects water from their roof and sump pump.

7. Energy Efficiency & Conservation

- They have an energy efficient refrigerator and oven,
- Use all energy-efficient LED and CFL lighting,
- Use a pellet stove to heat the air and a solar radiant heat system to heat the floor and water, and
- Utilize passive heating and cooling by using window overhangs that block light in summer and allow heat in during the winter.

Creating a more sustainable household is an exciting and ongoing process. Benefits from the changes that the Superczynskis have made encourage them to think of even more practices that they can incorporate into their household. In the future, they want to focus on reducing the turf grass in their yard and utilizing their 1/3 acre to produce as much food as possible for the family.

Not only have the Superczynskis saved money on energy, food, transportation, building materials, and more, they also feel healthier and more united as a family because of the changes they made.



Instead of using electricity, the Superczynskis heat their water with a solar water heater.



Brienne's homemade vegetable-based soaps are environmentally friendly and healthy for the family.

"We've really tried to watch what materials go into the house. Being vegetarian is a big piece of [being healthier too]. It's a busy family. It'd be really easy to run out to some fast food place, but we just don't eat that stuff. I think that sets the kids up. This is their foundation."

-Brienne Superczynski



*Are you motivated to inspire others to take action for a greener home, community, or planet?
Are you part of an affiliated group through work, worship, school, or community activities?*

Be a Green Ambassador!

What is a Green Ambassador?

A Green Ambassador serves as a volunteer leader for one year and commits to motivating others to become more energy efficient, adopt environmentally-friendly lifestyles, and use renewable energy. It's a flexible role; there is no set schedule or required number of volunteer hours. You can serve individually or pair up with another Green Ambassador in the community you wish to serve. Green Ambassadors may use the Green Homes Challenge tools and resources and implement their own creative ideas and strategies! You can serve as a Green Ambassador almost anywhere... in your workplace, school, place of worship, homeowner's or neighborhood association, civic or recreational organization, mom's or singles club, or youth or scouting group.

What types of things can Green Ambassadors do?

Green Ambassadors choose at least one of these primary roles:

- Host at least two Powerware Parties,
- Navigate people through the Green Homes Challenge certification process,
- Lead or organize a "Green Team" that meets regularly to support group progress, or
- Provide outreach assistance for the Challenge by helping to staff booths at community events or presenting to community or school groups.

If you decide to get more involved, you can also:

- Implement a Green Homes Challenge registration drive,
- Set up an online social networking group to keep people motivated and informed about group progress,
- Organize discussion groups, demonstration workshops, or potluck meals, or
- Distribute information and resources door-to-door.

Our goal

*is to engage
2,000 households
in the Green
Homes Challenge
by 2014! Can you
help us get there?*

What qualities make a good Green Ambassador?

Successful Green Ambassadors are:

- Known and respected in their affiliated community,
- Outgoing, friendly, engaging and responsive,
- Organized and proactive,
- Easily accessible through person-to-person visits, email, phone, or social networking tools,
- Passionate about promoting energy conservation and sustainability, and
- Motivated to “walk the talk” and lead by example!

What Responsibilities would I have as a Green Ambassador?

Requirements are minimal but include:

- Filling out the Green Ambassador Registration and Commitment Form,
- Submitting a simple Monthly Green Ambassador Update documenting the types of things you have done in your community, how many people have been engaged, and hours spent volunteering,
- Filling out occasional online surveys about your experience as a Green Ambassador,
- Maintaining communication with the Green Homes Challenge staff, and
- Registering with the Green Homes Challenge and working towards Power Saver, Green Leader, and/or Renewable Star Certification.

How will Green Ambassadors be Supported?

Green Ambassadors will receive:

- One-on-one orientation and training by Office of Sustainability and Environmental Resources (OSER) staff,
- On-going one-on-one consultation and support through periodic phone calls and email messages from OSER staff,
- Opportunities to network with other Green Ambassadors, and
- Up to \$500 in mini-grants for implementing projects or initiatives (limited availability).

Resources available to Green Ambassadors:

- Copies of the Green Homes Challenge brochures and handbooks,
- Brochures and resources from partner agencies and organizations,
- Free incentive gifts to distribute,
- OSER presenters for Powerware Parties, workshops, and other events, and
- The Low Carbon Diet or Green Living Handbook for leading Green Teams (per book cost \$11-\$15)

What are the Perks?

Each Green Ambassador receives:

- A Green Homes Challenge name badge and business cards, upon request.
- Recognition through the Green Homes Challenge web pages and other venues.
- Leadership experience to add to your resume.
- The priceless feeling of knowing that you’re making a difference for our children’s, community’s, and planet’s future well being!

For more information about the Green Homes Challenge or becoming a Green Ambassador, contact the Green Homes Challenge Coordinator at 301.600.7414 or GreenHomes@FrederickCountyMD.gov.





Green Ambassador Application & Commitment Form

Name: _____ Date: _____
 Street Address: _____
 City, State, Zip: _____
 Day Phone: _____ Evening Phone: _____ Cell: _____
 Email Address: _____
 Name of affiliated community in which you want to serve as a Green Ambassador (business, place of worship, community organization, neighborhood, etc.): _____
 Please estimate how many people comprise this community: _____
 Address (if applicable), or zip code, for this community: _____

Will you be pairing up with another Green Ambassador in your community? YES NO
 If yes, please provide the name of your Green Ambassador partner: _____
 If you do not have a partner Green Ambassador identified, would you like us to connect you with a current Green Ambassador? YES NO
 Please briefly describe why you are interested in serving as a Green Ambassador:

Please select at least one primary role that you will fill as a Green Ambassador:

- Host at least two Powerware Parties
- Navigate people through the Green Homes Challenge certification process
- Lead or organize a “Green Team” that meets regularly to support group progress
- Provide outreach assistance for the Challenge by helping to staff booths at community events or presenting to community or school groups.

If you have other ideas of the types of things you might like to do as a Green Ambassador, please share them here:

Please list three dates and times when you would be available for a one-on-one Green Ambassador orientation at the Office of Sustainability and Environmental Resources at 30 N Market St, Frederick. Preferred dates and times are Monday – Friday, between 8am and 5pm (Interviews are typically held within 1-2 weeks of receiving your application).

What month/year do you want to begin serving as a Green Ambassador? _____
 Please initial:
 ___ I commit to serving as a Green Ambassador for one year.
 ___ I commit to tracking my volunteer hours and keeping the OSER staff informed of my community’s Green Homes Challenge activities by submitting the Quarterly Green Ambassador Update Form to GreenHomes@FrederickCountyMD.gov, or providing an update regarding my availability if I have no activities to report.

Signature: _____ Date: _____

Fillable form also available at www.FrederickCountyMD.gov/GreenHomes
MAIL, FAX OR EMAIL TO:
Green Homes Challenge Coordinator, 30 North Market Street, Frederick, MD 21701
Fax: 301.600.2054 • Email: GreenHomes@FrederickCountyMD.gov

Office Use Only:
 Reviewed by: _____ Date: _____
 Accepted? Yes No Further follow up needed for decision.

Green Actions Catalog References

Any views or opinions presented in these resources are solely those of the authors and do not necessarily represent those of the Frederick County Government or Green Homes Challenge program funders.

All online links were active as of April 3, 2012.

1. National Institute of Environmental Health Sciences. (2012). Since You Asked – Bisphenol A (BPA). Retrieved from <http://www.niehs.nih.gov/news/sya/sya-bpa/>
2. Root, J. (n.d.). 60,000 Plastic Bags are Being Used This Second. Help Slow it Down. Retrieved from <http://tlc.howstuffworks.com/home/plastic-bag-facts.htm>
3. Clean Virginia Waterways, Longwood University. (n.d.). Cigarette Butt Litter. Retrieved from <http://www.longwood.edu/cleanva/cigbutthowmany.htm>
4. Real Diaper Association. (n.d.). Real Diaper Association – Diaper Facts. Retrieved from <http://www.realdiaperassociation.org/diaperfacts.php>
5. Audet, M. (n.d.). Eco-Friendly Alternatives to Feminine Products. Retrieved from http://maryeaudet.hubpages.com/hub/mama_pads
6. EPA. (2012). Polluted Runoff (Nonpoint Source Pollution). Retrieved from http://www.epa.gov/owow_keep/NPS/index.html
7. Frederick County Department of Solid Waste Management. (n.d.). Paint Disposal. Retrieved from <http://www.frederickcountymd.gov/index.aspx?NID=4775>
8. Green Waste. (2010). Recycling Stats. Retrieved from <http://greenwaste.com/recycling-stats>
9. Frederick County Department of Solid Waste Management. (n.d.). Drop Off Center for Recyclable Materials. Retrieved from <http://frederickcountymd.gov/index.aspx?NID=3955>
10. Desbarats, A. (2010). Let's keep clothing out of our landfills. Retrieved from <http://eartheasy.com/blog/2010/05/lets-keep-clothing-out-of-our-landfills/>
11. EPA. (2011). Environmental Benefits. Retrieved from <http://www.epa.gov/osw/conserv/rrr/composting/benefits.htm>
12. EPA. (2011). Don't Top Off Your Gas Tank! Retrieved from <http://www.epa.gov/donttopoff/>
13. Longley, R. (2005). Americans Now Spend Over 100 Hours a Year Commuting. Retrieved from <http://usgovinfo.about.com/od/censusandstatistics/a/commutetimes.htm>
14. Eartheasy. (n.d.). Fuel-Efficient Driving. Retrieved from http://eartheasy.com/move_fuel_efficient_driving.html
15. Drivewiser. (n.d.). Myths. Retrieved from <http://www.drivewiser.ca/content/myths>
16. Natural Resources Defense Council (n.d.). No-Idling Policies. Retrieved from <http://www.nrdc.org/enterprise/greeningadvisor/ta-idling.asp>
17. Cars.com. (2005). Car Talk Service Advice: Tire Pressure. Retrieved from <http://cars.cartalk.com/content/advice/tirepressure.html>
18. Hanley, M. (2011). Why Oil Matters. Retrieved from <http://www.cars.com/go/advice/Story.jsp?section=maintenance&subject=oil&story=why-oil-matters&referer=advice&year&aff=national>
19. U.S. Department of Energy. (2011). Low Rolling Resistance Tires. Retrieved from http://www.afdc.energy.gov/afdc/vehicles/fuel_economy_tires_light.html
20. EcoBusinessLinks. (2012). Carbon Emissions Offset. Retrieved from http://www.ecobusinesslinks.com/carbon_offset_wind_credits_carbon_reduction.htm
21. Peachy Green. (2009). 5 Reasons to Take a Staycation. Retrieved from <http://www.peachygreen.com/going-green/peachy/5-green-reasons-staycation>
22. EPA. (2012). Telecommuting. Retrieved from <http://www.epa.gov/rtp/transportation/telecommuting/index.htm>
23. U.S. Department of Energy. (2012). How Hybrids Work. Retrieved from <http://www.fueleconomy.gov/feg/hybridtech.shtml>
24. U.S. Department of Energy. (2012). Electric Vehicles. Retrieved from <http://www.fueleconomy.gov/feg/evtech.shtml>
25. The Greener Car Website. (2012). A guide to green car fuel types. Retrieved from <http://www.thegreencarwebsite.co.uk/blog/index.php/a-guide-to-green-car-fuel-types/>
26. Alter, L. (2010). The Impact of Food Waste on Climate Change (And Just About Everything Else). Retrieved from <http://www.treehugger.com/green-food/the-impact-of-food-waste-on-climate-change-and-just-about-everything-else.html>
27. Jaffee, V. (2011). 253 Pounds: Americans Throw Away Their Weight in Food Every Year. Retrieved from http://switchboard.nrdc.org/blogs/vjaffee/253_pounds_americans_throw_awa.html
28. Monterey Bay Aquarium Seafood Watch. (n.d.). A Look at the Biggest Challenges – and the Way Forward. Retrieved from http://www.montereybayaquarium.org/cr/cr_seafoodwatch/issues/
29. Monterey Bay Aquarium Seafood Watch (n.d.). What is Seafood Watch? Retrieved from http://www.montereybayaquarium.org/cr/cr_seafoodwatch/sfw_aboutsfw.aspx?c=ln
30. Remick, P. (n.d.). Seven Reasons to Avoid Farm-Raised Salmon. Retrieved from http://www.purezing.com/living/food_articles/living_articles_7salmon.htm
31. Freston, K. (2009). The Startling Effects of Going Vegetarian for Just One Day. Retrieved from http://www.alternet.org/water/134650/the_startling_effects_of_going_vegetarian_for_just_one_day/
32. Environmental Working Group. (n.d.). Climate and Environmental Impacts. Retrieved from <http://www.ewg.org/meateatersguide/a-meat-eaters-guide-to-climate-change-health-what-you-eat-matters/climate-and-environmental-impacts/>
33. EPA. (2007). Frequent Questions. Retrieved from <http://epa.gov/rlep/faq.html>
34. Wikipedia. (n.d.). Vegetarianism. Retrieved from http://en.wikipedia.org/wiki/Vegetarianism#Health_benefits_and_concerns
35. U.S. Department of Agriculture. (2008). Organic Labeling and Marketing Information. Retrieved from <http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELDEVE3004446&acct=nopgeninfo>
36. Organic Meat Standards [Video file]. Retrieved from <http://www.youtube.com/watch?v=otHoBNs9LLQ>
37. Robinson, J. (n.d.). Health Benefits of Grass-Fed Products. Retrieved from <http://www.eatwild.com/healthbenefits.htm>
38. Robinson, J. (n.d.). Grassfarming Benefits the Environment. Retrieved from <http://www.eatwild.com/environment.html>
39. LaSalle, T.J. (2009). In Defense of the Cow: How Eating Meat Could Help Slow Climate Change. Retrieved from <http://www.treehugger.com/green-food/in-defense-of-the-cow-how-eating-meat-could-help-slow-climate-change.html>
40. Perennial Solutions. (n.d.). Welcome to Perennial Solutions. Retrieved from <http://www.perennialsolutions.org/>
41. Perennial Polyulture Guidelines [Video file]. Retrieved from <http://www.youtube.com/watch?v=znZxQIRJYM>
42. Kidd, R. (1982). Comparing the Five Best Backyard Animals. Retrieved from <http://www.motherearthnews.com/Sustainable-Farming/1982-11-01/Comparing-the-Five-Best-Backyard-Livestock-Animals.aspx>
43. Natural Resources Defense Council. (2006). Reforming the Paper Industry. Retrieved from <http://www.nrdc.org/cities/living/paper/default.asp>
44. Jones-Shoeman, C. (2010). Dry cleaning is hazardous to health, the environment and personal budget. Retrieved from http://www.naturalnews.com/030790_dry_cleaning_health.html
45. Eartheasy. (n.d.). Non-Toxic Paints. Retrieved from http://guides.eartheasy.com/live_nontoxic_paints.htm
46. Donald, S. (2010). The Health Effects of Oil Based Paint. Retrieved from <http://www.livestrong.com/article/125804-health-effects-oil-based-paint/>
47. Goetzman, K. (2010). Water-Based Paints Pose Health Risk to Kids. Retrieved from <http://www.utne.com/Wild-Green/Water-Based-Paints-Pose-Health-Risk-to-Kids.aspx>
48. Thurston County Public Health and Social Services. (2012). Healthy Indoor Painting. Retrieved from <http://www.co.thurston.wa.us/health/ehhm/paint.html>
49. EPA. (2010). A Citizen's Guide to Radon. Retrieved from <http://www.epa.gov/radon/pubs/citguide.html>
50. National Institute of Environmental Health Sciences. (2011). Lead Poisoning. Retrieved from <http://www.niehs.nih.gov/health/impacts/lead/>
51. Coalition to End Childhood Lead Poisoning. (n.d.). Homes And Lead. Retrieved from http://www.lead-safe.org/content/homes_and_lead/
52. EPA. (2012). Asbestos. Retrieved from <http://www.epa.gov/asbestos/index.html>
53. Szabo, L. (2007). 'Endocrine disruptor' won't be on label'. Retrieved from http://www.usatoday.com/tech/science/2007-10-30-endocrine-main_N.htm
54. Hughes, J. (n.d.). Hazards of Household Cleaning Products. Retrieved from <http://www.shareguide.com/hazard.html>
55. Eartheasy. (n.d.). Non-Toxic Home Cleaning. Retrieved from http://eartheasy.com/live_nontoxic_solutions.htm

56. Sierra Club. (n.d.). (Do) Judge a Product by its Label: Tips on Natural Skin Care Products. Retrieved from <http://www.sierraclubgreenhome.com/go-green/body-care/eco-friendly-personal-care-products/>
57. EPA. (2012). Bathroom Sink Faucets & Accessories. Retrieved from http://www.epa.gov/watersense/products/bathroom_sink_faucets.html
58. West Virginia University. (2011). Water Conservation. Retrieved from http://wecan.wvu.edu/sustainable_living/water_conservation
59. Gershon, D. (2006). Low Carbon Diet. New York, NY: Empowerment Institute.
60. Dunn, C. (2008). Washing Laundry in Cold Water is the Same As... Retrieved from <http://www.treehugger.com/culture/washing-laundry-in-cold-water-is-the-same-as.html>
61. EPA. (2012). Fix a Leak Week. Retrieved from <http://www.epa.gov/WaterSense/pubs/fixleak.html>
62. Energy Star. (n.d.). Clothes Washers for Consumers. Retrieved from http://www.energystar.gov/index.cfm?fuseaction=find_a_product.showProductGroup&pgw_code=CW
63. Energy Star. (n.d.). Dishwashers for Consumers. Retrieved from http://www.energystar.gov/index.cfm?fuseaction=find_a_product.showProductGroup&pgw_code=DW
64. EPA. (2012). Showerheads. Retrieved from <http://www.epa.gov/watersense/products/showerheads.html>
65. U.S. Department of Energy. (2011). Reduce Hot Water Use for Energy Savings. Retrieved from http://www.energysavers.gov/your_home/water_heating/index.cfm/mytopic=13050
66. HighEfficiencyToilets.org. (n.d.). High Efficiency Toilets (HETs). Retrieved from <http://highefficiencytoilets.org/>
67. EPA. (2012). Toilets. Retrieved from <http://www.epa.gov/watersense/products/toilets.html>
68. Calvert County Water and Sewerage Division. (n.d.). Water Conservation. Retrieved from http://www.co.cal.md.us/residents/water/water_conservation/
69. Burrell, C. C. (n.d.). Watering a Vegetable Garden. Retrieved from <http://home.howstuffworks.com/watering-a-vegetable-garden.htm>
70. Martin, N. (2011). All the Mulching Tips You Need to Get Started. Retrieved from <http://www.homeandgardenideas.com/outdoor-living/landscaping/mulch/all-mulching-tips-you-need-get-started>
71. City of Berkeley Green Building Initiative. (n.d.). Berkeley's Best Builders Guide to Conserving Water through Rainwater Harvesting & Graywater Reuse for Outdoor Use. Retrieved from http://www.cityofberkeley.info/uploadedFiles/Planning_and_Development/Level_3_-_Energy_and_Sustainable_Development/conserving%20water%20through%20harvesting%20and%20reuse.pdf
72. The Urban Farmer Store. (n.d.). Introduction to Drip Irrigation. Retrieved from <http://www.urbanfarmerstore.com/drip/drip.html>
73. EPA. (2012). Outdoor Water use in the United States. Retrieved from <http://www.epa.gov/WaterSense/pubs/outdoor.html>
74. eNature.com. (n.d.). Habitat Resources: Problems with Traditional Landscaping. Retrieved from <http://www.enature.com/articles/detail.asp?storyID=649>
75. Medline Plus. (2012). Lighter fluid poisoning. Retrieved from <http://www.nlm.nih.gov/medlineplus/ency/article/002833.htm>
76. Rensselaer Polytechnic Institute. (2007). What is light pollution? Retrieved from <http://www.lrc.rpi.edu/programs/nlpip/lightinganswers/lightpollution/lightPollution.asp>
77. Longcore, T. & Rich, C. (2004). Ecological Light Pollution. *Front Ecol Environ*, 2(4), 191–198.
78. District Department of the Environment. (n.d.). How to Properly Discharge and Dechlorinate Swimming Pool Water. Retrieved from <http://ddoe.dc.gov/service/how-properly-discharge-and-dechlorinate-swimming-pool-water>
79. EarthTalk. (n.d.). Eco-Friendly Car Washing: Is It Better to Wash Cars at Home or at the Car Wash? Retrieved from http://environment.about.com/od/greenlivingdesign/a/car_wash.htm
80. Carpenter, S. R. (2008). Phosphorous control is critical to mitigating eutrophication. *Proc Natl Acad Sci USA*, 105(32), 11039–11040.
81. EPA. (2010). Illicit Discharge Detection and Elimination. Retrieved from http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=3
82. Beyond Pesticides. (n.d.). Least-toxic Control of Mosquitoes. Retrieved from <http://www.beyondpesticides.org/alternatives/factsheets/Mosquito%20control.pdf>
83. Annapolis Environmental Stewardship Program. (2009). Annapolis Environmental Stewardship Self-Certification Workbook for Households. Retrieved from <http://www.annapolis.gov/Government/Departments/DNEP/Sustainability/Households.pdf>
84. University of Maryland Cooperative Extension. (n.d.). Invasive Plant Control in Maryland. Retrieved from http://www.hgic.umd.edu/_media/documents/publications/hg88.pdf
85. Fazio, C. A. & Strell, E. I. (2011). Environmental Impact of Road Salt and Deicers. Retrieved from <http://www.clm.com/publication.cfm?ID=321>
86. People Powered Machines. (n.d.). Cleaner Air: Gas Mower Pollution Facts. Retrieved from <http://www.peoplepoweredmachines.com/faq-environment.htm>
87. Solaris. (n.d.). Green Facts. Retrieved from <http://www.solarispowerproducts.com/green-facts.htm>
88. EPA. (2012). Lawn and Garden. Retrieved from <http://www.epa.gov/epawaste/wywd/funfacts/garden.htm>
89. Pimentel, D., Culliney, T. W., & Bashore, T. (2009). Public health risks associated with pesticides and natural toxins in foods. Retrieved from <http://ipmworld.umn.edu/chapters/pimentel.htm>
90. England, C. (2011). 10 Easy Ideas for Organic Pest Control. Retrieved from <http://goorganicgardening.com/garden-pests-diseases/10-easy-ideas-for-organic-pest-control>
91. Alexander, K. (n.d.). Benefits of Trees in Urban Areas. Retrieved from <http://www.coloradotrees.org/benefits.htm#carbon>
92. Eartheasy. (n.d.). Lawn Alternatives. Retrieved from http://eartheasy.com/grow_lawn_alternatives.htm
93. U.S. Fish & Wildlife Service. (2012). Pollinators. Retrieved from <http://www.fws.gov/Pollinators/>
94. Sample, D. J. (2011). Best Management Practice Fact Sheet 1: Rooftop Disconnection. Retrieved from <http://pubs.ext.vt.edu/426/426-120/426-120.html>
95. Coyman, S. & Silaphone, K. (2010). Rain Gardens Across Maryland. Retrieved from http://www.rainscaping.org/_ccLib/attachments/pages/Rain+Gardens+Across+MD_screen.pdf
96. ToolBase Services. (n.d.). Residential Green Roof Systems. Retrieved from <http://www.toolbase.org/Technology-Inventory/Roofs/green-roofs>
97. Frazer, L. (2005). Paving Paradise: The Peril of Impervious Surfaces. *Environ Health Perspect.* 113(7), A456–A462.
98. ToolBase Services. (n.d.). Permeable Pavement. Retrieved from <http://www.toolbase.org/Technology-Inventory/Sitework/permeable-pavement>
99. National Wildlife Federation. (n.d.). Certify your Wildlife Garden. Retrieved from <http://www.nwf.org/Get-Outside/Outdoor-Activities/Garden-for-Wildlife/Certify-Your-Wildlife-Garden.aspx>
100. Maryland Forest Service. (n.d.). Backyard Buffers. Retrieved from <http://www.watershed-alliance.com/articles/protect/BYBBrochure2007.pdf>
101. Environmental Protection Agency. (2012). Septic (Onsite) Systems. Retrieved from http://cfpub.epa.gov/owm/septic/septic.cfm?page_id=261
102. Calvert County Planning & Zoning. (2011). Frequently Asked Questions: The Bay Restoration Fund. Retrieved from http://www.co.cal.md.us/assets/Planning_Zoning/Environmental/FAQ-BayRestorationFund.pdf
103. University of Maryland Cooperative Extension. (2012). Selecting and Using a Soil Testing Laboratory. Retrieved from http://www.hgic.umd.edu/content/documents/HG110SelectingandUsingaSoilTestLab1_2012.pdf
104. Maryland Department of Agriculture. (2008). Use Fertilizers Wisely. Retrieved from <http://www.mda.state.md.us/pdf/Tip2.pdf>
105. University of Maryland Cooperative Extension. (2010). Maryland Master Gardeners. Retrieved from <http://mastergardener.umd.edu/>
106. EPA. (2011). Paper Recycling. Retrieved from <http://www.epa.gov/epawaste/conservation/materials/paper/index.htm>
107. TreeFreePaper.com, LLC. (n.d.). Treefree 101. Retrieved from <http://treefreepaper.com/treefree101.php>
108. California Department of Resources Recycling and Recovery. (2010). Chlorine-Free Paper. Retrieved from <http://www.calrecycle.ca.gov/paper/chlorinefree/default.htm>
109. Center for Sustainable Economy. (n.d.). Ecological Footprint Quiz. Retrieved from <http://myfootprint.org/en/>
110. Carbon Footprint Ltd. (n.d.). Carbon Footprint Calculator. Retrieved from <http://www.carbonfootprint.com/calculator.aspx>
111. GRACE. (2012). About the Water Footprint Calculator. Retrieved from http://www.h2oconserve.org/?page_id=503
112. Chesapeake Bay Foundation. (n.d.). Your Bay Footprint. Retrieved from http://www.cbf.org/Page.aspx?pid=1136&s_src=google&s_subsrc=Action+Center&gclid=CNeV3enNwKsCFUt_5QodUHGhuw



I'm Taking the Green Homes Challenge!

Please fill out the following information. Items with * are required:

*FAMILY OR HOUSEHOLD NAME (e.g. The Jones, or The Smith-Jones Household) _____

*HOUSEHOLD CONTACT NAME: _____

*PHYSICAL STREET ADDRESS: _____

*CITY, STATE, ZIP CODE: _____

*EMAIL ADDRESS _____ *DAYTIME PHONE NUMBER: _____

MAILING ADDRESS (if different from above): _____

I would like to participate in the (select all that apply):

- Power Saver Challenge
- Green Leader Challenge; Please give/send me my FREE home soil test kit Yes No
- Renewable Star Challenge

*GREEN HOMES CHALLENGE PLEDGE! I PLEDGE to

- Take action at home to reduce my household's environmental impact, and
- Keep the Challenge staff informed of my progress by responding to periodic surveys, emails, or phone inquiries.

*Signature: _____

If you do not wish to have your name or photos used in our GHC promotional materials or media releases please initial here to opt-out. _____

RESOURCES!

Handbook Request:

- Please give/send me a hard copy handbook.
- I'll use the online handbook.

Newsletter Request:

- Keep me informed about energy, green living, and sustainability. Sign me up to receive Sustainable Frederick County's quarterly electronic newsletter.

HOW CAN WE BEST SUPPORT YOU?

- Navigator Request: I'd like a one-on-one "Navigator" to guide me to resources and help me achieve my goals.
- Give Me Time to Act on My Own, Then Follow-Up: I am a "do-it-yourself" person but also really busy! I'll take action on my own, but I'll be receptive to follow-up or periodic check-in calls.
- Prefer to Act Independently: I am a "do-it-yourself" person and do not want very much outside support.
- Green Team Request: I'd like to meet regularly with people in my community or network to stay motivated to achieve my goals. Help me get a Green Team started.

Continued

OUR PRIMARY INTERESTS

(select all that apply, and then circle the check mark next to your most important priority):

- Saving money on utility bills
 Energy conservation and learning what to do to save energy
 Renewable energy systems
 Reducing our household's impact on the environment
 Adopting greener behaviors and creating a healthier living environment in our home
 Concerns about Climate Change or Global Warming
 Making our home more comfortable in summer and winter
 I want to help create a better future for our children and future generations by conserving natural resources
 Other: _____

INTERESTED IN HELPING OTHERS?

I may be interested in helping to inspire my friends, colleagues, or neighbors to save energy and go green by...

(check all that apply)

- Hosting a Powerware Party, a fun, interactive gathering that increases "power awareness". Contact me and tell me more.
 Serving as a Green Ambassador to promote green initiatives in my network or community. Contact me and tell me more.

OUR HOUSEHOLD:

We live in a:

- Detached single family home A duplex or townhouse A multi-family apartment/condo
 Year built: _____ Approximate square footage: _____

We:

- Own our home Rent our home

Total members in household: _____

Number of residents (optional):

Under age 18: _____ Ages 18 – 55: _____ Ages 55+: _____

Approximate Annual Income (optional):

- Less than \$50,000 \$50,000 - \$100,000 \$101,000 - \$150,000 \$151,000 - \$200,000 Over \$200,000

Our Household Members are (optional): *select all that apply*

- African American Asian Caucasian Hispanic Native American Mixed Race
 Other: _____

Registration can also be completed online at www.FrederickCountyMD.gov/GreenHomes

MAIL, FAX OR EMAIL TO:

Green Homes Challenge Coordinator, 30 North Market Street, Frederick, MD 21701

Fax: 301.600.2054 • email: GreenHomes@FrederickCountyMD.gov

Acknowledgements

This publication was developed under Assistance Agreement No. AF 83494501-0 awarded by the U.S. Environmental Protection Agency. It has not been formally reviewed by EPA. The views expressed in this document are solely those of the Frederick County Green Homes Challenge and EPA does not endorse any products or commercial services mentioned in this publication. Select components of the Green Homes Challenge are also funded by an Energy Efficiency and Conservation Block (EECBG) award from the U.S. Department of Energy (DOE) under Award Number DE-SC0002637.

Key programmatic partners include:

- U.S. Department of Energy
- U.S. Environmental Protection Agency
- Potomac Edison Home Performance with ENERGY STAR®
- Chesapeake Bay Trust
- Frederick County Department of Housing and Community Development
- Frederick County Neighborhood Green

Incentives are generously provided by local Frederick County businesses.

The components of the Green Homes Challenge were developed based on the best practices, experiences, and successes of related programs around the United States. The Frederick County Office of Sustainability and Environmental Resources gratefully acknowledges the Annapolis Environmental Stewardship program for sharing their Self-Certification Workbook for Households. Several other organizations generously shared strategies, insights, and resources including: Acterra's Green@Home program, the Baltimore Neighborhood Energy Challenge, the BrainShift Foundation's Energy Smackdown, CarbonFreeDC, Cool Rochester, the Empowerment Institute's Green Living and Low Carbon Diet programs, the Massachusetts Climate Action Network, Repower America's Repower at Home program, and Solarize Portland. Chesapeake Conservation Corps Volunteer Nicole Robinson led the effort to develop the Green Leader Handbook, providing essential research, writing, editing, and evaluation. Chesapeake Conservation Corps Volunteer Tyler Harshman and interns Katie Tartaglia and Brittany Calderon assisted with research and editing. Logo and handbook design was provided by Down to Earth Designs, LLC.

Frederick County Office of Sustainability and Environmental Resources



The Frederick County Office of Sustainability and Environmental Resources advances practical solutions for protecting the environment, conserving energy, and living sustainably in Frederick County, Maryland. We integrate sustainable practices into County operations and initiate community programs that support our mission.

The Green Homes Challenge is our first comprehensive community initiative in sustainability. A sustainable community starts at home, and the Green Home Challenge educates, inspires, and supports households to take action and help ensure that the energy and natural resources on which we all depend are available for current and future generations.

Participation in the Green Homes Challenge contributes towards the EmPower Maryland initiative established by the EmPOWER Maryland Energy Efficiency Act of 2008. EmPOWER Maryland calls for reductions in per capita electricity consumption and peak energy demand by 15% by the year 2015.



Frederick County Office of Sustainability
and Environmental Resources

Ensuring Our County's Future

30 North Market Street • Frederick, Maryland 21701
www.FrederickCountyMD.gov/GreenHomes