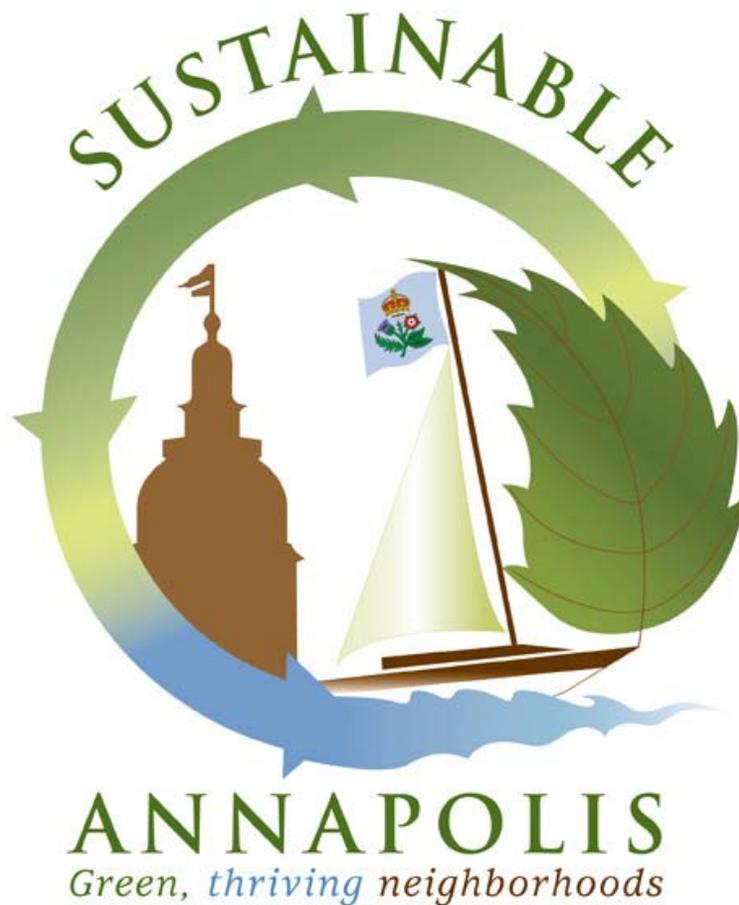


**Annapolis Environmental Stewardship
Self-Certification
Workbook for Households**



Honorable Mayor Mike Pantelides
Department of Neighborhood and Environmental Programs
Maria Broadbent, Director

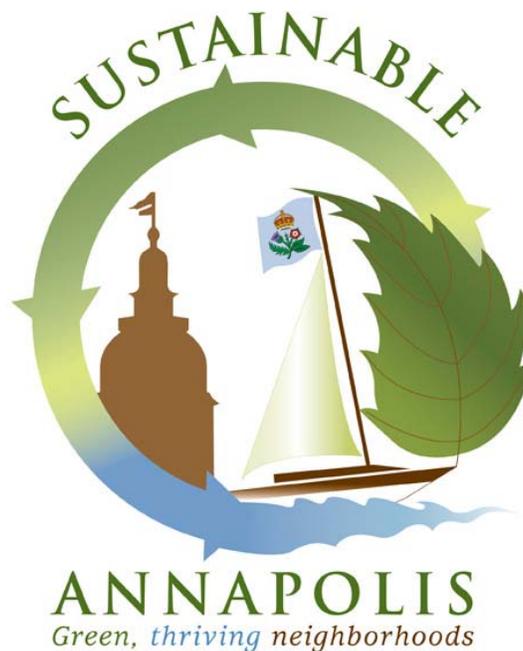
Annapolis Environmental Stewardship Self-Certification for Households



Stewardship: the careful and responsible management of something entrusted to one's care

BECOME AN ANNAPOLIS ENVIRONMENTAL STEWARD CERTIFIED HOUSEHOLD AND RECEIVE THESE BENEFITS:

- Annapolis Environmental Stewardship Certification certificate to fill out and display in your home.
- **FREE** links to technical assistance web-sites and advice from the Annapolis Department of Neighborhood and Environmental Programs to help you and your family implement environmental best practices.



How the program works:

1. Complete the Annapolis Environmental Stewardship Certification Workbook by checking off all of the initiatives that you and your household are currently undertaking.

Please understand that it is not necessary to complete all of the items in the workbook to become a Certified Annapolis Environmental Steward. The workbook is a comprehensive list of the many different ways to generate points. Employing all of the initiatives in this workbook is unrealistic, so please use the ones that you have not yet implemented as recommendations.

This list is not exhaustive. There are more environmental initiatives than we can ever list. We will attempt to update the list of initiatives on an annual basis. If you have an idea for an initiative we might want to include email it to: SustainableAnnapolis@Annapolis.gov. We will consider every suggested initiative we receive although we cannot promise that they will all be included.

2. Calculate your score by adding up all of the checked boxes.
3. First time participants need to have 150 points to receive certification as an Annapolis Environmental Steward. If you and your household earn at least 150 points, you can fill out the certificate available at the end of this packet and display it for others to see.

Certifications are valid for two years from the date of award. To recertify after the initial two years, households must earn 170 points thereafter.

4. Upon final scoring of the workbook, you and your household can sign up online to indicate your commitment to being a certified Environmental Steward. To pledge, visit www.tinyurl.com/StewardshipPledge

Annapolis Environmental Stewardship Self-Certification for Households

**800 total available points
Only 150 points necessary for certification**

The Annapolis Environmental Stewardship Certification Program is a part of the Department of Neighborhood and Environmental Program's Sustainable Annapolis initiative—a program to reduce the city's carbon footprint and to protect and improve the environmental health of our neighborhoods and watersheds.

The Annapolis Environmental Stewardship Self-Certification for Households is for anyone interested in becoming an Annapolis Environmental Steward. The workbook is a comprehensive checklist that includes categories from many fields within the home that lead to environmental sustainability. Within each category, several criteria are mentioned with an allocated point value to be added together and create a cumulative score. For example, points will be awarded for a wide range of efforts including: recycling, planting gardens, purchasing local products, installing energy efficient products, conserving water, and more.

The workbook is used as a way to reduce the city's carbon footprint and as an educational tool for city residents to be able to 1) reduce their greenhouse gas emissions; 2) improve the health of Chesapeake Bay 3) increase environmental awareness; and 4) to save money by using less energy. Workbook items link to websites that can be used to find out more information on how to get points for that item. Add up all of the points from your initiatives in each category to see your total score.

SECTION 1: HOME OFFICE/STUDY

- ✓ **Our household uses printing and writing papers (e.g., letterhead, stationary, copy paper, envelopes, invoices, business forms, etc.) that contain a minimum of 30% post-consumer recycled content OR tree-free fiber content.** **5 Points**
- ✓ **We purchase non-bleached coffee filters, paper towels, and other paper products.** **5 Points**
“Chlorine-free paper is an environmentally preferable alternative to paper bleached with chlorine. Chlorine and its derivatives (such as chlorine dioxide)—the most common bleaching agents used by the pulp and paper industry—are quite harmful to the environment, particularly the aquatic environment.” (source: ciwmb.ca.gov) For more information, visit <http://www.chlorinefreeproducts.org>
- ✓ **Eliminate paperwork by switching to electronic format rather than printing and filling out forms, information packets, memos, and financial statements. Machines default settings are programmed to photocopy and print on both sides automatically, with single sided print being optional.** **5 Points**
Many banks provide an online billing service to keep your financial transactions paperless. All of these options save paper.
- ✓ **Ink jet cartridges, cell phones are recycled OR reused.** **5 Points**
Recycling envelopes can be found at City Hall and mailed at no charge. Some ink jet cartridges can be refilled, and cell phones can be recycled through Annapolis’s e-cycling program or donated to the Annapolis Police Department for victim services.
- ✓ **We participate in our employer’s telecommuting program.** **5 Points**
Telecommuting is a term that means simply, “working from home.” The EPA states that telecommuting improves customer service, reduces traffic congestion, reduces energy consumption, and reduces traffic congestion (source: <http://www.epa.gov/rtp/transportation/telecommuting/index.htm>).

✓ **Computers, rechargeable batteries, CDs, electronics, and other household appliances are recycled.**

□ **5 Points**

Annapolis has our own e-cycling program where you can drop off your computers and electronics at the Annapolis Public Works Operating Center weekdays between 7:30AM and 4:00PM and weekends between 9:00AM and 2:00PM. For more information, visit <http://www.annapolis.gov/info.asp?page=6960>

Visit <http://www.epa.gov/epawaste/partnerships/plugin/partners.htm> for more information on where to recycle more electronics and batteries.

Section 1: Home Office/Study Category point total: _____

SECTION 2: FOOD

Purchase food grown on local farms as much as possible.

Purchasing locally grown food has many benefits to the environment and the consumer: Less fossil fuel is expended towards packaging and transporting local food; It supports the local economy – more money goes to the farmer instead of suppliers, processors, and marketers; It is healthier – processing and preservatives are not important as the food does not have to travel far; It is more honest – since the source is local, we know how the food is grown/produced. (source: www.vermontlocalvore.org)

Free-range products are inspected by the Food Safety and Inspection Agency (FSIS) – a federal agency in the US Department of Agriculture. FSIS approves “free range” raising claims in labeling of poultry products if the producers demonstrate that the birds were allowed continuous, free access to the outside for over 51% of their lives. Free Range certification inspected by the FSIS can either be certified by the USDA’s Agricultural Marketing Service or by private certification entities. (sources: www.ams.usda.gov, www.fsis.usda.gov)

Minimally processed foods are mutually inclusive with “functional foods.” Functional foods: Food products or fractions that provide specific health benefits beyond traditional nutrients (carbohydrates, protein, lipid, vitamins and minerals) they contain. According to the USDA’s Agricultural Research Service, “in order to prevent and ameliorate degenerative diseases and improve the quality of life multifunctional foods containing minimally processed whole grains, fruits, vegetables and edible plant materials would be most desirable,” (source: www.ars.usda.gov). Functional foods can contain antioxidants, omega fatty acids, fiber, probiotics, lycopene, and various phytonutrients. For information on phytonutrients, visit <http://www.ars.usda.gov/Aboutus/docs.htm?docid=4142>

Organic products sold in the US are those that were grown using the USDA’s standards of “organic”. Organic crops do not use synthetic pesticides or genetically-modified organisms, nor do they use synthetic fertilizer. Purchasing organic produce and grains reduces the chemical impact on the Chesapeake Bay, and reduces chemical reactions within the human population. The organic industry uses organic feed for their animals and avoids potentially harmful growth hormones and antibiotics commonly used in the conventional industry to make more (not necessarily better quality) meat, eggs, milk, etc. (sources: www.usda.gov, www.organic.org) For a free listing of Maryland-grown farm products, see the University of Maryland’s Food Trader website at www.foodtrader.org.

Note: Organic certification refers to meeting the standards in place in the USDA National Organic Program

✓ We shop at our local farmers markets.

☐ 10 Points

For locations and operating hours, visit

http://www.mda.state.md.us/md_products/farmers_market_dir.php#arundel

Other Maryland Agricultural products can be found on the Maryland Department of Agriculture’s website at http://www.mda.state.md.us/md_products/index.php

✓ **We buy free-range eggs, chicken, and other poultry whenever possible.** **10 Points**

✓ **We buy organic meat and produce whenever possible.** **10 Points**

✓ **Our seafood purchases align with sustainable seafood recommendations from the Monterey Bay Aquarium (Seafood Watch), Blue Ocean Institute, or other sustainable seafood programs:** **10 Points**

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 ecosystem. (source: www.montereybayaquarium.org) For more information, visit:

http://www.montereybayaquarium.org/cr/SeafoodWatch/web/sfw_factsheet.aspx

<http://www.blueocean.org/seafood/seafood-guide>

Seafood can be purchased through companies certified to the Marine Stewardship Council standard for sustainable fishing: <http://www.msc.org/where-to-buy/msc-labelled-seafood-in-shops-and-restaurants/united-states>

A guide for sustainably-caught sashimi/sushi is now available: http://www.montereybayaquarium.org/cr/cr_seafoodwatch/sfw_sushi.aspx

✓ **We purchase salmon that is wild-caught (vs. farm raised):** **5 Points**

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 California. (sources: www.atsdr.cdc.gov, www.sierraclub.org, www.montereybayaquarium.org, www.seafoodwatch.org)

✓ **Sustainable seafood from Atlantic U.S. waters is prioritized.** ☐ **5 Points**

While sustainable fishing is important, buying sustainable seafood closer to where you live aids in other environmental initiatives. The product does not need to travel as far, which reduces fossil fuel emissions and the need for preservatives and excess packaging.

For more information, visit

http://www.montereybayaquarium.org/cr/SeafoodWatch/web/sfw_regional.aspx?region_id=2

http://www.montereybayaquarium.org/cr/SeafoodWatch/web/sfw_regional.aspx?region_id=5

✓ **We grow our own herbs and flowers for use in the kitchen.** ☐ **10 Points**

For information on herbs and herb growing, visit <http://www.nal.usda.gov/ref/herbs.html>

✓ **We grow fruits and vegetables in our own garden or a community garden.** ☐ **10 Points**

✓ **We use organic practices in our garden.** ☐ **5 Points**

To find out more information on how to start and grow your own garden, visit

<http://growit.umd.edu/>

✓ **We participate in a Community Supported Agriculture program.** ☐ **10 Points**

“Community Supported Agriculture consists of a community of individuals who pledge support to a farm operation so that the farmland becomes, either legally or spiritually, the community's farm, with the growers and consumers providing mutual support and sharing the risks and benefits of food production,” (source:

www.nal.usda.gov/afsic/pubs/csa/csa.shtml). The individuals that support the farm can be thought of as shareholders investing in a business that will reap the benefits of a good growing and harvesting season. To find a CSA farm near you, visit

<http://www.localharvest.org/csa/> and type in your zip code.

✓ **We eat vegetarian or vegan meals at least once a week.** ☐ **5 Points**

Reduce your carbon footprint by refusing to eat meat at some meals. Benefits include reduced nitrogen, reduced gaseous methane, and reduced pollutants involved in rearing and meat production. For more information, visit: <http://www.epa.gov/rlep/faq.html>

<http://www.epa.gov/oecaagct/ag101/printpoultry.html>

<http://www.nlm.nih.gov/medlineplus/vegetariandiet.html>

✓ **We buy foods that are minimally processed.**

☐ **5 Points**

Foods such as whole grains (including flour), fresh or frozen fruits and vegetables, and fresh meats and fish do not have lost nutritional value if eaten right away. Make sure that, when you purchase fresh vegetables and other functional foods, you only purchase what you can consume in a short period of time. For more information on antioxidants and their nutritional shelf life, visit <http://www.nlm.nih.gov/medlineplus/antioxidants.html>

✓ **We incorporate a “Heart Smart” diet in our lives.** Meals should meet the following criteria established by the American Heart Association:

☐ **5 Points**

- low in fat (each serving should have 3 g or less)
- low in saturated (animal) fats (each serving should have 1g or less)
- low in sodium (each serving should have 480mg or less)
- high in nutrient content - This can be achieved by combining 3 or more food groups in one meal (fruits, vegetables, whole grains, low-fat dairy, lean meat)

✓ **We support Maryland wineries, distilleries, and breweries by purchasing their products.**

☐ **5 Points**

<http://www.marylandwine.com/mwa/wineries/index.shtml>
<http://marylandbeer.org/default.asp?ild=HILHG>

✓ **We scrape leftover foods that will not be composted into the garbage.**

☐ **5 Points**

Put sauces, marinades, gravies, and other non-compostable foods into the garbage instead of the sink. For information on what and what not to compost, visit <http://www.epa.gov/epawaste/conservation/rrr/composting/basic.htm> Even if you have a garbage disposal, food can cause plumbing and wastewater treatment problems.

✓ **We pour cooking grease into a glass jar. Wipe the residue with a paper towel.**

☐ **5 Points**

Use caution as the grease is very hot. Using this method of cleaning your pots and pans prevents grease from clogging your pipes. After the grease in the jar cools, cover and dispose of the jar in the trash.

Section 2: Food Category point total: _____

SECTION 3: INDOORS & CLEANING

- ✓ **We use cleaners and detergents that are biodegradable, do not contain NTA (nitrilotriacetic acid), and do not contain chlorine bleach or phosphates.** (up to 10 points depending on use throughout property). □ 10 Points

NTA is a known human carcinogen. Emulsifiers and degreasers are not to be used. Phosphates in detergents contribute to the production of algal blooms which have a detrimental effect on the health of the Chesapeake Bay. (source: www.ntp.niehs.nih.gov/) For information on reducing hazardous products in your home, visit <http://www.nasdonline.org/document/1449/d001243/reducing-hazardous-products-in-the-home.html>

Simple Green is a product line that has many options for multi-purpose cleaning. Their new "Naturals" line contains no phosphorous or phosphates. For more information on their products, visit http://www.simplegreen.com/products_msds.php

★ *Note: Annapolis City Code 2.48.350 states: "...all surfactants shall meet EPA standards as "readily biodegradable." No detergents shall contain phosphates, " and "Where available, no janitorial cleaning or disinfecting products shall contain ingredients that are identified by United States Environmental Protection Agency or the National Institute for Occupational Safety and Health as carcinogens, mutagens, or teratogens."*

Code 2.48.350 is the standard for city-owned assets. Please follow our lead.

Describe which product brands are used and for which purpose.

glass cleaner: _____

floor cleaner: _____

bathroom cleaner: _____

counter top cleaner: _____

laundry soap: _____

other: _____

- ✓ **We clean windows and mirrors with newspaper.** □ 5 Points

Mirrors and windows will be streak- and lint-free when using newspaper and a non-toxic, biodegradable cleaner. Replace paper towels with newspaper.

A cheap non-toxic formula for streak-free glass surfaces: 1 part water, 1 part distilled white vinegar, 2-5 drops dish soap. Put contents in a spray bottle and wipe with cloth or newspaper.

✓ **We have had our home tested for lead.**

□ **5 Points**

Lead Poisoning is a disease contracted from exposure to lead-based products.

“Research has shown that children are particularly vulnerable to the health effects of lead, including deficits in attention span, adaptability, learning, and memory, as well as increases in aggression and other behavioral problems. Even low levels of lead exposure can result in decreased performance on intelligence tests. Lead exposure in adults is associated with an increased risk of high blood pressure, impaired kidney function, fertility problems, and cataracts.”

Lead-based paint has been used in houses within the United States throughout the 1900's, and if your home or complex was built before 1978, there is a high likelihood that your home contains lead paint. To test for lead, there are “Instant Lead Testing” kits available at hardware stores. (sources:

<http://www.niehs.nih.gov/health/impacts/lead.cfm>, leadsafe.org, Annapolis.gov)

For more information on Lead Safe Annapolis' Lead Hazard Reduction Fund, visit www.leadsafeannapolis.org

✓ **We have had our home tested for radon.**

□ **5 Points**

Radon is a natural radioactive gas that is known to cause cancer in humans.

“Radon comes from the natural (radioactive) breakdown of uranium in soil, rock and water and gets into the air you breathe. Radon can be found all over the U.S. It can get into any type of building - homes, offices, and schools - and result in a high indoor radon level. The amount of radon in the air is measured in "picocuries per liter of air," or "pCi/L.”

“There are many kinds of low-cost "do-it-yourself" radon test kits you can get through the mail and in hardware stores and other retail outlets.” (sources: <http://www.epa.gov/radon/pubs/citguide.html>, mde.maryland.gov)

For more information, visit:

<http://www.epa.gov/radon/>

<http://www.epa.gov/radon/pubs/citguide.html>

Facts and Resources

- Institutional users report that, in general, green cleaners are cost competitive and perform just as well as their conventional counterparts.
- Social and environmental benefits can be gained by switching to green cleaners; Use products certified by Green Seal <http://www.greenseal.org/> or products certified “Designed for the Environment” (DfE) by the EPA <http://www.epa.gov/dfe/pubs/projects/formulat/label.htm>
- For technical information about a product’s safety, look at its Material Safety Data Sheet (MSDS), a form containing data regarding the properties of a particular product or substance. It contains comprehensive information including toxicity and health effects, to assist in switching to less hazardous chemicals. Most manufacturers put their MSDS online.
- Use “Green Seal certified” or “Design for the Environment” cleaning materials throughout your home. Green Seal is a non-profit organization creating environmental standards for products and materials including cleaning products, paints, and windows. Design for the Environment is a program run by the Environmental Protection Agency to inform substitution to safer chemicals. Cleaning products certified by either of these programs will have labels on their containers stating that they are certified.
<http://greenseal.org/findaproduct/index.cfm>
<http://www.epa.gov/oppt/dfe>
- The Center for Disease Control’s National Ag Safety Database provides an online webpage (developed by Clemson University Cooperative Extension) that suggests ways to reduce hazardous cleaning products in the home. It gives suggestions to make household cleaners from kitchen products. For more information, visit the webpage at <http://www.nasdonline.org/document/1449/d001243/reducing-hazardous-products-in-the-home.html>

Section 3: Indoors & Cleaning Category point total: _____

SECTION 4: OUTDOORS & YARD

- ✓ **We refrain from using harmful or dangerous chemicals in the landscape, and use botanical controls such as organic insecticides, fertilizers and biocides and/or integrated pest management (IPM) techniques to treat fungus and insect problems.** ☐ 5 Points

Organic insecticides, fertilizers, and biocides are naturally-derived chemicals developed to kill and/or repel insects and other living pests. IPM is an approach to pest management using a combination of techniques to manage pest damage by using the most economical means and with the least possible hazard to people, property, and the environment. For more information on IPM, visit

<http://www.epa.gov/pesticides/factsheets/ipm.htm>

Visit the MD Home & Garden Center website for more information

<http://www.hgic.umd.edu>

★ *Note: Annapolis City Code 10.34.040 states: “no person shall apply on any lawn fertilizer that is labeled as containing more than zero percent phosphorous or other compound containing phosphorous, such as phosphate.” For exemptions, see Annapolis City Code 10.34.050.*

- ✓ **We manage mosquitoes and other pests using natural methods and controls.** ☐ 5 Points

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 rain water does not get caught. Keep garbage/recycling bins covered as to prevent stagnant water. Scrub the insides if you suspect mosquito eggs were laid. If you have a bird feeder, inspect it often so that there are no larvae. For more information, visit

<http://www.mosquitoes.org/LifeCycle.html>

<http://www.beyondpesticides.org/alternatives/factsheets/index.htm>

Build a bird house or a bat house to encourage nesting. 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. They are excellent natural ways to rid your property of unwanted guests. (source: Dr. Kevin Omland Ph.D., Associate Professor at UMBC)

For more information, visit Anne Arundel County Bird Club’s website at <http://danhaas.com/AABIRDCLUB/>

Learn how to make a bat box by visiting Maryland DNR’s webpage: <http://www.dnr.state.md.us/wildlife/bats/batboxes.asp>

✓ **We manage garden pests naturally and safely.**

□ 5 Points

Try to avoid the use of pesticides, if possible. Search online or DIY yard and garden hint books for ways to get rid of earwigs, slugs, nematodes, and other pests.

To get rid of root nematodes, plant marigolds among your beans, spinach, tomatoes and celery. The roots of marigolds produce a chemical in the soil that kills nematodes when they try to eat the roots, or when they come into close contact with the soil surrounding the root system. To get rid of earwigs that are killing your young plants, dampen newspaper and roll tightly. The next morning, it should be full of earwigs – bag it up well and discard. Repeat each day until there are no more earwigs. For slugs and snails, fill a pie tin with 1 inch of flat beer. The slugs and snails will drink it, pass out, and drown. To get rid of aphids, attract ladybugs by growing marigold, dill, and cilantro. (source: *Household Hints & Handy Tips* by Reader's Digest)

For more information on how to get rid of pests naturally, visit <http://www.hgic.umd.edu/content/onlinepublications.cfm#Pest%20Control>

✓ **We plant native trees and plants in our yard.**

□ 5 Points

Planting trees initially uses a lot of water, but over time, native trees require less water, less maintenance, and less fertilizer than either exotic trees or grass lawns.

For more information on the types of trees and plants that are suitable for your property, take a look at the “Native Plants for Wildlife Habitat and Conservation Landscaping” booklet. The booklet also gives information of the types of wildlife the trees will attract.

A free copy is available by visiting <http://www.nps.gov/plants/pubs/chesapeake/> Maryland Department of Natural Resources has a simplified list of trees that are acceptable to plant in MD that can be found by visiting <http://www.trees.maryland.gov/pickatree.asp>. A coupon for \$25 is provided for trees purchased from the list provided on DNR's website. <http://www.trees.maryland.gov/pdfs/coupon.pdf>

✓ **We attract bees and other pollinators by planting wildflowers in our gardens.**

□ 5 Points

Animals and insects account for the pollination of 75% of all flowering plants. They promote biodiversity which reduces occurrences of genetic defects and sweeping diseases. Examples of crops that are pollinated include apples, squash, and almonds.

For more information on pollinators, visit <http://www.fws.gov/Pollinators/>

✓ **We use hardwood mulch for trees, vegetable, and flower beds. We use TreeGator^R bags for newly planted trees.**

□ 5 Points

Using mulch for your plants will help keep moisture in and around the root system instead of being lost to evaporation. Use of the TreeGator^R bags allows maximum water to reach the tree, and minimum water waste. For more information, visit <http://www.tregator.com/>

✓ **Become a Master Gardener or a Master Composter.** □ 10 Points

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.” For more information, visit <http://mastergardener.umd.edu/>

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. For more information, visit <http://mastergardener.umd.edu/files/oldfiles/MasterComposter.cfm>

✓ **We established a program to compost kitchen wastes for use as soil amendment in gardens or for farm animal feed.** □ 5 Points

“Composting offers the obvious benefits of resource efficiency and creating a useful product from organic waste that would otherwise have been landfilled.” (source: www.epa.gov) For more information on composting, please visit <http://www.epa.gov/osw/conserves/rrr/composting/>

✓ **We frequently check our lawn and garden for litter and dispose of it properly.** □ 5 Points

Recycle the materials when possible.

✓ **We pick up after our pets.** □ 5 Points

When your pet goes to the bathroom outside, pick it up and dispose of it properly by either flushing the waste down the toilet or placing it in a contained receptacle such as a trash can. For more information, visit

<http://www.epa.gov/owow/nps/toolbox/other/wiexpets.pdf>

★ *Note: Annapolis City Code 11.16.040 states: “A person who owns, possesses or controls an animal shall remove any excrement deposited by the animal upon any street, gutter, sidewalk or other public area. A person is in compliance with this section if the person removes the excrement and carries it away for disposal or places the excrement in a bag, wrapper, or other container and deposits it in a litter receptacle.”*

✓ **We use a push reel mower or an electric mower.** □ 5 Points

The EPA recommends the use of a push reel mower as it consumes no fossil fuels and emits no greenhouse gasses. If you do use a power mower, use an electric mower with mulching capabilities to reduce grass clippings. (source: <http://www.epa.gov/epawaste/wycd/funfacts/garden.htm>)

✓ **Don't bag leaves or grass.**

□ **5 Points**

Leaving newly cut grass (using a mulching lawn mower) on the yard will allow nutrients to be absorbed back into the soil so that your yard can stay healthy. When collecting leaves, use them for composting. For more information on composting grass clippings and leaf litter, visit

<http://www.epa.gov/epawaste/conserves/rrr/composting/grassmulch.htm>

http://www.penningtonboro.org/Composting_fs074.pdf

✓ **We keep current on the Air Quality Index (AQI).**

□ **5 Points**

"The AQI is an index for reporting daily air quality. It tells you how clean or polluted your air is, and what associated health effects might be a concern for you. The AQI focuses on health effects you may experience within a few hours or days after breathing polluted air."

The EPA calculates AQI for five major air pollutants regulated by the Clean Air Act:

ground-level ozone, particle pollution/particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide. In unhealthy conditions, refrain from excessive exposure to the air, and try not to use motorized vehicles as this will contribute to unhealthy air quality levels.

For more information, visit <http://www.airnow.gov/>

✓ **We use a metal cylinder charcoal chimney starter or electric charcoal lighter instead of starter fluid.**

□ **5 Points**

Using a metal cylinder charcoal chimney starter or an electric charcoal lighter is better for the air quality. Starter (lighter) 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 are breathed in by people around the grill. Health effects include loss of vision, severe throat and esophagus pain, vomiting, dizziness, and breathing difficulties. (sources: <http://www.epa.gov/reg5oair/naaqs/o3info.html>, <http://www.nlm.nih.gov/medlineplus/ency/article/002833.htm>)

✓ **We avoid using and/or burning pressure-treated wood.**

□ **5 Points**

Pressure-treated wood is usually treated with harmful chemicals such as chromated copper arsenate (an arsenic), Pentachlorophenol (penta) and creosote, in order to prevent insects and fungal invasions. About 90% of all outdoor wood structures are made from pressure-treated wood. "The toxicants easily migrate into soil, water, and the air we breathe, posing serious health risks to human life and the environment." Consequences of direct and indirect contact with pressure-treated wood include cancer, genetic damage, reproductive damage, and fetal damage or even death. Burning this type of wood is also very dangerous as it can release the chemicals into the air which can enter your lungs.

For more information on how to avoid pressure-treated wood, visit http://www.beyondpesticides.org/wood/resources/CCA%20health_factsheet.htm

✓ **Build children’s playgrounds made of recyclable and sustainable materials.** **10 Points**

Consider materials such as recycled steel, recycled plastics, and recycled fiberglass. Recycled plastic lumber is now available. If choosing wood material, look for the Forest Stewardship Council-certified products at your local retailer. Preference should be for naturally rot- and pest-resistant wood sustainably harvested such as cedar, redwood, and certain types of heartwood. For more information on safe and sustainable products, contact Beyond Pesticides at info@beyondpesticides.org. See EPA’s recommended guidelines for recycled content of materials <http://www.epa.gov/epawaste/consERVE/tools/cpg/products/plgrndeq.htm>

✓ **We use phosphorous- and phosphate-free car cleaner when washing automobiles.** **5 Points**

Soap that contains phosphorous and phosphate are nutrients that can run directly into drainage inlets which connect to the Chesapeake Bay. When too much phosphorous enters a body of water, this nutrient allows algae (tiny rootless plants) to grow in exponential proportions. Eventually, the algae die and decompose in the waters. When decomposition occurs, it uses up the oxygen in the water needed by other living things such as fish and shellfish. For more information on excessive nutrient load, visit <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=2516213>

✓ **In summertime, we fill our gas tanks early in the morning or in the evening.** **5 Points**

Pumping gas early in the morning or later in the evening during warm weather reduces evaporation and saves you money. Make sure not to “top off” as “topping off the gas tank can result in your paying for gasoline that is fed back into the station's tanks because your gas tank is full.” It also leads to more air pollution. (source: <http://www.epa.gov/donttopoff/>)

✓ **We have calculated our Nitrogen Footprint.** **5 Points**

Your nitrogen footprint is the amount of nitrogen that you use and/or produce that ends up as excess in the environment. Nitrogen (N) is a part of a cycle occurring naturally. Human input of too much N causes an imbalance in the cycle which may lead to drinking water contamination and excessive nutrient load into the Chesapeake Bay. To calculate your N footprint, visit <http://www.cbf.org/yourbayfootprint>

✓ **Take an eco-tour or go on an environmental education vacation.**

□ **5 Points**

The American Heritage Dictionary defines ecotourism as “tourism designed to contribute to the protection of the environment or at least minimize damage to it”. Ecotourism also educates visitors about the local environment, and it is connected with many local environmental conservancies and societies. For information on ecotours around Annapolis, visit <http://www.epa.gov/innovation/collaboration/Community-based%20Work/AnnapolisEco.htm>

You can find many websites dedicated to ecotourism and environmental education vacation options by searching for key words on Google or other search engines.

Section 4: Outdoors & Yard Category point total: _____

SECTION 5: WASTE MANAGEMENT

✓ **We recycle.**

Visit Annapolis' Recycling webpage and to find information on the collection schedule.
<http://www.annapolis.gov/info.asp?page=3241>

□ **5 Points**

Visit <http://www.annapolis.gov/info.asp?page=6662> to see new items that can now be recycled.

Recycling bins are available, free of charge, from the Department of Public Works at 145 Gorman Street, 2nd floor, or the Operations Center at 935 Spa Road, Monday - Friday, 8:30 - 4:30, not including holidays.

To find out where and how you can recycle your universal wastes (hazardous wastes that contain mercury, lead, cadmium, copper and other hazardous substances), visit <http://earth911.com/> and type in the item you want to recycle and your zip code into the search engine or call 1-800-CLEANUP for more information.

✓ **Old or burned out fluorescent lamps (tube style), CFLs (compact fluorescent lamp bulbs), and CRTs (televisions and computer monitors) are stored in a central accumulation area. CFLs and fluorescent tubes are recycled properly.**

□ **5 Points**

Incorrect disposal of CFL bulbs and fluorescent tubes can result in mercury being released into the environment. Home Depot and Ikea provide free CFL recycling to customers. Please let us know if you are aware of other retailers that provide this free service to customers.

For more information on universal waste, visit

<http://www.epa.gov/epawaste/hazard/wastetypes/universal/>

Note: Points will only be awarded for proper disposal of this type of waste.

✓ **Gas, kerosene, cleaners, solvents, and other chemicals are disposed of properly at an Anne Arundel County Waste Management Center.**

□ **5 Points**

For 2009 Household Hazardous Waste drop-off days, see

<http://www.aacounty.org/DPW/WasteManagement/Resources/HHW-2009.pdf>

- ✓ **We minimize stockpiling and storage of excess paint and paint products, by periodically reviewing excess paint and paint products in storage, reusing or donating usable paint, and recycling/disposing of material that is outdated, not reusable, or not needed.** **5 Points**

To properly store paint, close it tightly and write down the date that you opened it. Donate unwanted paint in usable conditions to charity. As a last resort, you can dispose of your hazardous wastes at a county facility.

<http://www.aacounty.org/DPW/WasteManagement/convCtr.cfm>

If you have latex paint, stir kitty litter, sand, or dirt into the paint and let it dry. Close the lid, place in a trash bag, and place it for regular trash collection.

- ✓ **We purchase materials for home improvement projects from establishments that sell salvaged building materials.** **5 Points**

Visit the following websites for materials specifically targeted towards home improvement:

<http://www.arundelhabitat.org/restore/>

<http://www.loadingdock.org/>

<http://communityforklift.com/>

<http://www.secondchanceinc.org/>

You can also go to a local Goodwill, Salvation Army, and other charitable facilities for materials.

- ✓ **We purchase used items instead of new ones whenever possible.** **5 Points**

From books to clothes, furniture and toys, visit a local Goodwill, Salvation Army, consignment shop, or garage/yard sale to find used items that can be inexpensive compared to a new purchase and are often of good quality. There are also online services such as Craigslist and Annapolis Freecycle in which you can interact with others trying to get rid of their items; It keeps materials out of our landfills, and it saves you money.

<http://annapolis.craigslist.org/sss/>

<http://www.freecycle.org/group/US/Maryland/Annapolis>

- ✓ **We give away items or hold a yard sale instead of throwing them away.** **5 Points**

Hold a yard sale or use services like Craigslist and Annapolis Freecycle to give away or sell usable items you no longer want or need.

- ✓ **We use reusable shopping bags and keep bags near the door to help to remember them.** 5 Points

Each year, the United States uses 5.33 million tons of paper and plastic shopping bags. A majority of the bags are thrown in landfills (not recycled) accounting for 3.2 million tons of trash! Using reusable shopping bags will help decrease the amount of waste in our landfills. If you have plastic bags, tie them in a knot before recycling them. Tied bags don't fly around and are less likely to be a litter problem.

★ *Note: Annapolis City Code Chapter 2.48.350 E establishes a goal of a forty percent reduction in the use of plastic and paper checkout bags in large retail chain stores by May 31, 2009.*

- ✓ **We buy goods in bulk rather than pre-packaged items to reduce the amount of packaging waste. Preference is given to packaging that is recyclable and post-consumer recycled material.** 5 Points

- ✓ **We only use reusable (washable) dishes and utensils. We rarely use disposable serving items, and recycle them when we do use them.** 5 Points

- ✓ **We use reusable bottles for beverages on-the-go.** 5 Points

Bring travel coffee mugs to cafes, and ask for them to fill it instead of taking a disposable cup. There are many options when choosing a reusable bottle. You can use glass, aluminum, or 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 plastics. Many containers provide information on their product being BPA-free. To learn more about the effects of BPA, visit <http://cerhr.niehs.nih.gov/chemicals/bisphenol/bisphenol.pdf>

- ✓ **We use a water filter instead of purchasing bottled water.** 5 Points

Buying a water filter that fits on your tap is cheaper and creates less trash than buying bottled water. You can use your reusable water bottle to take your filtered water with you wherever you go.

- ✓ **We use recyclable plastic or paper containers instead of Styrofoam. We use only plastic containers and utensils made from renewable sources such as corn starch or cellulose. Paper cups are preferred over plastic.** 5 Points

Styrofoam is neither biodegradable nor recyclable, so choosing recyclable materials is a key component in becoming an Environmental Steward. Ask the businesses you're patronizing for alternatives to Styrofoam containers.

- ✓ **We use cloth towels to clean up spills, to dry dishes, and to clean surfaces.** 5 Points

✓ **We use cloth (reusable) napkins or napkins containing at least 50% post-consumer recycled material.** **5 Points**

✓ **We use alternatives to wrapping paper. If wrapping paper is used, it is recycled.** **5 Points**
Alternatives to wrapping paper can be 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. For more creative ideas visit <http://www.ciwmb.ca.gov/publiced/holidays/NoWaste.htm>

✓ **We use the back of papers as scratch paper for note-taking.** **5 Points**
Using scratch paper is cheaper than buying a note pad since you're using paper that has already been used.

✓ **Reduce junk mail by signing up to opt-out of junk mail lists** **5 Points**
For more information, visit:
<http://www.privacyrights.org/fs/fs4-junk.htm>
<http://www.coxtarget.com/mailexpression/s/StoreMailSuppression>
<https://www.dmachoice.org/dma/member/regist.action>
<https://www.ims-dm.com/cgi/ddnc.php>

✓ **We rent or borrow tools that are not used often.** **5 Points**
Tools that are not used often take up valuable space in your home, and it may not perform well if you wait long periods of time between uses.

✓ **Smokers: We dispose of cigarette butts properly.** **5 Points**
Cigarette filters are made of a fibrous material called cellulose acetate that takes many years to decompose. Improper disposal, flushing, or "flicking" the finished cigarette on the ground will eventually lead to our storm drains and the Chesapeake Bay. This "marine debris" is harmful to many plants and animals in the environment. According to the Ocean Conservancy's International Coastal Cleanup 2009 report, cigarette filters, cigar tips, and tobacco packaging accounted for almost 38% of the marine debris collected in the United States. (sources: epa.gov, oceanconservancy.org, ers.usda.gov)
For more information on marine debris, visit
http://www.epa.gov/owow/oceans/debris/factsheet_marinedebris.html
http://www.oceanconservancy.org/pdf/A_Rising_Tide_full_lowres.pdf

✓ **We use cloth diapers instead of disposable diapers.**

□ **5 Points**

Clean the cloth diapers using non-bleach detergent and tea tree oil – a natural antiseptic. If your daily life is not conducive to the regimen required by cloth diapers, consider using chlorine- and bleach-free disposable diapers or hybrid diapers. For information on the pros and cons of diaper choices, visit <http://www.ciwmb.ca.gov/wpie/healthcare/Diapers.htm>. For more information on chlorine-free disposable diapers, visit <http://www.modernwife.com/diapers.html>

Section 5: Waste Management Category point total: _____

SECTION 6: WATER CONSERVATION

The following water conserving fixtures or retrofits are in place:

✓ **2.2 gpm faucets and aerators;**

5 Points

Faucets can use up to 10gpm when not equipped with aerators. Aerators cut water use by 75% and saves money on water and energy bills. (source: <http://www.epa.gov/nps/chap3.html>) Low-volume faucet aerators can be installed when the entire faucet does not need replacing.

✓ **1.6 gpf or dual-flush toilets;**

10 Points

“Replacing a typical 3.5 gallon toilet with a 1.6 gallon model will save a family of four 11,096 gallons per year. That’s a 54% reduction in toilet water use.” Dual-flush toilets allow for 2 options when flushing: half-tank flushes and the full 1.6 gallon flushes. This can save up to 64% of the water that would have been flushed in single-flush toilets. (sources: www.mwra.state.ma.us, <http://www.epa.gov/nps/chap3.html>)

✓ **2.5 or less gpm and stop-flow showerheads;**

5 Points

Showering accounts for 20% of the water use in United States homes. That’s more than 1.2 TRILLION gallons of water consumed each year. Federal regulations mandate that new showerhead flow rates can not exceed more that 2.5 gpm at 80 pounds per square inch (psi) or 2.2 gpm at 60 psi. For more information, visit http://www.energysavers.gov/your_home/water_heating/index.cfm/mytopic=13050

✓ **We use a bottle filled with pebbles in the tank of the toilet to reduce water use.**

5 Points

Make sure to keep the plastic bottle away from moving parts of the toilet. This can save about half a gallon per flush. Alternatively, you can purchase an inexpensive “tank bank” or “float booster” for your toilet water tank.

✓ **We take “shorter” showers.**

5 Points

When showering with a 4.5 gpm showerhead, every ten minutes, you use up 45 gallons of water. 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 putting in a shower clock, and try to reduce your shower by 10-20%.

✓ **We turn off the water when brushing our teeth.**

5 Points

This is a simple task just like turning off the light switch when you’re not using the room.

Make sure to identify and repair all leaks.

To see how much water your leaks can cost you, see the Washington State Department of Health's Water Loss Information Card at the end of this workbook.

✓ **Dishwashers are only run when they are full.**

5 Points

You'll pay the same amount to run a half loaded dish washer as a fully loaded one, so make sure you only run a fully loaded dish washer. Cutting wash cycles could save you hundreds of dollars annually. To save even more water, use the "water efficient" or "light load" mode when running the dishwasher. (source: <http://www.epa.gov/nps/chap3.html>)

✓ **Utensils and dishes are presoaked in basins of water and not running water.**

5 Points

Only biodegradable, phosphorous/phosphate-free detergents should be added to soaking water.

✓ **Frozen foods are thawed in the refrigerator rather than with running water.**

5 Points

Running a faucet to thaw food wastes approximately 2.2 gallons of water per minute. Frozen foods are often under running water for over 30 minutes, wasting at least 66 gallons of water!

✓ **A broom, rather than a hose, is used to clean sidewalks, driveways, patios and other impermeable surfaces.**

5 Points

Make sure to pick up the swept-up waste and put it in a trash can, not the gutter. Sweeping the waste into the gutter only adds to the pollution in the Chesapeake Bay. Remember, "*Only rain down the drain!*"

✓ **We adjust irrigation schedules to account for seasonal rain variation.**

5 Points

When watering landscape and plants, keep in mind the time of year and do not water plants in seasons with adequate rainfall. "Although the heaviest precipitation occurs in the summer, this is the season when severe droughts are most frequent. Summer precipitation is less dependable and more variable than in winter." Don't water during droughts. Your lawn can go dormant and will be green again as soon as the fall rains come. (source: meto.umd.edu)

✓ **We do not water our gardens mid-day.**

5 Points

"It is best to irrigate one hour before sunrise or early morning as the temperature is rising to catch transpiration at its most active period and give the foliage a chance to dry before the heat of midday." (sources: gardeners.com, novatoadvanced.com)

✓ **We use “grey” water for watering our plants.**

□ **5 Points**

“Grey water” is a term for water from your shower, bath, spa, sinks, and fish bowls that you can use to water your gardens and reduce your water bills. “Grey water” does not include water from toilets, urinals, or bidets. (source: dwe.nsw.gov.au)

Be creative in ways to collect your “grey water”: save water used to boil vegetables, pasta, eggs; collect dripping water from your window air conditioning unit; collect water used to rinse fruits and vegetables. Think of ways to use your “grey water” such as watering your outdoor plants.

✓ **We installed rain barrels and/or rain gardens as stormwater management facilities.**

□ **10 Points**

Rain barrels trap water from your downspouts and store it for future use (like watering your garden). For more information on rain barrels, visit <http://www.arlingtonecho.net/Restoration-Projects/Rain-Barrels.html>

Rain gardens are plots of land that are used to decrease the amount of polluted stormwater going directly into the Bay. They clean the water by absorbing it into the soil and changing the chemistry of the polluted water. For more information on rain gardens, visit <http://www.annapolis.gov/info.asp?page=13037>

✓ **We have an automatic shutoff nozzle.**

□ **5 Points**

“A standard garden hose uses about 10 gallons per minute. This means you use 100 gallons of water with only a 10-minute car wash.” When using good practices, you can save about 70 gallons each time you wash. You can also save water by using a bucket to hold sudsy water instead of turning the hose on and off. (source: mde.maryland.gov)

For more car-washing tips, visit

http://www.mde.maryland.gov/Programs/WaterPrograms/Water_Conservation/Household_Tips/carwashing.asp

✓ **We take our car to a carwash with a water recycling system.**

□ **5 Points**

For more information on water recovery systems at carwashes, read this article put out in the Fall of 2006 by the Mid-Atlantic Car Wash Association’s newsletter “Wash Trends” at <http://www.mcacarwash.org/WashTrendsFall2006/pdfs/contents6.pdf>

**For more information on how to conserve water and use it effectively, visit
<http://www.epa.gov/nps/chap3.html>**

Section 6: Water Conservation Category point total: _____

SECTION 7: ENERGY

✓ **Lights in areas not being used are turned off.**

☐ **5 Points**

This is the simplest behavioral change that you and your family can make to your daily energy-saving regimen! Making a difference starts with small changes. You can also install motion sensors in rooms that are not often used or walked through. For more information, visit

http://apps1.eere.energy.gov/consumer/your_home/lighting_daylighting/index.cfm/mytopic=12280

✓ **We keep unoccupied rooms “closed”.**

☐ **5 Points**

When a room is not in use, make sure to close the door and the vents so that energy is not wasted to cool or heat the room. This is also a simple behavioral change that can save you money.

✓ **We keep radiators and vents clear.**

☐ **5 Points**

Don't place furniture within 2-3 feet of the radiator as it will absorb the heat that would have otherwise risen to circulate and heat the room. Don't place anything on top of the radiator, either. Don't place furniture or rugs directly on top of vents as it prevents air circulation. (source: energystar.gov)

✓ **Natural light substitutes for electrical light, or we use a daytime dimming sensor.**

☐ **5 Points**

Using light that is already available during daytime hours reduces energy output from light bulbs, saving you money. For example, if a 100 watt light bulb is not being used during a daytime period from 7am to 7pm (12 hours), you can save up to 45 kilowatt hours(kWh) over a year. If you have 20 light bulbs in your home, you can save about \$100 each year with the average energy cost in Maryland being 13 ¢ per kWh. Open your curtains to allow solar heating, and close when they get too hot. (source: www.eia.doe.gov)

For more information, visit:
http://apps1.eere.energy.gov/consumer/your_home/lighting_daylighting/index.cfm/mytopic=12290

✓ **Computers and other electronic equipment are turned off and unplugged when not in use or are set to revert to an energy-saving mode.**

☐ **5 Points**

For more information, visit:

http://apps1.eere.energy.gov/consumer/your_home/appliances/index.cfm/mytopic=10070

✓ **Plug electronics and appliances into a power strip when not in use to save energy.** ☐ 5 Points

“Many appliances continue to draw a small amount of power when they are switched off. These "phantom" loads occur in most appliances that use electricity, such as VCRs, televisions, stereos, computers, and kitchen appliances.” (source: energy.gov) Make sure to unplug your cell phone and reusable battery chargers when not in use.

✓ **We seal our home to prevent energy loss.** ☐ 10 Points

Stop air leaks around windows and doors with caulk or weather stripping. Air leaks can rob your house of heat in the winter or make it too humid in the summer. As much as 40 percent of your heating and cooling costs can be due to air leaks (source: <http://www.epa.gov/reg5rcra/wptdiv/p2pages/energy.pdf>). This option is a great first step when making your home energy efficient. For more information on sealing and insulating your home, visit:

http://www.energystar.gov/index.cfm?c=home_sealing.hm_improvement_sealing

Check grants made available by the U.S. Department of the Environment given to state funds called the Maryland Weatherization and Low-Income Energy Programs. For more information, visit

http://apps1.eere.energy.gov/weatherization/state_activities_detail.cfm/state_abbr=md

http://apps1.eere.energy.gov/weatherization/state_contacts_detail.cfm/state=md

Even a cheap fix such as draft stoppers at doors help considerably.

✓ **Building insulation has been added in the last year to increase our energy efficiency.** ☐ 10 Points

✓ **We use insulated curtains or window quilts to prevent energy loss.** ☐ 5 Points

In the summer, close drapes and blinds closed during the hottest parts of the day (usually between 11am-3pm). In the winter, open drapes and blinds open during the day to allow the sun to warm your home, and close drapes and blinds during the evening to keep the heat inside your home.

✓ **We use clothes lines (indoors and/or outdoors) to dry our laundry instead of using the dryer.** ☐ 5 Points

On average, the clothes dryer uses 3% of the daily energy used in the household. (source:epa.gov) Check the weather and the Air Quality Index before you hang your clothes outside. Use caution if you have severe allergies to pollen. For more information on pollen, visit <http://www.niehs.nih.gov/health/topics/conditions/asthma/pollen.cfm>

✓ **Programmable on/off timers and/or sensors are used for lighting in low traffic and low occupancy areas (e.g. outdoor floodlights, sheds, closets, attics)** **5 Points**

✓ **We use solar walkway lights.** **5 Points**

Using solar walkway lights instead of a porch light or electric walkway lights will cut energy and/or battery costs because they use the sun to generate light energy, and they only turn on at night using a light sensor. Little maintenance is needed other than keeping the solar cells clean from pollen, dust, and dirt.

For energy-efficient product performance levels recommended by the US Department of Energy, please visit

http://www1.eere.energy.gov/femp/technologies/eep_purchasingspecs.html

We use energy-efficient indoor lighting (compact fluorescent bulbs, T-8 or T-5 fluorescent, and/or LED). Lighting fixtures that are clearly historic in nature or specialty light fixtures (e.g., display or accent lighting) may be exempt from this requirement if compatible options are not available. **5 Points**

Fluorescent lights use up to 75% less energy than incandescent light bulbs, and can last up to 10 times as long. If you replace 20 bulbs with more energy-efficient lights, you can save up to \$600 in the lifetimes of the bulbs. For more information, visit:

http://www.energystar.gov/index.cfm?c=cfls.pr_cfls

http://www.energystar.gov/index.cfm?c=ssl.pr_why_es_com

✓ **When the time comes to replace appliances, we will choose to purchase high-efficiency “Energy Star” appliances.** **10 Points**

For more information, visit:

http://www.energystar.gov/index.cfm?c=appliances.pr_appliances

✓ **We use a solar cooker or grill in the summertime.** **5 Points**

Decreasing the use of your kitchen oven in the summer and using outdoor cooking options will keep your house cooler, and will keep your energy bills lower as your air conditioner won't have to work as hard.

✓ **We calculated our Carbon Footprint.** **5 Points**

Your carbon footprint is the amount of carbon that you use and/or produce that ends up as excess in the environment. To calculate your C footprint, visit http://www.epa.gov/climatechange/emissions/ind_calculator.html

✓ **We replace or clean filters and appliance coils for appliances regularly.**

□ **5 Points**

“An air conditioner's filters, coils, and fins require regular maintenance for the unit to function effectively and efficiently throughout its years of service. Neglecting necessary maintenance ensures a steady decline in air conditioning performance while energy use steadily increases.” The air conditioner and heater account for half of the household energy consumption. Changing the HVAC (“heating, ventilating, and air conditioning”) filters regularly will allow the system to operate efficiently, and it will keep the indoor air clean. Use HEPA (High Efficiency Particulate Air) filters on your HVAC system so that you have maximum filtration in your home. For more information on HEPA filters, visit <http://www.hss.energy.gov/csa/csp/hepa/>

For more information, visit:

http://apps1.eere.energy.gov/consumer/your_home/space_heating_cooling/index.cfm/mytopic=12390

“Keeping refrigerator coils clean can help you avoid service calls. To clean the coils on your fridge, first unplug it. Then locate the coils -- either on the back or at the front bottom of the fridge. If they're at the bottom, snap off the grill covering them and use a coil-cleaning brush (available at any appliance-parts store) to loosen the dirt; then remove it by vacuuming. If the coils are on the back, move the fridge away from the wall and clean them the same way. Do this at least twice a year (more often if you have pets) to help keep your appliance trouble-free.” (source: www.diynetwork.com)

✓ **Installed Low E insulating glass windows.**

□ **10 Points**

The “E” in Low E stands for “emissivity”. Windows are measured for their R value, or their resistance to heat loss; The higher the R value, the higher the resistance and the more energy efficient it is. Low E insulating glass windows can have over 5 times the resistance to heat loss as the single pane regular glass windows. (source: www.askabuilder.com)

For buildings in the Historic District or on the National Register: Storm windows that were approved by the Historic Preservation Commission have been installed on the building. For more information, visit www.energystar.gov

✓ **Solar, wind, and/or geothermal energy are used to generate electricity.**

□ **20 Points**

There are incentives and programs administered by the Maryland Energy Administration that will aid in the implementation of alternative energy initiatives. For more information, visit <http://energy.maryland.gov/incentives/residential/>

✓ **We installed a solar hot water system.**

□ **20 Points**

✓ **We installed a tankless hot water system.**

☐ **15 Points**

Also known as a “demand” or “instantaneous” water heater, the tankless systems can conserve up to 34% of the energy as a conventional hot water tank. For more information on the tankless hot water system, visit

http://apps1.eere.energy.gov/consumer/your_home/water_heating/index.cfm/mytopic=12820

✓ **We turned down the water heater’s maximum temperature.**

☐ **5 Points**

“You can reduce your water heating costs by simply lowering the thermostat setting on your water heater. For each 10°F reduction in water temperature, you can save between 3%–5% in energy costs.” For more information, visit

http://www.energysavers.gov/your_home/water_heating/index.cfm/mytopic=13090

✓ **We installed a timer for the hot water system.**

☐ **5 Points**

Timing your hot water heater to shut down on your sleep schedule and to start up again about an hour before you wake up can drastically save you on energy bills as the water heater accounts for 20% of household energy consumption (source: <http://www.epa.gov/reg5rcra/wptdiv/p2pages/energy.pdf>) For more information, visit: http://apps1.eere.energy.gov/consumer/your_home/water_heating/index.cfm/mytopic=13110

✓ **We installed insulation for water heaters, hot water lines, and furnaces.**

☐ **5 Points**

“Insulating your hot water pipes reduces heat loss and can raise water temperature 2°F–4°F hotter than uninsulated pipes can deliver, allowing for a lower water temperature setting,” (source: [energysavers.gov](http://www.energysavers.gov))

http://apps1.eere.energy.gov/consumer/your_home/water_heating/index.cfm/mytopic=13060

✓ **We installed an “Energy Star”-qualified programmable thermostat.**

☐ **5 Points**

“When installed and used with the four pre-programmed temperature settings for weekend and weekdays, you can save about \$100 each year while staying comfortable.” The programmable thermostats automatically adjust the temperature when you’re sleeping or when you’re away. (source: [energysavers.gov](http://www.energysavers.gov))

- ✓ **We regulate our thermostat especially when going on vacation or leaving our home for more than a day.** **5 Points**

The EPA recommends that you set the thermostat to 68°F in winter when you're at home and down to 55°F when you go to bed or when you're away. "For every degree you lower your heat in the 60-degree to 70-degree range, you'll save up to 5% on heating costs." In the summer, set the thermostat to 77°F. "For every degree you raise your thermostat setting above 72 degrees, you will save about 7% on cooling costs." (source: www.santaclara.ca.gov)

- ✓ **We converted our fireplace to natural gas.** **10 Points**

Natural gas fireplaces and wood stoves are more efficient, safer to use, easier to start up, and don't require the use of logs compared to conventional wood-burning fireplaces. PM_{10s} (particulate matter less than ten microns) are produced by burning wood and can cause lung damage, trigger asthma, or even develop lung cancer after long periods of exposure. (sources: <http://www.epa.gov/burnwise/>, Vedal, Sverre (1995). *Health Effects of Inhalable Particles: Implications for British Columbians*. Department of Medicine, University of British Columbia, Vancouver Hospital and Health Sciences Centre for the Ministry of Environment.)

- ✓ **We test the seal on our fridge and freezer.** **5 Points**

Replace warped or damaged gaskets on your refrigerator. To test the effectiveness, place a dollar bill in the door and close. Gently tug it. If the dollar comes out easily, the gasket is not working properly, and you are losing energy and money. (source: org.elon.edu)

- ✓ **We keep our freezer defrosted.** **5 Points**

Keeping your freezer defrosted not only saves wasted energy from over-cooling the freezer, but it also saves your food as the frozen water in the food will not crystallize and cause freezer burn. Try not to open and close your freezer door frequently, as the fluctuation in temperatures above and below the freezing point also contributes to freezer burn.

- ✓ **We have conducted a home energy audit within the past 5 years.**

For more information, visit http://apps1.eere.energy.gov/consumer/your_home/energy_audits/index.cfm/mytopic=111
60

- Do-It-Yourself Home Energy Audit** **5 Points**
Professional Home Energy Audit **10 Points**

Section 7: Energy Category point total: _____

SECTION 8: TRANSPORTATION

- ✓ **We perform regular maintenance of cars and other vehicles.** 5 Points

Tires should be properly inflated and checked frequently. Check oil levels approximately every 3000 miles. Keep track of your average miles-per-gallon by calculating:

$$\frac{\text{_____ Miles-per-gallon}}{\text{_____ Gallons of gas used}} = \frac{\text{_____ Miles driven}}{\text{_____ Gallons of gas used}} \div$$

For maintenance information, visit <http://www.edmunds.com/maintenance/select.html>

- ✓ **We refrain from idling and “warming up” our cars. When we go to a bank or restaurant drive-thru, we turn the car off while waiting. We also turn off our engines while waiting at drawbridges.** 5 Points

Idling a car for more than 10 seconds burns more fuel than stopping and restarting the car. Idling also releases toxic fumes like sulfur oxides, ground-level ozone, and nitrogen oxides which are detrimental to human health. (sources: www.drivewiser.ca, www.nrdc.org)

- ✓ **We purchased hybrid or alternative fuel vehicles.** 15 points

Cars that perform well and produce the least air pollution and greenhouse gas emissions are listed here: <http://www.epa.gov/fueleconomy/basicinformation.htm>

- ✓ **We carpool and run errands in the least amount of trips as possible.** 5 Points

- ✓ **We use alternate transportation such as busses, walking, or biking.** 5 Points

For more information, visit <http://www.ci.annapolis.md.us/info.asp?page=2613>

- ✓ **We offset our carbon footprint from flying and/or commuting.** 5 Points

For more information on your carbon footprint, visit http://www.carbonfund.org/site/pages/how_it_works

- ✓ **We live within 25 miles from where we work.**

For more information, visit <http://www.commuterchoicemaryland.com/>

One person 5 Points

Two or more people 10 Points

Take advantage of Annapolis' "Free Fare Zone" instead of driving and parking downtown. Board any Annapolis Transit bus from Compromise Street (on the Annapolis side of the Spa Creek Bridge) to Westgate Circle for free. This includes Duke of Gloucester Street, Main, and West Streets and Church Circle.

Visit <http://www.ci.annapolis.md.us/info.asp?page=7615> for route information.

✓ **We park at the Navy-Marine Corps Memorial Stadium parking lot and take the free shuttle into town.** **5 Points**

For day-trips, visit http://www.pinnacleparking.com/public_parking.htm

For monthly passes, visit http://www.pinnacleparking.com/monthly_parking.htm

✓ **When going to Baltimore or Washington, D.C., we park and ride using their public transportation systems rather than driving into the city.** **5 Points**

To get to Baltimore from Annapolis, use the C-60 bus route:

<http://annapolis.gov/info.asp?page=3274>

For information on Baltimore, visit <http://www.mtmaryland.com/services/lightrail/>

For information on D.C., visit <http://www.wmata.com/>

Section 8: Transportation Category point total: _____

SECTION 9: MISCELLANEOUS

- ✓ **We participate in or sponsor environmental restoration or education projects or other community efforts to reduce environmental impacts.** **5 Points**

For help in finding an organization, please see a list of non-profit organizations by visiting <http://www.melissadata.com/Lookups/np.asp>

- ✓ **We pledged to take part in the Annapolis Clean Air Initiative.** **5 Points**

Annapolis' Clean Air Campaign is designed to educate residents about the ways dirty air can hurt us and how we can reduce our negative impacts. For more information, visit <http://www.eannapolis.us/upload/images/government/depts/mayor/CleanAir.pdf>

- ✓ **We reduce the light pollution emitted from our outdoor lighting by addressing glare, spillover, and sky glow.** **5 Points**

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 luminaire housing. Ineffective lighting creates nuisances and safety hazards for the community, drivers, and aviators. Taking these actions keeps the light shining only on their intended areas, reducing wasted energy. 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 (sources: www.windows.ucar.edu, www.indiana.sierraclub.org, www.alabama.sierraclub.org, Ecological Light Pollution. *Front Ecol Environ* 2004; 2(4): 191–198)

- ✓ **We use a “green” dry cleaner service and give back the hangers that they provide.** **5 Points**

Choose dry cleaners that use phosphorous-free, biodegradable detergents and products. To find out what products your dry cleaners use, ask them.

- ✓ **We support retail members of Buy Local Annapolis.** **5 Points**

Buy Local is a campaign of the Annapolis Sustainable Business Alliance designed to educate Annapolis area residents to “Think Local” when they are considering where to make purchases and to “Buy Local” whenever possible. For more information, please visit http://annapolisfirst.org/pages/ind_why.html

✓ **Other activities to reduce environmental impact:**

10 Points

If you have any ideas on what to put in our next release, please email us at SustainableAnnapolis@Annapolis.gov

Section 9: Miscellaneous Category point total: _____

Add up ALL points, and enter the total.....

**Total
Points**

Bonus Points:

✓ **We have calculated our carbon footprint using the Sustainable Annapolis carbon calculator (www.SustainableAnnapolis.com)**

5 Points

The Sustainable Annapolis carbon calculator is a tool you can use to estimate how much carbon dioxide and other greenhouse gasses you generate on an annual basis. It looks at your home, vehicles, travel, and diet to calculate your footprint.

Add your bonus points to your total points.....

**Grand
Total**

Unrepaired Leaks Can Be Costly

Water Loss in Gallons at 50 psi

Leak this Size	Loss per Day	Loss per Month	Loss per Year
●	120	3,600	43,200
●	360	10,800	129,600
●	693	20,790	249,480
●	1,200	36,000	432,000
●	1,920	57,600	691,200
●	3,096	92,880	1,114,560
●	4,296	128,880	1,546,560
●	6,640	199,200	2,390,400
●	6,984	209,520	2,514,240

Drinking Water - It's Worth Saving

Office of Drinking Water
 1-800-521-0323
<http://www.doh.wa.gov/ehp/dw/>



Annapolis Environmental Stewardship Certification

Is hereby awarded to:

(PRINT YOUR NAME HERE)

for voluntarily taking pro-active measures to protect,
improve and enhance the quality of the environment and to
ensure sustainability for future generations.

Ellen O. Moyer

Honorable Mayor Ellen O. Moyer
City of Annapolis

Michael D. Mallinoff

Michael D. Mallinoff
Director, Dept. Neighborhood and Environmental Programs

