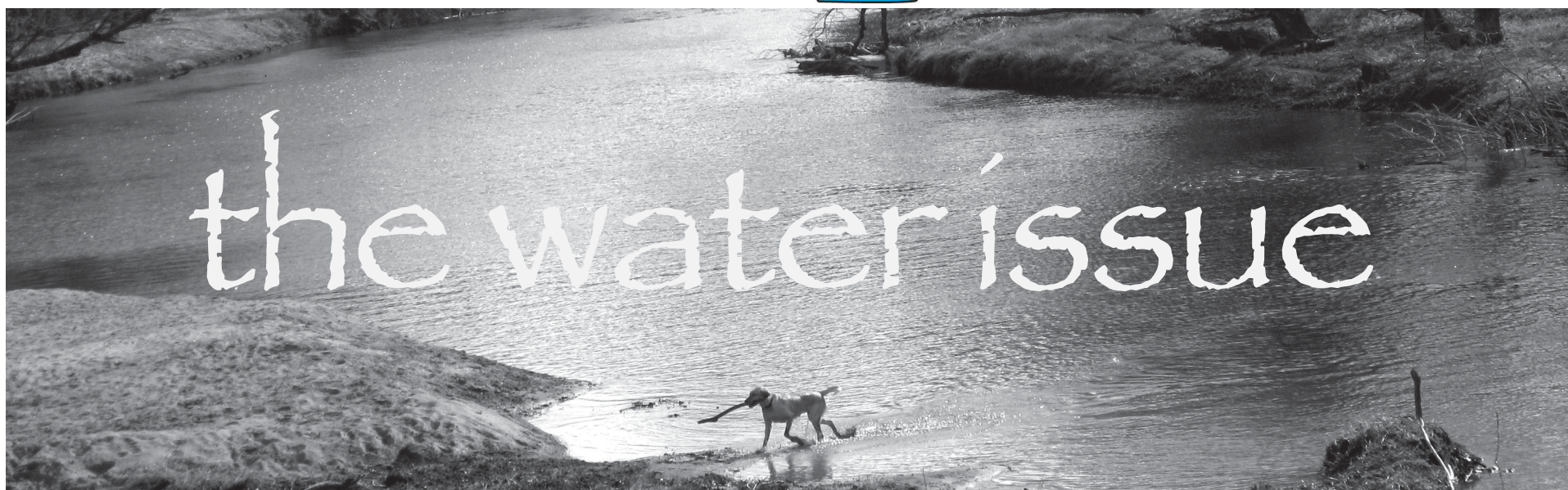


Chesapeake

Maryland Chapter of the Sierra Club

Spring/Summer 2012



How We Got Here

By Alan Girard—The largest estuary in North America, the Chesapeake Bay, was once the most productive in the world. H.L. Menken called it an “immense protein factory.” But pollution generated by nearly 17 million people now living in the 64,000-square-mile watershed has left the Bay an ecosystem dangerously out of balance.

Three decades of attempts to restore the Bay are littered with promises broken, and commitments only partially fulfilled. Voluntary measures to clean the Bay have not been sufficient.

The Clean Water Act of 1972 set a goal of making the nation’s waterways “swimmable and fishable” by 1983. Within just a few years of the law’s passage, the process hit snags. States did not meet a 1979 deadline for devising pollution caps called for in the Act for water-

(continued on page 5)

The Many Names of Chesapeake Bay Restoration

What Everyone Needs to Know about the Biggest Watershed Restoration Process Ever Undertaken in the United States

By Claudia Friedetzky—Call it what you will—Bay pollution diet, Bay total maximum daily load (or TMDL), Chesapeake Bay restoration, or watershed implementation plan (or WIP)—all these terms describe the most ambitious watershed restoration process ever undertaken in the United States.

It will stay with us for a long time to come, and offers the greatest chance in 40 years to restore the Chesapeake Bay and reduce pollution in local rivers and streams. We all appreciate the benefits of clean water, but many of us have been shielded from the cost that dirty water has imposed. The success of the Chesapeake Bay restoration depends on activists understanding its

basic principles and mechanisms so we can support and advance the cleanup of our waterways.

Where does Restoration take place?

This might be obvious: in the entire Chesapeake Bay watershed. But the geographical area requires some clarification. There are seven jurisdictions in the Chesapeake Bay watershed: six states and the District of Columbia. These states include Maryland, Virginia, Delaware, West Virginia, New York and Pennsylvania. EPA has directed all of these states to develop clean water plans (aka watershed implementation plans or WIPs) that include all

(continued on page 6)



Explore, enjoy and protect the planet

spring/summer the water issue

- 2 Letter from the Chair
- 3 What Happened During the 2012 Legislative Session?
- 4 How Our Bills Fared
- 7 The Hidden Cost of Energy: Water
- 8 Patriotism, Agriculture, and Phase II WIPs
- 10 Loaded Landscapes, Empty Waters
- 11 How Growing Smarter Can Achieve Clean Water Goals
- 12 Watershed Moment for Prince George's County Waterways?
- 12 Blue Crabs Depend on a Healthy Bay
- 14 The Future of Good Jobs Looks Green
- 14 Leaders List
- 16 Tick Talk
- 17 Habitat Stewardship Outings
- 28 Get Outdoors
- 29 Outings Schedule
- 35 Baltimore Inner City Outings (BICO)
- 35 LNG Update

33
33

The opinions expressed in this newsletter are in general aligned with those of the environmental community in Maryland, but are strictly those of the authors and not necessarily official policy of local, state or national Sierra Club entities. The Sierra Club prides itself on being a grassroots volunteer organization. The concerns and opinions of all its members are welcome in these pages.

Letter from the Chair

Changes and Challenges



David O'Leary, Chapter Chair

Change is all around us—changes in the weather, in politics, and in many aspects of our personal lives. We meet new people, start new jobs, and experience changes in our families. Fewer than four years ago, Obama was elected President, and optimism around the potential for change increased. Within two years, the rise of the “Tea Party” also heralded a different kind of change, and the next election is coming up soon.

In the Maryland Chapter of the Sierra Club, we've also seen a lot of changes. Conservation campaigns come and go and evolve—we win some campaigns, and some we lose. Some we choose; but some campaigns, especially fighting against particularly egregious proposals and violations, are imposed on us, or at least we are obligated by our mission to respond as we are able.

Fortunately, many recent changes in the Maryland Chapter help us to be better prepared to respond to the environmental challenges we face. With more staff, we have additional capacity to work on a broader range of issues. We also have the opportunity to be more proactive, advocating in favor of long term solutions and approaches, rather than only fighting against the worst attacks against the environment and the health of our families and communities.

In January, I accepted the challenge of serving as the new Maryland Chapter Chair. After a few months on the job, I continue to feel a mix of excitement and concern. This is a big job, but there are many people helping. If you've visited or contacted the chapter office over the past several months or read the email alerts, you probably noticed some new faces and names. Our long-term Chapter Coordinator, Laurel Imlay, is always happy to help answer questions. Claudia Friedetzy continues to coordinate our water resources campaigns—working to protect and restore the Chesapeake Bay and our local streams and rivers. The chapter added three new staff members in the latter part of 2011. Our new Chapter Director, Josh Tulkin, joined the chapter staff just before Thanksgiving and hit the ground running. Josh brought previous experience in Maryland to the

chapter. He is working closely with members of the chapter executive committee and staff on many aspects of the chapter operations and conservation campaigns. Chris Hill joined the staff in October, just in time to help with the Jamboree. Chris is supporting our energy campaigns, especially offshore wind power and coal plant retirement (which you will be hearing more about soon!). In December, Vidal Hines began organizing in Prince George's County, also focusing on energy issues.

Increasing the staff size from two to five in less than a year is one indication of the rate of change in the chapter, and it sounds like a lot—and from the “close in” view of chapter leadership, it *is* a lot! But we need more—and we especially need more people involved so we can affect even more change in Maryland and beyond. Five is a tiny number, and our staff can only do so much compared with the thousands of Sierra Club members across the state. Every one of us is needed to meet the great challenges that we face. The role of our staff members is to organize, support, and coordinate—but not actually to carry out the campaigns. We need people to make phone calls, write letters, conduct research, participate in community events, conduct technical analysis and perform a wide variety of other tasks. Reflect on which issues matter the most to you and consider how you can help. If you get a phone call or an email message, please listen and respond.

In addition to our campaigns to Move Maryland Beyond Coal and to restore the Chesapeake Bay and its tributaries, you may have heard of our increasing level of activity around natural gas. Sierra Club members opposed the construction of the Cove Point Liquefied Natural Gas (LNG) import plant in Calvert County in the early 1970's. More recent settlement agreements provided the Sierra Club with considerable influence on changes to the facility. As part of a broader strategy around natural gas, we are working to block Dominion's proposal to export LNG from Cove Point, and in Western Maryland, we are fighting fracking.

This is only one example of the challenges that we face and our opportunities to make a difference. There are lots of ways to get involved. Maryland's environment and communities need your help, so please read through this issue, take a look at the chapter web site, (<http://maryland.sierraclub.org>), and contact your local group leaders or other campaign leaders for the issues you are most interested in. We'll help you to find your place in the Sierra Club.

Thanks for your continued support! ■

Annapolis Report

What Happened During the 2012 Maryland General Assembly Session?

By David O'Leary and Sarah Peters—Environmental issues were prominent during the General Assembly this year, including key decisions about the state's energy future and efforts to clean up the Chesapeake Bay. Other big issues received significant attention, including marriage equality, and, of course, the state budget. In a short ninety-day session, most decisions on these bills came down to the last week or two—and frequently the last day or the last hour!

Thanks to the Sierra Club staff and volunteers who worked on many important bills—lobbying and rallying in Annapolis, attending town hall meetings, and calling and sending email messages to legislators.

Offshore Wind

For more than two years we have advocated for bills to facilitate the construction of an offshore wind farm. A large coalition, including the Sierra Club and other environmental, labor, faith, and community groups, worked closely with Governor O'Malley's staff and key legislators to pass the bill this year, but we were unsuccessful. The bill passed the House, but we were unable to get enough votes in the Senate committee. Given the effort involved so far, this was quite a disappointment. We are working with our coalition partners to determine next steps toward this goal.

Chesapeake Bay

Three major bills were introduced to reduce pollution in the Chesapeake Bay, and we achieved much greater success with these bills, although the outcomes were uncertain until the final days of the session.

A bill passed to double the fee collected for the Bay Restoration Fund ("flush tax") from \$30 per year to \$60 per year. This fund is used to fund wastewater treatment plant upgrades, agricul-

tural programs, and other important Bay cleanup efforts. A bill requiring the higher-population counties to collect a "stormwater utility fee" also passed. Each county is given flexibility to structure the fee. But it must be tied to the amount of impervious surfaces like pavement and roofs, and it must be used for local programs to reduce polluted run-off during rain storms, and to repair damage from storm run-off. Although this bill was weakened by not including all counties, it is still a major step forward. And a bill passed requiring all counties to designate various tiers of land-use areas with varying limits on the size and location of subdivisions constructed using only septic systems. Although this bill was also weakened with amendments on the Senate floor, we hope that it provides an important step forward in recognition of this significant source of water pollution and of the issue of externalized costs of pollution.

Fracking

Numerous bills addressing regulation and fees associated with natural gas drilling were introduced, but only one bill passed, also on the last day of the session. It defines a "presumptive impact area" as one in which the burden of proof is placed on the gas-drilling company to demonstrate that their actions are not responsible for water contamination. A bill to establish a fee on mineral rights leases for funding the state's Marcellus Shale Advisory Commission did not pass, and the implications for the commission are still being determined.

Renewables and Recyclables

Other bills relating to renewable energy met with mixed success. A bill that increases the utilities' requirement for use of solar energy passed; the date by which electric utilities are required to provide 2% of our electricity from solar genera-

tion was changed from 2022 to 2020. A "Community Renewables" bill, which would make it easier for groups to invest collectively in and benefit from renewable energy projects like the University Park Solar Co-op did not pass. Chris Stoughton from the Montgomery Group travelled to Annapolis to lobby and testify in support of this bill, along with representatives from clean-energy groups and community groups from across the state. A bill to add geothermal heating and cooling to the state renewable portfolio standard passed.

Some recycling bills passed, including bills that require higher goals for county recycling plans and inclusion of plans for recycling in apartment buildings and condominium complexes. Unfortunately, the bill to place a fee on disposable bags once again did not pass this year. Despite local support, a bill that would enable Prince George's County to establish a local bag fee also did not pass.

Miscellaneous Bills

A bill that places a ban on the use of arsenic-based products in chicken feed passed, after multiple attempts in recent years.

Two bills which increase election transparency by requiring additional disclosure passed, but more meaningful campaign finance bills did not receive committee votes. Cliff Terry once again tracked and testified in support of key proposals on this issue.

Reaching agreement in the General Assembly on the state budget was a bigger problem than usual this year. At the time of this writing, it is still unclear how this situation will be resolved. A budget including significant funding for important environmental programs was passed before the end of session deadline, but many feel that the numerous cuts to state programs in this budget are not acceptable. As of this writing, it seems likely that

the governor will call a special session of the General Assembly to renegotiate the budget.

We decided not to take a position on the gasoline sales tax. There was little likelihood that significant funding would be set aside over the long term for public transit. But even if it were, the protection for transit funding would be weak, as it is for "dedicated" funds in Maryland in general. As the proposal was not receiving much support, this did not seem like the best use of our limited resources.

Card of Thanks

Governor O'Malley proposed a strong package of environmental bills, including the offshore wind bill and two of the key Chesapeake Bay restoration bills. There were many legislators who led the way this year. Delegate Tom Hucker sponsored the stormwater utility fee bill and the ban on arsenic in chicken feed, and was a leader on offshore wind. Delegate Heather Mizeur was a leader on the bills dealing with natural gas drilling. Delegate Dana Stein sponsored the bill to increase recycling rates in the county plans and the community renewables bill. Delegate Dereck Davis, as Chairman of the House Economic Matters Committee, provided key support for the offshore wind bill. Senator Paul Pinsky led the effort on stormwater, community renewables, recycling in apartments and condos, and the Prince George's County bag fee. Senator Brian Frosh sponsored bills to regulate natural gas drilling, the state bag fee, and energy efficiency.

We were disappointed to not have the support from Senators Anthony Muse and Catherine Pugh on the offshore wind bill.

The Work Ahead

Even with a relatively successful session, we still have a lot of work to do. Work

(continued on page 4)

Legislative Session

What Happened During the 2012 Maryland General Assembly Session?

(continued from page 3)

will begin this summer to prepare for the 2013 General Assembly session, setting priorities and working with legislators on bills dealing with renewable energy and energy efficiency, fracking, and other topics. If you would like to get involved with the chapter's legislative work and our efforts in Annapolis, please contact Chapter Director Josh Tulkin at the chapter office at josh.tulkin@mdsierra.org, or 301-277-7111. ■

We're *Always* in Session

The legislators have left Annapolis, but the Maryland Chapter of the Sierra Club is still at work protecting our water, our air, our land, our health, and our heritage.

No matter what your interest, be it energy conservation or water quality, recycling or recreation, clean air or clean elections, we're on it, and we need your help.

Contact Josh Tulkin, Chapter Director, at 301 277-7111, or email josh.tulkin@mdsierra.org

How Our Bills Fared

Bill # and Name

House Action

Senate Action

Final Action

Energy Bills

SB 791 (RPS Standard - Solar Energy and Solar Water Heating Systems)	Passed	Passed	Bill Passed
HB 864/SB 595 (Community Energy-Generating Facilities and Net Energy Metering)	Unfavorable vote in Economic Matters committee	No Action	Bill Failed
HB 441/SB 237 (Offshore Wind)	Passed	No Action	Bill Failed - stuck in Senate Finance Committee

Water Bills

HB 987/SB 614 (Stormwater Management)	Passed	Passed	Bill Passed
HB 446/SB 240 (Bay Restoration Fund)	Passed	Passed	Bill Passed
HB 445/SB 236 (Sustainable Growth and Agricultural Preservation Act)	Passed	Passed (significant amendments)	Bill Passed (significant amendments)

Fracking Bills

HB 1204/SB 798 (Marcellus Shale Safe Drilling Study Fee and Performance Bond Act)	Passed	No vote in Environment committee	Bill Failed
HB 296 (Hydraulic Fracturing Wastewater)	Unfavorable Report	Not introduced in the Senate	Bill Failed
HB 1123/SB 636 (Contamination from shale gas drilling)	Passed	Passed with amendments	Bill Passed with amendments

Recycling Bills

HB 895 (PG County - Authority to Impose Fees for Use of Disposable Bags)	Unfavorable vote in Environmental Matters committee	No Action	Bill Failed
HB 929 (Recycling Rates and Waste Diversion - Statewide Goals)	Passed	Passed	Bill Passed
HB 1247/SB 511 (Community Cleanup and Greening Act - "Bag fee")	No Action	No Action	Bill Failed
HB 1/SB 208 (Recycling - Apartment Buildings and Condominiums)	Passed	Passed	Bill Passed

Misc Bills

HB 167/ SB 207 (Commercial Feed - Arsenic Prohibition)	Passed	Passed	Bill Passed
--	--------	--------	-------------

Thanks to Sarah Peters for compiling the chart.

How We Got Here

(continued from page 1)

ways impaired with too much pollution.

During the 1970s a rising population around the watershed produced more houses, runoff, and wastewater. Poor farm stewardship also caused considerable pollution. Prompted by these concerns in 1976, the late Senator Charles McCurdy Mathias Jr. (R-MD) pushed through Congress a seven-year Environmental Protection Agency (EPA) Chesapeake Bay study.

In 1983, EPA released its findings, documenting systemic declines in water quality around the Chesapeake. The report focused not on a single cause but an accumulation of insults to the Bay based on human pressures.

In December of that year, EPA signed the first *Chesapeake Bay Agreement* with Maryland, Pennsylvania, and the District of Columbia. The signatories strengthened the agreement in 1987 with an additional commitment to reduce nitrogen pollution by 40 percent by 2000.

While important, these efforts produced only modest improvements in Bay health overall. Underwater grasses returned to the Potomac around Washington and to a number of other areas from which they had disappeared. Striped bass (rockfish) rebounded strongly as a result of a fishing moratorium of the late 1980s. At the same time, however, oyster stocks in both Maryland and Virginia declined to historic lows, causing great hardship in the seafood industry and prompting dangerous levels of increased fishing pressure on blue crabs.

In 1997, a new threat arose from the toxic microorganism, *Pfiesteria piscicida*. Fish kills began that summer in the Pocomoke River in Maryland. Later that year, they also occurred in Kings Creek, a tributary of the Manokin River, and the Chicamacomico Rivers, also in Maryland. The kills were significant, both in loss of fish and in dramatic illnesses suffered by some watermen. They also harmed state

workers investigating the kills and others.

Around this time it became clear the early efforts to reduce Bay pollution were not enough. The states were well short of the goal set in 1987 to reduce pollution by 40 percent by the turn of the century.

In 2000, the EPA and the Bay states signed the *Chesapeake 2000* agreement, which re-affirmed the 40 percent reduction goal of 1987, and promised the Bay would be restored by 2010. As in previous agreements, however, the Bay states were left to achieve the goals voluntarily.

If we continue to make progress, we will add tens of thousands of jobs, to upgrade sewage and stormwater facilities and reduce farm runoff, and also to support seafood, tourism, and recreation industries as the Bay's health recovers.

Individual states did achieve some success in reducing pollution in subsequent years. Maryland subsidized the planting of winter crops that soak up leftover nutrients and also started upgrading the state's 67 largest sewage plants with state-of-the-art nutrient reduction technology, financed with a new fee shared equally by all Maryland households.

In 2007 the states and EPA acknowledged this lack of sufficient progress, but offered no new concrete commitments.

In 2008, frustrated with government's lack of progress, the Chesapeake Bay Foundation (CBF) and partners initiated a lawsuit against EPA for failure to enforce the Clean Water Act, formally filing a complaint Jan. 6, 2009.

On May 12, 2009, President Obama issued an executive order requiring EPA to lead seven federal agencies in developing a plan within a year to restore the Chesapeake.

In December 2010, EPA announced pollution limits called the Chesapeake Bay Total Maximum Daily Load (TMDL) and allocated specific numeric

pollution-reduction targets for nitrogen, phosphorus, and sediment to the Bay states and Washington, DC.

The six watershed states and the District then each submitted a watershed implementation plan to put in place concrete pollution-reduction strategies. Counties were encouraged to help the states achieve a pollution limit under each plan. Those states that did not make reasonable progress over certain timeframes could expect consequences. The settlement of CBF's lawsuit required EPA to establish consequences for failure, which was a major change from the earlier voluntary approach.

Even with the challenges of the Bay restoration effort, there has been important success. Bay wide, the states and the District have already achieved a little more than half of the pollution-reduction goal set in 1987.

But nature doesn't accept incompletes on its report card. The Bay's ecosystem is still severely degraded. The protein factory is working at a fraction of its capacity. Thousands of watermen, and others in the seafood and other industries, have lost their jobs over the years as a result.

But now we have a cleanup program that includes details and a timeline that states must follow or face consequences. That program is on track. If we continue to make progress, we will add tens of thousands of jobs, to upgrade sewage and stormwater facilities and reduce farm runoff, and also to support seafood, tourism, and recreation industries as the Bay's health recovers.

Making progress will be good for our future. Saving the Chesapeake Bay and restoring clean water will not just benefit us; it will benefit our children and all future generations. It is important that each and every one of us gets behind the new commitment to limit pollution and finish the job. ■

Alan Girard is the Eastern Shore Director of the Chesapeake Bay Foundation.



It's time for America to get smart about energy and be less dependent on fossil fuels like coal. We need to increase use of clean, renewable energy sources like solar and wind.

Add your voice to protect the planet.
Join Sierra Club

Name _____
Address _____
City _____ State _____
Zip _____ Phone (____) _____
Email _____

Join today and receive
a FREE Sierra Club
Weekender Bag!



☐ Check enclosed. Please make payable to Sierra Club.
Please charge my: ☐ Visa ☐ Mastercard ☐ AMEX
Cardholder Name _____
Card Number _____
Exp. Date ____/____/____
Signature _____

Membership Categories	Individual	Joint
Special Offer	<input type="checkbox"/> \$25	
Standard	<input type="checkbox"/> \$39	<input type="checkbox"/> \$49
Supporting	<input type="checkbox"/> \$75	<input type="checkbox"/> \$100
Contributing	<input type="checkbox"/> \$150	<input type="checkbox"/> \$175
Life	<input type="checkbox"/> \$1000	<input type="checkbox"/> \$1250
Senior	<input type="checkbox"/> \$25	<input type="checkbox"/> \$35
Student/Limited Income	<input type="checkbox"/> \$25	<input type="checkbox"/> \$35

Contributions, gifts and dues to Sierra Club are not tax deductible they support our effective, citizen-based advocacy and lobbying efforts. Your dues include \$7.50 for a subscription to *Sierra* magazine and \$1 for your Chapter newsletters.

Enclose a check and mail to Sierra Club,
P.O. Box 421041, Palm Coast, FL 32142-1041

or visit our website www.sierraclub.org F94Q W _____

The Many Names of Chesapeake Bay Restoration

(continued from page 1)

the strategies necessary to reduce water pollution in local rivers, streams and ultimately the Chesapeake Bay.

What kind of pollution?

There are several types of water pollution, and Chesapeake Bay restoration only deals with nutrient pollution and sediment. Nutrient pollution consists of nitrogen and phosphorus. I like to think of nutrient pollution as plant food, because runoff of nitrogen and phosphorus into our waterways leads to massive overgrowths of algae, which sink to the bottom of water bodies where they decompose. The process of decomposition uses up oxygen in the water, leading to dead zones where no life can thrive. Sediment is another important pollutant, making the water too murky for sunlight to penetrate where underwater grasses grow. These grasses provide important habitat for crabs and fish species.

In other words, reducing nutrient pollution is about preventing water bodies from dying and becoming entirely inhospitable to marine life and human activities like swimming and fishing.

What sources of nutrient pollution are we talking about?

OK, so we know what types of pollution will be reduced, but where does nutrient pollution come from? There are generally four types of nutrient pollution sources. Agricultural runoff contains fertilizer and animal manure that washes into streams after it rains. Similarly, lawn fertilizer also ends up in our rivers and streams. The water discharged from wastewater-treatment plants into streams contains nitrogen and phosphorus; houses on septic systems pollute at five times the rate of homes on sewer systems. And finally, stormwater runoff is rainwater which picks up nitrogen and toxic pollutants from roofs, roads and parking lots as it flows into storm drains and from

there directly into a stream. But nitrogen emitted from the tail pipes of motor vehicles not only pollutes when it is washed from roads and parking lots; it also gets deposited from the air itself.

Reduce But By How Much?

You may think that surely, we must reduce vast amounts of pollution to restore the Chesapeake Bay. Luckily, that's not the case. We are talking about reducing pollution by about one fourth, *i.e.*, 25 percent nitrogen, 24 percent phosphorus and 20 percent sediment. We can do it!

Timeframe

All good things take time.

And the restoration of the Bay will take an especially long time, which presents a great opportunity for Sierra Club members who tend to make long-term commitments when they sign up with our organization. Under the current schedule, EPA expects Maryland and all of its counties to achieve 60 percent of the pollution reduction by 2017 and meet all of the required pollution reduction goals by 2025.

Let me guess. As you are contemplating this schedule, you are having concerns. The state has five years until it needs to complete 60 percent of pollution reductions. That'll never happen, you think. Well, after decades of unsuccessful restoration efforts, the EPA has come to the same conclusion and introduced a new concept.

The Two-Year Implementation Milestones

Rather than letting years and years pass without checking in as to whether the states are meeting their water-pollution reduction goals, EPA decided that it would be a good idea to check in more frequently with the goal of catching slackers in the act.

Every two years, the state of Maryland and its counties have to submit a

plan that details what strategies they are planning to implement in the upcoming two years. At the end of the two years, EPA expects to see reports from Maryland about what has been accomplished. And if the states get little or nothing done . . .

. . . There Will Be Consequences!

Indeed. Read it again. C-o-n-s-e-q-u-e-n-c-e-s! The era of voluntary and ineffective measures is over for now. The Bay pollution diet is a mandate backed up by EPA with consequences for the states, if they do not follow through on their commitments that they made in their Clean Water Plans (also known as the watershed implementation plans or WIPs). The EPA is considering the following actions to encourage underperforming states to live up to their commitments: expansion of regulation to previously unregulated sources; requirement of additional pollution reductions from wastewater treatment plants; and attaching additional conditions to EPA grants.

So now, you are getting more convinced that Chesapeake Bay restoration will actually be successful. But, since you are an informed and questioning reader, you will ask what about . . .

. . . Anticipated Population Growth

and the increase in pollution that comes from that? You are right! That's a huge issue.

Annually, 170,000 additional people move into the Chesapeake Bay watershed. And with every new person who moves into the watershed comes new pollution

to local streams, rivers, and the Bay.

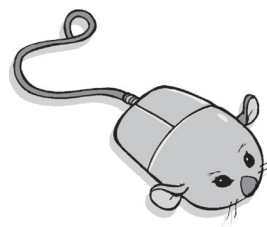
The current framework for Chesapeake Bay restoration addresses this challenge because the only way we will be able to restore the Bay is by accounting for and offsetting water pollution that is anticipated in connection with future pollution loads.

The state's Clean Water Plan recommends using smart-growth approaches to limit future pollution loads. There are several principles underlying smart growth, including mixed-use development in existing urban areas that are connected to sewer, and walkable neighborhoods that are accessible by public transportation. By limiting the spread of impervious surfaces (roads, roofs, parking lots) and reducing the amount of traffic and number of septic systems, smart growth limits three sources of water pollution: air deposition, septic and stormwater pollution.

Smart growth's opposite, sprawl growth, in addition to all of its negative impacts on quality of life, is a death knell for our rivers. Sprawl growth removes forests and natural areas and replaces them with impervious surfaces that do not absorb and filter rain water. Sprawl growth causes stormwater pollution. It is a well-documented fact that the water quality in a river declines precipitously when impervious surface in the watershed exceeds 10 percent.

So smart growth generally is the way to go. But even smart growth adds to water pollution, so how do we handle these added pollution loads? Through . . .

(continued on page 7)



Join the Maryland Chapter's

e-mail action alert list

<http://maryland.sierraclub.org/action/>

The Hidden Cost of Energy: Water



Water surrounds the H. A. Wagner Power Plant. Photo by F. R. Sypher

By James McGarry—The American Water Works Association estimates that the average U.S. household uses approxi-

mately 127,000 gallons of water every year. That may seem like a lot, but do you know how much additional water

you use every day just to turn on the lights? Everybody has heard about air pollution, climate change, and fossil-fuel depletion, but the silent victim of America's insatiable energy demand is our water resources.

Energy Generation Uses Enormous Amounts of Water

Almost every stage of the energy cycle uses enormous amounts of water including mining [e.g., hydraulic fracturing (aka fracking) for natural gas], cleaning, and refining. Even after burning, some power plants use water to clean out ash and scrub smoke-stacks to reduce air-pollution emissions.

Thermoelectric power plants use nuclear power or fossil fuels to boil water to spin a turbine which drives an electric generator. To efficiently drive the turbine the steam is cooled by heating water drawn from local bodies of water or through evaporative cooling towers (described in more detail later in this article). Together these methods use more than four times the amount of water used by all U.S. residents. Despite the efforts of utilities and system operators to improve their water-efficiency, our electricity-related water use continues to grow and is reaching unsustainable heights.

Even with the industry squeezing more power out of each gallon of water, the absolute water use for thermoelectric power plants has steadily increased from 14.6 trillion gallons in 1950 to about 100 trillion gallons in 2007.^{1,2} With no abatement in our current trajectory, the risks we face include rising prices for water and electricity, reduced water quality (in many cases caused by heated water), high rates of fish mortality, and the possibility of billions of dollars of economic damages. In fact, if business-as-usual demand growth continues, federal estimates about the cost of upgrading our water infrastructure range from about \$250 billion to over \$1 trillion over a twenty year time span.³

Maryland alone withdraws 379 mil-

lion gallons of fresh water per day for electricity, and that makes us look good compared to our neighbors. Pennsylvania and Virginia withdraw approximately 6.98 billion and 3.85 billion gallons of fresh water per day, respectively.⁴

The Impact on Maryland

So what does this mean for our area? A study published in the *Columbia Journal of Environmental Law* in July, 2009 placed Maryland's Montgomery County and Calvert County on its list of national electricity-water crisis areas. Given those areas' predicted electricity demand, population growth, and water resources in 2025, the authors estimated that Montgomery County would have a 4.45-inch annual water deficit and that Calvert County would have a 2.25-inch annual water deficit to meet their summertime water needs in the next decade. Rising demand for water and electricity and a shortage of available supply will mean higher water and electricity prices and costly infrastructure investments.

How the Thermoelectric Water Cycle Works

To understand how we use so much water, it is important to know how the thermoelectric water cycle works. Water is used by power plants to produce the steam used to spin the turbines, but predominantly for cooling needs. The two main water cooling methods are once-through cooling and closed-cycle cooling, the latter of which is more common in the water-scarce western United States. In once-through cooling, cool water is extracted from a nearby water source and run through a series of pipes to cool surrounding steam before being discharged back into the water source downstream, about 30 degrees Fahrenheit warmer than the surrounding body of water.

In closed-cycle cooling, after the water is extracted and run through the pipes in the condenser, it gets transferred to a cooling tower to be re-used for the same purpose later. While closed-cycle

(continued on page 8)

The Many Names of Chesapeake Bay Restoration

(continued from page 6)

Offsetting

Chesapeake Bay restoration requires that new pollution loads need to be offset. This means that wherever a new pollution load is introduced, there needs to be an offsetting reduction in water pollution somewhere else. For example, the state is envisioning that farmers will institute practices on their land, such as installing forest buffers or restoring wetlands, to reduce pollution more than was required of them under already existing laws and regulations. They may then sell the additional reduction in pollution to a developer, for instance, who needs to offset the pollution caused by a new development.

So now, you are becoming skeptical again. It all sounded pretty confidence-inspiring. That last part, however, strikes you as far-out and raises a lot of questions. Again, you are right. The current framework for Chesapeake Bay restora-

tion relies on nutrient trading as an integral means of accounting for and offsetting increased pollution loads due to population growth in the Bay watershed. Sierra Club's national conservation policies indicate a general opposition to pollution trading as a way of dealing with environmental regulation, and list a number of conditions that need to be in place to ensure that a pollution trading program is viable. The Chapter is paying close attention to the evolving offset policy and the overall nutrient trading approach EPA and the state of Maryland are taking to ensure that we are actually offsetting new pollution. ■

Claudia Friedetzky is the Conservation Representative for water issues for the Maryland Chapter.

The Hidden Cost of Energy: Water

(continued from page 7)

cooling systems use a fraction of the water needed by once-through systems, they ultimately deplete more than twice as much through evaporation in the cooling towers.

Thermal Pollution

The predominant environmental repercussion of the once-through cooling system in the eastern U.S. is thermal pollution. Billions of gallons of heated water recirculating into rivers, lakes, and streams contribute to thermal pollution, which decreases the amount of dissolved oxygen in the water, even while increasing the demand for oxygen in aquatic animals. And like eutrophication, in which an influx of nutrients such as nitrogen and phosphorus alters the water chemistry, thermal pollution may stimulate the growth and decay of simple plants such as algae and plankton. Accelerated growth and decay further deplete dissolved oxygen, reduce water quality, can collapse ecosystems, and complicate the water treatment process. A study conducted by Oklahoma State University found that eutrophication in U.S. freshwater costs \$2.2 billion annually in the losses in recreational water usage, waterfront real estate, spending on recovery of threatened and endangered species, and drinking water.

The repercussions of the electricity sector's water dependence are not a distant threat. North Carolina residents may remember blackouts in the summer of 2007, when Duke Energy had to cut the output of its C.G. Allen and Riverbend coal plants on the Catawba River. In Alabama, the Browns Ferry nuclear power plant has had to drastically reduce its output to avoid exceeding temperature limits on its discharge water and killing fish in the Tennessee River. Climate change means higher water levels in some areas of the country, but it also means longer and more intense periods of drought in others. More fossil fuels to meet energy

demand mean more greenhouse gas emissions and increased drought intensity. This in turn increases average global temperatures thus increasing energy demand, which comes full circle back to water depletion.

We are on a self-destructive trajectory driven by a lack of available water to meet a growing energy demand. America's water resources may be vast, but our increasingly energy-intensive economy may soon outstrip nature's ability to replenish its resources if we do not start taking water use into consideration when citing and building new power plants.

What We Can Do

Actions we can take today include increased research and development and commercial deployment for alternative cooling technologies; rapid deployment of solar photovoltaics and wind energy generation systems that do not rely on cooling technology; and more investment in efficiency and demand-side energy management. For example, when the 1,250 megawatt plant Yates in Georgia added cooling towers in 2007, it cut water withdrawals by 93%. When new thermoelectric power generation is unavoidable, give preference to low-water power plant design.

Using existing technology, we can sustainably meet our energy needs without compromising the ability of future generations to meet theirs. A failure to act now will impose greater costs later on. Instead, let's invest in a future that can both meet energy needs and protect our water systems. ■

James McGarry holds a Master's degree in public policy from the University of Maryland.

Endnotes appear on page 35.

Patriotism, Agriculture, and Phase II WIPS

By Tim Junkin—My father was a pilot who flew off an aircraft carrier in the Pacific and fought in every naval air engagement from Midway Island to the Second Battle of the Philippine Sea, where the Japanese fleet was destroyed. Seventy-five percent of his original squadron was lost in that effort. His skipper later published a book with photos taken from the cockpits of Corsairs; aerial pictures of torpedoed destroyers; Japanese carriers on fire; and American Hellcats flaming into the sea. As I grew up my father rarely spoke of that time. Once or twice, though, with the power that only such an experience can bestow, he'd quietly talk about patriotism, about love of country.

Growing up during the eras of civil rights, Vietnam, the seemingly endless world population growth, and its effects on our environment, I've often wrestled with those words, *patriotism* and *love of country*, trying to understand better what they really mean.

Patriotism is a love of the land, of the place where you call home. It means a love for the fields, rivers, mountains, animals, seasons, the traditions they engender, all part of the place that is intimate to your life.

Patriotism is certainly not love of a political candidate or even a president. If it were, few patriots my age would be left. It is not even the admiration for a political system. After all, as Churchill once quipped, "Democracy is the worst form of government . . . except all the others that have been tried." Moreover, if it were simply loyalty to a form of government, how would one explain the love of Nelson Mandela for South Africa even while imprisoned for decades by his white oppressors?

Part of patriotism certainly is a love for your people. But in equal measure the word means a love of the land, of the place where you call home. It means a love for

the fields, rivers, mountains, animals, seasons, the traditions they engender, all part of the place that is intimate to your life.

As such, perhaps one of the most powerful expressions of patriotism is to be willing to fight for the health of such a place, for clean water, clean air, for land that is not poisoned or degraded. We are, make no mistake, embroiled in such a fight in 2012. For forty years we have tolerated the gradual deterioration of our magnificent rivers and Bay such that we have "dead zones" proliferating around us. All of us are inculcated in this catastrophe and all of us, at least those who wish to bear the mantle of *patriot*, must now take on the challenge of this fight.

Recently, a local non-profit, Environment Maryland, published a scientific study on chicken manure, demonstrating how it contains excess amounts of phosphorus which has been poisoning our soils. When a farmer fertilizes his corn with chicken waste, the report detailed, in order to pro-

vide the needed amount of nitrogen, he must put enough waste on his field that it leaves as much as four times more phosphorus in the ground than the crops can uptake. This excess phosphorus over the decades has saturated our soils and is polluting our rivers. The report raised the ire of certain segments of the agricultural community. A poultry industry representative called it a "misguided effort in an on-going series of attacks upon the Delmarva Peninsula's chicken industry and farmers..."

Maryland farmers rightly point out that they have been doing a great deal to improve their agricultural practices so as

(continued on page 9)

Patriotism, Agriculture, and Phase II WIPS

(continued from page 8)

to reduce pollution. We are all grateful for this and commend them for this effort. But many of our Eastern Shore rivers, above the tidal influence—watersheds surrounded by agriculture—continue to become more polluted. The better response to the Environment Maryland research paper might have been to acknowledge its conclusions, and to appreciate and articulate that ways must be found to better manage the 500,000 tons of chicken waste that is spread on Maryland fields each year.

There has been a wider appreciation of the fact that the cost of reducing pollution (think in terms of a pound of nitrogen) is significantly less for agriculturally sourced pollution than for any other.

According to recent statistics from the EPA and Maryland's Bay Stat Program, agriculture remains the largest contributing source of pollution to the Chesapeake Bay. For the State of Maryland, for example, agriculture is responsible for 40 – 50% of the nitrogen, phosphorus, and sediment that is over-enriching and polluting our rivers and Bay. Farm animal pollution is responsible for approximately half of this. To successfully reach the pollution reduction goals that will ensure a healthy Bay, we must find ways to effectively reduce pollution from these sources. We must, of course, do so in a way that supports our agricultural base and our farmers.

In this regard, the EPA-directed plan to clean up the Chesapeake Bay by 2025 is under way. A Bay-wide TMDL (total maximum daily load) was issued by the EPA in January, 2011, with over 90 sub-watersheds assigned TMDLs as well. A TMDL defines the amount of a particular pollutant a watershed can handle and remain healthy. The EPA has asked the Bay states to submit detailed watershed implementation plans (WIPs) to describe how they will reduce pollution over the

following 13 years to ensure that all their waterways meet the TMDLs. The Bay states submitted their draft watershed implementation plans to the U.S. Environmental Protection Agency on December 15. (Maryland's 23 counties and Baltimore City, for example, each developed draft WIPs to reduce nitrogen, phosphorus, and sediment pollution. These county WIPs were then combined to form Maryland's state-wide plan to clean up the Bay.) Final Maryland county plans are due at the end of June this year.

The agricultural component of these

plans has been delegated to local Soil Conservation Districts (SCDs). Meeting with farmers, environmentalists, and other stakeholders, the SCDs have been trying to develop realistic and meaningful plans to reduce farm pollution both on county levels and in a basin-wide context. For all of this to be successful, it is essential that these plans establish benchmarks that are accountable and that will lead to the pollution reduction goals that have been established.

Ensuring the universal use of best management practices (BMPs) on farm fields is essential in this effort. Universal participation in cover crops, the requirement for targeted buffers to trap and treat surface runoff, the use of precision farm methods such as Greenseeker and Subsurfer technology to ensure that precision fertilization rates are used and that organic fertilizer is knifed into the soil, and the conversion of all county and state-owned agricultural land to model projects utilizing all such practices are just some of the steps that must be undertaken to ensure that our state agricultural goals are met.

Interestingly, as the various jurisdictions have been developing their WIPs, there has been a wider appreciation of the fact that the cost of reducing pollution (think in terms of a pound of nitrogen) is significantly less for agriculturally sourced pollution than for any other. The cost, for example, of eliminating a pound of nitrogen pollution by upgrading septic systems is exponentially higher than the cost of eliminating that same pound of nitrogen through the use of cover crops or a targeted buffer on a farm field. Thus, many of the Bay states are developing nutrient trading plans. The idea is that farms could install pollution reduction practices efficiently, taking their pollution loads way below the baselines required of them, qualifying for credits. The farm could then trade those excess credits for cash to concerns where pollution reduction is cost prohibitive. Like all of these plans, nutrient trading must be closely monitored and regulated if it is to become a successful tool in the effort to restore our Chesapeake.

Agriculture is only one piece of the equation. We must all be concerned about the pollution caused by the tendency to over-fertilize lawns. Lawn fertilizer use is a large though vaguely documented component of waterway pollution. And we

must insist that our legislative leaders upgrade our wastewater treatment plants. All of them. We must curtail septic sprawl and septic pollution.

For three hundred years, throughout the environmental history of the Chesapeake, legislative leaders have failed to have the courage and political will to insist that watershed protection be a priority. And so, because of their failings, we have nearly lost our country's greatest estuary, and we are faced with the crisis that confronts us in 2012.

For all of us who love this land, the time is now to make our voices known—at home in the county in which we live, in Annapolis and Baltimore, wherever you live, and in Washington, DC. Let us engage in this vitally important fight with the same courage and intensity that our parents displayed a generation ago and that our men and women in uniform display today. Let us all reflect on the spirit of sacrifice that true patriotism requires. Be an advocate in the fight for clean water! ■

Timothy Junkin is the Executive Director of Midshore Riverkeeper Conservancy (www.midshoreriverkeeper.org)



Explore, enjoy and protect the planet



SUPPORT YOUR LOCAL SIERRA CLUB

We send out an appeal in March to each of our members, asking for contributions directly to our Chapter. These contributions really do make a difference to us, and are an important part of our Chapter's budget.

When you make a donation to the Chapter, you support the Sierra Club's work in your own backyard. You allow us to continue our work to protect wilderness and wildlife, to improve the quality of life in our cities, and to promote the enjoyment of nature.

Please be as generous as you are able - and remember, these funds directly affect your way of life in your neighborhood.

Make your contribution to
Maryland Chapter, Sierra Club
7338 Baltimore Ave., Suite 111
College Park, MD 20740

Thanks so much!

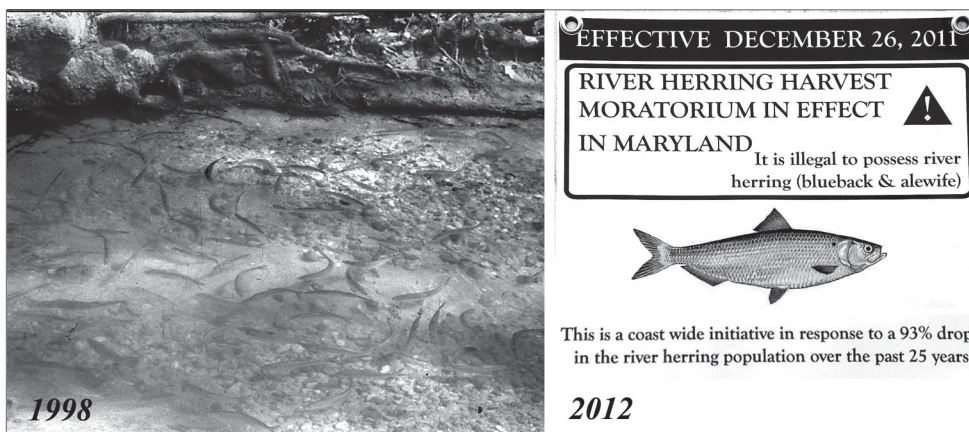
Loaded Landscapes—Empty Waters

This spring marks two disquieting milestones in our flight from sustainability. First, anglers in Maryland are now prohibited from keeping their catch of river herring. The moratorium follows one initiated in 1982 for their cousins, the American and hickory shad. Then, the Atlantic sturgeon was granted federally endangered status, a grim step that echoes the shortnose sturgeon's declaration decades ago. All are migratory fish that once were plentiful in Chesapeake Bay waters. But none more than river herring, which with the shad once surged in unimaginable numbers from the ocean to spawn each spring in our local rivers and streams, and fed alike wildlife and people, from Native Americans to recent generations.

Two centuries after the Native Americans were driven from the tidal Potomac basin, John Chapman, one in a long line of proprietors of his family's fishery at what is now Chapman State Park, could recall that "seine hauls on the shore piled the herring up from the water's edge 12 or 15 feet landward. The men waded knee deep among them, thrusting in their arms to find and select out shad, and allowed the herring to float off at high tide." In living memory, many people of our region, including the economically stressed, augmented their food supply with salted or frozen river herring, which could be taken with nets from small streams.

Anglers came to measure their catch in 5-gallon buckets, while commercial enterprise measured abundance in tens of millions of pounds. But the planet's measure was a maelstrom of life, infusing our landscape with energy. These brilliantly reflecting fish were messengers of sunlight, having converted oceanic plankton to the protein and fat they carried to our landscape during the spring run. In addition to people, and the fish themselves, beneficiaries included estuarine predators like striped bass and bluefish; scavengers

like crabs plucking fish that succumbed to wounds or breeding stress; and hunters like the herons, ospreys, eagles, otters, and bears that fished ankle-deep streams for the swirling masses. Even forest plants were nourished by fish-enriched guano.



Left: Spawning River Herring swarm in the late 90's in a Mattawoman Creek tributary draining Chapman Forest. Right: Excerpt of a sign posted at a Mattawoman fishing hole announcing the new moratorium on River Herring in response to years of severe decline along the eastern seaboard. The decline is due in part to habitat degradation. In fact, spawning numbers in the nontidal Mattawoman have fallen a hundredfold in just a decade, linked to impervious surface surpassing ~10% of the watershed land area. In a telling indictment of political will and societal values, this same high-quality stream would be degraded by an inappropriately sited Tech Park proposed for its steeply sloped and forested headwaters, when in the same area previously built Tech Parks languish for lack of tenants, and redevelopment opportunities abound.

While news articles report the continuing depletion of the world's oceans in an unbalanced age, river herring bring word to our very backyards. For after maturing in the Atlantic, these fish can struggle into remarkably small streams to spawn the next generation (see figure). They return again to the sea, to be joined not a year later by their adolescent offspring who summer in estuarine nurseries, in what was once a vibrant circulation of life between oceanic and inland waters.

Aquatic organisms fundamentally require unpolluted habitat to survive. But a sprawling human presence is muscling in, hacking away forest in the Bay watershed at 100 acres per day, and then sealing much of this land with impervious surface—at five times the rate of population growth! The results? Absent transpiring leaves of the forest canopy and a

spongy forest floor, twice as much erosive stormwater gushes into streams. Road salts create a chemical "dam" that repels river herring from spawning in their natal streams. Streams no longer nurture the base of the foodchain, and instead deliver

shed serve as a perfect example. The Bay's most productive nursery for migratory fish is now in decline as a consequence of rampant development in its watershed, according to studies by Maryland's Department of Natural Resources (DNR).

Most of the watershed lies in Charles County, which presently is in the throes of a battle for its soul as big money, pushing for business-as-usual in the county's comprehensive plan revision, is undoing beneficial elements in the current draft. The DNR has said in a major new report that this plan revision is probably the last chance to save Mattawoman. (For insights into the battle, see the article by Claudia Friedetzky, page 11)

Meanwhile, we continue to pass milestones marking our march into the Anthropocene geologic epoch. Considering the loss of habitat for a decimated but spunky marine fish reveals how it happens, and what is at stake. To turn things around, we must use all tools, including permits, legislation, the law, and efforts like the Bay's pollution diet. But none will work without public support and ever greater public participation. As Baltimore's sage H.L. Mencken quipped, "The cure for the evils of democracy is more democracy." Here Sierra Club members and their allies are at the front lines, and must continue to educate many more lest milestones continue to lead to a bleak and impoverished future. ■

This article was provided by the Mattawoman Watershed Society.

mud to choked estuaries. Water tables, sealed by roads, roofs, and parking lots, decline and fail to maintain stream flow between storms. Add the pollutants and the elevated temperature of urbanized stormwater, and the loss of aquatic biodiversity is a given.

The fundamental solution requires thoughtful land-use decisions, for the landscape is densely penetrated by a network of first-order perennial streams, so called because they are the first to collect water. A filigree of capillaries, these streams convey what is happening on the landscape to second and higher-order streams, thence to rivers and estuaries, and finally to the Bay. Thus, to restore the Bay, it is critical that we begin at the local level—through our master and comprehensive plans that serve as blueprints for where and how we grow.

Mattawoman Creek and its water-

The Example of Charles County

How Growing Smarter Can Achieve Clean Water Goals

By Claudia Friedetzky—There are some basic truths about what type of land use is beneficial for water quality and what type of land use will lead to a decline of our rivers and streams. Forests are the best land use for water quality. The roots of trees absorb large amounts of rain water, and the forest floor filters the remaining water until it is discharged into underground streams and seeps that empty into larger streams, and, eventually, into an estuary like the Chesapeake Bay or into the ocean. Forests are equipped to handle a wide range of storm events, from gentle to severe. Forests slow down and cool the runoff from storms so it does not disturb sensitive aquatic ecosystems.

Roads, roofs and parking lots are the worst land use for water quality. These impervious surfaces don't absorb rain water at all. Rain water that hits impervious surfaces picks up pollutants and toxins, and then flows unfiltered—at high speeds, high temperatures, and in large volumes—into storm drains. From there the water flows directly into streams, where the accumulated pollutants and toxins degrade water quality and disrupt aquatic ecosystems. When there is a big storm and a lot of sediment present, the sudden and massive flow of water into streams gouges out the streambeds, leading to dangerous levels of erosion.

The Effects of Stormwater Runoff

Mattawoman Creek in Charles County is a perfect example of the deleterious effects of stormwater runoff. Considered Maryland's most productive fish nursery to the Chesapeake Bay, Mattawoman Creek is now showing signs of serious decline linked to urbanization. It is a testament to recent research demonstrating that a stream degrades seriously when impervious surfaces cover 10 percent of its watershed. Yet Mattawoman is slated for impervious cover (23 percent) comparable to that of the Anacostia River wa-

tershed, sadly recognized by the Chesapeake Bay Foundation as the Washington, DC area's greatest source of toxic pollution to the Chesapeake Bay. Amplifying the problem, Mattawoman is also slated for loss of half its rapidly diminishing forest cover.



Mattawoman Creek

The Cost of Sprawl

Partly because of sprawl development, our rivers, streams, and estuaries have been deteriorating so much that cleanup and restoration costs are becoming stunningly expensive. Charles County's share of the costs for Chesapeake Bay restoration, a historic and comprehensive process to restore clean water in the Chesapeake Bay and its watershed, will amount to about one billion dollars. Between now and 2025, when we expect to reach our Chesapeake Bay cleanup goals, we will be paying dearly for past mistakes in land use. But this will not—and this is important to understand—address all the pollution that we will have to account for under the “pollution diet” mandated by Chesapeake Bay restoration. And these costs do not include pollution associated with future population growth in Maryland.

Many of Maryland's counties are expected to have substantial increases in population. Charles County has been the fastest growing county in the state. Its

population increased by 22 percent since 2000, and it will continue to grow. Under the state's Clean Water Plan (watershed implementation plan or WIP), pollution caused by future growth will have to be accounted for and offset. If we fail to account for pollution as a result of ex-

pected population growth, we would fail once again to meet our Chesapeake Bay restoration goals and any ground gained in the quest for clean water in Maryland would be lost.

Smart Growth

One of the most effective ways to limit pollution from future growth is to pursue smart growth approaches to planning and development. Smart growth limits the spread of impervious surface and new septic systems, which are associated with much higher pollution loads than development on sewer systems, presuming that our wastewater treatment plants function properly (which is not always the case).

In Maryland, counties have power over land use. Through the comprehensive plan process, counties largely determine the location and extent of housing developments, shopping areas, roads, and schools, and where farmland and natural resources will be protected.

The comprehensive plan is the ve-

hicle through which the counties can limit future sprawl development to protect our waterways. In its Clean Water Plan, Maryland recommends that counties use their planning processes, including the comprehensive plan process, to limit increases in pollution loads. The state recommends that counties pursue smart growth approaches to limit pollution from stormwater and septic systems.

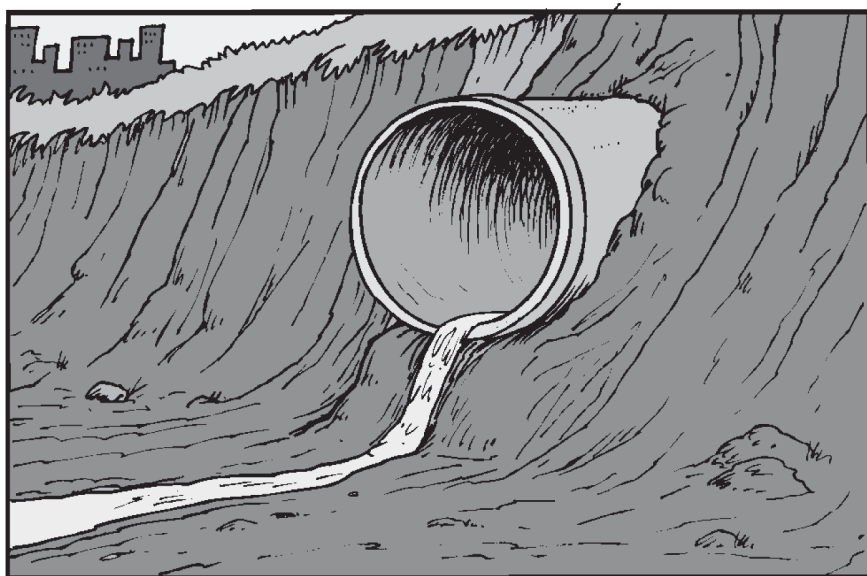
While other counties decided to integrate their comprehensive plan revisions and the development of their clean water plans, Charles County is shunning that route, contrary to recommendations from the state of Maryland.

As a result, an important educational opportunity was lost in Charles County. During the public input period of the comprehensive plan, consultants charged with managing the process presented the land-use options to the public as if nothing were at stake, as if we weren't rapidly losing our most precious rivers and streams to pollution caused by sprawl development. No one presented to the public the costs of sprawl in loss of water quality and associated cleanup costs, or the many benefits of smart growth. This lost opportunity has contributed to the traction gained by a vocal growth-oriented faction that is bent on continuing failed land-use policies at the expense of quality of life for county residents.

At the final meeting of the public input process, attendees at the comprehensive planning meetings were told that compromise between the differing visions among the public was necessary. We were told that we would get some protection of natural resources and some growth. A more appropriate approach would have been to point out to the public that all but one of the rivers in Charles County are degraded, and, unless we wanted to become the next Prince George's County, with all of its rivers highly polluted, and

(continued on page 13)

Watershed Moment for Prince George's County Waterways?



By Tom Dernoga—The Prince George's Sierra Club group has taken great interest in environmental issues relating to waterways in the county. Virtually all of the county's major waterways (Anacostia, Patuxent, and Piscataway) are impaired, and have been so for many years.

The major culprit in heavily urbanized Prince George's County is stormwater because it washes pollutants from roads and parking lots, fertilizers from lawns, and sediment (which destroys streambeds) into rivers and streams. The Prince George's Group and many of the

county watershed protection groups fought hard in 2010 and 2011 to get the Prince George's County government to adopt strong stormwater management standards for re-development. This would have meant that developers would have had to be responsible for installing practices on redevelopment sites that capture and filter stormwater. However, the Baker Administration sided with the development community to keep the standards near the state minimum.

Options to Regulate Water Pollution

There are many ways of regulating water pollution. Holding developers accountable for the pollution generated on their properties is one, as provided for under the stormwater management act of 2007. The Clean Water Act provides other avenues for reducing water pollution.

For example, under the Clean Water Act, major jurisdictions (such as Prince George's County) are required to get a

permit if they are discharging water pollution directly into rivers and streams. These permits cover any type of industrial, municipal, and agricultural waste discharged into water.

Pollutants can enter U.S. waters from a variety of pathways including agricultural, domestic, and industrial sources. Typical sources for water pollution include publicly owned treatment works (POTWs), discharges from industrial facilities, and discharges associated with urban runoff.

A major component of the Clean Water Act is the municipal separate storm sewer system (MS4) permit, which was designed to compel counties to address pollution from stormwater. Prince George's County received its most recent five-year MS4 permit in 2004 from the Maryland Department of the Environment (MDE) under the oversight of U.S. Environmental Protection Agency (EPA).

(continued on page 13)

Blue Crabs Depend on Healthy Bay

By Lauren Donnelly—The blue crab is an iconic symbol of the Chesapeake Bay and of Maryland itself. Since 1990, the sheer number of both juvenile and harvestable crabs in the Chesapeake Bay drastically decreased from a population of 791 million to 260 million in 2007.

There are two main reasons for the drastic decline in crabs—overfishing and pollution. This astonishing decline sparked a ban in both Maryland and Virginia in 2008 on the recreational catching and commercial harvest of female blue crabs in order to reduce harvests enough that the population could recover. Still the number of young crabs entering the population decreased from 345 million in 2010 to 207 million in 2011.

The decline in 2011 was most likely due to the early and severe winter temperatures experienced last year, which killed many crabs before they were able

to burrow for the winter. Other contributing factors include increased rainfall in the spring leading to runoff of pollution into waterways, and an increase in temperature, which decreases dissolved oxygen levels.

Both the polluted run-off and higher temperatures are contributing factors to the persistent 'dead zones' in the Chesapeake Bay that make it difficult for crabs to survive. Despite these declines, scientists have recently been seeing an overarching trend of the crab population rebounding with respect to harvesting. The number of harvestable crabs in

2011 was still 254 million, which is well above the 1990-2010 average of 192 million. This however is not necessarily the case when looking at crabs of all ages, and

NOAA scientists warn that it doesn't mean we're out of the woods yet.

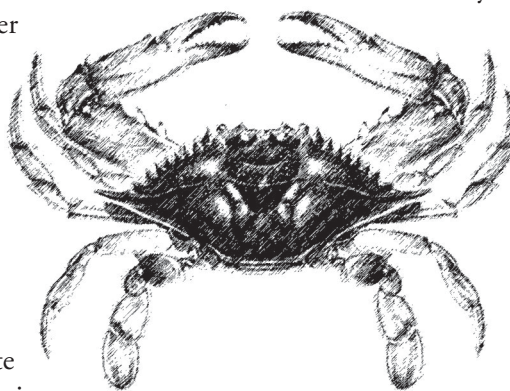
It will take a long time to remedy the decimation of the population. Continuing sustainable recreation and commercial fisheries as well as resource management of the crab populations are key to ensuring that we do not

have a major decline in numbers again.

An integral part of the restoration of the blue crab population is Maryland's

watershed implementation plan (WIP), into which the Sierra Club has invested great effort. It is essential that the WIP enforce a stringent reduction in the amount of pollution entering the Chesapeake Bay. If it does it will significantly benefit the blue crab population through a decrease in pollution which will significantly improve crab habitat and food sources. The process of Bay restoration and subsequent species recovery will be an ongoing process, but in the meantime, it is good news to those of us who look forward to crab season every year that we will not soon be disappointed by the absence of blue crabs. ■

Lauren Donnelly is working on water resources as an intern with the Maryland Chapter.



Watershed Moment for Prince George's County Waterways?

(continued from page 12)

This permit expired in 2009, but MDE extended it until a new MS4 permit is issued.

Under the county's MS4 permit, the administration has numerous obligations for maintaining and improving water quality, including: stormwater management, erosion and sediment control, detecting and eliminating illicit discharges into the county's separate storm sewer system, reducing pollutants associated with road maintenance activities, engaging in public education, watershed assessment and planning, watershed restoration, and assessing the effectiveness of pollution-control efforts.

The MS4 permit also requires the county to meet any "pollution diets" developed under a watershed implementation plan, which is basically a pollution-reduction goal. The Clean Water Act requires states to develop lists of impaired waters (those too degraded to meet the water-quality standards) and then calculate the maximum amount of a pollutant that each impaired waterbody can receive and still safely meet water quality standards (*i.e.*, develop a pollution diet).

County-Specific Actions—and Lack Thereof

In Prince George's County, pollution diets have been developed for various segments of the Anacostia, Patuxent and Piscataway, and for various pollutants (including nitrogen, phosphorus, total suspended solids, and trash). Without question, local waterways continue to be in great danger, and the county has not lived up to its obligations. Now, in addition to the pollution diets for certain county waterways, the EPA has developed a Chesapeake Bay pollution diet and has been working with MDE to come up with a way to implement it across the state. The process has involved getting each county to create a watershed implementation plan (WIP) so that, in total, the Maryland portion of the Chesapeake Bay wa-

tershed will achieve its pollution diet.

The Prince George's Group and county watershed-protection groups have been following the county's efforts to create a WIP strategy and to obtain a renewed MS4 permit. Ultimately, a progressive WIP that contains measurable results, a clear path to achieving them, identified funding, and meaningful milestones would mean tremendous advancement for county waterways. Similarly, an MS4 permit that requires measurable results and a clear implementation and monitoring plan, in addition to holding the county accountable, would herald potential water-quality improvement for county waterways. Thus, the permit process and the WIP process hold out much promise.

The Draft WIP

To the county's credit, reviewers from the environmental community believe that the draft WIP plan establishes a fairly clear path toward reducing water pollution and has some meaningful milestones to demonstrate its achievements.

However, the county's draft WIP fails to contain clear estimates of pollution reductions and recommended funding sources to achieve nutrient-load reductions within the milestones. An unfortunate amount of the county's WIP is spent bemoaning a lack of funding and time. The county has dragged its feet for many years on getting serious about water quality, and it has sided with the development community to prevent implementation of the strongest possible stormwater management measures. Therefore, much of its problems are self-imposed as a result of short-sighted evasion of responsibility. Now, it has little choice but to act under the MS4 permit and to leave it up to county taxpayers to fund the restoration of waterways degraded by poor development standards.

Funding

In the county government's defense (al-

though not the taxpayers), failure to address long-term consequences and costs has been standard across the state. Prince George's County is not alone in this regard, and almost all counties have complained about the cost of solving the problems they have collectively created. The state government worked to address this problem in the just completed General Assembly session, approving a stormwater utility fee that counties can impose on property owners. Thus, through this new "taxing" authority, counties will have access to funds to address their historical shortcomings.

The Prince George's Group intends to continue working with local and regional watershed groups to ensure that the state requires the county to adopt a comprehensive and effective WIP to address the Chesapeake Bay pollution diet, and, even more importantly, that the state imposes effective conditions in the new MS4 permit. The WIP and the MS4 permit are two separate, but interrelated pro-

grams. One major distinction is that the MS4 permit has legal obligations under the Clean Water Act and enforcement mechanisms that environmental groups can press EPA and MDE to act upon, if the county fails to live up to its obligations.

We are hopeful that the responsible county officials will begin a new course of utilizing available funding to identify existing problems, enforce existing laws, and plan and implement effective and efficient restoration methods. If so, Prince George's County waterways could be transformed in ways that would have been unimaginable a few years ago. Quite simply, this is a watershed moment. ■

Tom Dernoga is a member of the executive committee of the Prince George's County Group.

How Growing Smarter Can Achieve Clean Water Goals

(continued from page 11)

sprawl growth covering most of the county, we needed to pursue a substantially different direction in land-use planning.

In the face of all this, the intrepid Charles County environmentalists, with assistance from the Sierra Club Maryland Chapter, very successfully mobilized during the public input phase of the comprehensive plan revision. The result was a commendable comprehensive-plan scenario that could, with changes here and there, shift Charles County's land-use plan to a smart growth direction and substantially increase protection for natural resources.

In the meantime, however, a segment of the public has become prey to the pro-sprawl growth forces in the county. This segment is now supporting the Planning Commission's dismantling

of the results of the public input process and the reinstatement of business-as-usual land use with its negative effects on people, rivers and the Chesapeake Bay.

Saving Charles County's rural character and its streams, and improving the quality of life of its residents, will require a huge and well-conceived grassroots mobilization. If you want to get involved or get more information, please contact Claudia Friedetzky, Conservation Representative, Maryland Chapter of the Sierra Club at claudia@mdsierra.org, 301-277-7111, or Bonnie Bick, Conservation Chair of the Southern Maryland Group, bonnie.bick@mdsierra.org, or 240-493-4919. ■

Claudia Friedetzky is the Conservation Representative for water issues for the Maryland Chapter.

Green Jobs

The Future of Good Jobs Is Green

The jobs picture and the future looked green to the Sierra Club's Maryland Delegation to the fifth annual Good Jobs Green Jobs (GJGJ) conference, with a focus on wind energy and other renewable energy sources and job opportunities in renewable energy, solar power and forest products industries. The GJGJ conference is co-sponsored by BlueGreen Alliance, the national Sierra Club, and numerous labor organizations and businesses. This year the conference has been held regionally—the Southeast, West Coast, Northeast, and Midwest—in order to encourage new and diverse attendance.

The conference starts off with a plenary session featuring well-known speakers, and then dives into informative workshops such as “Oil Spills, Twisters, Hurricanes and Other Hazards: Responding to Workplace and Environmental Disasters,” “Defending Jobs and the Environment in a Right-to-Work State: How the Sierra Club and CWA are Building a Grassroots Movement in Texas,” “Why Green is Your Color: A Woman's Guide to a Sustainable Career,” and “Young People and the Green Economy.”

Here is a sampling of reports from the Sierra Club Maryland delegation, who attended the Philadelphia conference in early April:

Sarah Peters, volunteer with the Legislative committee and at the College Park office: What I appreciated the most was learning about the financial and technical aspects of wind energy, such as the difference between the production tax credit and the investment tax credit. The conference inspired me to learn me about the production process of renewable energy projects. To understand how these projects affect communities and policymakers, one must understand this process.

Larry Tierney, Southern Maryland

Group: I am very grateful to the Sierra Club for the opportunity to participate in the GJGJ Conference. Thank you again for including me. I attended most of the sessions on Renewable and Energy Efficiency, my primary area of interest.

I most enjoyed attending the workshop on offshore wind chaired by Sierra staffer Dave Hamilton. I found each of the four speakers very interesting, especially the comments made about Maryland's Offshore Wind Bill. There was a wonderful briefing about the offshore wind industry in Northern Germany which showed a lot of detail on turbine installation in the sea.

I was pleased to learn about the BlueGreen alliance. I was not previously aware of the collaboration of the Sierra Club with Steelworkers and other unions in building a better future. It should give us all more power supporting green issues together.

I learned a good bit about how one of the union locals in New York City provides training for their members on a variety of environmentally friendly systems in both new and old buildings. It looks like we might eventually win over Americans one at a time with green jobs.

There were talks on the solar labor market and the forest-products industry as well, which added to my understanding of the broad range of green jobs that are improving our country, our economy and the environment, as well.

Bravo, to all of those who coordinated and who assisted in making this conference a treat for the attendees!

As a result of a discussion I had with one of the speakers, I am planning to buy 100% wind power for my home. I am researching this issue now and hope to nail this down soon. Thank you.

Alice Ortuzar, Montgomery Group: I am busy applying for jobs and made lots of contacts there. I'm excited to review a

(continued on page 16)

Maryland Chapter Leaders

EXECUTIVE COMMITTEE

David O'Leary, Chapter Chair, At-Large Del. (2012)
301-580-8673
dave.oleary@mdsierra.org

Ron Henry, Vice Chair, At-Large Del (2012)
443-474-7449
ron.henry@mdsierra.org

Karen Moody, At-Large Del. (2011)
443-789-1638
karen.moody@mdsierra.org

Rich Reis, At-Large Del. (2011)
301-384-0540
rich.reis@mdsierra.org

Baird Straughan, At-Large Del. (2011)
410-757-4134
baird.straughan@mdsierra.org

David Hauck, At-Large Del (2012)
301-270-5826
david.hauck@Maryland.sierraclub.org

David Prosten, Anne Arundel Del.
dprosten@yahoo.com

Dan Andrews, Catoclin Del.
410-857-4129
dooze@qis.net

Don Grace, Eastern Shore Del.
don.grace@mdsierra.org

Kathleen Sheedy, Howard Del.
410-505-4528
kathleen.sheedy@maryland.sierraclub.org

David Sears, Montgomery Del.
david.sears@maryland.sierraclub.org

Alex Hirtle, Pr. Geo's Del.
chair.pg@mdsierra.org
301-927-2105

Marc Imlay, Southern MD Del.
301-283-0808
marc.imlay@maryland.sierraclub.org

Sam White, Western MD Del.
301-264-4162
sam.white@maryland.sierraclub.org

GROUP CHAIRS

ANNE ARUNDEL GROUP
David Prosten
410-263-6341 or 410-703-0847
dprosten@yahoo.com

CATOCTIN GROUP (CARROLL, FREDERICK, WASHINGTON COUNTIES.)
Dan Andrews
410-857-4129
dooze@qis.net

EASTERN SHORE GROUP (CECIL COUNTY AND EASTERN SHORE COUNTIES)
Don Grace
410-352-3722
don.grace@mdsierra.org

GREATER BALTIMORE GROUP (BALTIMORE CITY AND COUNTY, HARFORD COUNTY)
Chris Yoder
410-466-2462
cncyoder@comcast.net

HOWARD COUNTY GROUP
Ken Clark
301-725-3306
kenclark7@live.com

MONTGOMERY COUNTY GROUP
Alvin Carlos
alvin.carlos@maryland.sierraclub.org

PRINCE GEORGE'S COUNTY GROUP
Alex Hirtle
chair.pg@mdsierra.org
301-927-2105

SOUTHERN MARYLAND GROUP (CALVERT, CHARLES, AND ST. MARY'S COUNTIES)
Frank Fox
301-884-8027
ff725@yahoo.com

WESTERN MARYLAND GROUP (ALLEGANY AND GARRETT COUNTIES)
Sam White
301-264-4162
sam.white@Maryland.Sierraclub.org

ISSUES CHAIRS

David O'Leary, Conservation Chair
301-580-8673
dave.oleary@mdsierra.org

continued ➞

Maryland Chapter Leaders

←continued

Chris Yoder, Conservation Co-Chair

410-466-2462

Chris.Yoder@mdsierra.org

Sam White, Agriculture, CAFO, True Cost of Food (True Cost of Food) Chair

301-264-4162,

sam.white@maryland.sierraclub.org

Cliff Terry, Campaign Finance Reform Chair

410-944-9477

cliff.terry@maryland.sierraclub.org

Charlie Garlow, Air Quality Chair

301-593-9823

charlie.garlow@juno.com

Marc Imlay, Biodiversity, ESA, Invasive Species, and Habitat Stewardship Chair

301-283-0808

marc.imlay@maryland.sierraclub.org

David O'Leary, Global Warming, Cool Cities Chair

dave.oleary@mdsierra.org

Rich Reis, Energy Chair

301-384-0540

rreis@verizon.net

Bonnie Bick, Environmental Justice Chair, Mattawoman Campaign Chair

240-493-4919

bonnie.bick@maryland.sierraclub.org

Caroli Mullen, Blue Green Alliance

410-366-6953

carolimullen@verizon.net

Chris Yoder, National Wilderness/Refuges/Mining Chair

410-466-2462

Chris.Yoder@mdsierra.org

Kim Birnbaum, Pesticides Chair

410-379-1075

Kim.Birnbaum@maryland.sierraclub.org

Cliff Terry, Population Chair

410-944-9477

cliff.terry@maryland.sierraclub.org

Sam B. Hopkins, Population Vice Chair

410-554-0006

sbh@hopkinsandassociates.com

Earl Bradley, Right Whale

410-224-3236

earlbradley@verizon.net

Fred Tutman, Stormwater Mgmt Chair

301-249-8200 ext 7

fred@paxriverkeeper.org

Ed Merrifield, Water Quality Chair

202-222-0707

ed@potomacriverkeeper.org

Carol Nau, Watershed Chair

nau.carol@gmail.com

ADMINISTRATIVE CONTACTS

Ron Henry, Council Del.

443-474-7449

ron.henry@mdsierra.org

Baird Straughan, Fundraising Chair

410-757-4134

baird.straughan@mdsierra.org

Legislative Chair (Vacant)

Jan Hoffmaster, Outings Chair

jan.hoffmaster@mdsierra.org

Mike Pretl, PAC Treasurer

443-323-3060, 410-562-5292c

mikepretl@aol.com

David Hauck, Political Chair

301-270-5826

david.hauck@Maryland.sierraclub.org

Charlie Garlow, Political Compliance Officer

charlie.garlow@juno.com

Steve Lonker, Postmaster

postmaster@maryland.sierraclub.org

Nancy Hammond, Treasurer

nancy.hammond@mdsierra.org

Laura Glass, Assistant Treasurer

laura.glass@mdsierra.org

Rick Andrews, Webmaster

andrews4art@yahoo.com

ACTIVITIES SECTIONS CONTACTS

John Genakos, Baltimore Outdoor Sierrans

BaltimoreSierrans@gmail.com

Bob Burchard & Nicole Veltre

Baltimore Inner City Outings Chairs

baltimoreinnercityoutings@gmail.com

CHAPTER STAFF

Josh Tulkin, Chapter Director

josh.tulkin@sierraclub.org

301-277-7111o / 301-244-9405c

Laurel Imlay, Chapter Coordinator

laurel.imlay@sierraclub.org

301-277-7111

Claudia Friedetzky, Chapter Conservation Representative (water issues)

claudia.friedetsky@sierraclub.org

301-277-7111

Chris Hill, Chapter Conservation Representative (energy issues)

chris.hill@sierraclub.org

301-277-7111

Vidal Hines, Prince George's Conservation Project Coordinator

vidal.hines@sierraclub.org

301-277-7111o / 301-247-5577c

Office: 7338 Baltimore Avenue, #111
College Park, MD 20740

Tel: 301-277-7111, Fax: 301-277-6699

http://maryland.sierraclub.org



Explore, enjoy and protect the planet



VOLUNTEER with US!

Sierra Club offers many different types of volunteer opportunities for anyone looking to become more involved in helping to protect the planet. By volunteering, you will be given the exciting opportunity to contribute to the betterment of our world and our future. So get active, meet new people, and have some fun!

Name _____

Address _____

City _____ State _____

Zip _____ Country _____

Home Phone (____) _____

Work Phone (____) _____

Fax (____) _____

Email _____

Please select the activities that interest you.

- ☐ Attend and/or Testify at a Hearing
- ☐ Door Hanger/Literature Delivery
- ☐ Fundraising
- ☐ Host Club Leaders Visiting My Area
- ☐ Lead an Outdoor Activity or Inner City Outing
- ☐ Perform Legal Services
- ☐ Phone Calling
- ☐ Media Relations
- ☐ Signature Gathering
- ☐ Work at Club Booths at Fairs and Events
- ☐ Use My Vehicle to Transport People and Supplies
- ☐ Work in the Club office
- ☐ Work at a Mailing Party
- ☐ Trail Maintenance, Tree Planting or Other Outdoor Activity
- ☐ Volunteer Coordination
- ☐ Work on the Web Site
- ☐ Write Letters

Please list your top three conservation issues:

- 1) _____
- 2) _____
- 3) _____

Mail to: Maryland Chapter/Sierra Club
7338 Baltimore Ave., Ste. 111
College Park, MD 20740

Tick Talk

By Fred Sypher—Spring is here and you want to get outside and hike in the woods or work in the yard, just enjoying the great outdoors before the bugs come out. Not so fast! First, let's talk ticks, specifically the black-legged tick (*Ixodes scapularis*) that most people call a deer tick. Black-legged ticks can carry three diseases including Lyme disease, the leading tick-

a tenth of inch long, lay eggs in May, then die. The eggs hatch into larvae in July. August is the most active month for larvae questing for a host mammal. Larvae, which are the size of a punctuation period, climb up on low grass stems and wait for a small passing host. They prefer the white-footed mouse, but they'll latch on to ground-feeding birds, rabbits, and human ankles. Fortunately, deer tick larvae don't carry diseases, but they become

aren't any ticks out there on that warm, early spring day. When adult ticks are on the hunt they climb up to a height of three to five feet on brush and grasses and wait to snag a ride and a meal on a white-tailed deer, but any mammal will do, including you, so be prepared. Wear stop-rip nylon hiking clothes to reduce the ability of the ticks to snag your clothing. Tuck pants into socks and spray with repellent. Use repellents that specifically say they are effective against

ticks. Repellents containing permethrin are preferred for spraying clothes and repellents containing DEET are recommended for use on exposed skin. An alternative is a repellent containing oil of lemon eucalyptus but it is not long lasting. When you get

home shower and scrub well. Placing clothes into a dryer on high heat effectively kills ticks. Examine your body for ticks not scrubbed off in the shower and remove them. It takes 24 to 36 hours for a tick to transmit bacteria to your blood so prompt inspection is important. Removing ticks within 24 hours of attachment generally prevents disease transmission; however, if you develop a localized rash after spending time in the woods go to a doctor. Anyone bitten by a tick should be watched closely for at least 30 days.

Don't let ticks scare you out of the woods; just be aware that deer ticks are out all year round take precautions every time you go into woods or high grasses. Yes, the odds are small that you will contract Lyme disease, but you buckle your seat belt every time you go out in your car, don't you? I thought so. For more

information visit the CDC site at www.cdc.gov/lyme or the American Lyme Disease Foundation site at www.aldf.com. ■

Fred Sypher is a Carroll County Weed Warrior with an enormous stash of insect repellent and well-sprayed hiking clothes.

The Future of Good Jobs Is Green

(continued from page 14)

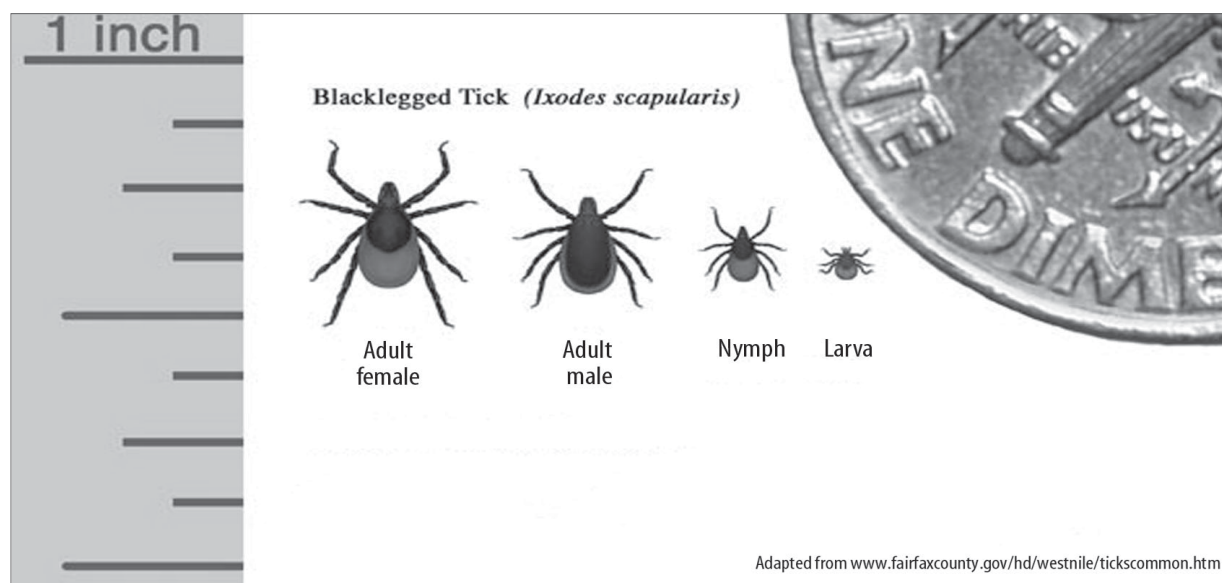
book about restoring our manufacturing base that someone at a union table gave me and will submit it to the next issue of the Chesapeake.

Chris Hill, Sierra Club Maryland Chapter Conservation Representative / Beyond Coal: What a great conference, surrounded by like-minded environmentalists and labor. It was great to see such a good contingent of Sierra Club folks. I loved getting to know not only our very own Maryland Sierrans, but also other Sierra Club folks from the neighboring states.

My favorite workshop was one about toxins in our communities. It had a great environmental justice component to it.

Next year, Good Jobs Green Jobs will be back in Washington, DC. Hope you can be there with us. Check the website at www.greenjobsconference.org for more updates. ■

In 2009, Laurel Imlay, Maryland Chapter Coordinator, attended the Good Jobs Green Jobs conference, and was particularly excited by a trash workshop. Her article about it appeared in the Summer 2009 issue of Chesapeake as "Green Jobs Conference Promotes Recycling." Check it out at our website: http://maryland.sierraclub.org/newsletter/archives/2009/06/a_007.asp.



Adapted from www.fairfaxcounty.gov/hd/westnile/tickscommon.htm

associated disease in the United States.

The Centers for Disease Control and Prevention (CDC) received reports of some 30,000 cases of Lyme disease in 2010, but the CDC believes that only ten percent of cases are reported, which means there were likely more than 300,000 cases of Lyme disease country wide. In Maryland there were 1,617 cases reported in 2010, meaning there were probably over 16,000 cases. Considering that most people who are bitten by a tick do not get Lyme disease, a lot of people are being bitten! Lyme disease, when properly diagnosed, can be treated with two to four weeks of antibiotics, but wouldn't you rather avoid that?

White-footed mice and white-tailed deer are the tick's preferred hosts. More mice and deer lead to more cases of Lyme disease in humans. The life cycle for these ticks is two years. Adult female ticks, only

carriers by feeding on infected host mammals. After ingesting the blood of an infected host, larvae drop off and molt into infected nymphs which appear in the spring of the following year, just in time to look for tasty hikers. Like the larvae, nymphs feed and drop off, then molt into adults that appear in the fall. Adult females need to feed in order to lay eggs the next spring, so they don't hibernate and are active until cold weather. They hide in leaf litter and can be active on warm winter days. Adults can be more potent disease carriers as they may have fed on infected hosts as larvae and nymph, and harbor the Lyme disease bacteria, *Borrelia burgdorferi*. The ticks can inject infected saliva as they feed.

What does all this mean to you? It means that black-legged ticks are in the woods all year. Late fall is thought of as prime tick time, but don't think there

Habitat Stewardship Outings

Multi-County

THE NATURE CONSERVANCY

The Conservancy's volunteer Weed Watchers explore our preserves and map new occurrences of invasive plant species that threaten our native flora. Our weed management philosophy emphasizes preventing new weed infestations to minimize the impact and expense of weed control.

The second part of this program is promptly controlling new weed infestations. That's where Weed Busters come in. Control may include pulling, cutting, digging roots, mowing, or applying herbicide to foliage or cut stumps. In some cases, we have enough advance notice to describe the projects on this website and in our volunteer newsletter, along with our other outdoor projects. In other cases, we won't have enough time.

We've developed a list of volunteers who want to be contacted about these short-notice field projects. If a given workday does not fit your schedule, we'll understand and hope to see you at the next one! We conduct 6-10 weed control workdays throughout Maryland in a given growing season (April through November), and we hope that people on the Weed Busters list will be able to participate in two or more workdays per season.

More Information: If you'd like to be notified about these field projects, please send an e-mail to dbarber@tnc.org or call Deborah Barber, Volunteer Coordinator at (301) 897-8570.

POTOMAC CONSERVANCY

Potomac Conservancy's Growing Native is a year-round volunteer project that helps to restore and protect rivers and streams in the

Potomac River watershed. Volunteers of all ages and backgrounds participate in Growing Native by collecting native tree seeds and planting trees along streams and rivers across the region.

Not only are participants creating forests for tomorrow, they are also learning the important connection between healthy, forested lands and clean waters

Since Growing Native's inception in 2001, nearly 30,000 volunteers collected more than 94,000 pounds of acorns, walnuts, and other hardwood tree seeds. These seeds have generated seedlings that will be used to restore sensitive streamside lands.

Growing Native's efforts culminate in the fall, when we do large scale outreach to individuals, community groups, and local businesses to get involved while seeds are dropping on the ground! We invite people to volunteer by acting as Growing Native ambassador, seed collection event coordinators, and Drop-off site coordinators.

More information: Contact Kate McNamee, Outreach Coordinator, Potomac Conservancy, 8601 Georgia Avenue, Suite 612, Silver Spring, MD 20910, 301-608-1188 x211. Check our website at www.potomac.org.

Allegany

FROSTBURG STATE UNIVERSITY ARBORETUM

Volunteer for one of the FSU Arboretum Workdays! The FSU arboretum would never be able to survive if it wasn't for the help of its many dedicated volunteers. Volunteers have given their time, money, and hard work to help rid the arboretum of invasive gardens, and perform general maintenance.

Programs such as the Allen HallSTARS! and Americorps have also made this possible. Many grants from the Chesapeake Bay Foundation have also funded our efforts.

Directions: Meet at the gazebo in the stadium parking lot, ready to work outside.

Note: Tools and gloves provided.

Contact: Dr. Sunshine Brosi, Ethnobotanist, Department of Biology, sibrosi@frostburg.edu, 301-687-4213; Dr. Daniel Fiscus, Forest Ecologist, Department of Biology, dafiscus@frostburg.edu, 301-687-4170.

Anne Arundel

FORT MEADE ARMY INSTALLATION

Sponsoring Organization: Fort Meade

Dates and Times: Second Saturdays, monthly, 10:00am

Help remove Japanese stilt grass, English ivy, garlic mustard, tree of heaven, multiflora rose, Japanese honeysuckle, common privet, phragmites, Asiatic tearthumb, etc. Prior to removing the weeds, there will be a short training session on identification, and control techniques of non-native invasive plants.

People of all ages, backgrounds and interests are invited to spend a few hours outdoors, hand-pulling some non-native plants while learning about the differences between native and non-native invasive plants and how these invasives adversely impact our natural ecosystem.

Directions: Take Route 175 East from the 295 Baltimore Washington Parkway. Turn right onto Reece Road

to enter the post, immediately turn left onto Ernie Pyle Street, go approximately 1 mile to Llewellyn Avenue, turn left on Llewellyn, then turn right onto Chisholm Avenue, turn left on 3rd Street, turn right on Ross Road and go to 2nd building on the right, Environmental Division Office.

Bring/Wear: Bring hand tools, gloves, lunch and water. Long sleeves and pants recommended.

Contact: Mick Butler, Installation Forester, by phone at 301-677-9188 for the dates starting in spring for the second Saturday of every month at 10 am. Time is flexible if enough volunteers are available. At least three days prior to the event, contact Mick Butler, Installation Forester, by phone at 301-677-9188 or by e-mail at mick.butler@us.army.mil, or contact Sheila Chambers, 301-677-9167 or sheila.chambers@us.army.mil. A list of names should be provided to the forester that will in turn be provided to guard personnel at Reece Road entrance to ensure access on to post.

JUG BAY WETLANDS SANCTUARY

Sponsoring Organization: Jug Bay Wetlands Sanctuary

Spring Stewardship Day

Jug Bay Wetlands Sanctuary consists of over 1500 acres of wetlands, upland forests, meadows, and streams. Stewardship means taking care of the land we all share. Join us to pick up trash that has floated into the marsh, pull invasive weeds, and maintain our native plant gardens.

Date and Time: contact the Sanctuary for dates.

Leaders: Lindsay Hollister and Elaine Friebele

Wear/Bring: Please dress in work clothes (long sleeves and long

continued ➞

Habitat Stewardship Outings

←continued

pants), including boots or shoes that can get wet, and bring work gloves, a bag lunch, a change of clothes and a towel.

Note: Children should be at least 6 years old. Scout troops and community groups are encouraged to participate. Sign up for morning, afternoon, or both.

Contact: Those interested in volunteering should call the Sanctuary (410-741-9330) or e-mail Lindsay at lindsay@jugbay.org.

Adopt-a-plot Program

Dates and Times: Ongoing
Join our team to remove the non-native invasive plants (NIPs) from our forests and nip these NIPs in the bud before they spread and threaten the special habitats and rare plants found on the Sanctuary. Those interested in continuing this effort throughout the year can adopt their very own plot to monitor, map, and manage the invasives.

Contact: Lindsay Hollister, 410-741-9330, rpholl27@aaacounty.org.

Directions: JBWS, 410-741-9330 or www.jugbay.org.

Baltimore City

BALTIMORE CITY RECREATION AND PARKS' URBAN WEED WARRIORS PROGRAM

Become an Urban Weed Warrior! Baltimore City Recreation and Parks has started its own Urban Weed Warriors program. Training will include weed ID, removal techniques, and native alternatives to exotic flora. The training will lead to certification as a weed warrior, whereby volunteers can work on their own to help control non-native invasives in City parks. There will also be information about organized weed-pull activities throughout the summer.

Weed Warrior activities are scheduled throughout the year at Cylburn Arboretum, Herring Run Park, Leakin Park, and Wyman Park.

Contact: For all Baltimore City programs, contact Kimberley Mead at Kimberley.Mead@baltimorecity.gov, 410-396-0359 for more information or directions.

BALTIMORE HARBOR

See Blue Water Baltimore

BLUE WATER BALTIMORE

Blue Water Baltimore was formed through the recent merger of the Herring Run, Jones Falls, Gwynns Falls, and Baltimore Harbor Watershed Associations and the Baltimore Harbor Waterkeeper. Includes Meadowood Park, Druid Hill Park, Stony Run Park, Western Run Park and Wyman Park.

Blue Water Baltimore is seeking volunteers to help liberate our native forests from invasive plants. Your work will be critical both for the success of reforestation projects and for the conservation of Baltimore's mature tree canopy. Plus, you'll get a great workout!

Bring: We will provide all training, tools, and work gloves, but please dress appropriately for the weather. Work boots and a pair of thin, warm gloves that you can wear under work gloves (during the cold season) are highly recommended.

More Information: or to sign up, please contact Debra at dlenik@bluewaterbaltimore.org or at 410-254-1577 x100.

DRUID HILL PARK

See Blue Water Baltimore

GWYNNS FALLS

See Blue Water Baltimore

STONY RUN PARK

See Blue Water Baltimore

WESTERN RUN PARK

See Blue Water Baltimore

WYMAN PARK

See Blue Water Baltimore

Baltimore Cnty

BLUE WATER BALTIMORE

Blue Water Baltimore was formed through the recent merger of the Herring Run, Jones Falls, Gwynns Falls, and Baltimore Harbor Watershed Associations and the Baltimore Harbor Waterkeeper. Includes Meadowood Park, Druid Hill Park, Stony Run Park, Western Run Park and Wyman Park.

Blue Water Baltimore is seeking volunteers to help liberate our native forests from invasive plants. Your work will be critical both for the success of reforestation projects and for the conservation of Baltimore's mature tree canopy. Plus, you'll get a great workout!

Bring: We will provide all training, tools, and work gloves, but please dress appropriately for the weather. Work boots and a pair of thin, warm gloves that you can wear under work gloves (during the cold season) are highly recommended.

More Information: or to sign up, please contact Debra at dlenik@bluewaterbaltimore.org or at 410-254-1577 x100.

CROMWELL VALLEY PARK

Sponsoring Organization:

Baltimore County Recreation and Parks

Dates: second Saturday of each month, 9:00am - 12:00pm. Rain date is the following day, at the same time.

Cromwell Valley Park is a wonderful rural park just outside the Beltway on Cromwell Bridge Road. Quietly and slowly, parts of CVP are being transformed with the help of enthusiastic volunteers. The Habitat Restoration Team has been working for several years to remove the unwanted invasive nuisance plants, and to replant some areas with native plants suitable for this particular place. We want the wild areas of the Park to be as healthy and friendly to wildlife as possible after three centuries of industrial and agricultural activity and more recent suburbanization. The areas we have worked on in recent years, Beehive Woods and Dogwood Hill, are looking much better, free of major invasives, with new trees and shrubs gaining a foothold. A new project last year was the installation of a deer exclusion fence demonstration to show the effects of excessive deer browsing in the forest.

We have been greatly helped by groups from local schools and businesses; we always welcome groups who want to help. But the consistent work force is one that meets at the Sherwood House each month on the second Saturday at 9 am and we work until 12 pm. We only cancel if there is too much rain and then the rain date is always the next day (Sunday).

Please join us. We provide tools, but you should wear appropriate clothing with long sleeves for working in the woods. There remains a lot to do. You will end the morning with the satisfaction of knowing you made a positive contribution to conserving the natural environment—and we guarantee a good workout!

Wear/Bring: Suitable protective clothing.

continued →

Habitat Stewardship Outings

←continued

Contact: Carl Koprowicz, Chair, Habitat Restoration Team, 410-887-2503, Monday – Friday, 9:00am - 2:00pm, or birders1@netzero.com. You may also call to volunteer to participate in trail maintenance outings at cvpark@bcpl.net. Volunteers are placed on an e-mail notify list.

More Information: The park office is at 410-887-2503, info@cromwellvalleypark.org. Check out the park's website at www.cromwellvalleypark.org.

GUNPOWDER VALLEY CONSERVANCY

Sponsoring Organization:

Gunpowder Valley Conservancy

Dates: see our calendar of events on our website at www.gunpowderfalls.org/.

Tree Maintenance Volunteers Needed!

The Gunpowder Valley Conservancy (GVC) is seeking volunteers, ages 12 and up, to adopt a tree planting site or be a helper on tree maintenance days in the spring. You can help to maintain some of our 4,000 trees planted in the last two years.

Invasive plants must be removed surrounding the trees; stakes and shelters must be secured; dead trees need to be marked; and watering may need to be done.

Contact: If you are interested in being a tree steward, contact Peggy Perry, Program Director for the GVC, at 410-668-0118 or pperry@gunpowderfalls.org.

More information: Web site, www.gunpowderfalls.org/.

HERRING RUN

Sponsoring Organization: Blue Water Baltimore

Dates: Ongoing

You will be working in city parks removing multi-flora rose, honeysuckle, English ivy, Japanese knotweed, oriental bittersweet and more! Work consists of regular weed-pull parties using shears, loppers, pick mattocks, and good 'ole muscles.

Directions: Parks throughout Herring Run watershed. See calendar at www.bluewaterbaltimore.org/events/ for directions to specific events.

Wear/Bring: Water, durable clothes w/long sleeves, boots, and sunscreen. We'll provide gloves and tools.

More information:

www.bluewaterbaltimore.org

JONES FALLS

Sponsoring Organization: Blue Water Baltimore.

Dates: Check online calendar for dates.

Activities may take place at Meadowood Park, Druid Hill Park, Stony Run Park, Western Run Park and Wyman Park.

More information: Web site: www.bluewaterbaltimore.org

MEADOWOOD PARK

See Blue Water Baltimore

PRETTYBOY RESERVOIR

Sponsoring Organizations:

Prettyboy Watershed Alliance

Dates: Contact for time and dates.

Invasive Vine Cutting at Prettyboy Reservoir

For those who love hiking and animal-watching, Prettyboy Reservoir provides habitat for a variety of forest wildlife species, including white-tailed deer, wild turkey, rabbit, squirrel, and songbirds.

Meet for a couple hours of cutting invasive vines along the CCC fireroads at Prettyboy Reservoir.

Directions: Meet at the parking lot on Tracey Store Rd. Reach Tracey Store Rd. by getting off I-83 north at the Mt. Carmel Rd. exit and heading west. Turn right on Prettyboy Dam Rd. Turn left on Tracey Store Rd. After passing a Prettyboy Reservoir sign and a couple of fireroads on the right and crossing a creek, park in the dirt parking lot on the right side of the road.

Bring: Clippers, loppers, hand saws, and gloves will be available, or you may bring your own.

Contact: Nancy L. Shaper, nshaper@jhmi.edu

Calvert

AMERICAN CHESTNUT LAND TRUST

Dates and Times: Every Wednesday: 10am – 12pm (October-April) and 9am - 11am (May-September); call for more dates

Join us for our extensive Non-Native Invasive Plant Removal program in one of the last pristine watersheds on the Western Shore of the Chesapeake Bay. Work as a team or individually; includes training, tools, water, and gloves.

Contact: Liz Stoffel, Land Manager, 410-414-3400 or land@acltweb.org.

More information: American Chestnut Land Trust, Post Office Box 204, Port Republic, MD 20676. Phone: 410-586-1570. Fax: 410-586-0468. Web: www.acltweb.org

HELLEN CREEK FOREST AND WILDLIFE PRESERVE

Sponsoring Organization: Cove Point Natural Heritage Trust

Leader: Bob Boxwell

Hellen Creek Forest and Wildlife Preserve is 50 acres of stream and ravine along Hellen Creek. We have over 25 species of trees including hemlocks and we are adjacent to The Nature Conservancy's Hemlock Preserve.

Join us for a quick tour of the preserve before we get down to the ongoing work of invasive plant removal and native wildflower plantings. Learn how you can improve your own backyard to make it friendlier to the environment and take a native plant home for your garden. We will provide gloves and tools, and refreshments.

Location: Hellen Creek Forest and Wildlife Preserve, 11785 Clifton Drive, Lusby MD 20657.

Directions: The Hellen Creek Forest and Wildlife Preserve is located off Clifton Drive in Lusby. From Washington, take Rt. 4 south to Calvert County. Turn right at the second light in Lusby, which is Coster/Mill Bridge Road. Take Coster Road less than 1 mile to Clifton Drive on the right. Follow this to the driveway on the left with the number 11875 posted. Follow to the end where you will see the Cove Point Natural Heritage Trust sign.

Wear: Sturdy clothes and shoes.

More info: To receive updates about workdays, e-mail or call Bob Boxwell, Executive Director, Cove Point Natural Heritage Trust, P.O. Box 336, Lusby, MD 20657, 410-394-1300 (office), 410-610-5124 (cell), or cpnht@comcast.net. Web site: www.covepoint-trust.org

Caroline

ADKINS ARBORETUM

Dates: Ongoing

Adkins Arboretum is a 400-acre

continued →

Habitat Stewardship Outings

←continued

native garden and preserve on the Tuckahoe River adjacent to Tuckahoe State Park. The Arboretum trains volunteers to assist staff in removing invasive non-natives. Workdays are flexible. Volunteers learn how to identify invasive plants and the best protocols for managing specific invasive species. In addition, the Arboretum's native meadows and wetland are managed by manually removing shrubs and trees.

Contact: Ginna Tiernan, gtiernan@adkinsarboretum.org, 410-634-2847 (x27).

More information: Eleanor Altman, ealtman@adkinsarboretum.org, 410-634-2847 (x22). Web site: www.adkinsarboretum.org

Carroll

CARROLL COUNTY WEED WARRIORS

Sponsoring Organization: Carroll County Forest Conservancy District Board

Become a Weed Warrior! Help the environment! Have "fun with a purpose" outdoors!

After the loss of habitat, the takeover by invasive exotic plants causes the next most harm to our native species. These invasive weeds crowd out native plants. Our native butterflies and animals also suffer when the native plants they depend upon are no longer around. Weed Warrior training and weed removal events are planned for spring. Check the calendar for dates and times.

More Information: contact Carolyn Puckett at 410-876-1995 or e-mail cpuck@comcast.net. Also, see website <http://ccfb.gardentotable.net>. E-mail

Carolyn to be added to their e-mail list announcing weed warrior activities.

Charles

CHAPMAN FOREST AND RUTH SWANN PARK

Sponsoring Organizations: Sierra Club, Chapman Forest Foundation

Dates and Times: Usually the first Sunday and following Saturday, monthly, 10:00 am–4:00 pm

Help remove invasive non-natives from the 200-acre Swann Park and 800-acre portion of Chapman Forest designated Chapman State Park. There will be time for plant identification and a beautiful beach lunch. Learn about best season for species, wet soil condition for pulling, extent of area of natives seen rescued, delayed gratification, targeted use of herbicides, and matching funds for staff to do what volunteers find hard to do.

Non-native invasive plant removal will reach maintenance phase following a major work effort at each site in the Mid-Atlantic region and around the world for about five to seven years to remove the massive populations of species.

Regular stewardship projects are conducted in all seasons including winter, early spring, late spring, summer, and late summer. This high-intensity program is followed by a low-intensity annual maintenance program for plants we have missed, plants emerging from the seed bank, and occasional plants migrating in from neighboring areas.

Directions:

Sundays: Meet at main gate of Chapman Forest. Take the Washington Capital Beltway to Indian Head Highway (MD 210) south toward Indian Head (from VA

Exit 2; from MD Exit 3A). At 14 miles, continue through on MD 210 through the traffic light at MD 227 (This crossroads is the center of the community known as Bryans Road). At about 1.1 miles past the light, veer to the right onto Chapmans Landing Road. Follow for 1.6 miles to the gated entrance of Mount Aventine and Chapman State Park.

Saturdays: Meet at Ruth B. Swann Park-Potomac Branch Library parking lot, 20 miles south of Washington Beltway (I-495) on Rt. 210 (Indian Head Hwy), about a mile and a half south from the traffic light on Rt. 210 in Bryans Road. Give yourself 30 to 40 minutes from the Beltway.

Carpool Info: Meet at Sierra Club Md. Chapter office at 9 a.m.; return 5 p.m. Call Laurel Imlay at 301-277-7111.

Wear/Bring: Casual clothing, long sleeves and pants, sturdy comfortable walking boots/shoes; gloves are encouraged for these events.

Contact: Marc Imlay, 301-283-0808; call 301-442-5657 (cell) on workdays.

More information: Area information and map can be found at www.chapmanforest.org and www.mattawomanwatershedsociety.org.

Garrett

BEAR PEN WILDLANDS, SAVAGE RIVER STATE FOREST

Sponsoring Organization: Savage River Watershed Association

Leaders: Ron Boyer & Liz McDowell

Dates and Times: check for dates

Battling "Botanical Bullies" in the Bear Pen Wildlands

Adult volunteers are needed to continue control efforts of Japanese spiraea in the Bear Pen Run area of Savage River State Forest. Bear Pen is designated as a Type 1 Wildland and like other natural areas around the

state is threatened by a variety of exotic invasive species. Kerrie Kyde, Invasive Plant Specialist with the Maryland Wildlife & Heritage Service, is providing technical support. Wade Dorsey, Savage River State Forest acting manager, is providing work tools. Mary Ironside, Big Run & New Germany State Park manager, is providing free camping the night before for any out-of-town volunteers. The Savage River Watershed Association is coordinating the project and providing snacks and drinks for volunteers.

For more details or to volunteer: E-mail Savage River Watershed Association at SRWAcordinator@gmail.com or call Ron Boyer, SRWA invasive species removal coordinator, at 301-895-3686.

Harford

OTTER POINT CREEK ANITA C. LEIGHT ESTUARY CENTER

Date/Times: contact for more information.

Invasinators! Enjoy pink lady's slippers and native orchids in upland and wooded swamp. Become a part of the volunteer team of invasive plant removers and native plant restorers. Learn why non-native invasive plants are a threat to our ecosystem, how to identify problem plants, and removal and restoration strategies.

Participants receive an "Invasinators" T-shirt after attending two work days.

Wear: Sturdy shoes, long sleeves, and work gloves for fieldwork in the Reserve each meeting date.

Location: Anita C. Leight Estuary Center, 700 Otter Point Road,

continued →

Habitat Stewardship Outings

←continued

Abingdon, MD 21009.

Contact/Registration Info: Please call Kriste Garman, 410-612-1688 or register through the web, www.otterpointcreek.org.

Howard

HOWARD COUNTY CONSERVANCY

The Habitat Restoration Work Group works on projects such as removing unwanted invasive nuisance plants, replanting and maintaining plantings areas with native plants, stream bank restoration, deer protection, erosion control as well as general trail maintenance.

Location: Howard County Conservancy, 10520 Old Frederick Road, Woodstock, MD 21163.

Bring: We provide tools, but you should wear appropriate clothing with long sleeves for working in the woods.

Note: All levels of experience are welcome. In case of inclement weather, call the day of the event to see if we are still meeting. Check website calendar for events:

www.hcconservancy.org

Contact: Tabby Fique, Land Manager/Easement Coordinator, Howard County Conservancy, 410-465-8877 ext. 109, tabby.fique@hcconservancy.org.

MIDDLE PATUXENT ENVIRONMENTAL AREA

Sponsoring Organizations: Howard County Recreation and Parks and Howard County Master Gardeners

The Conservation Stewardship Project, a joint program of the Howard County Recreation & Parks and the Howard County Master Gardeners, targets the problem of controlling invasive, exotic species in

the Middle Patuxent Environmental Area. Volunteer work dates occur monthly from March through November, skipping July & August. Each date includes an educational component concerning the target invasive species or target work area for the day.

See the calendar on this website for dates and times.

Driving Directions:

South Wind Circle Entrance: Route 29 to Route 108W towards Clarksville OR Route 32 to Route 108E. Turn onto Trotter Road to South Wind Circle (about 1 mile). Enter the circle and proceed to trailhead on left (opposite Misty Top Path).

Trotter Road Entrance:

From U.S. 29 at 32: Take 32 west to the Great Star Drive exit. Turn right onto Great Star Drive. Then make a right onto Summer Sunrise.

Continue to Trotter Road and make a left. Proceed about 1 mile to the parking area on the right just beyond the small traffic circle.

From U.S. 29 at 108: Take 108 west and continue past Centennial Lane. Proceed past Harpers Farm Road to Trotter Road and make a left.

Continue to the parking area on the left. If you reach the small traffic circle, you've gone too far.

Wood Elves Way Pathway: From U.S. 29 at 108: Take 108 west and continue past Centennial Lane. Proceed to Harpers Farm Road and make a left. Just after passing Hobbit's Glen Golf Course turn right (at the light) on Willow Bottom Drive. Turn left on Wood Elves Way and proceed 1/2 mile to pathway entrance at the cul-de-sac. Parking is on-street only. Do not block private driveways.

Contact: Master Gardener Aylene Gard at (410) 992-9889 or Jeff Claffy, Assistant Natural Resources Manager, MPEA at (410) 313-6209 or

jclaffy@howardcountymd.gov.

More information about the MPEA: Web site: www.co.ho.md.us/RAP/RAP_MPEA.htm.

PATAPSCO VALLEY STATE PARK

Sponsoring Organization: Friends of Patapsco Valley State Park

Dates: Ongoing

Please join the Friends of Patapsco Valley State Park at the Avalon area to eradicate invasive vines. This is the worst place in the park for non-native vines where they have killed or broken many trees in that area, so we need lots of help.

Wear/Bring: Wear long clothes and bring gloves as there is some poison ivy. If you have them, bring hand pruners and loppers (the 2 handed cutters for larger vines). We will have a few extra tools if you need to borrow some.

Directions: Meet at the Avalon contact station. From I-95 take I-195 east to Rt. 1 toward Elkridge. Turn right immediately on South St. Park entrance is on the left. Proceed 1/2 mile to the contact station.

Contact: Jim Palmer to confirm date/time via email at J.G.Palmer@jhuapl.edu or at 410-948-4796.

More information: www.dnr.state.md.us/publiclands/central/patapscovolunteer.html

PIGTAIL RECREATION AREA (WSSC)

Sponsoring Organization: Washington Suburban Sanitary Commission (WSSC)

WSSC is doing invasive weed removal projects in Prince George's, Montgomery and Howard Counties at their recreation areas along the Patuxent. WSSC provides training, gloves and garden snippers. All invasive weed removal projects are from 9am to noon. Locations

include:

- ♦ Brighton Dam (Montgomery County)
- ♦ Browns Bridge Recreation Area (Montgomery County)
- ♦ Greenbridge Recreation Area (Montgomery County)
- ♦ Pigtail Recreation Area (Howard County)
- ♦ Scott's Cove (Howard County)
- ♦ Supplee Lane Recreation Area (Prince George's County)
- ♦ Triadelphia Recreation Area (Montgomery County)

More Information: Kim Knox, WSSC's Community Outreach Manager, (301) 206-8233, kknox@wsscwater.com, www.wsscwater.com/home/jsp/content/environment-stewardship.faces#cleanup

SCOTT'S COVE (WSSC)

See Pigtail Recreation Area above

WESTERN REGIONAL PARK, GLENWOOD

Sponsoring Organization: Howard County Department of Recreation & Parks

A new stand of purple loosestrife was discovered at Western Regional Park last year and volunteers are needed to tackle the problem!

Contact: Sue Muller, smuller@howardcountymd.gov, 410-313-4697.

Kent

EASTERN NECK WILDLIFE REFUGE

Sponsoring Organization: U.S. Fish and Wildlife Service

Welcome to Eastern Neck National Wildlife Refuge, located at the confluence of the Chester River and

continued →

Habitat Stewardship Outings

←continued

the Chesapeake Bay on Maryland's Eastern Shore. This 2,285-acre island refuge is a major feeding and resting place for migrating and wintering waterfowl. More than 100,000 ducks, geese and swans seek sanctuary here each year, as do migrating and breeding songbirds and shorebirds, and bald eagles that thrive here year-round. Interpretive programs and hikes are offered at this wetland site known for its rare plant life.

Wineberries with garlic mustard: A new type of exotic fruit salad? Not quite. These are two invasive plant species that the U.S. Fish and Wildlife Service would like help removing from Eastern Neck Wildlife Refuge. Garlic mustard is a newly arrived invasive species, and is a management priority. Wineberry is a raspberry-like plant that begins to ripen with fruit between June and July. Garlic mustard is pulled by hand, but a 4-pronged spading fork works best on wineberry.

Wear: High boots (for ticks) are recommended, along with a DEET-based bug repellent, a hat and gloves.

Location: 1730 Eastern Neck Road, Rock Hall, MD.

Contact: Colby Hawkinson, 410-708-1956 or colby_hawkinson@fws.gov

Montgomery

BLUE MASH NATURE TRAIL, LAYTONSVILLE

Sponsoring Organizations:

Montgomery County Sierra Club, Montgomery Bird Club, Montgomery County Department of Environmental Protection

Leader: Mimi Abdu

Dates and Times: Fourth Sunday of each month, 9:00 am – 11:00 am (invasive removal, March – November)

The diverse habitats surrounding the

closed Oaks Landfill attract birds and other wildlife. Bird diversity has dropped off in recent years due to invasive non-native plants. We are partnering with the Department of Environmental Protection and the Montgomery County Bird Club to observe the relationship between bird diversity and habitat, remove invasive plants, and return the area into a birding hot spot.

Bring: Tools are limited so please bring clippers, saws, and loppers. Long sleeves, pants, comfortable walking shoes or boots, hat, water, gloves, and binoculars are recommended.

Directions: Meet at the Zion Road park entrance between Brookeville and Riggs Roads. Go north on Georgia Avenue through Olney and Brookeville. Make a left on Brookeville Road. Make a right on Zion Road. The park entrance is on the left, 1/2 mile from Brookeville Road at 20500 Zion Road before Riggs.

Map and more information: Sierra Club calendar: <http://maryland.sierraclub.org/montgomery/calendar.html>.

Contact: RSVP Mimi Abdu at mimi.abdu@maryland.sierraclub.org or 301-919-6060.

BRIGHTON DAM (WSSC)

See Howard County, Pigtail Recreation Area

BROOKSIDE GARDENS

Sponsoring Organization:

Maryland-National Capital Park and Planning Commission

Weed Warriors are needed for the forested areas surrounding the gardens. You will be given directions so that you may work independently, weekends or weekdays, on your own schedule.

Contact: Stacy Parsons, 301-962-

1417 or stacy.parsons@mncppc-mc.org. Web sites: www.BrooksideGardens.org and/or <http://www.weedwarrior.org>

BROWNS BRIDGE RECREATION AREA (WSSC)

See Howard County, Pigtail Recreation Area

CABIN JOHN LOCAL PARK

Sponsoring Organization: Sierra

Club, Montgomery County Group
Location: Cabin John Local Park (Meet at the MacArthur Blvd. parking lot between 75th St. and Cabin John Parkway.)

Bring: M-NCPPC will provide gloves and pruners, but feel free to bring your own clipper, handsaw, and gloves. Long sleeves, pants, comfortable walking shoes or boots, and water are recommended.

More information: <http://maryland.sierraclub.org/montgomery/> or contact Jeremy Arling at md.sierraclub@comcast.net or 240-398-3635.

GREENBRIDGE RECREATION AREA (WSSC)

See Howard County, Pigtail Recreation Area

LITTLE FALLS STREAM VALLEY PARK

Sponsoring Organization: Little Falls Watershed Alliance (LFWA)

Dates: Ongoing Saturday and Wednesday invasive species workgroups. Usually the first Wednesday and second and fourth Saturdays, but schedule occasionally varies. Please visit our website for schedule: www.lfwa.org/events.

We focus on removing creeping euonymus, Japanese honeysuckle, porcelainberry, English ivy, garlic mustard, etc., from various parts of the park.

Location: Little Falls Stream Valley Park is located between Massachusetts Ave. and MacArthur Blvd. in lower Montgomery County. Meet at the gravel parking lot at the corner of Little Falls Parkway and Mass Ave.

Bring/Wear: Gloves and tools provided, but feel free to bring your own favorite tool or pair of gloves. Dress in long pants and long sleeved shirts to protect against poison ivy and thorns. Some protection from ticks is also advised.

Contact: Lynnwood Andrews at plants@LFWA.org and visit our website for schedule and to sign-up for events. We can also arrange special events for groups. Contact Lynnwood to set up.

Web Site: www.LFWA.org.

M-NCPPC'S WEED WARRIOR PROGRAM

Sponsoring Organization:

Maryland-National Capital Park and Planning Commission

Dates: Ongoing

In 1999, M-NCPPC/Montgomery Parks forest ecologist Carole Bergmann created the Weed Warriors Program as a way to combat the non-native invasive-plant (NNIs) problem in Montgomery County. The program's goal is to educate citizens about identification and management of NNIs. Through 2010, more than 750 people had been trained by Carole and her staff. Certified Weed Warriors have logged more than 30,000 hours, and have made a valuable contribution to non-native invasive plant control in many parts of Montgomery County's 34,000-acre park system. SIGN UP TO HELP US!

continued →

Habitat Stewardship Outings

←continued

Weed Warriors has two components:

1. Certified Weed Warriors.

Volunteers must complete a two-part online course and participate in a two-hour field training session. Once certified, Weed Warriors are authorized to work anywhere on M-NCPPC/Montgomery County parkland, on their own schedules and at their own pace. They can also work on group projects with the staff coordinator of the Weed Warriors Program, and those with strong interest and leadership skills may be appointed as Weed Warrior Supervisors.

2. Special Project Weed Warriors.

This component gives community members the opportunity to learn about and work on invasive plants in their parks without making the commitment to become full-fledged Weed Warriors. Under the supervision of Weed Warrior Supervisors, special workdays take place throughout the year in small and large parks throughout Montgomery County.

At the present time there are regular weekend and weekday projects in Little Falls Stream Valley Park, Capital Crescent Trail Special Park, Rachel Carson Conservation Park, Northwest Branch Stream Valley Park (two locations), Wheaton Regional Park at Brookside Nature Center, Sligo Creek Stream Valley Park (three locations), Ovid Hazen Wells Recreation Park, and Meadowbrook Local Park along Rock Creek, just north of the Maryland/DC line. Special Project Weed Warriors, enables community groups (e.g., schools, workplaces, church or synagogues, or community associations) to learn weed ID and removal on the spot and then spend a couple of hours tackling invasive

vines, shrubs, and herbaceous plants on county parkland.

Contact: Weed Warriors volunteer coordinator Paul Carlson, paul.carlson@montgomeryparks.org or 301-962-1343.

More information:

www.montgomeryparks.org/PPSD/Natural_Resources_Stewardship/Veg_Management/weed_warriors/spw2_events.shtm

MUDDY BRANCH GREENWAY TRAIL SYSTEM

Sponsoring Organizations:

Maryland-National Capital Park and Planning Commission, Muddy Branch Alliance (<http://muddybranch.org/>)

Leader: Ken Bawer

Dates & Time: Last Saturday of each month from 10 am until 1 pm. Rain or shine.

The Muddy Branch Weed Warrior project will be crucial to help control the spread of non-native invasive (NNI) plants in this stream valley. Come learn what NNIs are, the problems they create, and then help pull and cut the bad guys. I'll also point out native plants along the way.

Students who need an SSL activity can attend. Volunteers do NOT need to be official Weed Warriors. This activity is sanctioned by the Montgomery County Parks Department's Weed Warrior Program.

Location: Meeting locations in the park will vary. Please check the Muddy Branch Alliance Web site (www.muddybranch.org/) for the next location and to register. Questions can be sent to Ken Bawer at kbawer@msn.com (cell: 240-744-6306).

Bring: Work gloves, pruners, hand saws, loppers, and shovels—not that

everyone needs all of these. I use a garden shovel with long handle (4 ft) and a small (6" wide), pointed blade for digging out wineberry—yeah, there's a lot. It's lighter than the larger blade shovels. Folks should definitely bring drinking water and perhaps a snack or lunch as they desire. Depending on the season: sun block and insect repellent. Wear sturdy footwear (hiking boots, etc.). **Contact:** Ken Bawer, volunteer Weed Warrior Invasive Project Supervisor, kbawer@msn.com. Call after 9 am on Saturday at 240-744-6306 if in doubt about the weather. Forms are available for students who need an SSL activity.

NORTHWOOD CHESAPEAKE BAY TRAIL

Sponsoring Organizations:

Montgomery County DEP, Northwood HS, and Potomac Appalachian Trail Club

Dates and Times: Contact for community work days.

Work on the Northwood Chesapeake Bay Trail and the Breewood property (owned by Montgomery Parks at SE corner of University and Sligo Creek Pkwy). Work may include removing trash and dumped household items, removing invasive species, stormwater retrofit, building a natural surface trail (continuing the Northwest Chesapeake Bay Trail) to connect Sligo Creek and Northwest Branch Parks, and education and outreach in neighboring communities to clean up property and encourage respect and pride in it.

Contact: Jennifer Chambers, Potomac Appalachian Trail Club, Northwood Chesapeake Bay Trail Project Coordinator. Web site: <http://www.patc.net/PublicView/>.

POTOMAC GORGE

Sponsoring Organization: The

Nature Conservancy and the National Park Service

Dates: Ongoing

The Nature Conservancy, in partnership with the National Park Service, will continue all season with invasive plant control workdays in the Potomac Gorge, a 15-mile stretch of river valley between Great Falls and Georgetown with over 200 rare plants and five globally rare plant communities. Volunteers are welcome to sign up for a variety of workdays, where we cut or pull some of the most problematic weeds, often in scenic areas. We will hold Weed Warrior trainings, where volunteers learn 13 non-native plant species, adopt an area and work independently in the National Parks in the Potomac Gorge.

We have some upcoming volunteer workdays in the Potomac Gorge—please come join us! There will be a slew of fun opportunities in the spring! Please let Mary know if you are interested.

More information: go to www.nature.org/wherewework/northamerica/states/maryland/events/ for a list of workdays, or contact Mary Travaglini, Potomac Gorge Habitat Restoration Manager, if you would like to sign up a school or organizational group for a workday, or be added to our email list: PotomacGorgeVol@tnc.org; or 301-897-8570 x210.

ROCK CREEK NATIONAL PARK Rock Creek EXTREME Cleanup and Ongoing Activities

Sponsoring Organization: Friends of Rock Creek's Environment (FORCE)

Dates: Ongoing; check web site for new events:

www.rockcreekconservancy.org

continued →

Habitat Stewardship Outings

←continued

FORCE is off to a great new year! Volunteers came out—in force!—on warm, sunny Martin Luther King Day. In the morning, 100 people cut and sawed invasive English ivy from trees along Normanstone Creek, a tributary of Rock Creek flowing near Massachusetts Avenue in DC. In the afternoon, another group of more than 30 people hauled trash from along Turkey Branch, a tributary of Rock Creek in the Aspen Hill neighborhood of Montgomery County.

You too can take steps to help protect Rock Creek. We are now gearing up for the Rock Creek EXTREME Cleanup, where we expect over 50 trash cleanups to span the length of Rock Creek.

More information: Friends of Rock Creek's Environment (FORCE), www.rockcreekconservancy.org, for a cleanup site near you.

Contact: Beth Mullin, 202-237-8866.

SLIGO CREEK PARK

Sponsoring Organizations: Friends of Sligo Creek, Maryland-National Capital Park and Planning Commission

Leader: Sally Gagne

Dates: Please visit www.fosc.org/RIPEventSched.htm for dates

Friends of Sligo Creek (FOSC) has launched RIP, its Removing Invasive Plants Project. RIP is an all-out effort to remove the invasive vines and shrubs in Sligo Creek. We will gradually build a corps of residents to come out for regular organized events in each section of the park. We welcome anyone who would like to take part in the fun! All Friends of Sligo Creek plant removal activities are done under the auspices of the Parks Department.

From mid-April to mid-June

we will work on removing all garlic mustard. For a schedule, see <http://www.fosc.org/RIPEventSched.htm>. Sites are between New Hampshire Avenue and Arcola Avenue.

Bring: Gloves, tools, and water or we will provide.

Contact: Sally Gagne, 301-588-2071 or rip@fosc.org.

TRIADELPHIA RECREATION AREA (WSSC)

See Howard County, Pigtail Recreation Area

UNDERGROUND RAILROAD EXPERIENCE TRAIL

Sponsoring Organizations:

Montgomery County Sierra Club and Montgomery County Parks

Leader: Jeremy Arling

Dates and Times: Second Saturday of each month, 10 am–12 pm

We are partnering with Montgomery County Parks to remove non-native invasive plant species, restore the native plant communities, and create a living history museum where people can learn the fascinating stories of those who escaped slavery and the people who helped.

Location: 16501 Norwood Road, Sandy Spring, MD

Bring/Wear: Tools are limited so please bring clippers, saws, and loppers. Long sleeves, pants, gloves, comfortable walking shoes or boots, and water are recommended.

More Info: For a trail map and more information, go to www.mc-mncppc.org/parks/ppsd/parktrails/trails_MAPS/Rural_legacy.shtm and <http://maryland.sierraclub.org/montgomery/calendar.html>.

Directions: Take Rt. 28E (Norbeck Road) across Georgia Ave. to the intersection with Layhill Road. Go left on Layhill and proceed to the

intersection of Norwood and Ednor Roads. Go left on Norwood. Take the first driveway on the right at 16501 Norwood Road. We will meet at the parking lot near the picnic tables.

Contact: RSVP Jeremy Arling at jeremy.arling@maryland.sierraclub.org or 240-398-3635.

WOODEND NATURE SANCTUARY

Sponsoring Organization:

Audubon Naturalist Society

Dates and Times: Second Saturdays, monthly, between 9:00 am–noon.

Woodend, the ANS' original sanctuary, is a 40-acre oasis in the middle of Chevy Chase, MD. Bordering Rock Creek Park, the sanctuary contains mature woods and meadows, a pond, and an intermittent stream that provide habitat for many birds, insects, deer, rabbits, and foxes.

The Audubon Naturalist Society needs your help to remove invasive non-native plants from its Woodend Sanctuary in Chevy Chase, MD! Join us for group work sessions where training will be provided. Trained volunteers may also be authorized to work independently.

Location: 8940 Jones Mill Road, Chevy Chase, MD 20815

Contact: Liz Jones, Volunteer Coordinator: 301-652-9188 x30 or volunteer@audubonnaturalist.org for details and current schedule and to sign up.

More information: Web site: www.audubonnaturalist.org/cgi-bin/mesh/sanctuaries/woodend_md

Prince George's BELT WOODS

Dates: Ongoing Saturday, Sunday, and occasional mid-week invasive species workgroups. Times and dates vary based on available team leader.

Please call or email for schedule. We will be removing creeping euonymus, Japanese honeysuckle, winged burning bush, multiflora rose, oriental bittersweet, Japanese stiltgrass, garlic mustard, etc. from various parts of the property, which contains mature forest with giant trees.

Location: Belt Woods is bordered by Central Ave (214) to the south and Church Road to the east, just on the outskirts of Bowie, MD. Meeting place for work groups varies, depending on the focus for that day.

Bring/Wear: Snacks and water. Gloves and tools provided, but feel free to bring your own favorite tool or pair of gloves. Poison ivy is very abundant, as are thorny bushes, so please dress in long pants and long sleeved shirts. Some protection from ticks is also advised.

Contact: E-mail to be added to the contact list at pamelakcooper@verizon.net or call 301-390-0797.

CHERRY HILL ROAD COMMUNITY PARK

Sponsoring Organizations:

Anacostia Watershed Society, Sierra Club, Maryland Native Plant Society

Dates and Times: Last Saturday of the month from 11:00 am–3:00 pm.

Several of the worst invasive species in the Mid-Atlantic region, including English ivy, Asiatic bittersweet, garlic mustard, bush honeysuckle and porcelainberry, are in the early stages of invasion in this park. Japanese stiltgrass covers about 5% of the park. Research indicates that Japanese stiltgrass is a major contributor of nitrogen pollution in the Chesapeake Bay and reduces by half the ability of any land it dominates to hold water and release it slowly. Non-native invasive plant

continued→

Habitat Stewardship Outings

←continued

removal will reach maintenance phase following a major work effort at each site in the Mid-Atlantic Region and around the world for about three to five years to remove the massive populations of species. Regular stewardship projects are conducted in all seasons. This high intensity program is followed by a low intensity annual maintenance program for plants we have missed, plants emerging from the seed bank, and occasional plants migrating in from neighboring areas. The project supporters are now removing English ivy, wineberry, periwinkle, ground ivy, Japanese pachysandra, bush honeysuckle, and multiflora rose to rescue the incredible diversity of native plants and animals at this particular park. Unlike most parks in the area the 150 acre Little Paint Branch Park is in the early stages of invasion and is essentially the native plant nursery for the Paint Branch itself.

Bring: It is best to wear long-sleeved shirts and pants. Gloves and tools will be provided.

Note: There are full indoor toilet facilities and a large seating area for lunch. There will be a sign-in and safety orientation with handouts.

Directions: Meet at the Beltsville Community Center parking lot. Take U.S. 1 north from the Beltway. Go about 1 mile, passing the National Agricultural Research Center, and turn left at the light on Montgomery Rd. Go 3 blocks and turn left on Sellman Road. Go about 5 blocks and turn right into Little Paint Branch Park at the bottom of the hill.

Contact: Marc Imlay, PhD, Conservation biologist, Anacostia Watershed Society, 301-442-5657, 301-283-0808, or Marc.Imlay@pgparks.com, for dates

and times and rsvp. Visit www.anacostiaws.org.

GREENBELT HOMES, INC., HOUSING COOPERATIVE

Dates: Third Wednesday of each month

The Greenbelt Homes, Inc., (GHI) housing cooperative in Old Greenbelt has approximately 100 acres of stewardship forest as well as other wooded parcels. The Woodlands Committee is actively involved with urban forestry management. Regular work sessions and educational events are scheduled the third Wednesday of every Month. Typical outings include removal/eradication of non-native invasive plant species, tree plantings, bird counts, native landscaping seminars and guided hikes.

More information on GHI Woodlands Committee activities: contact Matt Berres, Manager, Maintenance Operations, mberres@ghi.coop or 301-474-4161 ext 132. Web: www.ghi.coop/Woodlands/index.htm.

GREENBELT NATIONAL PARK

Sponsoring Organization: National Park Service

Dates and Time: First Saturdays, monthly, 11:00 am–3:00 pm

Located just 12 miles from Washington D.C., Greenbelt Park is a beloved retreat from the city and an important refuge for native plants and animals. Come join us in defending Greenbelt Park from encroachment by alien invasive plant growth. Volunteers will be hand pulling harmful non-native plants such as Japanese honeysuckle, beefsteak mint, mile-a-minute weed and garlic mustard. People of all ages, backgrounds and

interests are invited to spend a fun day outdoors while learning about the differences between native and non-native plants and helping to preserve the health and native wildlife of this local natural area.

Directions: The park entrance is at 6565 Greenbelt Road (MD Rt 193). From the Beltway, take Kenilworth Avenue south about 1/4 mile to Greenbelt Rd. Stay to the right so you can take Greenbelt Rd East (a left to go over Kenilworth). From US Rt 1, take Greenbelt Rd east past Beltway Plaza shopping center and Kenilworth Ave. The park entrance is only a few hundred yards past Kenilworth on the right. Follow the signs to the Sweetgum picnic area.

Bring/Wear: Lunch, drink, work gloves if you have them, and appropriate clothing for weather.

More info: Contact Tom Crone at tomnjan@erols.com or 301-864-1959, 202-746-2228, or visit www.nps.gov/gree/ or call 301-344-3944.

HARD BARGAIN FARM ENVIRONMENTAL CENTER

Sponsoring Organization: Alice Ferguson Foundation

Leader: Karen Jensen Miles

The hike on trails through the diverse ecosystems of the Accokeek Creek and Potomac River watersheds focuses on plants and animals that live there, the interdependence of organisms in food webs, natural cycles, and each person's connection to the environment. Volunteers are needed for invasive plant removal.

Contact: Call Karen Jensen Miles, Program Director, at 301-292-5665 or e-mail kmiles@fergusonfoundation.org for more information and schedule.

LAKE ARTEMESIA, BERWYN HEIGHTS

Sponsoring Organization:

Maryland-National Capital Park and Planning Commission

Leaders: Chris Garrett and John Dillon, M-NCPPC park rangers

Dates: Ongoing. Contact John Dillon or Chris Garrett at 301-627-7755 for dates and times as they are organized.

Built around a 38-acre lake, this beautiful park includes an aquatic garden, handicapped-accessible fishing pier and over two miles of hiker-biker trails.

Garlic Mustard Pull-off at Indian Creek Trail

Teams compete in removal of the non-native invasive weed garlic mustard. Prizes given to winning team for largest amount pulled in a given area and time.

Directions: The lake is located on Berwyn Road in College Park. Meet in the Lake Artemesia parking lot along Berwyn Road. Because vehicles are not permitted on park grounds, visitors should enter the park via trails at the 5200 block of Calvert Road in College Park, or Osage Street and Swathmore Court in Berwyn Heights (parking lot within easy walking distance). From the south, the Capital Beltway (I-495), take Exit 23 (Kenilworth Avenue) toward Bladensburg. Make a right onto Route 193 (Greenbelt Road). Make a right onto Branchville Road. (This road turns into 55th Avenue). The parking lot is on the left at the Berwyn Road intersection.

From the north, the Capital Beltway (I-495), take Exit 25 (Route 1) toward College Park. Make a left onto Route 193 (Greenbelt Road), then a left

continued →

Habitat Stewardship Outings

←continued

onto Branchville Road. (This road turns into 55th Avenue.) The parking lot is on the left at the Berwyn Road intersection.

Bring/Wear: Water, work boots, durable clothes, long sleeves, gloves.

Note: Light refreshments will be provided. Some poison ivy is at work site.

Contact: M-NCPPC Park Ranger Chris Garrett or John Dillon, M-NCPPC Park Ranger Office, 301-627-7755.

LITTLE PAINT BRANCH PARK

Sponsoring Organizations:

Anacostia Watershed Society, Sierra Club, Maryland Native Plant Society

Dates and Times: Last Saturday of the month from 11:00 am - 3:00 pm.

Several of the worst invasive species in the Mid-Atlantic region, including English ivy, Asiatic bittersweet, garlic mustard, bush honeysuckle and porcelainberry, are in the early stages of invasion in this park.

Japanese stiltgrass covers about 5% of the park. Research indicates that Japanese stiltgrass is a major contributor of nitrogen pollution in the Chesapeake Bay and reduces by half the ability of any land it dominates to hold water and release it slowly.

Non-native invasive plant removal will reach maintenance phase following a major work effort at each site in the Mid-Atlantic Region and around the world for about three to five years to remove the massive populations of species. Regular stewardship projects are conducted in all seasons.

This high intensity program is followed by a low intensity annual maintenance program for plants we have missed, plants emerging from the seed bank, and occasional plants migrating in from neighboring areas. The project supporters are now

removing English ivy, wineberry, periwinkle, ground ivy, Japanese pachysandra, bush honeysuckle, and multiflora rose to rescue the incredible diversity of native plants and animals at this particular park. Unlike most parks in the area the 150 acre Little Paint Branch Park is in the early stages of invasion and is essentially the native plant nursery for the Paint Branch itself.

We will continue the wonderful progress accomplished the last three years by the Americorps workers, General Electric Volunteers, Robert Goddard French Immersion and Montessori Elementary School, Washington Quaker Work Camps, and World Bank volunteers at Little Paint Branch Community Park.

Bring: It is best to wear long sleeved shirts and pants. Gloves and tools will be provided.

Note: There are full indoor toilet facilities and a large seating area for lunch. There will be a sign-in and safety orientation with handouts.

Directions: Meet at the Beltsville Community Center parking lot. Take U.S. 1 north from the Beltway. Go about 1 mile, passing the National Agricultural Research Center, and turn left at the light on Montgomery Rd. Go 3 blocks and turn left on Sellman Road. Go about 5 blocks and turn right into Little Paint Branch Park at the bottom of the hill.

Contact: Marc Imlay, PhD, Conservation biologist, Anacostia Watershed Society, 301-442-5657, 301-283-0808, or Marc.Imlay@pgparks.com, for dates and times and rsvp. Visit www.anacostiaws.org.

LOWER BEAVERDAM CREEK: EUCLID WOODS PARK, CHEVERLY

Sponsoring Organizations: M-NCPPC Cheverly Conservation Corps and Friends of Lower Beaverdam

Creek

Dates: Please call 301-341-1261 to arrange a work session, when you are free to help out.

Euclid Woods consists of a 50 acre contiguous wooded area wedged between a residential neighborhood, the hospital hill, and the Cheverly Industrial Park, bounded on the west side by a tributary feeding into the Lower Beaverdam Creek. After restoration work began shortly after 2000 the area is slowly returning to its natural state, primarily due to removal of invasive plants and the rescue of young trees and shrubs from windfalls. The restoration has allowed the return of a rich understory of native shrubs, saplings and herbaceous plants, which form the basis of the local food chain and which in turn encourage insects that, according to the entomologist Doug Tallamy, form over 96 percent of the summer diet of our birds. Smaller trees and shrubs, such as dogwood, hawthorn, sassafras, serviceberry, spicebush and several viburnums, such as the hobblebush and witherod, are now thriving. Birds such as the pileated woodpecker, woodcock and a number of raptors that had gone missing are now returning. The forest is beginning to function as it should to keep our air and waters pure and support the web of life that in turn supports us. Bring friends and help us remove invasive plants to maintain and further improve this largest and most productive natural area in Cheverly.

Bring: Tools provided, but bring work gloves and sturdy shoes.

Directions: Call ahead to arrange the time and meet at 5607 Greenleaf Rd in Cheverly. Enter Forest Rd from Cheverly Ave heading west; go three blocks and keep right when the road

splits; continue straight ahead and park anywhere at the end of on Greenleaf Rd.

Contact: For further information please contact Matt Salo at 301-341-1261.

LOWER BEAVERDAM CREEK: WOODWORTH PARK, CHEVERLY

Sponsoring Organization: Friends of Lower Beaverdam Creek

Dates and Times: last Saturday of the month, March–June, 9 am– noon

The Friends of Lower Beaverdam Creek hosts the monthly removal of non-native invasive plants from Woodworth Park in Cheverly, MD. This 15-acre wooded buffer wedged between a residential neighborhood and Route 50 is slowly returning to its natural state thanks to The Friends of Lower Beaver Dam Creek.

The group landscaped steps into a small hill that leads to an inviting trail the volunteers blazed along a shallow winding creek. The creek, which roughly divides the park in two, eventually feeds a tributary of the Anacostia River. The reclaimed land has a peaceful resonance. Trees stand out. Space, depth and light are abundant. Smaller trees such as sassafras, hickory, hornbeam and a dogwood—discovered on a hillside after the thickets were cleared—were labeled. The forest returned to its rightful winter hues—brown, black and gray. Help clean up the most polluted stream in the Anacostia Watershed.

Bring/Wear: Tools are provided, but wear work gloves and sturdy shoes.

Directions: Meet at Woodworth Park on Wayne Place in Cheverly. Take 202 East under the BW Parkway. Go one block and turn right on Cheverly. Go one mile and turn left on Forest

continued →

Habitat Stewardship Outings

←continued

Road. Go 2 blocks passing church on left and turn right on Parkway. Go 2 blocks and turn left on Wayne for one block. We meet there at the park by the small playground.

Contact: Dan or Cathy Smith at 301-386-4394, Gabe Horchler ghor@loc.gov or Elaine Friebele at 301-341-5722

MAGRUDER PARK, HYATTSVILLE

Sponsoring Organization: Friends of Magruder Woods

Dates and Times: Third Saturday, 9 am to 1 pm

Directions: Meet at the Magruder Park parking lot. Take Eastwest Highway (410) east almost to Route 1 in College Park. Turn right on Queens Chapel Road about a mile before Route 1. Go south about a mile and turn left on Hamilton. Pass the Safeway on the right, then pass 38th street, go about one block and turn right into the park.

Magruder Park is easily accessible from the West Hyattsville Metro stop on the Green Line. Approximately a 10-block walk to Magruder Park.

Contact: Colleen Aistis, 301-985-5057.

Sponsoring Organization: Anacostia Watershed Society

Dates and Times: ongoing, contact for schedule.

AWS invasive removals usually employ hand-pulling, cutting (with hand pruners and cutting saws) and pulling using tools, *e.g.*, pitchforks. In autumn and winter we usually control species like English ivy, Chinese wisteria, common periwinkle and bush honeysuckle. Our invasive plant removal outings have an educational approach; AWS staff will talk about our watershed, about the history and the natural history of the park and will be sure to

point out interesting native plants and animals. Also, AWS staff will make sure you have a completely safe and enjoyable outdoor experience by briefing volunteers about basic safety measures regarding poison ivy and deer ticks.

Bring: We strongly recommend the use of long pants, closed-toe shoes (hiking or waterproof) and basic gear to protect from UV rays (hat, sunglasses and sunscreen) in this open-land habitat. Also, long-sleeved shirts should help protect skin during plant removal and minimize skin exposure to poison ivy and ticks, which are found in the area. We recommend bringing along a repellent designed to repel both deer ticks and mosquitoes. Don't forget to bring plenty of water. AWS will provide gloves, tools and other supplies to get the job done. If you are an amateur naturalist don't hesitate to bring your bird and wildflower field guides to enjoy the biodiversity of the Anacostia watershed!

Note: AWS will provide gloves, tools and other supplies to get the job done.

Meeting Place: Magruder Park in Hyattsville, MD. We will meet up at the parking lot past the Hamilton Pool (on 3901 Hamilton Street) right by the sports fields. From Queens Chapel Road take Hamilton Street, go by the Safeway on the right, pass 38th street, go about one block and turn right into the park.

Magruder Park is Metro accessible; from the West Hyattsville Metro station on the Green Line walk a 10-block walk to Magruder Park or take the bus F8 to Cheverly Station and get off at the bus stop between 38th Av. and Hamilton St., walk one block and turn right into the park.

More Information: Jorge Bogantes Monterol, Conservation Biologist,

301-699-6204. Website: www.anacostiaws.org/. E-mail: info@anacostiaws.org.

PATUXENT RESEARCH REFUGE: LAUREL

Established by President Franklin D. Roosevelt in 1936, Patuxent Research Refuge was America's first and only refuge devoted to support wildlife research. Patuxent's mission is "to help protect and conserve the nation's wildlife and habitat through research on critical environmental problems and issues." Its 12,750 acres of forest, meadow, and wetland habitats are managed to promote biological diversity and the protection of native and migratory bird species.

Non-native invasive plants are threatening our wildlife habitat. We need YOU to help stop them. Come out for one of our "Weed Warriors Days" and help us treat garlic mustard, mile-a-minute, Japanese stiltgrass and other non-native plant infestations on the refuge. All ages and abilities are welcome. Do your part to protect Patuxent from alien invaders, and become a Weed Warrior! You will receive a short educational briefing explaining the effects of invasive plants on wildlife and wildlife habitats and how to identify and control these plants.

Note: Wear long-sleeved shirts and pants and bring gloves.

Contact: Please register for these events by calling 301-497-5887.

Directions to the North Tract

Visitor Contact Station: From I-295, take the exit for MD-Route 198 towards Fort Meade. Go approximately 1.5 miles until you see Glory Days Auto Salvage on your near right corner and baseball fields on your far right. Turn right between the two onto Bald Eagle Drive.

Proceed through the gate and continue about 1/2 mile to the visitor contact station.

Directions to the National Wildlife

Visitor Center: The National Wildlife Visitor Center is located off of Powder Mill Road between MD Route 197 and the Baltimore/ Washington Parkway, south of Laurel.

More info: Call 301-497-5763 or visit patuxent.fws.gov.

PATUXENT RIVER PARK, UPPER MARLBORO

Sponsoring Organization: Maryland-National Capital Park and Planning Commission

Invasive plants present one of the greatest threats to the health and biodiversity of public lands. Join a park naturalist to help remove these invasive plants.

Bring: Please dress in old clothes and closed toe shoes or work boots. Gloves and tools will be provided.

Register: Register at www.pgpparks.com. Ages 13 to adult.

Directions: Meet at the park visitors center at 16000 Croom Airport Road, Upper Marlboro, MD 20772.

More Information: Call Stephanie for more information at 301-627-6074.

SUITLAND BOG, SUITLAND

Sponsoring Organization: Maryland-National Capital Park and Planning Commission

Leader: Chris Garrett, M-NCPPC Park Ranger

Dates: Ongoing; contact park ranger's office below for dates and times

Manual removal of honeysuckle and multiflora rose using shovels, pruners and perseverance. Come

continued →

Habitat Stewardship Outings

←continued

and help preserve this unique rare magnolia bog habitat.

Directions: From the Capital Beltway (I-495), take Exit 7A (Branch Avenue), toward Waldorf. Take Route 5 south. Take the Allentown Road exit. Make a left onto Allentown Road. Stay on Allentown Road through five lights. Turn left onto Suitland Road at the 6th light. Follow Suitland Road until it passes under Suitland Parkway. The entrance to the Suitland Bog is to the right. Meet in the parking lot.

Bring: Water, work boots, durable clothes, long sleeves, gloves, pruners, and shovels.

Note: Light refreshments will be provided. There is some poison ivy at the work site.

Contact: Christopher Garrett or John Dillon, M-NCPPC park ranger office, 301-627-7755.

SUPPLEE LANE RECREATION AREA (WSSC)

See Howard County, Pigtail Recreation Area

WATKINS REGIONAL PARK, UPPER MARLBORO

Sponsoring Organization:

Maryland-National Capital Park and Planning Commission

Leader: John Dillon, M-NCPPC Park Ranger

Dates and Times: Ongoing. Contact park ranger's office below for dates and times.

Watkins Regional Park covers more than 850 acres, and offers all kinds of outdoor adventures. The park is also home to the Watkins Nature Center, the Chesapeake Carousel, Old Maryland Farm, the Watkins Regional Park miniature train, and the Watkins Miniature Golf Course. Recreational amenities include 34 campsites at the park campgrounds; picnic areas

with shelters; playgrounds; comfort stations; a paved, 1.7 mile circuitous hiker/biker trail; and several miles of trails through deciduous forest for hiking and biking.

Weed Warrior Work Day

Manual removal of the non-native invasive weed garlic mustard.

Location: Watkins Nature Center at Watkins Regional Park, Prince George's County. Meet at Watkins Nature Center parking lot.

Directions: Located in Upper Marlboro, Maryland, in Watkins Regional Park, one mile west of the Six Flags America amusement park. From the Capital Beltway (I-495), take Exit 15A (Central Avenue) east. Continue for approximately three miles. Turn right onto Watkins Park Drive (Route 193) and follow the park signs to the facility.

From Route 301, turn onto Central Avenue (Route 214) west. Continue for approximately three miles (past Six Flags America). Turn left onto Watkins Park Drive and follow to the park entrance on the right.

Bring/Wear: Water, work boots, durable clothes, long sleeves and gloves.

Note: Light refreshments will be provided. There is some poison ivy at work site.

Contact: M-NCPPC rangers John Dillon or Chris Garrett, M-NCPPC Park Ranger Office, 301-627-7755.

Outings (General Information)

Get Outdoors and Explore, Enjoy, and Protect the Planet

Sierra Club outings are open to everyone, members and non-members alike. Each outing is intended to be a wholesome, safe, and enjoyable experience in the outdoors.

Participants must have proper clothing, equipment, and stamina suitable to the event, and are encouraged to select activities that match their individual abilities for outdoor adventures. The Club offers a variety of outings from "easy" to "strenuous" that suit all activity levels. The difficulty of each outing is clearly designated in the announcement.

Reservations are generally not required for a local outing unless noted, but the outing leader should be contacted in advance for questions about the terrain, the difficulty or duration of the trip, recommended clothing, footwear and equipment. Activities are normally held "rain or shine," but may be postponed at the leader's discretion for safety reasons in the event of inclement weather.

Potential participants are reminded that all outdoor activities carry a degree of risk, and some take place in locations where professional emergency medical aid may be two or more hours away. People with health concerns should consult a physician to determine the advisability of participating in these or similar activities. The Club outing leader is responsible for the safety of all participants, and has the final authority to decide whether or not an individual may participate on a specific outing. Sierra Club safety policy requires that helmets be worn on bicycling outings. Also, any participant must wear a personal flotation device (PFD) on outings using personal watercraft such as kayaks or canoes.

Unless noted in the announcement, Club outings are intended for adults. Children and dogs are not normally per-

mitted, unless an outing is so designated. Even on outings that are designated as child/dog friendly, please contact the leader in advance before bringing minors or pets. Minors (under 18 years of age) must be accompanied by a parent or a legal guardian, or they must have both 1) a signed permission slip, and 2) the leader's prior consent to participate in the Club outing. Dogs must be non-aggressive, well-behaved, and on a leash.

Sierra Club outings officially begin and end at the trailhead, paddlecraft put-in/take-out point, or some other similar designated locality near the activity. Travel to the official starting point and back, even from an advertised meeting place, is the sole responsibility of each participant. While the Club encourages car-

pooling, such arrangements are strictly between the riders and the drivers, and are not a part of the outing. Participants assume full responsibility and liability for all risks associated with such travel.

All participants on Sierra Club outings are required to sign a standard liability waiver, which can be viewed on the web at <http://www.sierraclub.org/outings/chapter/forms/index.asp>. Sierra Club local outings are free of charge, although payment of park entrance fees, a share of campsite rental costs, permit fees, equipment rental charges, etc. may be required from the participants. Such costs are specified in the announcement whenever possible.

The Sierra Club practices "leave-no-trace" trail techniques, including hiking and camping on durable surfaces, minimizing campfire impacts, packing out all trash, respecting wildlife, being considerate of other visitors, and leaving the environment as it was found.

Take only pictures, leave only footprints, and have fun out there. ■



Outings (May)

Abbreviations Used

Most outings in the Maryland Chapter are run at the group level, with a few chapter and inter-chapter events. The group originating the outing is identified in parentheses by the leader's name. These and other abbreviations used are listed below:

AA:	Anne Arundel Group
AMC:	Appalachian Mountain Club
AT:	Appalachian Trail
BLM:	Bureau of Land Management
CCA:	Canoe Cruisers Association (Washington, D.C.)
CG:	Catoctin Group
C&O:	Chesapeake and Ohio Canal
FFA:	Family Friendly Activity (kids/dogs ok, but check with leader)
FWS:	(U.S.) Fish and Wildlife Service
GB:	Greater Baltimore Group
GWNF:	George Washington Natl. Forest
HC:	Howard County Group
JNF:	Jefferson Natl. Forest
MNF:	Monongahela Natl. Forest
MC:	Montgomery County Group
NPS:	Natl. Park Service
NRA:	Natl. Recreation Area
NWR:	Natl. Wildlife Refuge
PFD:	Personal Flotation Device (lifejacket)
PRO:	Sierra Club Potomac Region Outings (SCPRO)*
SF:	State Forest
SM:	Southern MD Group
SP:	State Park
SNP:	Shenandoah Natl. Park

* For hike ratings of SCPRO, refer to their website at <http://www.sierrapotomac.org/rating.htm>

May

Sat. May 19: Great Falls Billy Goat Trail, MD. Moderate 7 mile hike on trails near the Potomac River, with short rock scrambles on the Billy Goat Trail. Enjoy dramatic scenery and observe wildlife. Bring lunch and water. Depart at 9:00 from the west lot of the Broken Land Parkway Park & Ride at Rt. 32. Call Ken Clark, 443-280-4050, kenclark7@live.com.

Sat. May 19, Rated B. Trails in DC to the Greek Festival (Get-to-Know-DC Series). Moderately paced 6-7 mile loop hike using mostly wooded trails in the city as well as some streets in NW DC. Learn about how Sierra Club (and others) saved a park, where the UN was established and other interesting historical facts. About a mile from hike's end we will stop for lunch at the St. Sophia Greek Festival. Hikers can stay there or return to the starting point with the leader. Meet at 9:30am on Van Ness St., NW at the entrance to Glover Archbold Trail, about a quarter block west of Wisconsin Ave., beside the McDonald's parking lot. The start is about a half mile south of the Red line's Tenleytown Metro Station. Leader: Helen Epps, 202/363-1278 (leave message) or hcepps@juno.com.

Sat. May 19. Rated B Valley Trail and Western Ridge Northern Circuit Hike (Get to know DC). We will do a 6.3 mile circuit hike through beautiful Rock Creek Park. See the park as plants and animals wake to the spring. We meander south along the blue-blazed Valley Trail. We cross the creek and climb to take the Western Ridge Trail to the Boundary Bridge. We pick up the Valley trail to return to our starting point. Meet near Caribou Coffee – just south of

Silver Spring Metro station 8:40 AM or at 9:00 AM at W. Beach Dr. and Parkside Dr. Contact the leader for directions or carpool. Rich Reis, 301/325-8001, rreis@verizon.net.

Sat. May 19. Rated B. Blue Ridge Center (Conservation Hike). Located in Virginia's Northern Blue Ridge is the Blue Ridge Center for Environmental Stewardship (BRCES) which showcases a working farm, 10 miles of wooded trails, and a number of pre-Civil War sites. We will meander 6.5 miles (1000 ft. elev. change) through woods, over streams, and stop by a large pond in the for a lunch break (so bring snacks



or lunch). We'll pass historic buildings, and stop to observe and learn about the nature around us all along the way. Come with appropriate footwear for hiking and shallow stream crossings. We will meet at 9am at the Vienna Metro North Parking lot. Leader: Brian Shermeyer, 571-606-8911 brian.shermeyer@gmail.com

Sat. & Sun. May 19 & 20 GB - Moderate. Car Camping at Caledonia State Park in PA Camping overnight and hiking both days exploring lakes and streams in the Michaux State Forest in southern Pennsylvania. We will hike parts of the Appalachian Trail with some

good views. Call Jack for details at 410-256-3963.

Sun. May 20. Rated E. Sugarloaf Mountain. 9-mile hike with 3300 ft. of elevation change. Views of the Potomac Valley and the Catoctin Mountains. To carpool, meet at 10am at the Grosvenor-Strathmore Metro Kiss & Ride. Leader: Chris Stoughton, 240/602-4004 or stoughtoncs@gmail.com.

Sat. May 26. Rated A. Mason Neck VA State Park, Lorton VA. A 5.5-mile hike on well maintained trails including Beach, Bay View, Wilson Spring, Dogue, Kanes Creek and Eagle Spur Trails with natural, gravel and boardwalk surfaces. Meet at 10:15am at Park Visitor Center (7301 High Point Rd., Lorton VA 22079). Directions: Driving south on I-95, take exit 163 at Lorton and turn left at end of ramp to Lorton Rd. Go 1 mile to a right on Armistead Rd, right on Route 1 and drive 1-mile to traffic light on top of hill, turn left on Gunston Rd; continue a little over four mi. to High Point Rd. Allow 20 minutes driving time from Route 1 and have \$4 ready for vehicle entrance fee. Bring water and lunch. No pets. Leaders: Henri Comeau, hencom75@msn.com or 703/451-7965 and Frank Wodarczyk, fwhiker44@cox.net or 703/569-6737 (before 9pm).

Sat. May 26. Rated B Valley Trail and Western Ridge Northern Circuit Hike (Get to know DC) We will do a 6.3 mile circuit hike through beautiful Rock Creek Park. See the park as plants and animals wake to the spring. We meander south along the blue-blazed Valley Trail. We cross the creek and climb to take the Western Ridge Trail to the Boundary Bridge. We pick up the Valley trail to

continued →

Outings (May-June)

←continued

return to our starting point. Meet near Caribou Coffee – just south of Silver Spring Metro station 8:30 AM or at 9:00 AM at W. Beach Dr. and Parkside Dr. Contact the leader for directions or carpools. Rich Reis, 301-325-8001, rreis@verizon.net

Sat. May 26. Rated B Valley Trail and Western Ridge Northern Circuit Hike (Get to know DC). We will do a 6.3 mile circuit hike through beautiful Rock Creek Park. See the park as plants and animals wake to the spring. We meander south along the blue-blazed Valley Trail. We cross the creek and climb to take the Western Ridge Trail to the Boundary Bridge. We pick up the Valley trail to return to our starting point. Meet near Caribou Coffee – just south of Silver Spring Metro station 8:40 AM or at 9:00 AM at W. Beach Dr. and Parkside Dr. Contact the leader for directions or carpools. Rich Reis, 301-325-8001, rreis@verizon.net.

Sat. May 26: Patapsco Valley State Park, Hilton Area. Moderate 7 mile hike. Bring lunch and water. Meet at 9:15 at the parking lot behind the Hilton Area Nature Center, just inside the Hilton Avenue entrance on the right. Call James Perschy, 410-964-1902, jameshike@verizon.net.

Sat. May 26 GB – Moderate. Sweet Air Hike. 5 miles. Diverse landscape through fields and forest, along the headwaters of the Little Gunpowder. Meet at 1:00 PM. From the Baltimore Beltway take Exit 27, Dulany Valley Rd, north. After Loch Raven Reservoir the road bears left and becomes Jarrettsville Pike. Turn right on Hess Rd, 11.5 miles from beltway. Go 1 mile and turn right on Park Rd. Go 0.3 mile and turn left on Moores Rd. Go 1 mile and turn right on Dalton-Brevard Rd. Take to parking lot at

end. Cancelled for steady rain or storms. For more details, call Alan at 410-252-5720 or email apenczek@stevenson.edu.

Sat. May 26, 2012 10 to Noon Hellen Creek Forest and Wildlife Preserve Come out as we explore for signs of spring. We will be looking for migrating birds, butterflies, wildflowers, and all the other sounds, sights, and smells that tell us my favorite season is really here to stay a while. Nature Walk Seasonal Series at Hellen Creek Forest and Wildlife Preserve 11785 Clifton Drive Lusby, MD 20657 Sponsored by Sierra Club Southern Maryland Group and Cove Point Natural Heritage Trust 410-394-1300



Sat.-Mon. May 26-28: Potts Mountain to Bluff City AT Backpack, VA/WV. Moderate 21 mile backpack, 4000 feet of elevation gain with one very steep climb. Hike with one foot in VA and the other in WV while taking in westward views. We will try to set up a shuttle with our trail angels in Pearisburg (small fee). Seasoned backpackers only. Leave from the Rt 32/Broken Land Parkway @ 7:00. Pre-registration required.

Contact Mike Juskelis, 410-439-4964, mjuskelis@cablespeed.com.

Sun. May 27, 5pm-8pm. Not Rated. Planning a Backpacking Trip and Pre-trip Meeting. The second in a 3-part, beginner-backpacking classroom series, including a 2-night backpack trip June 1-3. Learn about trip selection, route planning, mapping/GPS overview, Leave No Trace basics, and water planning including water purification options. We will cover the First Aid Kit and emergency planning. We will have you do some interactive map reading. Class size limited to 20 people. Must be 16 or older. Class cost is \$25 for expenses; payment (check or PayPal) in advance will confirm your spot. For location contact Liz Guertin. Leaders: Liz Guertin, 202-415-4639 or eguertin@yahoo.com and Mike Darzi, 301-580-9387 or michael.darzi@saic.com.

Sun. May 27: Overall Run, VA. Strenuous 10.3 mile hike featuring wading pools and Shenandoah's tallest waterfall. Bring lunch and water. Depart at 8:00 from the west lot of the Broken Land Parkway Park & Ride at Rt. 32. Call Ken Clark, 443-280-4050, kenclark7@live.com.

June

Fri.-Sun. Jun. 1-3. Beginner Backpacking Trip — Location TBD. Part of the Beginner Backpacking Class series, this trip will include shorter daily mileage and a reasonable elevation profile. Trip is designed so that the beginner can practice carrying a full pack and master other backpacking skills. Pre-trip meeting scheduled for May 27, directly following planning class. For more information, please contact Liz Guertin.

Leaders: Liz Guertin, 202-415-4639 or eguertin@yahoo.com and Mike Darzi, 301-881-7068 or michael.darzi@saic.com.

Sat. June 2: Jug Bay, Patuxent River Park. Explore this tidal marsh by canoe or kayak, then hike a mile for a different perspective. Observe a variety of birds and other animals. Bring lunch and water. Sign up early to reserve a \$20 canoe or kayak, or bring your own. Call Ken Clark, 443-280-4050, kenclark7@live.com.

Sat. June 2- Rated D Morning on the Potomac. A pleasant 12-mile hike along Virginia's Potomac Heritage Trail starting at the American Legion Bridge and continuing down to the Chain Bridge before returning. Enjoy the Potomac's water fowl and perhaps a few kayakers along the way. The route crosses several streams and has a number of short but steep hills. Hikers should bring water and a snack or light lunch. We will meet at 8:30 a.m. in McLean. Directions: From the Capitol Beltway, take the Virginia Rt 193 (Georgetown Pike) exit and go east 0.1 miles to the first traffic light (Balls Hill Road) then north (left) on Balls Hill for 0.4 miles then left on Live Oak Drive 0.9 miles to the end of Live Oak. Park on the right side of the road. For further information, contact Ray Evert at Hikerdude22@msn.com or 703-408-7117 (after 8 am or before 9:30 pm)

Sat.-Sun. June 2-3 (8 am-7 pm). Unrated. Wilderness First Aid (WFA). This intensive, two-day course teaches the assessment and treatment of an ill or injured person in a remote environment where definitive care or rapid transport is not readily available. Participants learn how to assess, treat, and when

continued →

Outings (June)

←continued

possible, prevent medical and traumatic emergencies within the scope of their training. The course will be taught by Clif Castleman and the Center for Wilderness Safety (www.wildsafe.org) at the Turkey Run Education Center in Prince William Forest Park, and is sponsored by SCPRO. The course is open to all, but Sierra Club leaders get a discount and are eligible for reimbursement. Registration deadline is July 11. For more information or to register, visit <http://www.regonline.com/builder/site/Default.aspx?EventID=1063442>. (Note that CPR/AED certification is a prerequisite and a separate course. If you do not have CPR/AED, you may also register for a course given on Tue. May 29, 6 pm-10:30 pm, at the Trinity Presbyterian Church, Herndon, VA.) Contacts: Clif Castleman, ccastleman@wildsafe.org or 703-624-2543, and Mike Darzi, michael.darzi@saic.com or 301-580-9387.

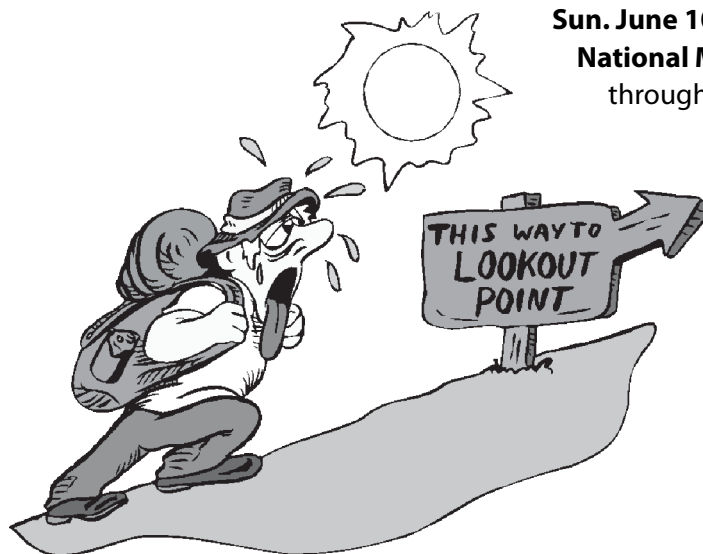
Sun. June 3. Rated F. Shenandoah NP – Jeremy's Run Conservation Hike. We will take a full-day, 14-mile hike to enjoy the beauty of an Appalachian forest and discuss the conservation issues of invasive species, air pollution, climate change, poaching and other topics. Shenandoah NP is listed as one of the ten most 'endangered parks' by the National Parks Conservation Association. We'll look for forest-dwelling birds and other creatures so bring binoculars. This will be a steady paced loop hike that follows the AT for 4 miles, climbs up to Neighbor Mountain and crosses Jeremy's Run 15 times. There is 2600 ft. of elevatopn change making the trip a considerable physical challenge. Leader: Ron LaCoss, 301-946-1106 (before 9pm) for information or ronenviroed@aol.com.

Wed. June 6 GB – Easy. Outings Meeting. New and prospective outings leaders are welcome to attend a meeting of the Greater Baltimore Group's Outings Committee. Come plan new outings and meet other outings leaders. If you're interested in leading outings and are curious about what is involved, come and talk with the outings leaders. The meeting will be held at the Panera Bread restaurant in Timonium, beginning with dinner and socialization at 6:30 PM in a quiet corner and the meeting to follow at 7:00. From I-83 north, take exit 16 Timonium Rd. east, turn left on York Rd., and turn right at the next light for the Timonium Center across from the State Fairgrounds. For more information, call Jack at 410-256-3963 or Mary at 443-386-0862 or email XxDiTz4LyFxX@aol.com.

Sat. June 9. Rated E. Hoover Camp in central SNP. Moderate 11-mile circuit hike to lodge used by former president as weekend fishing camp in beautiful park area at junction of two streams that form Rapidan River. Lodge itself not open to walk-in visitors, but park signs outside describe history. Lunch stop on lodge deck overlooking the stream. Return climb along stream passes small waterfall and involves a couple of stream crossings. \$15.00 per car SNP entry fee or park pass. Meet at 7:30am at Oakton Shopping Center on Rt. 123 in front near McDonalds. Leaders: Marcia Wolf, 301-565-3165 or marcia.wolf@verizon.net and Sue Auerbach, 703-931-2728. Call before 9pm.

Sat. Jun. 9. Rated H. Great North Mountain. This 17-mile circuit hike will start at Waite's Run in GWNF, WV and proceed up the Pond Run Trail to

The Tuscarora Trail, completing the circuit through Vance Cove. Elevation gain 4,000 ft. Meet at Oakton Shopping Center at 7:30am. Moderate pace with stops for flora and fungi of interest. Inexperienced hikers call for hiker requirements.



Leader: William Needham, 410-884-9127 or Needham82@aol.com.

Sat June 9 – 11 am – 3 pm – Piney Run kayak/canoe trip (Sykesville, MD). Easy. Park fee. Boats available for rent. Meet at boathouse. See <http://maryland.sierraclub.org/events/ActivitySearch.asp> for more information. Contact Karen Moody (karen.moody@mdsierra.org) to register. Sierra Club Catoctin region hikes occur the second Saturday of every month at 11 am. Check the Maryland Sierra club events calendar for information on location and details. For further information, email Karen Moody at Karen@lunafiberarts.com

Sat.-Mon. June 9-11: Allegheny Trail/AT-Peters Mountain, VA/WV. Strenuous 25 mile backpack, 5000 feet elevation gain. Continue the traverse of the VA/WV border as we hike this isolated ridge top. Seasoned backpackers only. Shuttle

cost approximately \$35.00/person depending on the number of participants. Leave from the Rt 32/ Broken Land Parkway @ 7:00. Pre-registration required. Contact Mike Juskelis, 410-439-4964, mjuskelis@cablespeed.com.

Sun. June 10. Rated C. Gettysburg National Military Park. We'll walk through the history of the beautiful, hilly battlefield that was witness to the bloodiest engagement of the Civil War. The hike of 10 to 11 miles will feature stops at most of the major sites, with historical guidance by Jackie Gluck. You'll learn the significance of the battle and its

51,000 casualties to the war and to our nation's history. We'll have dinner at the very historical (1776!) Dobbin House in Gettysburg before we're done. Limited reservations available; contact leader soon. Leader: Mike Darzi, michael.darzi@saic.com or 301-580-9387.

Wed. June 13 GB – Moderate. Evening Hike at Loch Raven Moderate 3 to 4 mile hike along the shoreline of Loch Raven Reservoir on the Glenn Ellen Trail. Meet on Seminary Ave. to the left at the light off Dulaney Valley Rd. north from the Baltimore Beltway at 7:00 PM. For details, call Jack at 410-256-3963.

Sat. June 16, 2012 10:00 a.m. to noon Hellen Creek Forest and Wildlife Preserve. Invasive Plant Removal. We continue our efforts to remove and control the invasive species on the Preserve. Some of these plants have natural defenses

continued →

Outings (June)

←continued

so please wear long sleeves and long legged pants. Gloves, tools, and water will be available. Nature Walk Seasonal Series at Hellen Creek Forest and Wildlife Preserve 11785 Clifton Drive Lusby, MD 20657 Sponsored by Sierra Club Southern Maryland Group and Cove Point Natural Heritage Trust 410-394-1300

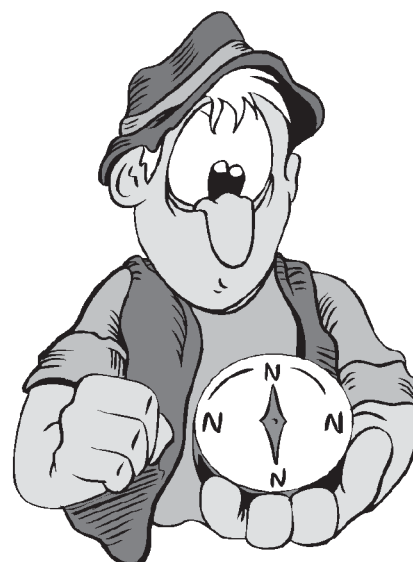
Sat. June 16. Rated B. Hiking Along the Potomac in Great Falls and River Bend Parks. An approximately 8-mile morning hike along the River and Ridge Trails of Great Falls and River Bend Parks, through scenic Mather Gorge. We start at 8:30am so you'll have plenty of time to enjoy the afternoon with other pursuits. Bring hiking boots, water and a snack or light lunch which we will eat at the River Bend Visitors Center. There will also be an opportunity to view the falls from several different sites and enjoy the Visitor's Center at Great Falls Park. Meet at the Difficult Run parking area. Directions: Take the Virginia Route 193 (Georgetown Pike) exit of the Capitol Beltway west for 3.6 miles to the parking lot on the left. For further information, contact Ray Evert at Hikerdude22@msn.com or 703-408-7117 (after 8am or before 9:30pm).

Sat. June 16: Patapsco - Rockburn Branch, MD. Moderate 7-8 mile hike with several stream crossings, following the Patapsco River on the Valley View Trail. Bring lunch and water. Meet at 8:30 in Rockburn Branch Park, the entrance off Landing Road one mile north of Montgomery Road; park in the lot at the end of the road under the power lines. Call James Perschy, 410-964-1902, jameshike@verizon.net.

Sun. Jun. 17. Rated B. Carderock to Great Falls along C&O Canal. Enjoy a lovely summer out-and-back hike along this scenic stretch of the Potomac River on the C&O Canal towpath, choosing your own pace and distance up to about 9.5 mi. We'll meet at 9:30 am and finish just in time and just in place for an optional, yet hearty picnic. (See next item.) From Beltway, take Clara Barton Pkwy west; after 0.6 mi, take ramp on right and turn left to cross over pkwy; follow to end (0.3 mi), turn left, and park near pavilion (<http://tinyurl.com/cbagjd>). Leader: Mike Darzi, michael.darzi@saic.com or 301-580-9387 and Carol Ivory, carolivory@verizon.net.

Sun. Jun. 17. Not Rated. Annual ODH Picnic at Carderock. Join us for the traditional potluck and cookout picnic to celebrate this year's One Day Hike to Harpers Ferry. The picnic is open to all, with ODH veterans and volunteers as special guests. We'll provide hotdogs, hamburgers, veggie burgers, trimmings, bread, chips, and non-alcoholic beverages, as well as paper and plastic ware; you may bring appetizers, side dishes, or desserts. You may first work up an appetite by doing an optional hike of up to 10 miles. (See previous item.) The picnic will feature live, traditional Scottish/Irish music. From Beltway, take Clara Barton Pkwy west; after 0.6 mi, take ramp on right and turn left to cross over pkwy; follow to end (0.3 mi), turn left, and park near pavilion (<http://tinyurl.com/cbagjd>). For more information contact Mike Darzi, michael.darzi@saic.com or 301-580-9387, and Carol Ivory, carolivory@verizon.net.

Sun. June 17 GB – Moderate. Leakin Park/Gwynns Falls Park Hike. 5-6 miles. Celebrate Father's Day on this hike along paved and unpaved trails within the parks. Beautiful views of Gwynns Falls valley. Includes visit to Carrie Murray Nature Center. Meet at 1:00 PM. From I-695 take Exit 16, I-70 East (not West). Exit ramp will open onto Security Boulevard. Make the first right on Forest Park Ave. After one-half mi. turn right on Windsor Mill Rd. After one-third mi. turn right into Eagle Dr. and parking. Meet by tennis courts. Cancelled for steady rain or



storms. For more details, call Alan at 410-252-5720 or email apenczek@stevenson.edu.

Wed.-Thu. June 20-21: Massanutten Trail-Edinburg Gap to Mud Hole Gap Backpack, VA. 16-19 mile backpack, 2000 feet elevation gain. Rocky ridge walk with views. Leave from the Rt 32/I-70 Park and Ride @ 8:00. Seasoned backpackers only. Pre-registration required. Contact Mike Juskelis, 410-439-4964, mjuskelis@cablespeed.com.

Wed. June 20 GB – Easy. Cylburn Arboretum Evening Hike (older children and dogs welcome). 2 miles. Celebrate the first day of summer. Cylburn is a "well-kept secret" with rare trees, wildflowers, spacious lawns and gardens surrounding a Victorian Mansion. Meet at 6:30 PM in front of the Vollmer Center at end of entrance driveway. Children under 18 must be accompanied by parent or other adult. Dogs must be friendly and leashed. Located at 4915 Greenspring Ave., Baltimore, on the east side of road, between Northern Parkway and Cold Spring Lane, both accessible via western exits off I-83. The entrance is marked by stone pillars. Cancelled for steady rain or storms. For more details, call Alan at 410-252-5720 or email apenczek@stevenson.edu.

Sat. June 23: Flag Ponds Nature Park. Easy 4 mile hike down to the beach on the Chesapeake Bay, where we will hunt for shark teeth and other fossils eroded from Calvert Cliffs. Bring lunch to eat on the beach. Depart at 8:30 from the west lot of the Broken Land Parkway Park & Ride at Rt. 32. Call Ken Clark, 443-280-4050, kenclark7@live.com.

Sat. June 23. Rated A/B. Claude Moore Park Hike. Get-to-Know-Loudoun Series. Discover a little-known gem in the heart of suburban eastern Loudoun County. This easy 6-mile loop hike features a Civil War signaling site, the pre-1800 Lanesville House, the Frogshackle Nature Center, a portion of the original colonial road once used by George Washington, and a diverse natural environment of woods and meadows. We'll discuss the park's efforts to meet the recreational needs of the surrounding population

continued →

Outings (June-July)

←continued

while preserving the park's natural and historical assets. Meet at 9am: from route 7 in Sterling, VA, take route 1794 (Cascades Parkway) south through 2 traffic lights; look for brown sign with white lettering "Claude Moore Park." Take next left at Vestals Gap Road and park in lot near visitors' center. If you need to contact the leader, please do so by June 21. Leader: Gary Kosciusko 703/765-0306 or novahiker@cox.net.

Sun. June 24 GB – Easy. Gunpowder Tube Trip

Meet at the Monkton Station on the NCR Trail at 12:00 noon. Bring a tube or rent one there. Bring water shoes, sun screen, and a way to keep your keys in your pocket like a safety pin. For more details, call Jack at 410-256-3963.

Sun. Jun. 24. Rated D. Great Falls & Riverbend Parks. An approx. 10-mile, moderately paced, loop hike of both parks that includes great views of the Great Falls, Mather Gorge, and the quiet version of the Potomac. We'll examine the curious remains of the Patowmack Canal and ponder area life in olden times. Hike covers part of the Potomac Heritage Trail, and includes a little bit of bushwhacking. Meet at Great Falls Park (VA) Visitor Center lot Riverbend Park Visitor Center parking lot at 9 am. Bring lunch and water. Leader: Mike Darzi, michael.darzi@saic.com or 301-580-9387.

Sat. June 30. Rated C. Virginia Heritage Trail Northwest of River Bend Park. A pleasant four hour hike along the Potomac River from Riverbend Park to the Seneca Area and returning. The distance we cover will depend on the hiking ability of the group but should be about 10 miles with some modest hills. Bring water and a snack or light lunch. We

will meet at the Riverbend Park Nature Center (NOT VISITOR'S CENTER) at 9am. Directions: Take Virginia Route 193 (Georgetown Pike) and go west for 4.5 miles to River Bend Drive, right on River Bend for 2.3 miles to Jeffery Road and bear right following the signs another 1.4 miles to the Nature Center. For further information, contact Ray Evert at Hikerdude22@msn.com or 703-408-7117 (after 8am or before 9:30 pm)

Sat-Sun, Jun. 30 – Jul. 1. Rated F+. **Backpacking trip to North River Gorge, GWNF.** 12.5-mile loop hike.

The first day we'll climb up to the ridgeline and see spectacular views and then descend down to the North River to camp. Day two, we'll hike along the river back to the cars. There are 4100 ft .of elevation change and 8 river crossings. Participant must be fit, experienced backpackers, and able to keep up with the group. The group will typically travel at 2 miles per hour, including breaks. Extra shoes for river crossings and hiking poles are recommended. To participate, you must contact the leader. We will meet and depart from Vienna Metro NORTH parking lot at 9:30am on Saturday. From there we can carpool. Leader: Liz Guertin, eguertin@yahoo.com or 202-415-4639 (before 9pm).

July

Sun. July 1: Splash in the Middle Patuxent, in Columbia. Cool down with a leisurely 2 hour walk in the middle of the river, through the Middle Patuxent Environmental Area. Learn how this area was protected from development when Columbia was formed. Wear old sneakers, and be prepared to get wet. Optional restaurant lunch

afterwards, so bring a change of clothes. Meet at 10:00, 0.8 mile south of Rt. 108 on Trotter Road, at the MPEA parking lot on the left (east). Call Ken Clark, 443-280-4050, kenclark7@live.com.

Sat.-Mon. July 7-9: Great North Mountain/Elliots Knob Backpack, VA. Strenuous 22 mile backpack with 5000 Feet elevation gain and a panoramic view from 4463-foot Elliots Knob. Seasoned backpackers only. Pre-registration required. Contact Mike Juskelis, 410-439-4964, mjuskelis@cablespeed.com.

Sat. July 14: Splash in the Middle Patuxent, Gorman Area Park. Cool down with a leisurely 3-4 hour walk in the middle of the river, from Rt. 29 to Murray Hill Road. Wear appropriate footwear like old sneakers, and be prepared to get wet. Due to hidden slippery rocks in the river, this hike is not appropriate for people with bad ankles/knees/backs. Bring lunch and water, and a towel or change of clothes for the car. Depart at 10:00 from the west lot of the Broken Land Parkway Park & Ride at Rt. 32. Call Ken Clark, 443-280-4050, kenclark7@live.com.

Saturday July 14 – 11 am – 3 pm – Paw Paw Tunnel C&O hike (Allegany Co., MD). 4 mile, easy.

Meet at Paw Paw Tunnel Parking area on MD 51. See <http://maryland.sierraclub.org/events/ActivitySearch.asp> for more information. Contact Karen Moody (karen.moody@mdsierra.org) to register. Sierra Club Catoctin region hikes occur the second Saturday of every month at 11 am. Check the Maryland Sierra club events calendar for information on location and details. For further information, email Karen Moody at Karen@lunafiberarts.com.

Sat. July 21, 2012 8:00 a.m. to 10:00 a.m. Hellen Creek Forest and Wildlife Preserve. Please join us in exploring the Preserve in its summer clothes. We will be identifying birds, trees, shrubs, vines, flowers, insects, and whatever else pauses long enough. Bring camera's binoculars, and bug spray. Nature Walk Seasonal Series at Hellen Creek Forest and Wildlife Preserve 11785 Clifton Drive Lusby, MD 20657 Sponsored by Sierra Club Southern Maryland Group and Cove Point Natural Heritage Trust 410-394-1300

Sat. July 21 GB – Moderate. Mingo Forks/Bunker Hill Circuit Hike 4 miles on the south side of the Big Gunpowder. Pretty circuit through

continued →



Explore, enjoy and protect the planet

A Will is a Way

Make a commitment to the next generation by remembering Sierra Club in your will. Your support will help others preserve the intricate balance of nature

Sierra Club
Gift Planning Program
85 Second St, Second Floor • San Francisco, CA 94105
(800) 932-4270 • gift.planning@sierraclub.org

Outings (August-September)

←continued

upland forest and narrow stream valleys. Meet at 1:00 PM at Mt. Carmel Park & Ride, just off of I-83 (west side). Cancelled for steady rain or storms. For more details, call Alan at 410-252-5720 or email apenczek@stevenson.edu.

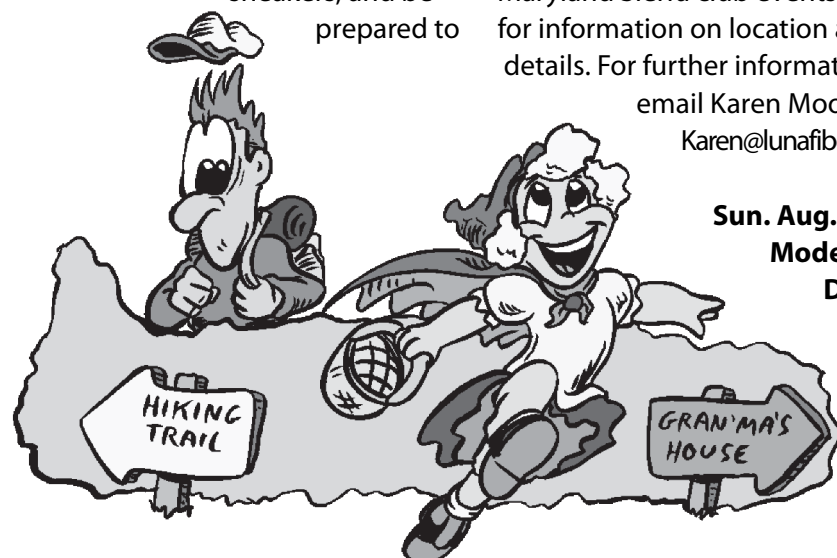
Sat.-Sun. July 21-22: Torry Ridge/ Mills Creek Backpack, VA.

Moderate 14 mile backpack, 2600 feet elevation gain. Ridge Top views and a pleasant stream valley to camp in. This trip is suitable for experienced hikers who wish to move up to backpacking. Leave from the Rt 32/Broken Land Parkway @ 8:00. Pre-registration required. Contact Mike Juskelis, 410-439-4964, mjuskelis@cablespeed.com.

August

Sat. Aug. 4: Splash in the Middle Patuxent, in Savage Park.

Cool down with a leisurely 3 hour walk in the middle of the river, from Murray Hill Road to Savage Park. Discover clams and other wildlife. Wear old sneakers, and be prepared to



get wet. Due to hidden slippery rocks in the river, this hike is not appropriate for people with bad ankles/knees/back. Bring a snack and water, and a change of clothes

for an optional restaurant lunch after the hike. Meet at 9:30 at the Savage Park Wincopin Trail parking lot, off Vollmerhausen Road, a quarter mile east of the bridge over I-95. Call Ken Clark, 443-280-4050, kenclark7@live.com.

Sat.-Mon. Aug. 4-6: Laurel Highlands Trail-Rt 30 to Rt 56 Backpack, PA.

Moderate 24 miles backpack through mature forest, vistas. We will camp in shelter areas. Leave from the Rt 32/I-70 Park and Ride @ 7:00. Pre-registration required. Contact Mike Juskelis, 410-439-4964, mjuskelis@cablespeed.com.

Sat August 18 – 11 am – 2 pm. Bear Branch yellow trail hike

(Westminster, MD). 4 mile, easy. Meet at Bear Branch Nature Center. See <http://maryland.sierraclub.org/events/ActivitySearch.asp> for more information. Contact Karen Moody (karen.moody@mdsierra.org) to register. Sierra Club Catoctin region hikes occur the second Saturday of every month at 11 am. Check the Maryland Sierra club events calendar for information on location and details. For further information, email Karen Moody at Karen@lunafiberarts.com.

Sun. Aug. 19 GB – Moderate.

Daniels Trail Hike. 6 miles. Out-and-back hike

along the south side of the Patapsco River, with one climb to the top of the ridge. Good chance of seeing herons. Will examine remnants of the B&O railroad track and visit the Davis

Tunnel. Muddy spots possible. Meet at 1:00 PM. From I-70 take Route 29 North to end. Turn right on Rogers Ave. After 0.7 mi. turn left on Old Frederick Rd. After 0.6 mi. turn left on Daniels Rd. Meet at the small lot near the end of Daniels Rd., additional parking is around the corner by the dam. Cancelled for steady rain or storms. For more details, call Alan at 410-252-5720 or email apenczek@stevenson.edu.

September

Sat.-Mon. Sep. 1-3: Shenandoah Trail-South Backpack, VA.

Strenuous 25 mile backpack, 5000 feet elevation gain. Ridge top hike with lots of views to the east and west. Seasoned backpackers only. Pre-registration required. Contact Mike Juskelis, 410-439-4964, mjuskelis@cablespeed.com.

Sat, Sept. 8 – 11 am – 2 pm. Penn Mar Park hike.

Details to be determined. See <http://maryland.sierraclub.org/events/ActivitySearch.asp> for more information. Contact Karen Moody (karen.moody@mdsierra.org) to register. Sierra Club Catoctin region hikes occur the second Saturday of every month at 11 am. Check the Maryland Sierra club events calendar for information on location and details. For further information, email Karen Moody at Karen@lunafiberarts.com

Tue.-Thu. Sep. 11-13: Massanutten Trail-Edinburg Gap to Shawl Gap Backpack, VA.

Strenuous 23 mile backpack, 4000 feet elevation gain. Rocky ridge walk with views. Seasoned backpackers only. Pre-registration required. Contact Mike Juskelis, 410-439-4964, mjuskelis@cablespeed.com.

Sat. Sept. 15: Blockhouse Point, MD. Moderate 8 mile hike, starting flat at Pennyfield Lock on the historic C&O canal, then over hilly terrain leading to a great view of the Potomac River from the cliffs over the canal. Bring lunch and water. Depart at 9:00 from the west lot of the Broken Land Parkway Park & Ride at Rt. 32. Or meet us at 9:55 at Pennyfield Lock. Call Ken Clark, 443-280-4050, kenclark7@live.com.

Sat.-Mon. Sep. 22-24: Roaring Plains Base Camp Backpack, VA.

Hike in 2.5 miles and set up camp on Day 1. Hike 12-14 miles around the canyon rim with 1100 feet of elevation gain on Day 2. Retrace Day 1 steps on Day 3. Seasoned backpackers only. Pre-registration required. Contact Mike Juskelis, 410-439-4964, mjuskelis@cablespeed.com.

Sat. Sept. 22 GB – Moderate. McKeldin Area Hike.

4 miles. Celebrate the fall Equinox with a hike. Explore diverse trail system in McKeldin Area of Patapsco Valley State Park. Meet in parking lot just past entrance station at 1:00 PM. Note: \$2 entrance fee per person. From I-70 westbound take Exit 83, Marriottsville Rd. north 4 mi. to park entrance on right. From I-70 eastbound take Exit 82, Route 40 to Marriottsville Rd. and turn left. Cancelled for steady rain or storms. For more details, call Alan at 410-252-5720 or email apenczek@stevenson.edu.

BICO

Baltimore Inner City Outings

Sierra Club Inner City Outings (ICO) is a community outreach program providing opportunities for urban youth and adults to explore, enjoy and protect the natural world. It was founded in 1999 with the goal of providing under-served Baltimore City youth with educational, enjoyable and safe outdoor experiences at no cost to them. Since start-up, Baltimore ICO (BICO) has conducted more than 350 outings serving over 3,000 youngsters.

BICO provides environmental education and promotes respect for the outdoors, teamwork and leadership skills, and a community service ethic.

BICO's outings in and around Baltimore include nature hikes & orienteering; camping, canoeing, cycling & caving; initiative and confidence coursework; and community service for Baltimore's Recreation & Parks Department.

For more information, please send inquiries to baltimoreinnercityoutings@gmail.com, or visit our web site at <http://ico.sierraclub.org/baltimore>.

Latest Word on LNG in Maryland

Cove Point, MD —The Sierra Club announced that they will reject a proposed liquefied natural gas (LNG) export facility in Cove Point, MD. In a unique plot twist, a prior legal settlement entered in the 1970s and later revised gives the Sierra Club the ability to reject any significant changes to the purpose or footprint of the existing Cove Point LNG import facility.

Converting the facility to accommodate LNG exports would result in major damage to the Chesapeake Bay, coastal forests, and the local economy and tourism.

The export of LNG will result in increased, dangerous fracking in the Marcellus Shale. No federal agency has ever fully analyzed or disclosed these dangers to the public interest. Sierra Club's letter makes clear that this failure of transparency is a key reason to oppose the project.

Read more: <http://maryland.sierraclub.org/>

The Hidden Cost of Energy: Water

(continued from pages 7-8)

(Endnotes)

1 Sovacool, Benjamin K., and Kelly E. Sovacool. "Preventing National Electricity-Water Crisis Areas in the United States." *Columbia Journal of Environmental Law* 34.2 (2009): 342-43.

2 Sovacool, Benjamin K. "RUNNING ON EMPTY: THE ELECTRICITY-WATER NEXUS AND THE U.S. ELECTRIC UTILITY SECTOR." *Energy Law Journal* 30.11 (2009): 13.

3 Sovacool, Benjamin K., and Kelly E. Sovacool. "Preventing National Electricity-Water Crisis Areas in the United States." *Columbia Journal of Environmental Law* 34.2 (2009): 362-63.

4 Sovacool, Benjamin K. "RUNNING ON EMPTY: THE ELECTRICITY-WATER NEXUS AND THE U.S. ELECTRIC UTILITY SECTOR." *Energy Law Journal* 30.11 (2009): 20-21.

The Maryland Chapter of the Sierra Club



Your best investment to protect Maryland's natural heritage.

The volunteers of the Maryland Chapter are your neighbors. They focus on environmental issues right *in your backyard*. They battle fracking in Western Maryland and incinerators in Frederick. This year they took the lead in passing landmark legislation to clean up the Bay, and came within one vote of passing the offshore wind bill. Next year they'll be back to build on that momentum.

Few organizations can match the grassroots muscle of the Sierra Club, and the dedication of the citizens who comprise it. Not only do they help to pass critical environmental protections, they also see *that those protections are actually enforced*.

This is citizen participation as it's meant to be, and your donation helps to support it by giving the Maryland Chapter the resources it needs to organize and prepare. Please donate to help these good people continue their work for all of us!

Please send your check to
Sierra Club, Maryland Chapter
7338 Baltimore Ave, Suite 111
College Park, MD 20740

Thanks!

The Chesapeake is published quarterly by the Maryland Chapter of the Sierra Club. Annual Sierra Club membership dues pay for subscription to this publication. Non-members may subscribe for \$20.00 per year.

The opinions expressed in this newsletter are in general aligned with those of the environmental community in Maryland but are strictly those of the authors and not necessarily official policy of local, state or national Sierra Club entities. The Sierra Club prides itself on being a grassroots volunteer organization. The concerns and opinions of all its members are welcome in these pages.

Items for publication are best submitted by email to <maryland.chapter@sierraclub.org> or <laurel.imlay@sierraclub.org> with "For Chesapeake" and title in subject line. Items must include the author's address and telephone numbers. Material may be edited for length, content or clarity at the discretion of the editor. Photographs, illustrations and other works of art are welcome. Materials cannot be returned unless accompanied by a stamped, self-addressed envelope.

Change of address: send address changes to the Sierra Club, 85 Second Street (2nd Floor), San Francisco, California 94705-3441. For fastest service, please include your old and new addresses along with your 8-digit membership number. For local membership information contact the Maryland Chapter Office 301-277-7111 or write: Maryland Chapter/Sierra Club, 7338 Baltimore Ave (Suite 101A), College Park, MD 20740.

Advertising: For display and classified advertising rates and information, contact:
Editor, *Chesapeake*
Sierra Club Maryland Chapter
7338 Baltimore Ave, Suite 111
College Park, MD 20740

Credits

The Maryland Chapter wishes to thank those who contributed to this issue of *Chesapeake*.

Writers and Contributors: Alan Girard, Claudia Friedetzky, David O'Leary, Sarah Peters, James McGarry, Tim Junkin, Mattawoman Watershed Society, Tom Dernoga, Lauren Donelly, Fred Sypher, Jan Hoffmaster

Editors: Betty Brody, Mary Corddry, Donna Engle, Becky French, Claudia Friedetzky, Ron Henry, Laurel Imlay, David O'Leary, Janis Oppelt, Cindy Paré, Richard Reis, D. Tewell

Outings Editor: Jan Hoffmaster

In her groundbreaking book, *Silent Spring*, Rachel Carson wrote:

In an age when man has forgotten his origins and is blind even to his most essential needs for survival, water along with other resources has become the victim of his indifference.

This issue of *Chesapeake* is focused on water, and what we must do to overcome the results of years of blindness and indifference. Spurred by the EPA to reduce the pollutants which have poured into the Bay through its vast watershed, Maryland and its counties are wrestling with issues like rushing stormwater, fertilizer-laced runoff from agricultural fields and suburban lawns, and inadequate water treatment plants and septic systems.

Enjoy a glass of water. Then call or e-mail Claudia to find out how you can help.

NON PROFIT
ORGANIZATION
U.S. POSTAGE
PAID
ELKTON, MD
PERMIT NO 85



the water issue

The Bay Is on a diet? Yep!
How it happened, and what it means
How energy costs . . . water
Patriotism, agriculture, and . . . water
Smart growth and . . . water
Water and . . . crabs

And see how we fared in Annapolis, meet our new chair, learn about ticks, and find a great reason to get outside!