



The Highlands Voice

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Making Permit Reviews More Efficient?

By John McFerrin

For at least the second time, Senator Joe Manchin (D-WV)'s dream that we should fast track proposed infrastructure projects has been thwarted. His idea was to shorten the time for review of infrastructure projects, limit judicial review of agency decisions on those projects, etc. He also wanted to specifically direct that the Mountain Valley Pipeline be approved.

Senator Manchin had previously proposed this in September 2022, as part of a spending bill. Most recently he had proposed it as an add-on to a defense authorization bill that was assured of passage. He didn't have the votes.

He has attributed the failure of his idea to politics, an attribution that makes sense. Fast tracking a pipeline sounds like a Republican

idea; examples of when any business wanted to do anything but the Republicans said, "Whoa, hold on, let's think about this" are rare or non-existent. Maybe Republicans opposed the idea just because a Democrat suggested it. A more nuanced explanation would involve a coalition of those who think hasty review of projects is a bad idea and those who didn't see why a project in Senator Manchin's state should be singled out when they had projects in their states they wanted to nudge along.

In any event, the Mountain Valley Pipeline remains where it always was—struggling to overcome its problems with slides and

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Thoughts from our President

By Larry Thomas

Winter certainly has arrived in the highlands with freezing temperatures, strong winds (causing wind chills to drop below zero) and several snowstorms blanketing the mountains. We have to wonder what Old Man Winter's plans for February and March are, but we will have to deal with whatever is sent our way. No matter, the Conservancy must keep focusing on new and exciting opportunities and continue to monitor unresolved issues that we have been working on as are reported every month in *The Highlands Voice*.

The West Virginia 2023 Legislature is in Full Session

The legislative session has begun, and as reported in a separate article, bills are being introduced at a fast and furious pace. Members of the Conservancy Legislative Committee as well as the West Virginia Environmental Council Lobby Team are monitoring bill introductions for those of interest, both good and bad, compiling a list of those to be watched as they move through the process.

An issue that the Conservancy is keeping an eye out for is legislation to permit the use of Off-Road Vehicles (ORVs) on West Virginia public lands. The Public Lands Committee has prepared information concerning the issues caused by allowing ORV use on our public lands, studies that must be addressed before considering permitting the use of ORVs on our public lands and the issues that must be assessed and studied to be sure that the environmental concerns of society are addressed before such a decision is made. See the information posted on the Allegheny-Blue Ridge Alliance Conservation Hub "Off-Road Vehicle Recreation On West Virginia Public Lands" at <https://bit.ly/ABRAORVS>

We All Live in a Watershed

The Conservancy has always advocated for clean water. I came across this great information about watersheds that describes a watershed, a list of watershed problems and what we can do as individuals to protect our watersheds.

What is a Watershed? A watershed is the land that water flows across or under on its way to a river, lake, stream or bay. Water travels over farm fields, forests, suburban lawns and city streets, or it seeps into the soil and travels as groundwater. Watersheds are separated from each other by high points, such as hills or slopes.

To picture a watershed, think of a small brook that flows into a river. The river then flows into a lake. All the land that surrounds the brook, river and lake are in one watershed, because all the water in the area flows into the lake. In addition, the lake and its watershed may be a part of a larger river's watershed. Water in the larger rivers eventually makes its way to the ocean.

What is your Watershed Address? Everyone lives in a watershed. The water in your backyard drains over or under the ground to a small creek or pond and is a part of its watershed. Where does

the rain in your backyard end up? The answer to this question is your watershed address, the drainage basin where you live.

What is a Drainage Basin? A drainage basin is a larger watershed containing the watersheds of several other smaller rivers and streams.

What are Identified Watershed Problems? People can affect the environment's health when they pollute a watershed. Pollutants are materials that can harm plants, animals or humans. These materials may be discharged directly into a water body or washed off the land and into water bodies. Some can also seep into the soil and groundwater.

Examples of pollutants include soil from construction sites, waste from septic systems, fertilizers, pesticides, and chemicals such as mercury, lead, and arsenic. Road salt, soil and animal waste can also pollute if washed into a water body. Sources of pollution include atmospheric deposition (acid rain), runoff from paved roads and driveways, lawns, eroding stream banks, oil spills, landfills, industries, and farm fields. Depending on the type and level of pollution, the water body may become unsuitable for fishing, swimming, or even for aquatic animals to survive in.

A watershed may also be harmed when people change how and where water flows, for example, by paving large parking lots or changing the direction of a stream. Problems such as flooding or lower groundwater levels can result.

What are Ways to Protect Watersheds? Everyone lives in a watershed. It could be large or small. What you do at your house affects everyone downstream and around you.

- Get involved. Little things can all add up. Get together with friends and adopt a section of waterway. Plan a picnic with friends and clean up the banks of a nearby waterway, bike route or highway.
- Sweep sidewalks and driveways rather than hosing them off. Hosing hard surfaces wastes water and moves the debris into the storm drains. There it can collect and clog the drain. Instead, collect and compost yard waste.
- Don't waste water. Wash your car on the lawn, or better yet, use a commercial car wash. Most commercial car washes recycle or pre-treat their wastewater, thereby reducing its effect on the environment.
- Don't flush unused drugs and cosmetics down the drain. These pollutants find their way out into the environment and can damage our watershed and everything living in it. Instead, dispose of these items, along with fats, grease, diapers, and personal hygiene products in the garbage can.

The Conservancy board met on January 29th. Highlights are reported in this issue of the *Voice* on page 6. I want to thank everyone in attendance as it was a very productive meeting. It is increasingly difficult to keep up as lots of good and potentially concerning information surfaces every day.

Please stay safe as we continue through the winter.

Winter Musings from Members of the National Garden Association



Winter is a season of
recovery and preparation.

Paul Theroux

Photo by NGA member "Bonehead"



While I relish our warm months,
winter forms our character and
brings out our best.

Tom Allen

The West Virginia Highlands Conservancy is a non-profit corporation which has been recognized as a tax exempt organization by the Internal Revenue Service. Its bylaws describe its purpose:

The purposes of the Conservancy shall be to promote, encourage, and work for the conservation—including both preservation and wise use—and appreciation of the natural resources of West Virginia and the nation, and especially of the Highlands Region of West Virginia, for the cultural, social, educational, physical, health, spiritual, and economic benefit of present and future generations of West Virginians and Americans.

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The West Virginia Highlands Conservancy web page is www.wvhighlands.org

EPA Wants to Plug the Leaks at Gas Wells

By John McFerrin

My mother hated waste. In a household headed by Depression era babies, we did it all: reusing wrapping paper, turning off the lights when leaving the room, rinsing out the Kool-Aid package to get every last speck of powder, everything.

She would be appalled that the oil and gas industry is letting perfectly usable gas, gas that could keep someone warm, just drift away.

Now the United States Environmental Protection Agency is doing something about it. It has proposed a regulation that would limit leaks of natural gas.

As worthwhile a goal as satisfying my mother's sensibilities might be, that is not why the EPA is doing it.

The gas that the industry is allowing to just drift away is mostly methane. Emissions of methane matter because methane is a potent greenhouse gas. While carbon dioxide is the greenhouse gas that is talked about the most, in the short-term methane is much more potent. According to the Intergovernmental Panel on Climate Change, over 20 years methane warms the planet 86 times as much as carbon dioxide.

Methane differs from carbon dioxide as an agent of climate change in how long it lasts. Methane degrades in the atmosphere over about 20 years. Carbon dioxide lasts at least for centuries.

When the proposed standards go into effect, the same actions that prevent methane leaks also prevent leaks of other health-harming air pollutants, including smog-forming volatile organic compounds (VOCs) and toxic air pollutants such as benzene.

In a nutshell, the oil and gas operations would be required to tighten the valves, plug the leaks, etc., all in an effort to keep gas from escaping. The rule also recognizes that more sensing technologies are becoming available all the time. The rule is designed to encourage companies to adopt those technologies.

More specifically, according to the Environmental Protection Agency, companies would be required to:

- Ensure that all well sites are routinely monitored for leaks, with requirements based on the type and amount of equipment on site;
- Encourage the deployment of innovative and advanced monitoring technologies by establishing performance requirements that can be met by a broader array of technologies;
- Prevent leaks from abandoned and unplugged wells by requiring documentation that well sites are properly closed and plugged before monitoring is allowed to end;
- Leverage qualified expert monitoring to identify "super-emitters" for prompt mitigation;
- Strengthen requirements for flares to ensure they are properly operated to reduce emissions;
- Set a zero-emissions standard for pneumatic pumps at affected facilities in all segments of the industry, with exceptions limited to sites without access to electricity;
- Establish emission standards for dry seal compressors, which are currently unregulated;

- Require owners/operators of oil wells with associated gas to implement alternatives to flaring the gas, unless they submit a certified demonstration that all alternatives are not feasible for technical or safety reasons.

Fixing leaks does not sound dramatic. A little leak here, a little leak there, a bigger leak there, etc., does not sound like much. It adds up. EPA estimates that between 2023 and 2035 the standards would reduce methane emissions by 36 million tons, the equivalent of 810 million metric tons of carbon dioxide. That's nearly the same as all greenhouse gases emitted from coal-fired electricity generation in the U.S. in 2020. In addition, the standards will reduce volatile organic carbon emissions by 9.7 million tons during the same period.

The existence of these leaks also affects other public policy discussions. Natural gas routinely brags about being a "clean" fuel. It is only "clean" compared to coal. It is true that, measured by carbon dioxide released at the power plant, natural gas is twice as clean as coal. Even at present levels of methane leaks, it is still cleaner. The presence of these leaks, however, diminishes the advantage. Instead of thinking of a choice between "clean" natural gas and "dirty" coal, the leaks suggest it is more like "dirty" coal and "not quite so dirty" natural gas.

In addition to helping save the planet (a worthwhile goal in its own right) the new rules will preserve a valuable resource. It would increase recovery of natural gas that otherwise would go to waste—saving enough gas from 2023 to 2035 to heat an estimated 3.5 million homes for the winter.

That the leaking methane is valuable changes how to evaluate the burden of compliance upon the industry. In other industries, the waste that rules prohibit an industry from releasing into the atmosphere is just that—waste. It is just something that has to be gotten rid of. Here, the methane is not useless waste. It is the product that the industry sells. Preventing it from leaking has a financial benefit for the company as well.

As with all environmental laws, the devil is in the implementation. Even when they become final, the proposed rules will not impose these requirements upon oil and gas operations directly. Instead, the rules contemplate what EPA describes as a federal-state partnership. States will have 18 months from the time the rule is final to submit a plan on how it intends to implement the standards. The standards would have to actually apply within 36 months of the time the rule is final.

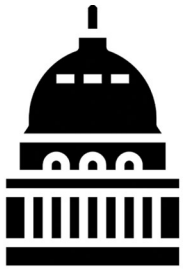
The Environmental Protection Agency is accepting comments on the proposed rule until Feb. 13, 2023. You also may send your comments the following ways:

- Email: a-and-r-docket@epa.gov. Include Docket ID No. EPA-HQ-OAR-2021-0317 in the subject line of the message.
- Mail: U.S. Environmental Protection Agency, EPA Docket Center, Docket ID No. EPA HQ-OAR-2021-0317, Mail Code 28221T, 1200 Pennsylvania Avenue, NW, Washington, DC 20460.

The West Virginia Highlands Conservancy will also be commenting.

2023 West Virginia Legislature Update

By Luanne McGovern



The 2023 West Virginia legislative session kicked off in Charleston on Jan. 11. So far over 1,500 bills have been introduced. The WV Highlands Conservancy, in conjunction with the WV Environmental Council and other aligned groups, are focused on monitoring five key legislative areas:

- **Public lands**
- **Community Solar**
- **Orphaned Oil and Gas Well Prevention**
- **Above Ground Storage Tanks**
- **PFAS Protection/Clean Drinking Water**

Public Lands

A new development this year in the Senate is the formation of the Outdoor Recreation Committee, chaired by Senator Mark Maynard. So far, the committee has been relatively quiet, taking up only a few bills, but we are keeping a close eye on any activity that could impact public lands. A group from the Conservancy, WV Environmental Council, WV Rivers and the WV Sierra Club met with Senator Maynard to discuss his committee and to communicate our shared love of this great state. The meeting was productive and hopefully will lead to better cooperation on public lands issues.

Several bills have been progressing quite quickly through the Legislature.

SB4 (Adopt A Trail) would allow groups to “adopt” a trail in state parks or forests and perform cleanup, trail maintenance, etc., and to be recognized for their efforts. This bill was modified from last year’s SB562, as it acknowledges that there are established groups already performing these functions in many state parks and forests. This is certainly an improvement from last year and provides some guardrails on implementation. This bill is likely to pass into law.

SB143 (Adopt A Stream) and **SB160 (Rail Trails Program)** provide clarifications to existing programs, and both bills are expected to progress.

HB2753 (Modify WV E-Bikes Laws) would bring WV regulations into compliance with the Federal rules and allow “throttle only” bikes wherever regular bikes are allowed. This bill is progressing.

SB162 (Authorizing director of DNR to lease state-owned pore spaces in certain areas for carbon sequestration) was passed through both houses with little discussion and little public comment. It is intended to allow CO2 sequestration from the production of “blue hydrogen” from natural gas at the proposed WV Hydrogen Hub. The regulatory framework for CO2 sequestration was set by HB4491 in 2022.

There are numerous other bills being introduced impacting public lands and the environment, which may or may not advance. We will be following all of these closely in the coming weeks.

Community Solar

HB2159 (Establishing a Community Solar Program) was introduced by Delegate Evan Hansen. This bill would create a community solar program where subscribers could purchase an interest in a solar facility and use credits against their electric utility costs. At the Joint Standing Committee on Energy meeting on Jan. 9, a panel of potential investors and local business leaders presented a compelling picture of how community solar would benefit West Virginians through economic development, job creation and lower utility costs. The presentations were met with typical skepticism from the Senators and Delegates that cannot move forward from coal. Lobbying on this issue will continue, but progress is unlikely, given the strong pushback from the coal interests.

Orphaned Oil and Gas Well Prevention

SB109 (Orphan Oil and Gas Well Prevention Act) and **HB2852 (Create the Orphan Well Prevention Act of 2023)** were both introduced to deal with oil and gas wells that become abandoned after they are no longer economically viable. Orphaned wells can continue to leak liquids and vapors into the environment. Both bills have been progressed to their Energy committees.

PFAS Protection Act

SB485 (PFAS Protection Act) has been introduced in the Senate by a bipartisan group of senators. We are hopeful for a quick passage.

The bill requires the WV Department of Environmental Protection to identify and address PFAS sources impacting public water systems; requires facilities that have recently used PFAS chemicals to report their use to the Department of Environmental Protection; requires permits to be updated to require monitoring of PFAS chemicals for facilities that report their use; and requires the Department of Environmental Protection to propose rules to adopt water quality criteria for certain PFAS chemicals after they are finalized by the United States Environmental Protection Agency.

For more detailed information on PFAS, see the Highlands Voice December 2022 issue.

Aboveground Storage Tanks

No new legislation on this topic has been introduced. We can only hope it stays this way.

To follow the WV Legislative Session in more detail visit:

wvrivers.org
wvecouncil.org

Board Highlights

By John McFerrin

The dicey weather in January and the appeal of meeting without having to leave our houses drew us to a Zoom meeting for the January Board meeting of the West Virginia Highlands Conservancy. Even though Zooming is not as much fun as meeting in person, we still got some stuff done and learned a lot.

After some preliminaries, Membership and Fulfillment Secretary Crys Bauer kicked things off with a report on how we are doing on membership. She reported that we have added more new members this year than in any recent year. Whether this is because of our increased online presence (see below), good luck, or something else is unknown but it is a fact. She also reported on the inventory of the various items that we have for sale in our online store (hats, t-shirts, bumper stickers, books, etc.).

Next came Olivia Miller, Communications Director. Although not articulated in so many words, the theme of her presentation was Welcome to the 21st Century. She reported that *The Highlands Voice* is still going out every month and she is getting compliments on it. What is new, and 21st century, is our online presence. We have substantially upped our game on both Facebook and Instagram, gaining more and more followers. It is possible to track which posts sparked the most interest; ours were those on Corridor H and Dolly Sods. Our Facebook posts have resulted in some new sales at our online store and additional signatures on the petition urging the northern route for Corridor H.

Program Director Cory Chase reported on what he has been up to. He, along with Olivia and Crys, have been working on ways to communicate with our members more effectively, especially using the EveryAction program that we got recently. This will make it possible to send action alerts to our members. They have sent out the first email to our members and are working to clean up our list, eliminate invalid addresses. He is also helping plan the Fall Review, scheduled for October at Canaan Valley. The theme is water with topics such as acid mine drainage, PFAS, water rights, storage tanks, Corridor H citizen science, remediation, etc.

Cory attended Tucker County Day/Tourism Day at the WV Legislature where he set up

and manned a WV Highlands Conservancy table.

We reviewed the financial report for 2022 and a budget for 2023. Both were unremarkable. The budget for 2023 is a deficit budget. In the short to medium term, we can operate on a deficit budget because we have some savings. The deficit for 2023 will be smaller because we applied for and received a grant of \$4,000 to support the Dolly Sods Wilderness Stewards program. While receiving grants is not unprecedented, supporting ourselves on grants represents a shift for us. For most of our history we have supported ourselves on membership and Guide sales.

George Hack reported on the Futures Committee. It had considered organizing a Board training and another facilitated meeting to talk about the organization's future. It was the consensus that with adding staff and all, things are in turmoil (in a good way). We are going to wait until we see how things develop before scheduling a facilitated meeting.

In Luanne McGovern's absence, Cory presented her report. We are still sticking with the same priorities: (1) All things Public Lands; (2) Community Solar; (3) Orphaned Well Prevention; (4) Above Ground Storage Tanks; (5) PFAS Protection/Clean Drinking Water. The Legislature is frenetic as always and getting more so all the time. Determining the prospects for any of these issues is impossible at this stage and could change in a heartbeat. Progress on community solar seems less likely because of opposition from the coal industry.

The Climate Change committee is working on a booklet entitled *Suggestions for What Individuals Can Do to Impact Climate Change*. It is mostly finished but the law is changing in ways that might impact what is in the booklet so there may be revisions. It is undecided on how or when to publish it.

Dave Johnston reported on the Dolly Sods Stewards program. There is a lot going on. To learn all about it, see the story on page 17.

Rick Webb reported on the Appalachian Blue Ridge Alliance and, more specifically, the Conservation Hub that it supports. He gave us

a tour of its website and the information it provides. The Appalachian Blue Ridge Alliance is not an advocacy organization. It provides mapping and information that makes it possible for advocacy organizations to be effective.

The breadth and depth of the information is impressive. Many of the topics are those of interest to the WV Highlands Conservancy; some are not. There is so much useful information that, were anyone to try to read everything, their head would explode (there are no reported incidents of this happening; the hypothesis remains unproven). Having been warned of the potential perils, you should go look for yourself at abralliance.org to learn more about the Appalachian Blue Ridge Alliance or to conservation-abra.hub.arcgis.com where all the potentially head exploding information is collected.

Susan Rosenblum reported on the activities of the Rivers Committee. It has been, in cooperation with other groups, been training water monitors to establish baseline in the proposed path of Corridor H and document changes if it is constructed. She is very pleased with how the cooperation with other groups is going.

Cindy Rank reported on Extractive Industries. It is the same long, slow slog that it has always been. The committee is monitoring litigation and other developments, all in an effort to hold coal and gas industries and those who regulate them accountable.

Hugh Rogers reported on Corridor H. For a long time, he had thought of Corridor H as a backwater issue, with years of inactivity producing a kind of torpor. Not anymore. Now that picking a route is a real possibility in the near future, things are hopping. From his reading of public sentiment, most of the public (including populations of the towns most directly affected) favors the northern route (the one favored by the Highlands Conservancy). There has been no apparent movement by the Department of Highways. If it comes to litigation, we are loaded for bear.



Spring Native Tree Planting Opportunity for Landowners in the Cheat Watershed

2023 marks the third year of Friends of the Cheat's (FOC) Riparian Reforestation project in Tucker and Preston Counties, through which free native tree plantings are provided to landowners along streams or rivers within the project area: the Cheat River and major tributaries like Horseshoe Run, Clover Run, Minear Run, Licking Creek, Buffalo Creek, and Saltlick Creek. FOC is currently seeking landowners interested in these services for this spring.

The goal of the project is to re-establish healthy, forested riparian areas within the approved areas of the upper Cheat River watershed. A riparian area is the land directly next to a body of water, such as a stream or river. Healthy riparian areas are composed of many trees and plants and provide direct benefits to landowners, wildlife and water quality.

For example, forested riparian areas alongside agriculture and livestock operations are important to stream health and bank stabilization. Mature trees protect the fields from powerful flood waters, reduce erosion and bank loss that may occur, as well as filter agricultural runoff, thereby improving the overall water quality of the stream or river.

Healthy forested riparian areas also benefit stream ecosystem. Tree leaves provide a food source for aquatic insects that are eaten by fish. They also provide shade to the stream, keeping water cold for species like West Virginia's state



fish, the eastern brook trout.

Landowners who are interested in these no-cost services are encouraged to reach out to Madison Ball, conservation program director, at madison@cheat.org or 304-329-3621 ext. 7 to discuss options and create a planting plan for the landowner to review. Approved projects will be scheduled for planting in April or May 2.

Marion Harless's Earth Days

By Hugh Rogers

Marion Harless, an herbarist, teacher, weaver, West Virginia Folklife Master and outspoken environmentalist, who inspired countless people to learn and practice what she referred to as “green traditions,” died on Jan. 17 in Elkins. She was 87.

She called herself an “herbarist” because she said, “An herbarist is a person who grows herbs and uses them, and an herbalist is a person who uses herbs medicinally and doesn't necessarily know anything about the plants!”

Marion had a way with words. She published many in *The Highlands Voice*, some typed by my wife Ruth. Marion did not own a computer. She was ahead of her time in important ways, and behind in ways that were not important to her.

In “Another Earth Day” (April 2021) Marion recalled the first Earth Day, fifty-one years before. She was teaching then at “a small Texas state university” in Wichita Falls. A few faculty arranged for a “teach-in.” Marion spoke for an hour and a half. The tenor of her talk is suggested by a dialogue with a student afterwards: In one of my classes I remember Brenda Hardy asking, “Miss Harless, how long do we humans have to change our behavior?” (We were very formal in those days!) Long pause. I answered, “Ten years. Fifteen, at the most.” I have never seen a reason to change that gloomy estimate.

That's Marion. For readers now, she cited some reasons for gloom: “Except for those swimming right around Antarctica, all the fish on the planet contain micro plastics.” She cited tire tread wear dust, glitter, endocrine disruptors, a whole range of pollutants, concluding, “petrochemical plastics, pesticides, herbicides, fertilizers are part of most living organisms inhabiting this fragile planet.”

Nevertheless, she wrote, “Meanwhile with April come Arbor Day and Earth Day. I still plant trees, including shagbark hickories, which may take 50 years to produce nuts. Plant trees. Read Doug Tallamy's Nature's Best Hope. Then follow his pleas to plant native trees. Happy Arbor Day. Happy Earth Day.”

My favorite of hers is a poem from March 2015 titled “Nothing There.” Then Editor of *The*

Highlands Voice, John McFerrin, reprinted it four years later. You can find it in the *Voice* archives at wvhighlands.org. And you should, so you can feel its power and enjoy Marion showing off: against the speakers in the first line who want to “put it there,” whatever “it” is, since “There's nothing there,” Marion arrays a hundred and six nouns in 35 lines, every noun beginning with “S.”

A sample: Sowbugs and spiders, Salamanders and song sparrows. Solomon's seal, spignet, Sambucus. Skunks and skinks. Sanicle, 'sang, Sanguisorba, Sorbus. Sleep site of ursine sow. Squirrels of every sort. Sirtalis. Scrub pine, scrub oak, squirrel corn.



Unmoved, her antagonists proclaim, “There's nothing there that matters. We'll put it there.” In six quick lines, “S” verbs tell what they do. Finally, Marion must admit defeat. The last “S” words describe the result. She's left with “Nothing.”

Her joy in the Earth's multiplicity, in her knowledge of that multiplicity, was wrapped in pessimism—but the joy overflowed when she was teaching willing learners.

Her garden in Kerens, “The Mulch Patch,” was a living classroom. Over 32 years she brought students from the Augusta Heritage Arts Workshops to this garden—actually, two gardens, both in Kerens, one at the house she rented in 1977 (we arrived on the same lane at the same time), the other at the one she bought in 1998. Food ways and natural healing arts that she had grown up with were being lost, just as they became of interest to young back-to-the-landers.

Marion Dolores Harless (note the middle name) was born on June 29, 1935 and grew

up in Weirton. Her father, Everett Harless, had come there from Logan, and her mother, Jane (Hoag) Harless, from across the border in Pennsylvania. Both were familiar with native and cultivated plants and their uses. Marion said, “By the time I was five, I knew the names of the 21 tree and shrub species” around the house.

Marion participated in 4-H from the age of 13 to 21. She was a counselor at nature camps from Oglebay Park in Wheeling to Palisades Interstate Park in New York.

Her bachelor's and master's degrees from West Virginia University were in psychology, and she did further graduate work in animal behavior and ecology. One of her many interests led to the co-edited book, “Turtles: Perspectives and Research,” published by Wiley in 1979. She had teaching positions in Missouri, Texas, Washington, and for two years in Venezuela.

Then it was time to come home. Subscribing to local newspapers helped her to decide where in the Mountain State she should settle. We're lucky she chose Elkins.

Besides teaching at Augusta, she served as director in 1979-80. For many years, she taught English as a Second Language in the International Language Institute at Davis and Elkins College.

She was a longtime member of the WV Herb Association, and in the late 1980s, she helped found the Mountain State Organic Growers and Buyers Association and edited its newsletter. She also enjoyed participating in the local Weavers Guild. Her handspun, handwoven scarves of local wool and mohair, along with her produce, herb plants and salves, were popular at farmer's markets in Elkins.

Kara Vaneck, proprietor of Smoke Camp Crafts in Weston, studied with her as a WV Folklife Apprentice. She said, “Marion will live on in each of those plants that she so graciously cared for throughout the course of her life.”

A memorial gathering will be held in Elkins during Augusta's summer season.

West Virginia Rivers Winter Lunch and Learn Series

Sign-up for a webinar!

Thursdays at Noon

Learn More and Register at wvrivers.org/winterseries

February 2: Mountain Valley Pipeline: How to Comment on Upcoming Permit Approvals.

February 9: Methane, Climate Change, and how Comment on EPA Regulations.

February 16: West Virginia's Public Lands.

February 23: What is Blue Hydrogen?



Throughout the month of February, West Virginia Rivers has scheduled 30-minute Lunch & Learn webinars to share information about important policies where your voice matters. Webinar registrants will receive a recording of the webinar. See you on Zoom!

Webinars:

February 2 at 12 pm: Mountain Valley Pipeline: How to Comment on Upcoming Permit Approvals. Two permits from federal agencies are pending approval and you have the opportunity to comment on them.

February 9 at 12 pm: Methane, Climate Change, and an Opportunity to Comment on Proposed EPA Regulations. Learn about a proposed EPA rule to limit methane pollution and how you can comment.

February 16 at 12 pm: Four Facts and Three Concerns about YOUR West Virginia Public Lands. Join us on Feb. 16 at noon for a conversation about the local, state, and national lands we West Virginians own or manage! Join Mike Jones, Public Lands Campaign Coordinator, for some trivia, learn about policy issues, and find out some ways you can get involved to assuring non-motorize recreation on our outstanding,

Wild and Wonderful, public lands is available for ALL!

February 23 at 12 pm: What is Blue Hydrogen? As industry and political interests increase around our state and country in using hydrogen as a fuel source, it is important to understand the risks to our public and environmental health. While there are many ways to make hydrogen fuel, one process gaining traction in our state is called “blue hydrogen” — which will use natural gas fracking to bring together methane and water and produce hydrogen with a carbon by-product, which is then captured and stored. Before West Virginia volunteers to be the next “hydrogen hub,” we need to consider the potential impacts to our communities.

Don't miss out on this great Lunch & Learn webinar series. Learn more and register at wvrivers.org/winterseries

A Tale of Ten Thousand PFAS

By Olivia Miller

Like many, a few months ago, I heard rumblings about Per- and polyfluoroalkyl substances (PFAS)—the latest dreadful man-made chemicals to be on the watch for at every turn of my day—potentially in the tap water I drink, definitely in my GORE-TEX lined hiking shoes, rain jacket, and that old Teflon pan sitting in the back of my cabinet. What about that pizza box from takeout the other night? Chances are, it contains PFAS.

Like any concerned citizen, I went to the internet in a fury. Is it possible to boil PFAS out of water? No. Were there any products on the market that could filter out PFAS from the tap? Likely not in accordance with the EPA's recommended limit. How long have we known about this? Since the 1950s. What is being done about it? Something IS actually being done about it! Phew.

What we have all learned about the class of PFAS chemicals recently is they do not break down and they accumulate over time in humans, animals, and the environment, making the call to regulate and remove them from our water systems even more urgent.

The class of PFAS chemicals includes tens of thousands of potential environmental contaminants.

It's a hard pill to swallow—realizing that you have been unknowingly exposing yourself to toxic substances that have been proven to decrease fertility, cause birth defects, suppress your immune system, decrease resistance to vaccines, and cause various other irreparable harms to your body.

Unfortunately, this is the world we live in today.

To add to my ever-growing distress, my mother-in-law called me earlier this week, telling me about the beautiful crappies my father-in-law caught for dinner at Parker Hollow Lake in Hardy County. My heart sank into my stomach. Earlier in the day, I had just read the latest study that found that PFAS chemicals have been detected at significantly high levels in freshwater fish in all 48 continental states of the United States.

Should I be the one to spoil their dinner and alert them to the dangers of PFAS levels found in recreationally caught fish? Would they

tell me to hit the road? I guess I'll find out after they read this.

It is impossible to know how to navigate these situations. It seems as though new information comes to light almost every day that exposes harms that were known long ago but have only recently made its way to the headlines.

In fact, as far back as 1950, studies conducted by 3M—producers of popular products like Scotch tape—showed that the family of toxic fluorinated chemicals now known as PFAS could build up in our blood. By the 1960s, more studies were performed by 3M and Dupont on animals, revealing that PFAS chemicals could pose health risks. Unsurprisingly, the companies kept these studies secret from their employees and the public for decades.

In 2016, the United States Environmental Protection Agency (EPA) set the first lifetime health advisory for PFOA and PFOS—types of PFAS—in drinking water to 70 parts per trillion (ppt). Today, the most recent health advisory set by the EPA for PFOA and PFOS has dropped considerably, setting the safe consumption limit more than 10,000 times lower to 0.004 ppt and 0.0002 ppt respectively.

Although some of these chemicals have been phased out by manufacturers under pressure from the EPA, these substances are still circulating in the country via imports, and they persist in drinking water, people and the environment.

We now know that the PFAS problem has turned into a global problem, and because of their widespread persistence in the environment, PFAS are found in the blood of people and animals all over the world, especially in industrialized regions and near pollution discharge sources.

Between PFAS and microplastics, the fish of this Earth can't seem to catch a break (pun intended). All jokes aside, though, here are a few recent findings on freshwater fish and PFAS (full study at <https://bit.ly/PFASinFish>):

- Researchers have calculated that one freshwater fish serving can be equivalent to drinking water for a month at 48 ppt PFAS.
- U.S. EPA fish testing in 2013-2015 found a median PFAS concentration of 11,800 ppt.

- A biomonitoring study of fisherman near Onondaga Lake, a sacred lake within the indigenous territory of the Onondaga Nation and one of the most polluted lakes in the world, found the most frequent consumers of freshwater fish had PFAS levels in their blood at 9.5 and 26.9 times the general U.S. median.
- In the Great Lakes region, licensed fisherman, and specifically fisherman from the Burmese immigrant community had median PFAS levels that ranged from two and six times the U.S. population average.

To date, fish consumption advice regarding PFAS is inconsistent or absent in the U.S.

We know that environmental change and pollution does not affect us all equally. Individuals most impacted by the changing climate and environmental degradation are indigenous and poor and marginalized communities. Indeed, there are still communities around the world who rely on fishing as a way to survive, and those whose cultures are deeply intertwined with the practice of fishing.

We are only now being to realize the full extent of PFAS contamination and harm to human health and there is still a great deal to be uncovered, as evidenced by the new study on fish.

It should be noted that in West Virginia, PFAS have been found in the pre-treated water for 130 water systems serving approximately 700,000 West Virginians, after the Legislature passed SCR 46 in 2020, requesting a study of PFAS for all community water systems in West Virginia. The WV Senate introduced a bill this January, SB 485—The PFAS Protection Act, to address this problem. The bill was introduced with bipartisan support.

The EPA is also moving forward to take regulatory action for greater protection against PFAS in the country's water, land, and air, and hold polluters accountable. Let's hope strict regulations are put in place across the country as soon as possible, and whatever chemicals are used to replace PFAS are not equally as damning.

One thing is for sure: we can't get this out of our environment P-FAST enough.

The Highlands Voice: It's Not Just for Reading Any More

The Highlands Voice is the main way that the West Virginia Highlands Conservancy communicates with its members. But we would like to communicate with more than our members. We have a valuable perspective and information; we would like to communicate with everybody. We still offer electronic delivery. If you would prefer to receive it electronically instead of the paper copy please contact Crys Bauer at membership@wvhighlands.org. With electronic delivery, you will receive a link to a pdf of the Voice several days before the paper copy would have arrived.

No matter how you receive it, please pass it along. If electronically, share the link. If paper, hand it off to a friend, leave it around the house, leave it around the workplace. It's not just for reading. It's for reading and passing along.

BUMPER STICKERS

To get free I ♥ Mountains bumper sticker(s), send a SASE to P.O. Box 306, Charleston, WV, 25321. Slip a dollar donation (or more) in with the SASE and get two bumper stickers. Businesses or organizations wishing to provide bumper stickers to their customers/members may have them free. (Of course if they can afford a donation that will be gratefully accepted.)



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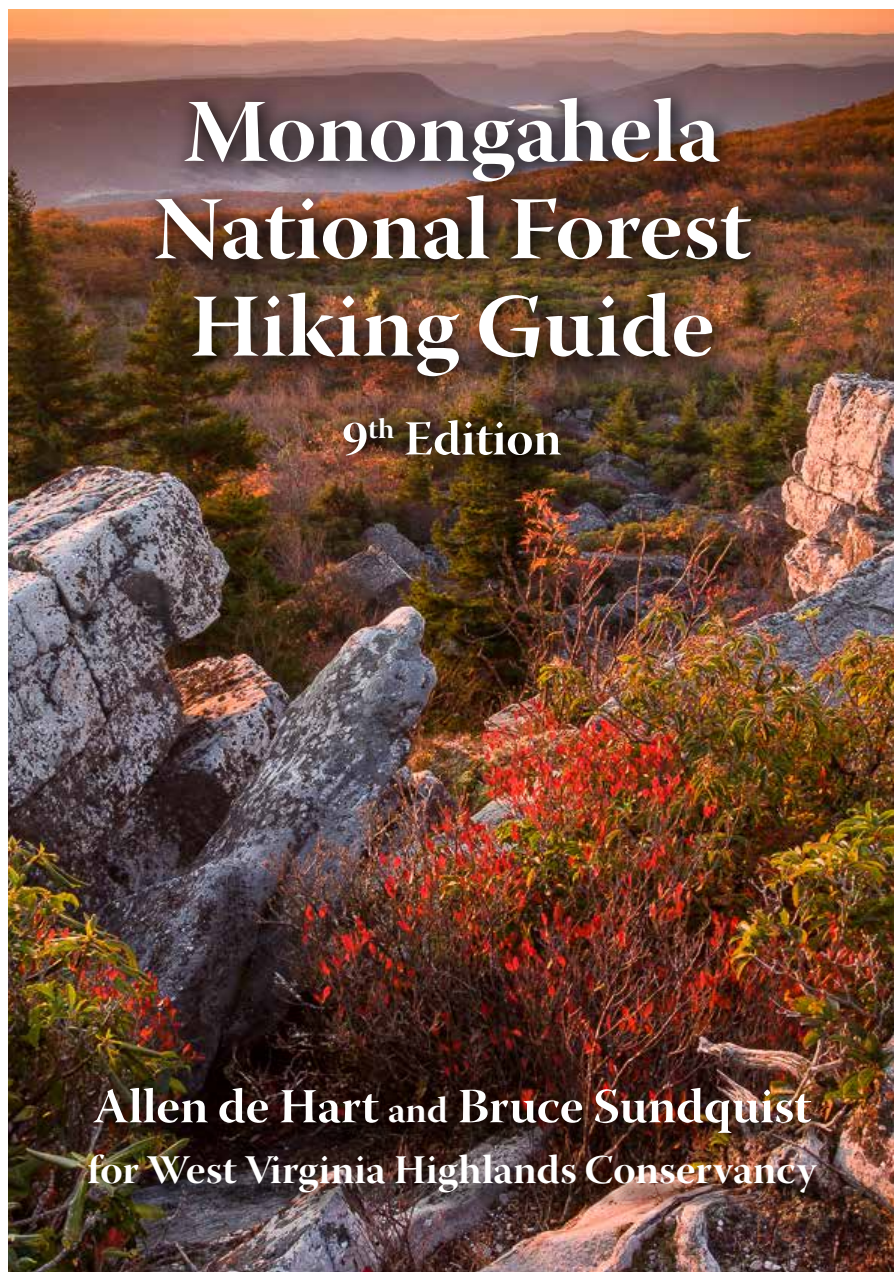
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MISCELLANEOUS OFFICES
WEB PAGE – DIGITAL PUBLISHING: Dan Radmacher, danrad@mac.com; (540) 798-6683

ADMINISTRATIVE OFFICES
MEMBERSHIP SECRETARY: Cristyn (Crys) Bauer, 2151 Herring Road Kingwood, WV 26537; (304) 997-2160, membership@wvhighlands.org
PROGRAM DIRECTOR: Cory Chase, 1602 Appalachian Highway, Dryfork, WV 26263; (304) 599-4906. director@wvhighlands.org
COMMUNICATIONS DIRECTOR: Olivia Miller, 679 Hendricks Hill Road; (304) 704-2997, comms@wvhighlands.org

Mon National Forest Hiking Guide



Celebrating the 50th anniversary of the West Virginia Highlands Conservancy, the new edition of the treasured guide to every trail in the Monongahela National Forest features brand-new topographic maps and Kent Mason's gorgeous photos, all in color.

The Guide has been updated with the cooperation of National Forest District Rangers and Recreation Specialists to reflect changes in the past ten years:

- newly designated wilderness areas
- new trails near campgrounds and sites of special significance
- a new complex of interconnected trails on Cheat Mountain
- rerouted and discontinued trails
- ratings for difficulty, scenery, access to water, and much else

The definitive guide to the Mon adds a wealth of information about history, wildlife, and botany; safety, preparation, and weather; horseback and mountain bike riding and cross-country skiing; as well as sources of further information on the Forest and its environs.

The Monongahela National Forest has long been known as a 'Special Place.' The hiking, backpacking, and cross-country skiing opportunities it provides are among the best in the eastern U.S. New wilderness and back country trails have been added to the outstanding areas we have appreciated for decades – Otter Creek Wilderness, Dolly Sods Wilderness, Flatrock Plains, Roaring Plains, Blackwater Canyon, Spruce Knob, North Fork Mountain, Shaver's Mountain, Laurel Fork Wilderness, Cranberry Wilderness -- and there are lesser-known gems to be found in between.

Profits from the sale of these guides support a wide variety of worthy environmental projects for the West Virginia Highlands Conservancy.

Send \$18.95 plus \$3.00 shipping to: West Virginia Highlands Conservancy, P.O. Box 306, Charleston, WV 25321 OR Order from our website at www.wvhighlands.org

LEAVE A LEGACY OF HOPE FOR THE FUTURE

Remember the Highlands Conservancy in your will. Plan now to provide a wild and wonderful future for your children and future generations. Bequests keep our organization strong and will allow your voice to continue to be heard. Your thoughtful planning now will allow us to continue our work to protect wilderness, wildlife, clean air and water and our way of life.

More on MVP and Permitting (Continued from page 1)

trying to convince various courts that it can, in fact, operate within the bounds of the law.

In the context of the Mountain Valley Pipeline, it is easy to think of the failure of efforts to fast track it as a good result. The Mountain Valley Pipeline is a bad idea. Even if we could look past all the landslides and all the misery that it would impose upon those who live along its path, it is still a bad idea. Even if we assume it will operate within the letter of the law, it is still a bad idea.

It is a bad idea because it is a long-term commitment to natural gas. The pipeline is a multi-billion-dollar investment.

Such investments are not profitable in a single year. It is intended to be in operation for decades. So long as it exists, there will be pressure to keep using it. From a climate change perspective, continuing to burn natural gas for decades more is a losing strategy. We should not allow an infrastructure investment that commits us to continue natural gas.

We are already in that situation with coal. There is near consensus that, because of its contribution to global warming, burning coal is a terrible idea. Many keep doing it because they have no alternatives or because they are working to move away from it and haven't yet made it. In West Virginia we keep burning it, in part, because our political leaders have it imbedded in their brains that coal is West Virginia, we can't get along without it, etc. A more fundamental reason is that we have all this infrastructure designed to mine coal. Were it not for all the railroads, tipples, and loading docks that have been built in the last century there would not be a lump of coal mined today.

The Mountain Valley Pipeline is the same thing. Building it locks us in to a future of burning natural gas. Just as we don't want to be locked into a future of burning coal, we should not be locked into a future of burning less dirty, but still not acceptable, natural gas.

While the question of whether or not the Mountain Valley Pipeline



Example of a pipeline right-of-way corridor through the mountains. *(Photo courtesy of Rick Webb)*

should be fast tracked is an easy one, the overall question of how infrastructure projects are reviewed is not.

Moving to a carbon free future will take new infrastructure. The mantra of people who are serious about slowing climate change is “electrify everything; produce electricity sustainably.” If we are to do that, we need upgrades to the electricity grid. We need to site the facilities that produce all that electricity. If we are going to do all the upgrades and siting that is necessary, we need to do it efficiently.

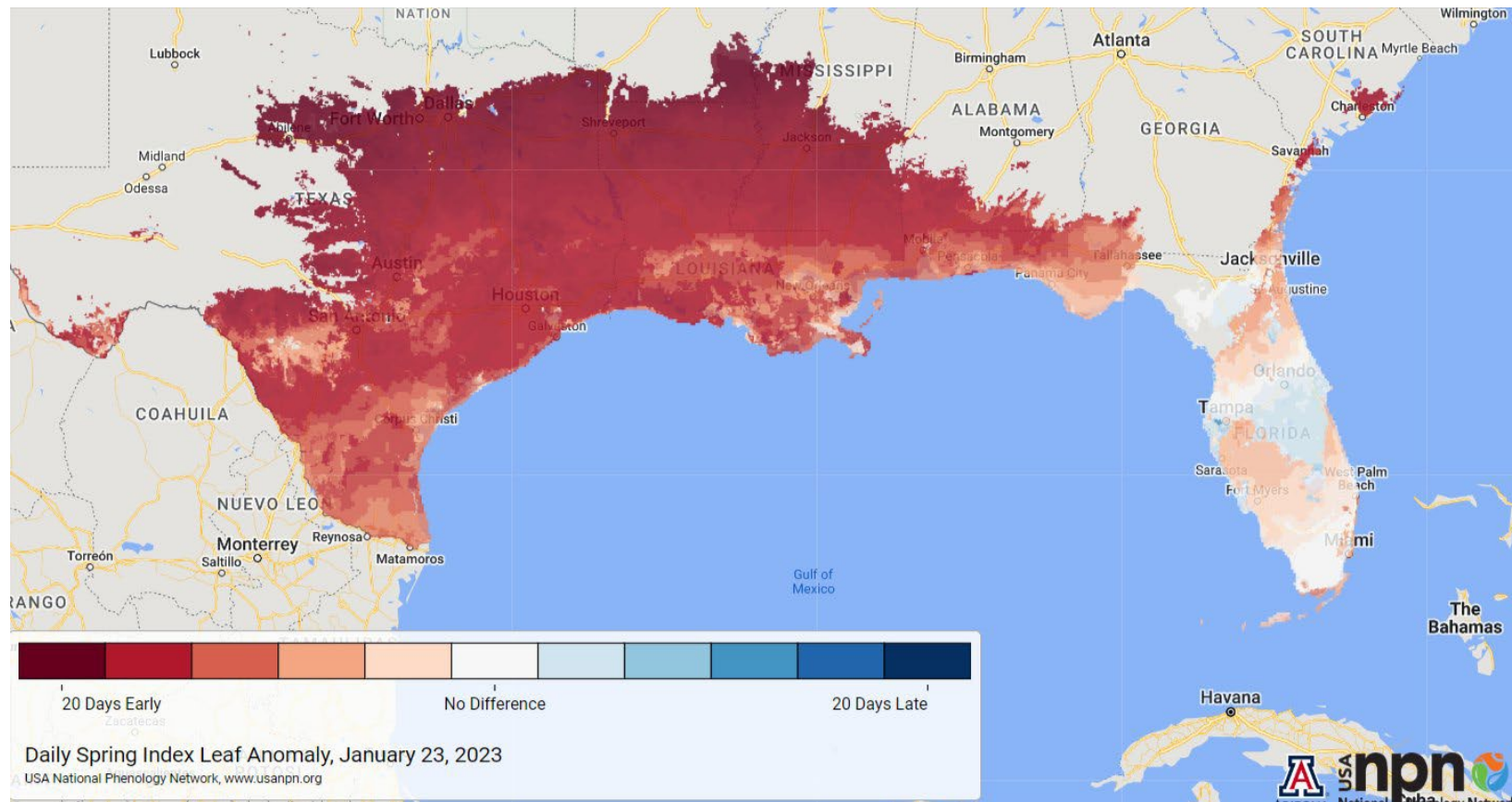
In review of proposed projects, “efficiency” is a loaded word. In the past words like “efficient” or “streamlined” were

euphemisms for cursory. Advocates for “efficiency” in permit review were really advocating issuing each reviewing agency a big stamp and a conveyor belt so it could stamp YES on any project that came down the line.

There is a lot to consider here. One person's trudging through mounds of pointless red tape is another's taking seriously obligations to protect endangered species, clean water, etc. There is a reason—a very good reason—for the National Environmental Policy Act (NEPA) policy of taking a serious look at the environmental consequences of our actions before plunging ahead. Everybody having their say is a core cultural value.

At the same time, we should do what it takes to make the process efficient. Not efficient in the damn-the-review-and-fire-up-the-bulldozers way. Instead, we should try to make the process truly efficient, doing a proper review with the least amount of effort. As wrong as Senator Manchin is about the Mountain Valley Pipeline, maybe he has a worthwhile goal in trying to make permitting more efficient.

Track the Status of Springtime's Arrival with the National Phenology Network



How do you know when spring has sprung? First leaf and first bloom are both early signs of the onset of spring. While we are still in the doldrums of winter in West Virginia, in many parts of the United States, the transition to spring has already occurred. As indicated by the U.S. National Phenology Network's (NPN) map above, spring has arrived in some southern states as much as three weeks early. The NPN compiles and analyzes data tracking the timing of many biological changes. You can track the timing of the start of spring in your location as warmer weather slowly moves upward across the United States in the coming months. You can follow their Twitter (@USANPN) to stay informed on the best estimates of when spring will arrive in West Virginia!

Get Emails from Us!

The West Virginia Highlands Conservancy has communicated with its membership through *The Highlands Voice* for decades, but there's a new kid on the block. Sign-up to receive email updates by visiting <https://bit.ly/WVHCemail> or by scanning the QR code.

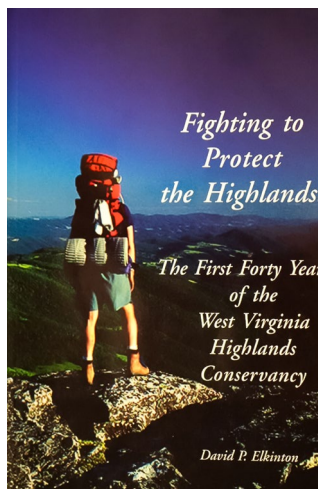
You can expect to receive updates on things like events and outings, action alerts, opportunities for volunteer events, discounts on new swag and more.



Send Us a Post Card, Drop Us a Line, Stating Point of View

Please email any poems, letters, commentaries, etc. to the VOICE editor at comms@wvhighlands.org or by real, honest to goodness, mentioned in the United States Constitution mail to WV Highlands Conservancy, PO Box 306, Charleston, WV 25321.

GET A GREAT HISTORY BOOK



For the first time, a comprehensive history of West Virginia's most influential activist environmental organization. Author Dave Elkinton, the Conservancy's third president, and a 20-year board member, not only traces the major issues that have occupied the Conservancy's energy, but profiles more than 20 of its volunteer leaders.

From the cover by photographer Jonathan Jessup to the 48-page index, this book will appeal both to Conservancy members and friends and to anyone interested in the story of how West Virginia's mountains have been protected against the forces of over-development, mismanagement by government, and even greed.

- 518 pages, 6x9, color cover, published by Pocahontas Press

To order your copy for \$15.95 plus \$3.00 shipping, visit the Conservancy's website, wvhighlands.org, where payment is accepted by credit card and PayPal. Proceeds support the Conservancy's ongoing environmental projects.

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Although "Fighting to Protect the Highlands, the First 40 Years of the West Virginia Highlands Conservancy" normally sells for \$15.95 plus \$3.00 postage. We are offering it as a premium to new members. New members receive it free with membership. Existing members may have one for \$10.00. Anyone who adds \$10 to the membership dues listed on the How to Join membership or on the renewal form will receive the history book. Just note on the membership form that you wish to take advantage of this offer.

Join the Count: Good For You, Good For Birds

Positive Vibes go Both Ways When People Connect with Birds



Red-headed Woodpecker (Manny Salas/Macaulay Library)

New York, NY, Ithaca, NY, and Port Rowan, ON—The 26th annual Great Backyard Bird Count (GBBC) takes place Friday, Feb. 17, through Monday, Feb. 20. Bird and nature lovers everywhere unite in the effort to tally as many of the world's bird species as possible over these four days. Combined with other bird counts, GBBC results help create a clearer picture of how birds are faring—whether individual species are declining, increasing, or holding steady in the face of habitat loss, climate change, and other threats.

“Based on the recently released State of the Birds report, we know that half the bird species in the United States and Canada are decreasing,” said David Bonter, co-director of the Center for Engagement in Science and Nature at the Cornell Lab. “We absolutely need the eyes and ears of birdwatchers to give us the big picture when it comes to shifting bird populations.”

Each participant or group counts birds for any length of time (but for at least

15 minutes) and enters the birds they could identify at each site they visited, whether that be from home, at a local park, or in a wilderness area. Those new to the event should read the How to Participate instructions. People of all ages and skill levels are welcome. And there's another reason to count the birds: It's good for you.

“Take a moment over this long weekend to observe, listen to, and count birds and improve your health, too. Birdwatching and being in nature can reduce stress and improve your mood,” said Chad Wilsey, chief scientist and vice president at National Audubon Society.

An estimated 385,000 people participated during the 2022 GBBC. They reported more than 7,000 species from 192 countries. Many GBBC participants discover a new fascination with birds and enjoy exploring (and comparing) results from around the world.

“The Great Backyard Bird Count is a

stepping stone towards bird conservation,” said Patrick Nadeau, president of Birds Canada. “Taking this step in February launches a journey of discovery whether you're just beginning to learn about the birds around you or an experienced birder watching out for new feathered friends!”

The GBBC website has tools and information to help birdwatching newbies and veterans participate in the count. You're also invited to tune in to a special webinar about how to participate in the GBBC being held Wednesday, February 15 at 1:00 p.m Eastern Time. It's free. Just register to attend this live-streamed event.

The Great Backyard Bird Count is a joint project of the Cornell Lab of Ornithology, National Audubon Society, and Birds Canada and is made possible in part by founding sponsor Wild Birds Unlimited.

Step-by-step instructions for entering your bird lists for the GBBC:

- Merlin Bird ID app: www.birdcount.org/merlin-bird-id-app
- eBird Mobile app: www.birdcount.org/ebird-mobile-app
- eBird on a computer: www.birdcount.org/ebird-on-computer



Carolina Chickadee (Brad Imhoff/Macaulay Library)

Dolly Sods Wilderness Stewards Plan for Upcoming Season

By Dave Johnston

Dolly Sods Wilderness is enjoying a needed winter respite from the crowds of visitors, but the Dolly Sods Wilderness Stewards have not been dormant! We have been working with the Monongahela National Forest to lay ambitious plans for the coming season. Some projects will be a continuation or expansion of our activities over the previous two years, while we have some exciting new projects on deck.

Planning for some of these is ongoing, and we will have announcements in the future with more specific descriptions and details, and opportunities to sign up for new teams we are organizing. For now, though, I want to give you a hint of what is coming so you can start thinking about how you can be involved or support Dolly Sods this year.

Trailhead Stewards: We will be planning a major training for new Trailhead Stewards this spring, probably in early May. This will be held in conjunction with our annual picnic that all Wilderness Stewards are invited to at Seneca Rocks. We are also arranging for Forest Service staff to train some of the more senior Trailhead Stewards to do the training so that we can bring new Stewards on more frequently during the summer.

The comprehensive campsite inventory that we did last summer documented many campsites that have endured major impact, including excessive firewood gathering, tree cutting, rock slab camp furniture and overbuilt fire rings, and proximity to streams and trails. We will be revising the Key Messages to put more emphasis on wilderness-compatible camping in our trailhead discussion and developing a handout on campsite tips tailored for Dolly Sods.

Solitude Monitoring: Last year the solitude monitoring team conducted enhanced monitoring during the summer on trails representative of the several usage level zones typical of Dolly Sods. This produced a wealth of information on usage patterns and the availability of an “opportunity for solitude” in this wilderness, which the Forest Service can use to make appropriate management decisions. We plan to perform solitude monitoring on a regu-

lar, cyclical basis to gauge conditions during all three seasons and detect trends. This year we will focus on monitoring during the spring or fall.

Trail Maintenance: Many trail sections in Dolly Sods are both uncomfortable for hikers and have unnecessary impact on the surrounding environment. Increases in staffing and resources on the Forest Service side have allowed them to begin working with us to identify locations that we can work on to begin addressing these hot spots. We will be forming a Trail Maintenance crew, or crews, to start trail work projects on a regular basis this year. We will be starting with relatively small projects, hardening trail treads and eroded areas and localized drainage issues, but this could lead to more ambitious projects. The Dolly Sods trails will always be primitive (as they should be in a wilderness) but this work will begin to address areas that impact the natural environment and have led hikers to behavior that worsens the impact.

Crosscut Sawyer Team: A specialized adjunct to the trail maintenance team will be a skilled and highly trained team of crosscut sawyers. There is always a need for clearing trees from the trails, and the ice storm in December resulted in many downed trees across roads and trails in Dolly Sods, which will require a major cleanup effort, probably extending into the summer. In person, hands-on training leading to certification will be provided by Monongahela National Forest trainers.

Campsite Inventory, expansion: Last year a team of Wilderness Stewards hiked all of the system trails in Dolly Sods and identified about 350 campsites associated with those trails. Each campsite was surveyed to assess its location, size, level of impact and proximity to streams and trails. This data is allowing the Forest Service to prioritize sites that are not compatible with wilderness for remediation and restoration of natural conditions. This year we will focus on surveying campsites that are away from system trails or along frequently used social trails in the backcountry.

Campsite Remediation: The campsite inventory of last year identified a large number

of campsites that are not compatible with wilderness standards. Problems include too-close proximity to streams and trails, camp furniture and other human structures made of displaced rocks, campfire impacts including depleted resources of dead and down wood, as well as felled trees and hacked branches, and excessive impact to vegetated areas. The Forest Service is assessing these observations and developing priorities and plans for addressing specific sites, and we will be developing a team to work with Forest Service staff in the field to address these. Activities may range from cleaning up and packing out trash and extraneous “accessories,” disassembling and scattering rocks structures, to closing and restoring campsites to natural conditions.

In addition to these projects, we will be revising and expanding parts of the Conservancy’s website, both to update and streamline the information about the Dolly Sods Wilderness Stewards and the sign-up process, and to provide needed information about Dolly Sods itself. One of the recommendations coming out of the Leave No Trace (LNT) Hot Spot workshop held last year was that LNT information specific to Dolly Sods be more widely available. We will be developing content based on LNT principles adapted for the issues that have become apparent in Dolly Sods, with an emphasis on best practices to minimize further impact.

We are excited about the possibilities to make a positive difference for Dolly Sods this year. Please look forward to upcoming announcements about further development of these projects and consider how you might join in.

Join us! Would you like to be part of the exciting activities we are doing and planning for the Dolly Sods Wilderness Stewards? Visit wvhighlands.org and follow the links to the Dolly Sods Wilderness Stewards. You can find a sign-up form on the site, and can indicate the programs(s) you are interested in. Once you sign-up, we will contact you once these programs are ready to be implemented.



HATS FOR SALE!

We have West Virginia Highlands Conservancy baseball style caps for sale as well as I ❤️ MOUNTAINS caps!

The WVHC cap is beige with green woven into the twill with a pre-curved visor. The front of the cap has West Virginia Highlands Conservancy logo and the words West Virginia Highlands Conservancy on the front and I ❤️ MOUNTAINS on the back. It is soft twill, unstructured, low profile, sewn eyelets, cloth strap with tri-glide buckle closure.

The colors are stone and red. The front of the cap has I ❤️ MOUNTAINS. The heart is red. The red hats are soft twill, unstructured, low profile, sewn eyelets, cloth strap with tri-glide buckle closure. The stone has a stiff front crown with a velcro strap on the back. All hats have West Virginia Highlands Conservancy printed on the back. Cost is \$20 by mail. West Virginia residents add 6% tax. Make check payable to West Virginia Highlands Conservancy and send to West Virginia Highlands Conservancy, Atten: Online Store, P.O. Box 306, Charleston, WV 25321-0306

www.wvhighlands.org

THE WAY THE VOICE WORKS

The Highlands Voice is the official publication of the West Virginia Highlands Conservancy. While it is the official publication, every story in it does not represent an official position of the Conservancy. While all of our members share the general goal “to promote, encourage, and work for the conservation—including both preservation and wise use—and appreciation of the natural resources of West Virginia and the nation,” our members often have differing views upon the best way to do that.

As a result, stories in *The Voice* often reflect different points of view. The Conservancy itself, however, only speaks through its Board. The only stories that reflect the official policies of the Conservancy are those reporting Board actions, including litigation positions we have taken, comments on proposed regulations, etc.

Is Our Water Safe to Drink?

Find out at the Fall Review

By Jackie Burns

Why talk about water again? Well, things are happening all the time and some of those things impact our water systems and waterways. Our bodies are still 60 percent water, so what affects water affects us. That's why it's good to look at water issues again from time to time. We invite you to join us Oct. 13-15, 2023 at Canaan Valley Resort State Park for the next West Virginia Highlands Conservancy Fall Review as we look at the health of our water!

As I write this, it is nearing the end of January 2023, nine years since a toxic spill into the Kanawha River upstream from the water intake for Charleston caused contamination and illness in that city and downstream a long way, including in Huntington. The rules changed, and they have changed again. Are our laws and regulations enough to protect us from future spills?

The Conservancy is also closely watching Corridor H. As they are building the highway, streams along their route are impacted. Are contractors following the rules? If not, what can we do to change that? We have recruited and trained volunteers to test the water in streams they will cross. How will this data be used to enforce compliance? And is compliance enough to protect our waterways, or should more be done?

Not long-ago on my individual social media I posed the question, "Do young people expect the water coming through their tap to be drinkable?" The one response I got was, "No. We expect to buy bottled water to drink." Yet I understand there is more testing and regulation for municipal water systems than for bottled water. So, is it truly better?

PFAS chemical are in the news. These forever chemicals are being found in many waterways and municipal water supplies, and they are not good for us. What can we do about it?

Mines and mine drainage have long

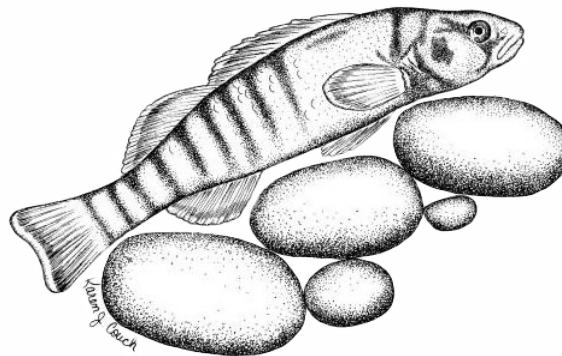
been a concern in the Mountain State. At the last Fall Review, we learned about efforts to clean some of the acid mine drainage by extracting rare earth elements that are useful in today's technologies. Let's get an update on that and look at its limitations and possibilities.

We are fortunate that our water is treated before it gets consumed by us. Fish, wildlife, and plants are not so fortunate. When we allow pollutants in our waterways, what impact does that have on other things that live here?

Who owns the water that flows across the land? What are the rights and obligations of those that use the water?

These are some of the issues we are planning to cover at the 2023 WVHC Fall Review. Do you have ideas for other topics and speakers on this theme? If so, please email them to marilyn.shoenfeld@gmail.com

Join us, won't you? Oct. 13-15 at Canaan Valley Resort and Conference Center. A block of rooms at the lodge have been reserved at a discounted rate for this event. Help us out by making your reservation in advance! Camping or cabins at the park are also available.



A Chance to Learn About Blue Hydrogen

Through Congressional action, eight billion dollars is now available for the creation of "hydrogen hubs." These are networks of hydrogen producers, consumers, and local connective infrastructure to accelerate the use of hydrogen. Nationwide, there will be six to ten of these hubs, so the competition is fierce (eight billion dollars will do that).

West Virginia is actively seeking what is called a "blue hydrogen hub." Blue hydrogen is made by extracting the hydrogen from natural gas. A byproduct of extracting the hydrogen is carbon dioxide. To avoid contributing to climate change, the carbon dioxide is either used for some industrial use or injected deep underground.

The West Virginia Legislature is very enthusiastic about having one of the blue hydrogen hubs in West Virginia. The most recent manifestation of its enthusiasm is a bill recently passed by the Legislature to allow the underground formations under West Virginia's public lands to be used as a place where the carbon dioxide can be injected.

There is much to be learned about blue hydrogen, both the technology and the policy involved. One tool for doing that is a webinar recently put on by the Environmental Health Project. There is a lot of discussion about the technology and the policy implication of blue hydrogen. To watch, go to <https://bit.ly/bluehydrogenwebinar>

More information can be found on the Environmental Health Project's website environmentalhealthproject.org



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Soft pima cotton adult polo shirts are a handsome earthtone light brown and feature the spruce tree logo. Sizes M-XL [Shirts run large for stated size.] \$ 25.00, 2XL \$26.50

To order by mail [WV residents add 6% sales tax] make check payable to West Virginia Highlands Conservancy and send to West Virginia Highlands Conservancy, Online Store, PO Box 306, Charleston, WV 25321-0306

White, heavy cotton T-shirts with the I ❤️ MOUNTAINS slogan on the front. The lettering is blue and the heart is red. "West Virginia Highlands Conservancy" in smaller blue letters is included below the slogan. Short sleeve in sizes: S, M, L, XL, and XXL. Long sleeve in sizes S, M, L, and XL.

Short sleeve model is \$18 by mail; **long sleeve** is \$22. West Virginia residents add 6% sales tax. Send sizes wanted and check payable to West Virginia Highlands Conservancy ATTN: Online Store, WVHC, P.O. Box 306, Charleston, WV 25321-0306.

www.wvhighlands.org

  @wvhighlandsconservancy

info@wvhighlands.org