

BRANCHING OUT

Maryland's Forest Stewardship Educator

University of Maryland Extension - Forest Stewardship Education
www.naturalresources.umd.edu

Vol 20 No 1; 2012

Branching Out Reaches 20 Volumes

This edition of Branching Out marks the newsletter's 20th year in publication! After 70 issues and over 400 articles, the newsletter continues to grow.

To celebrate this landmark edition, our website has been neatly updated with all available back issues of the newsletter, dating back to 1993. 46 original newsletters have been scanned and re-cataloged in our Newsletter Archive and Directory. Additionally, after four years in hiatus, two updated article directories have returned: Articles by Category and Articles by Year. These directories are provided for conveniently locating information you need.

From the very first edition in the Spring of 1993, to the second edition in 2006 when the newsletter hit the world-wide-web, to our first edition this year, Branching Out continues to be a steady part of the Natural Resources and Forest Stewardship Education program here at University of Maryland Extension.

You are invited to visit the newly formatted Branching Out Newsletter Archive and Directory page online at: <http://www.naturalresources.umd.edu>



Newsletter Archive	Articles by Category	Articles by Year	Subscribe	
Category	Year	Vol	No	Name of Article
Agroforestry	1999	7	4	Understanding Agroforestry
Agroforestry	2002	10	4	Maryland Center for AgroEcology
Agroforestry	2003	11	4	Temperate Agroforester
Agroforestry	2006	14	3	Inside Agroforestry Newsletter
Backyard Woods	2006	14	3	The Woods in Your Backyard: A Landowners
Backyard Woods	2007	15	2	The Woods in Your Backyard

20 Years of
 Forest Stewards Education

Not Any Axe Will Do

The challenge of cutting invasive vines and small trees can be quite daunting and dangerous if you try to use conventional tools such as a hatchet, small axe, machete, hand saw, or even a chainsaw. One tool most woodland owners will find very useful is the brush axe, specially designed for working in the woods.



The brush axe was originally designed for use by surveyors who needed to cut small trees or vines to run survey lines through brush. Using a conventional axe or machete requires extreme care and a common result is the blade bouncing or being deflected from what you are cutting into your leg, hand, foot, or worse.

The brush axe is constructed of a 7 ¼" Swedish steel blade that is about an inch deep, and attached to a 20" hickory handle. It is balanced to provide excellent leverage and since the blade is enclosed and sharp, it does not bounce off the target. In the field, the user should carry a file and constantly keep the blade very sharp.

When cutting a vine, you can generate great force in a small area due to the design. For small trees up to 4" in diameter, you can push the sapling over with one hand and then hit the base of the tree with the axe in the other hand. The tension and force of the blade will quickly sever the tree. It is amazing how well it works and how safe it is. You should use the tool wearing heavy boots just for added safety. After a tree or vine is severed, you can apply herbicide if it is being used, and move on. It is possible to treat a large area in a short time and not get tired.

The cost is about \$45 and it is well worth the investment. It is not sold in many stores but is

available through online surveyor and horticultural supply stores. Search the internet for "brush axe" to see what's available.

Pruning How and What

By Nevin Dawson, Forest Stewardship Educator,
University of Maryland Extension

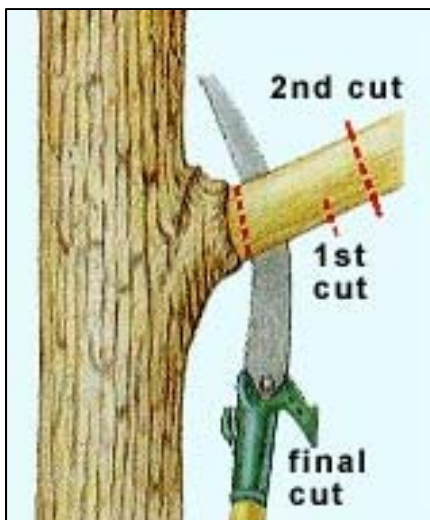
As flowers bloom and buds burst, spring beckons us forward into the growing season, the warm weather promising a flush of vibrant green growth just over the horizon. Untamed growth is not always a good thing, though. Pruning can help you improve the safety, health, appearance, fruit production, and timber value of your trees when done correctly.

Start planning your cuts by looking at the tree as a whole, using your objectives as a guide. Never remove more than one quarter of the tree's foliage at a time. If you're clearing branches from the trunk, don't go higher than one third of the tree's height.

Good pruning techniques help the tree recover quickly and receive the maximum benefit from the procedure. Pruning cuts should be made at the base of a branch. Making a cut in the middle of a branch usually leaves the remaining half to rot, slowing down the recovery process and possibly introducing a new disease to the rest of the tree.

The branch collar is the slight bulge at the base of the branch, and should be left intact, no matter what type of cut is used. Leaving this slight nub will allow new layers of wood to grow over the wound much more quickly, sealing out potential pathogens. A flush cut may look better at first, but it will take many more years to completely cover.

Cutting larger branches requires a series of three cuts so that the weight of the cut branch doesn't tear bark away from the material that you're keeping, or pinch your saw. First make a shallow cut on the bottom of the branch a few inches outside of the branch collar to sever the fibers that might tear. Then cut all the way through the branch from the top another few inches outside of the first cut.



http://www.na.fs.fed.us/spfo/pubs/howtos/ht_prune/cuts.htm

Now you can cut all the way through the remaining stub just outside the branch collar without worrying about the weight of the branch.

It used to be common practice to treat pruning cuts with a dressing or sealant. Science has shown that this practice often does more harm than good. Although the sap that oozes from pruning wounds is sometimes unsightly, it's the tree's natural method of flushing out insects and pathogens. Dressings and sealants interfere with this process.

The only exception to this rule is in the case of oaks and native elms, which need extra protection from oak wilt and Dutch elm disease, respectively. Any cuts or wounds made during the growing season in these species should be treated to keep out these deadly diseases.

Pruning tools generally fall into the categories of shears, loppers, and saws.

Single-handed shears and double-handed loppers are available in anvil and bypass styles. Bypass models have two blades, like scissors, and are preferred for pruning because they make clean cuts. Anvil models have one blade that closes against a flat plate. They are slightly more powerful and resistant to jamming, but their design causes crushing and a messy wound.

Compound action and ratchet mechanisms add mechanical advantage, and let you cut tough branches with less force. Pole pruners use a similar

cutting mechanism mounted on an extendable pole, and usually include a saw attachment. Some pole saws have hooks on the top end to keep the blade in the cut, and bark cutters on the bottom to prevent tearing.

Most types of saws can do the job, although there are a few that are specialized for pruning work. A single-handed pruning saw can be used to cut branches up to 10 inches in diameter.

Rope saws have a length of saw chain with rope on each end, and can be a great tool for cutting high branches without climbing.

When doing any type of pruning work, make sure that you're not putting yourself in danger by standing under the branch that you're cutting. Always have a clear escape path, and use it once the limb begins to fall.

Visit bit.ly/treepruning for more information.

Previously printed in the Delmarva Farmer)

Small 2011 Acorn Crop Predicted to Increase Human Lyme Disease in 2012

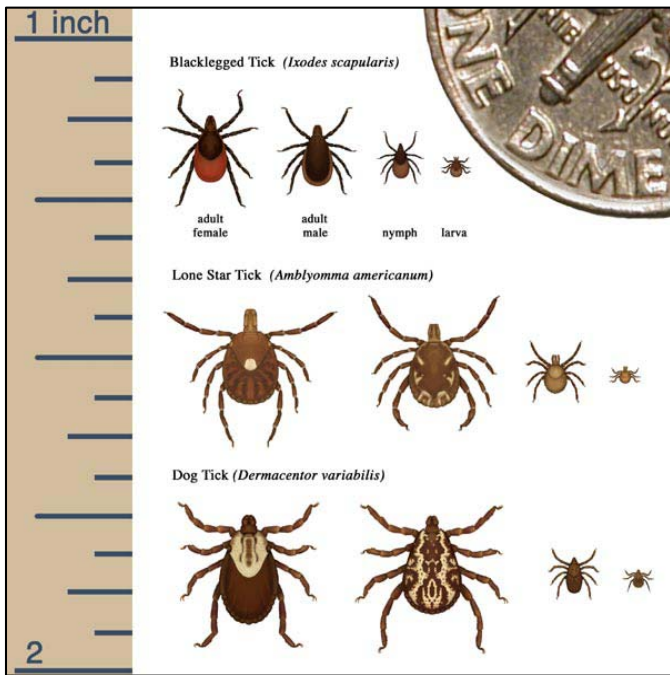
According to a New York Times article on December 2, 2011, the boom and bust cycle in acorn production over the past two years will likely result in a very high incidence of Lyme Disease in areas with lots of oak trees in 2012. Richard S. Ostfeld, a disease ecologist at the Cary Institute of Ecosystem Studies in Millbrook, N.Y., said, "We expect 2012 to be the worst year for Lyme disease risk ever."

Bumper crops of acorns, like the one we saw in 2010, provide a huge source of food for many mammal species, including the field mouse. This surplus in food led to a population explosion in field mice in the summer of 2011. Because the 2011 acorn crop was very small and unable to support the bigger population, field mouse numbers are expected to crash this year.

This food boom and bust cycle trickles down to other species, like deer ticks—also known as blacklegged

ticks or bear ticks. Just as more acorns mean more mice, more mice mean more ticks. When the mouse population crashes, ticks will be in search of other sources of a blood meal, including humans. Although the percentage of deer ticks infected with Lyme disease may be at normal levels, the number of tick bites on humans is expected to increase, leading to an overall increase in human cases of the disease.

What does this mean to you? Be sure to take extra



precautions when working or playing outside this year. Regularly apply insect repellent containing DEET or treat your clothes with permethrin, wear light-colored clothes so that ticks are more easily spotted, and tuck your pants into your socks. Do a careful tick check after going inside.

As the disease progresses, symptoms like facial palsy, meningitis, joint swelling, shooting pains, and change in heartbeat may develop.

Untreated cases of the disease can cause long-term arthritis and neurological problems, so early treatment is essential if infection is suspected.

Although the impacts in this case are undesirable, this relationship between food sources and populations is an example of the ties that bind the food web together, from trees to people.

Neighborhood Green Workshop

Would you like to learn how to design a sustainable and environmentally friendly landscape for your property and acquire the tools necessary to make your vision a reality? If so, you are invited to participate in the upcoming “Neighborhood Green Workshop” from 8:30 a.m. to 3:30 p.m. on Saturday, May 12, 2012. The workshop will be held at Linganore High School located at 12013 Old Annapolis Rd, Frederick, MD.

The Neighborhood Green Workshop will cover relevant conservation, wildlife enhancement, forestry and tree care practices; workshop participants will also receive help with developing their own individual plan for their property. Once this plan is prepared, a natural resource expert will be available to meet with each participant on their property to review this plan if they wish to do so. In addition, the property covered in the plan may be eligible for cost-share assistance to pay for a substantial amount of the implementation of this practice.

Workshop participants will also receive the full-color 139-page “The Woods in Your Backyard” manual (a \$20 value), lunch, additional reference materials, and a free soil test kit & analysis. Register by May 4, 2012 and only pay \$20 per person or \$35 per couple. Registration will be allowed after May 4th and at the door for \$30 per person/\$45 per couple. (Couples will receive one set of materials). The Neighborhood Green workshop agenda and registration form is available on-line: www.watershed-alliance.com, or by contacting Heather Montgomery, Community Restoration Coordinator, at 301-600-1741.

Landowners of just a few acres can make a positive difference in their environment through planning and implementing simple stewardship practices. Small lots are important, since the vast majority of landowners have less than 10 acres; this land, wooded or not, is a vital resource for all of us.

By enhancing or creating natural areas and woodland on these properties, landowners can enjoy recreation, aesthetics, wildlife, and water quality. If a landowner’s lot connects with other lots, there is

ample opportunity to make an even larger impact by getting neighbors involved.

Workshop topics will include:

- Basics needed when considering a plan for a property
- Brief introduction to forestry, wildlife, and tree care products
- Online tools to help prepare a plan and draw a property map
- Forestry and reforestation practices
- Wildlife management principles and practices
- Planting and caring for trees around your home
- Identification and management of invasive plant species and pests
- “Bay-wise” Landscaping
- How to perform a soil test and use analysis results to better manage your lawn
- How to use Neighborhood Green to achieve your management goals

If you have 1-10 (or more) acres of open space on your property and are interested in planting more trees or converting your currently mowed lawn to something more beneficial for water quality and wildlife habitat, this is the workshop for you!

If you are unable to make it to the workshop but are still interested in reforesting/planting trees on a portion of your property, or have any questions, please contact Heather Montgomery, Community Restoration Coordinator, at 301-600-1741 or HMontgomery@frederickcountymd.gov.

More information may be found online at the following links:

Program Flyer:

<http://www.naturalresources.umd.edu/Documents/Events/20120512.pdf>

Agenda/Registration:

<http://www.naturalresources.umd.edu/Documents/Events/20120512RegistrationForm.pdf>

Increasing Wood Energy Use in Maryland

Biothermal Wood Energy

Listening to the news today, you may think that renewable energy only includes solar, wind and geothermal, but you would be very wrong. In reality these technologies only provide a few percent of our energy needs. Wood is the oldest renewable energy source, and resurgence of wood energy is due to its low cost and recent improvements in wood burning technology.

Wood is the fastest growing residential heating fuel in Maryland, increasing 33% between 2000 and 2010. When homeowners or institutions convert to wood heat, the use of fossil fuel is reduced, whether it's through a reduction in the demand for heating oil and natural gas or the use of coal-powered electricity. One of the prominent reasons for increased wood use is the energy savings for the average homeowner. Whether you use firewood or pellets, the cost per unit of heat (known as Btu's) in wood is cheaper compared to most other energy sources (except for natural gas, which is a cost-effective fuel but is not renewable). You can figure out the cost of different fuels by using the online heating fuel comparison calculator provided on the US Energy Information Administration website at:

www.eia.gov/neic/experts/heatcalc.xls

Using woody biomass from forests and urban sources is truly renewable and sustainable, while providing green jobs locally. For woodland owners, wood energy provides another market for forest products that can provide a source of income.

Advances in wood burning technology have created a well-deserved image of woody biomass as a low emission renewable fuel. Smoky wood stoves manufactured prior to 1990 can produce around 30 grams of particulate per hour. Stoves manufactured after 1990 are EPA approved and produce less than 7.5 grams of particulate per hour.

However, if operators use unseasoned wood, or don't give their stove enough air, even the new, EPA certified stoves can emit too much smoke. Pellet stoves are not tested by EPA but they have even

lower emissions that are usually less than 2.5 grams per hour.

The greater problem is replacing old wood stoves with the post 1990 EPA approved stoves. The main incentive for homeowners is that the newer stoves save you money because they are more efficient and burn less firewood. Stoves manufactured before 1990 were basic steel boxes with a flue and burned wood at 30 to 40% efficiency. Comparatively, post 1990 stoves are 70-75% efficient, and burn about half the wood to get the same amount of heat.

Regardless of whether you cut your own firewood or buy it, you save a considerable amount of money (or labor) with a newer stove, not to mention a dramatic reduction in smoke and emissions which is good for the environment and your community.

The greater potential for wood energy lies with wood biomass boilers used in small to medium institutional or business applications (government buildings, schools, hospitals, prisons, etc.). Instead of heating a boiler with fossil fuels, modern wood boiler technology uses wood chips that are delivered to a heating facility and fed to a wood biomass boiler by a conveyor system. States like Pennsylvania, Vermont and other New England states have programs like Fuel for Schools that help incentivize the replacement of old fuel oil boilers with those heated with wood chips. The fuel saving realized from lower cost wood chips allows many of these capital projects to pay for themselves in less than 10 years. The current wood burning technology allows for high efficiency and low emissions.

Delivering tons of wood chips by truck requires access to nearby woodlands to source the materials. The result is real “green jobs” that are sustainable and keep money in the local community. The greatest barrier to using wood chips in boiler applications in Maryland is the lack of a permitting system from the Maryland Department of Environment.

So how can wood energy use in Maryland be increased? The Maryland Wood Energy Coalition was organized by University of Maryland Extension

and the Department of Natural Resources Forest Service in April 2010 with the goal to increase the use of woody biomass in Maryland. The Coalition effort produced a prospectus that provides research-based information and policy recommendations that will increase the adoption of advanced wood energy technology, and help Maryland reach targets for the Renewable Portfolio Standards (RPS).

The prospectus was released publically on February 2, 2012 and is available for download at: <http://www.naturalresources.umd.edu/Documents/BiomassThermalEnergy/20120212MarylandWoodEnergyProspectus.pdf>. The information in the document is being used to support policy changes, education, research, and outreach.

Wood Stove Design Challenge



Technology Competition Seeks Cleaner Wood Stove

Innovation may help re-invent the classic wood stove.

Today the Alliance for Green Heat announced the public launch of a Next Generation Wood Stove Design Challenge that seeks to promote innovation in wood stoves.

The Challenge will culminate in a Wood Stove Decathlon, modeled after the Solar Decathlon, which will take place on the National Mall in Washington D.C. in November 2013. Eminent stove, technology, air quality and combustion experts will judge this public exhibition of next generation wood stove designs. Stoves will be judged on emissions, efficiency, affordability, innovation and ease of use.

The Design Challenge grew from discussions between the Alliance for Green Heat and editors at *Popular Mechanics* magazine who believe innovation can overcome some of the problems inherent in the wood

stove and that a “smart” wood stove may be on the horizon.

Modern wood stoves can burn relatively cleanly, but they can be smoky and inefficient when not used properly. “Wood stoves are a lifeline for millions of mostly rural low and middle-income families, but they are too easy to misuse by operators,” said John Ackerly, President of the Alliance for Green Heat, the independent non-profit organization sponsoring the Design Challenge.

According to the U.S. Department of Energy, wood stoves produce 80% of residential renewable energy in America, while solar and geothermal combined produce 20%. The U.S. government funnels hundreds of millions of dollars into R&D and incentives for solar, biofuels and other technologies, yet the renewable energy device used by most Americans has been neglected.

“The wood stove is a vital part of our nation’s technological legacy, and we think it can be a vital part of our future,” said James Meigs, Editor-in-Chief of *Popular Mechanics* magazine. “We are excited to see what sort of innovation engineers, inventors and university teams can bring to the table to make the wood stove cleaner, and possibly re-invent its consumer image,” he continued.

Federal standards for wood stove emissions will be somewhat stricter by 2014, but will do little to impact how consumers use and misuse stoves. The two biggest problems with wood stoves happen when operators use unseasoned wood or do not give the stoves enough air, which leads to incomplete combustion. “We expect the Design Challenge to produce stoves that integrate electronics that are ubiquitous in today’s appliances and can include novel features that consumers want,” Ackerly said. “A smart wood stove may motivate people to trade in their older polluting stove and replace it with a higher efficiency, higher tech model,” Ackerly said.

A powerful and growing array of partner organizations that are helping with the Challenge include *Popular Mechanics*, the State of Washington Department of Ecology, the New York State Energy

Research & Development Authority (NYSERDA) and the Global Alliance for Clean Cookstoves. The Design Challenge will also bring together engineers working on developing clean cookstoves in the developing world with those working on heat stoves in the developed world on the common goal of increasing efficiency and reducing emissions.

The deadline for initial applications is December 20 and the finalists will bring their stoves to Washington for the Decathlon in November 2013. The winning design will receive \$25,000 and coverage in *Popular Mechanics* magazine. Second prizes will share a \$10,000 award. For rules and more information about the Wood Stove Design Challenge, go to www.forgreenheat.org/stovedesign.

A New Look for Maryland Woodland Stewards

Maryland Woodland Stewards Class of 2012 is kicking off this year’s program in April with a new look!



The logo for the program was redesigned to better represent this outreach program. Important components of the new logo include representation for forests (the oak branch), wildlife (the hawk), and water resources (blue element). But most important are the Maryland Woodland Stewards who will be sharing this new logo in their communities along with the message and knowledge that comes with being a participant of the program.

The Stewards for the 2012 class have been selected and training is scheduled for April 26 to 29. Best

wishes to the Maryland Woodland Stewards Class of 2012!

For more information about Maryland Woodland Stewards, please visit our website at, <http://www.naturalresources.umd.edu>, or contact Nevin Dawson, Forest Stewardship Educator, University of Maryland Extension, at 410-827-8057 x125 or ndawson@umd.edu.

Producer's Digital Toolbox **Coming Your Way**

Businesses everywhere are beginning to incorporate smartphones, iPads, social media, and digital technology into their business and marketing plans. Agriculture and rural businesses are no different. Social media has seen the greatest increase.

According to Nielsen, people in the U.S. continue to spend more time on social networking and blog sites, with total minutes increasing 210% year-over-year and the average time per person increasing 143% year-over-year from December 2009.

With this huge increase in technology use by the public, it will be important for farmers and rural businesses to have the knowledge and skills to incorporate it into their business and marketing plans. Examples of on-farm applications include:

- Registering farms in digital databases for easy consumer access, such as Google maps, MapQuest, Bing etc.
- Social media sites for farm markets that include events and announcements
- Smartphone apps for commodity prices, credit card purchases, weather, GPS, and more.

The Producer's Digital Toolbox is a suite of seminars that will be offered at several venues starting in April 2012. These seminars will assist University of Maryland Extension clients in capitalizing on the hardware and management systems tools now available through the Web.

These seminars will cover topics on:

- Digital Databases: Getting Your Business Listed - how to enter their business information in the 8-9 digital databases, such as Google Maps and others.
- Fingertip Marketing for Portable Devices and Apps - incorporating digital service and application into your marketing plan.
- Social & Professional Applications - An introduction to the basics of Facebook, Twitter, and LinkedIn for businesses. This seminar will explore basic fundamentals of popular social networking sites, examples of use, and the potential benefits social media could bring to your business and community.

The cost is \$40.00 per person which includes lunch and course materials. You must pre-register! No walk-ins will be accepted.

Seminar locations:

April 20, 2012 (8:00 AM - 1:30 PM)

Chesapeake College
Economic Development Center, Room #: EDC-27
Routes 50 & 213, Wye Mills, MD 21679
Registration Deadline: April 11, 2012

May 10, 2012 (8:00 AM - 1:30 PM)

Hagerstown Community College
Career Programs Building, Room #: CPB142
11400 Robinwood Dr., Hagerstown, MD 21742
Registration Deadline: May 1, 2012

May 15, 2012 (8:00 AM - 1:30 PM)

Cecil College - North East Campus
Elkton Station, Room #: Room 303
One Seahawk Dr., North East, MD 21901
Registration Deadline: May 6, 2012

The following materials may be found online:

Program Flyer:

<http://www.agmarketing.umd.edu/Documents/DigitalToolboxFlyer.pdf>

Online Registration:

<http://agnradmin.umd.edu/training/description.cfm?ID=179>

For more information, contact:

- Shannon Dill at 410-822-1244 or sdill@umd.edu
- Ginger S. Myers at 301-432-2767 x338 or gsmyers@umd.edu
- Jonathan Kays at 301-432-2767 x323 or jkays@umd.edu

Forests in the Farm Bill Helpline

No doubt, you've heard about Farm Bill conservation programs before. But maybe you wrote them off, thinking that these programs don't apply to you. In fact, the Farm Bill has several great tools that woodland owners can use to help manage their forests. **After all, forest owners are farmers, too!**

Call the Forests in the Farm Bill Helpline this month (call 202.463.2734 or email farbill@forestfoundation.org)! Get answers to your questions and learn about the tools available to you through Farm Bill Conservation programs.

Do you want to manage your Tree Farm for either turkey or songbird habitat? The Wildlife Habitat Incentives Program (WHIP) can help you do just that. Interested in thinning or burning to improve your forest's health? The Environmental Quality Incentives Program (EQIP) is the tool for you. Whether your priorities revolve around forest health management, invasive species removal, recreation, or wildlife, Farm Bill conservation programs give you the tools you need to achieve your management plan priorities.

The American Tree Farm System (ATFS) has several great tools for you to learn more about the Farm Bill and receive on-the-ground assistance you need. [Check out our website](#) for more information and publications on which programs are best for your Tree Farm and how forests are faring in these programs thus far.

We're also going one step further: **ATFS is offering a month-long Forests in the Farm Bill helpline** to answer all your questions, no matter how complicated. **The helpline is open from April 1 to April 30.**

Call directly (202.463.2734) between 9am and 5pm eastern OR Email experts at farbill@forestfoundation.org and get all the answers you need.

If we can't answer your question right away, we'll either do some digging or point you in the right direction. We look forward to talking with you!

Best,

Christine Cadigan; Manager, Public Affairs
American Forest Foundation
202.463.2734 | ccadigan@forestfoundation.org

Events

April 14, 2012 (10:00 a.m. to 12:00 p.m.)

Backyard Buffers Program

Location: Extension Office for Wicomico, Somerset and Worcester Counties
UME is partnering with Maryland DNR Forest Service to offer the Backyard Buffer Program to the Lower Eastern shore. This program is designed to assist homeowners who have a stream or other waterway on or adjacent to their property to create a streamside buffer of native trees and shrubs. Please see complete details online in the news release that can be downloaded from:
<http://www.naturalresources.umd.edu/Documents/Events/20120414.pdf>

April 20, 2012 (8:00 a.m. to 1:30 p.m.)

Producer's Digital Toolbox

(see full article, page 8)
Chesapeake College
Registration Deadline: April 11, 2012

April 26, 27, 28 and 29

Maryland Woodland Stewards 2012

Registration Closed

Shepherd Spring Retreat Center, Sharpsburg, MD
For more information about this program, please
visit our website at
<http://www.naturalresources.umd.edu/EducationalMWS.html>

May 4, 2012 (8:30 a.m. to 3:30 p.m.)

**2012 Western Maryland Local Government
Exchange, "Planning for Rural Equity in Western
Maryland"**

For more information about this event, please see
our online events calendar at:

<http://www.naturalresources.umd.edu/Events.html>

May 10, 2012 (8:00 a.m. to 1:30 p.m.)

Producer's Digital Toolbox

(see full article, page 8)

Hagerstown Community College

Registration Deadline: May 1, 2012

May 12, 2012 (8:30 a.m. to 3:30 p.m.)

Neighborhood Green Program:

Technical Assistance and Resources for a Low-
Maintenance, Environmentally Friendly Yard
(See complete details, page 4)

May 15, 2012 (8:00 a.m. to 1:30 p.m.)

Producer's Digital Toolbox

(see full article, page 8)

Cecil College - North East Campus

Registration Deadline: May 6, 2012

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religion, age, sexual orientation, marital or parental status,
or national origin.*

**Branching Out
University of Maryland Extension**

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Published four times per year and distributed to forest landowners,
resource professionals, and others interested in forest stewardship.

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