

West Virginia Highlands Conservancy
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The Highlands Voice

Since 1967, The Monthly Publication of the West Virginia Highlands Conservancy

Volume 55 No. 6 June, 2022

Time to Talk Turkey Again

By Cindy Rank

No, it's not November.
Nor is it Thanksgiving or any other recurring celebratory events.
But it is time to revisit one of our perennial topics --- Mountaintop Removal mining, or at least a remnant of what was once known as Mountaintop Removal coal mining, or MTR.
These days there are no Mountaintop Removal permits per se, at least none technically listed as MTR. But articles in the Voice from April and July of 2021 mentioned one huge coal mine permit that sure does look like MTR, just without the technical classification as such.
As proposed, the 1,085+ acre Turkeyfoot mine will involve a variety of mining methods to remove some 10 seams of coal.

(‘Highwall’, ‘area’, ‘contour’, ‘auger’, and ‘steep slope’ mining are all included in the application narrative.)
[Picture that layer cake with tiers of cake separated by layers of frosting. The sought-after coal is the frosting and the interspersed rock/ground/overburden is the cake that must be disposed of so the coal can be extracted --- hence the perceived need to get rid of that unwanted rock by dumping it into the stream valleys that for all intents and purposes serve as garbage cans.]
Drainage from the valley fills and some 35+ additional outlets along the perimeter of the permit will drain into tributaries of Marsh Fork and Clear Fork, extending the already extensive mining of Coal River Mountain.

(More on p. 4)

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Visit us on the web at www.wvhighlands.org Find us on Facebook

Thoughts from our President

By Larry Thomas

Our West Virginia Highlands are a biologically important treasure and perform an immeasurable role in our ability to support and promote tourism, provide clean drinking water, and clean air not only to West Virginians, but to the Eastern United States. They stand as a resilient stronghold, providing significant benefits for people, the environment, and the economy. People, many of which are unaware, are receiving these benefits even though they may not visit our public lands.

Forest Plan Stirs a Dispute Over What Counts as Old

Last month the president signed an executive order aimed at protecting the United States' forests, especially old-growth forests. The order directs the Department of the Interior to inventory the old-growth forests on federal lands over the course of the next year and identify the threats to these trees along with ways to better safeguard them.

As reported in the Associated Press, the order is raising a simple yet vexing question: When does a forest grow old?

Experts say there's no simple formula to determine what's old. Growth rates among different tree species vary greatly — and even within species, depending on their access to water and sunlight and soil conditions.

Any definitions for old growth or mature trees adopted by the administration are “going to be subjective,” said Mark Ashton, a forestry professor at the Yale School of the Environment.

Already disagreement is emerging between the timber industry and environmentalists over which trees to count. That's likely to complicate the administration's efforts to protect older forests as part of the climate change fight.

There's wide consensus on the importance of preserving the oldest and largest trees — both symbolically as marvels of nature, and more practically because their trunks and branches store large amounts of carbon that can be released when the trees are harvested or forests burn, adding to climate change.

The WVHC Public Lands Committee will continue to monitor the implementation of the executive order requirements by the Monongahela National Forest, George Washington National Forest, and the Jefferson National Forest and will report progress in future articles in the Highlands Voice.

The Importance of Carbon Sequestration in Our Forests

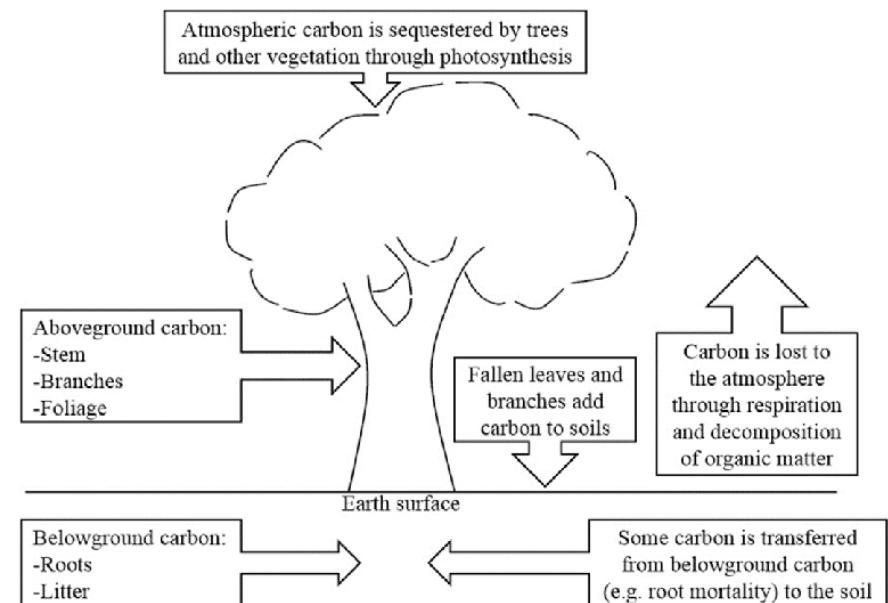
The increase of carbon dioxide (CO₂) in the atmosphere has caused a significant interest in carbon capture and sequestration technology in an effort to explore opportunities for climate change mitigation.

According to the US Forest Service, America's forests sequester just under a billion tons of carbon a year, which is roughly 16% of the US annual emissions.

Forests sequester or store carbon mainly in trees and soil. During

the process of photosynthesis trees pull carbon out of the atmosphere, but they also release carbon dioxide back into the atmosphere through decomposition. Carbon and other gases within forests are captured and released on a cycle. Forest management is able to influence these cycles and enhance carbon capture.

How does atmospheric carbon sequestration work?



There is also a great graphic of how carbon flows through the forest at [ForestCarbonGraphics_040522 \(dovetailinc.org\)](https://dovetailinc.org/ForestCarbonGraphics_040522) which is of great interest.

The Role of Critical Minerals in Clean Energy Transitions

Minerals are essential components in many of today's rapidly growing clean energy technologies – from wind turbines and electricity networks to electric vehicles. Demand for these minerals will grow quickly as clean energy transitions gather pace. A new World Energy Outlook Special Report provides the most comprehensive analysis to date of the complex links between these minerals and the prospects for a secure, rapid transformation of the energy sector. Alongside a wealth of detail on mineral demand prospects under different technology and policy assumptions, it examines whether today's mineral investments can meet the needs of a swiftly changing energy sector. It considers the task ahead to promote responsible and sustainable development of mineral resources, and offers vital insights for policy makers, including six key IEA recommendations for a new, comprehensive approach to mineral security.

An energy system powered by clean energy technologies differs profoundly from one fueled by traditional hydrocarbon

(More on the next page)

More Thoughts from President Larry (Continued from previous page)

resources. Solar photovoltaic (PV) plants, wind farms and electric vehicles (EVs) generally require more minerals to build than their fossil fuel-based counterparts. A typical electric car requires six times the mineral inputs of a conventional car and an onshore wind plant requires nine times more mineral resources than a gas-fired plant. Since 2010 the average amount of minerals needed for a new unit of power generation capacity has increased by 50% as the share of renewables in new investment has risen.

See the report at [The Role of Critical Minerals in Clean Energy Transitions \(windows.net\)](https://windows.net).

Two great informative articles that I found at Leave No Trace:

Nature Positively Impacts Our Well-Being & Caring for It Can Enhance Our Moods Too

[Nature Positively Impacts Our Well-Being & Caring for It Can Enhance Our Moods Too - Leave No Trace https://lnt.org](https://lnt.org) (Disambiguation note: although it looks as if it could be the numeral one, the figure in the address is a lower case L)

The Burning Question: What are the Four D's of Campfire Collection?

[The Burning Question: What are the Four D's of Campfire Collection? - Leave No Trace \(lnt.org\)](https://lnt.org)

WVHC welcomes Crys Bauer to our position of Membership and Fulfillment Secretary. See more about Crys in this issue.

Thanks again to all of our members and supporters for your continued support making what we have done at the Highlands Conservancy for over 54 years possible. June will be another busy month at the Conservancy as well as for other environmental

organizations that we continue to work with on various issues and projects throughout the Highlands. Enjoy *The Highlands Voice* as we report on the issues and happenings in or affecting the Highlands and please stay safe as the summer season starts this month.

SAVE THE DATE

WEST VIRGINIA ENVIRONMENTAL COUNCIL

2022
ENVIRONMENTAL
SUMMIT



WHEN

SEPT 24-25

WHERE

WVU Natural Resources Center
Morgantown, WV

Join us to discuss the future of WV's environmental movement!
For more information contact info@wvecouncil.org

 WEST VIRGINIA
ENVIRONMENTAL COUNCIL

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.

The Highlands Voice is published monthly by the West Virginia Highlands Conservancy, P. O. Box 306, Charleston, WV 25321. Articles, letters to the editor, graphics, photos, poetry, or other information for publication should be sent to the editor via the internet or by the U.S. Mail by the last Friday of each month. You may submit material for publication either to the address listed above or to the address listed for Highlands Voice Editor elsewhere in this issue. Electronic submissions are preferred.

The Highlands Voice is always printed on recycled paper. Our printer uses 100% post consumer recycled paper when available.

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

More Turkey Feet (Continued from p. 1)

The Turkeyfoot mine was granted its surface mine permit and its NPDES water permit by WVDEP, and is now awaiting the Army Corps of Engineers' approval of the four significant Valley Fills included in the permit area.

WV Highlands Conservancy, Sierra Club and Appalachian Voices recommended the Corps not grant the Turkeyfoot 404 permit in comments submitted by Appalachian Mountain Advocates (Appalmad) July 16, 2021.

Since that time the Corps reevaluated the jurisdictional determination of the extent of impact the proposed fills will have on the Waters of the US*, determined there would be some additional length of affected stream, and reissued a Public Notice of comment on April 4, 2022.

[*The Corps is now interpreting “waters of the United States” consistent with the pre-2015 regulatory regime whereas, the previous Public Notice relied on a jurisdiction determination under the June 2020 Navigable Waters Protection Rule, which no longer applies.]

With a cover letter dated May 3, 2022, Appalmad resubmitted our earlier comments indicating that “the water quality and stream function effects described in the July 16, 2021 comments are just as applicable to the additional 1,936 linear feet of stream. Indeed, the aggregate effects on watershed health described in the July 16, 2021 comments are only amplified by the Corps' recognition of effects on additional stream reaches.”

The other day while talking with a writer who asked what I might consider the most impactful actions we've taken with regard to Mountaintop Removal, I indicated the 1998 Bragg v Robinson case and all that it led to, including the Environmental Protection Agency's (EPA) Mountaintop Mining/Valley Fill Programmatic Environmental Impact Statement, EPA's veto of the Corps' Spruce Fork/Pigeonroost 404 fill permit a couple years later, and the multitude of studies and research projects that have documented the negative impacts of MTR and Valley Fills these past 20+ years.

In compiling our 165 pages of comments (and extensive exhibits in an attached CD) objecting to the Turkeyfoot 404 application, the good folks at Appalmad dusted off and compiled an impressive list of the many expert witness testimonies and research projects that have shed light on the destructive practice of MTR and Valley Fills.

Whether or not that documentation will have an impact on the Corps' (or EPA's) actions with regard to this Republic Energy/Alpha Metallurgical Coal permit application for Turkeyfoot is yet to be seen.

Coal Company Held in Contempt

By John McFerrin

Lexington Coal Company has been held in contempt for its failure to comply with previous Court orders to clean up its selenium violations at its Mingo County mine.

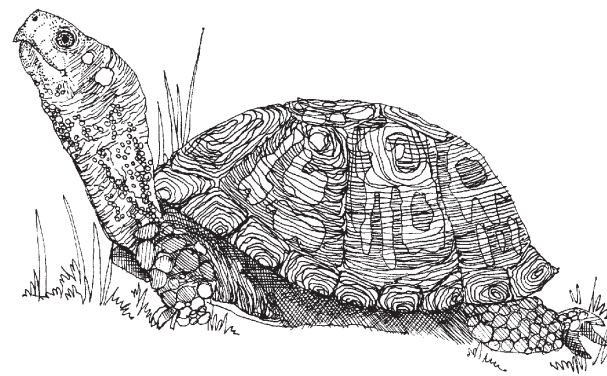
This litigation originated in 2019 when several environmental groups—including the West Virginia Highlands Conservancy—sued Lexington Coal, alleging that it was violating the selenium limits in its Clean Water Act NPDES permits and conditions of Surface Mine Act (SMCRA).

In March, 2021, the Court held that the company is liable for selenium and ionic pollution violations. At a later time, it ordered the company to come up with a plan for correcting the violations and set a time limit for submitting that plan.

The company submitted a plan; the Court found that it was inadequate and set a time limit for a new plan.

Now the time limit has come and gone and the company has not submitted a plan. In response to this failure, the Court required that the company submit the plan within ten days. If it does not, it will be required to pay a fine of \$1,000 per day until the plan is submitted.

Note: If this story sounds familiar, it should. While this may be the first such story about this particular mine, it is similar to dozens of stories about other mines that have appeared in *The Highlands Voice*: Mine is in violation. Groups sue. Time passes, often a lot of time. Company is ordered to clean up. This one has the added wrinkle that, even after the Order, the company still does not clean up. The stories are so depressingly similar that, were I a clever young person instead of a set in his ways old geezer, I would program a robot to write them. Cumulatively they demonstrate what a long, hard slog is involved in getting old mines cleaned up. “Step by step, the longest march can be won, can be won” (from the preamble to the constitution of the first mineworkers union in the US, written in 1870. Later set to music by Pete Seeger).



Become a Citizen Scientist! Help Conduct Water Quality Monitoring Related to Corridor H Construction

The Rivers Committee of the West Virginia Highlands Conservancy has partnered with Friends of the Cheat, West Virginia Rivers Coalition, Trout Unlimited, Corridor H Alternatives and members of the public to develop a Water Quality Task Force that will conduct water quality monitoring of streams and wetlands, beginning with those affected by construction of Corridor H.

The task force has become aware of current and past degradations of water sources, including Tier 3, high quality naturally reproducing trout streams, as a result of erosion and sedimentation from the construction of Corridor H from Kerens, WV to Parsons, WV. We have also determined that any of the routes that Corridor H will take from Parsons to Davis/Thomas, WV will cross, and potentially compromise, other trout streams and fragile watersheds that should be protected.

The task force has met several times and has agreed that it is necessary to gather historical and current water testing data for the affected waters, so that remedies can be pursued for current violations and that baseline and ongoing data can be collected for potentially affected waters. The company constructing the Corridor H segment from Kerens to Parsons has been cited numerous times and has incurred significant fines by the WVDEP for sedimentation of streams, including S. Haddix Run and its headwaters near

Moore, WV. (See *The Highlands Voice*, March, 2021 <https://www.wvhighlands.org/2022/01/01/2021/>).

Yet the degradations continue. We need to step up our efforts to hold this and future companies working on Corridor H responsible for taking appropriate measures to protect the waters that they may affect **before** affecting them, accountable for any violations that occur and responsible for taking appropriate remediation actions.

West Virginia Rivers Coalition and Friends of the Cheat have coordinated to develop and provide water testing training that is current and consistent with WVDEP standards, as well as an agenda for the streams and wetlands to be monitored. We thank them, as well as our other task force partners, for their ongoing efforts!

Volunteers interested in being trained as Citizen Scientists to conduct the water testing and monitoring are needed. These Citizen Scientists will conduct testing similar to that collected by volunteers for the Atlantic Coast and Mountain Valley Pipelines. **Anyone interested in participating in the water testing training and becoming a Citizen Scientist to help with this water quality program can contact Madison Ball, Friends of the Cheat Restoration Program Manager at : madison@cheat.org. The first water testing training will be held on Friday, June 17th, from 1:30-4:00 at Mill Race Park in Parsons, WV.**

Comings and Goings

We welcome Cristyn Bauer as our new Membership and Fulfillment Secretary. She has degrees from American Public University and Shepherd University. Her most recent work experience was with the West Virginia Water Research Institute and the Cacapon Institute, with other work in various environmental education and administrative positions less recently.

She lists as hobbies rafting, kayaking, rock climbing, trail running, snowboarding, mountain biking, dirt biking, hiking, and backpacking. She has worked as a raft guide where she “provided a fun and unforgettable experience down rapids of various difficulties.” She also has a certification in chainsaw and tree felling safety. Not that the job requires it and it may never come up but if it does we are ready.

The Membership and Fulfillment Secretary maintains our membership list—sending out renewal reminders, keeping up with address changes, etc. She will also be our own mini (very mini) Amazon, sending out the hats, t-shirts, books, etc. that we offer for sale.

At the same time, we are saying goodbye to Dave Saville who has been our most excellent Membership and Fulfillment Secretary for several years. We appreciate all the work he has put into the position and wish him well in the bazillion (approximation) other projects that he is always involved in.

If You See Something – Do Something!

By Luanne McGovern

It's no secret that the public lands of West Virginia continue to be under attack. The recent WV legislative session was filled with bills looking to privatize our state parks and open state lands to continual assault. The current administration in Charleston seems intent upon monetizing every scrap of state land, to add "attractions" and bring money into the state coffers. The federal government is still operating under many of the previous administration's policies, and our national forests are continuing to be logged.

At times it can seem overwhelming, as the onslaught comes from all directions. Logging, oil and gas extraction, road building, habitat degradation, expansion of off road vehicle access ... the list goes on and on.

But there are many ways that you – as an individual – can have a big impact and make a difference. West Virginia is a relatively small place and there is a great history of individuals who have stepped up and made things happen. Most organizations are avidly looking for new members and active volunteers.

Here are but a few suggestions:

- Get involved in your local state park or state forest foundation. These foundations are really the first line of defense against improper use of our state lands. There are currently about 25 foundations, and the list can be found at www.wvspf.org. Or just call your local state park or forest and ask! Many of these organizations are looking for officers, board members or just enthusiastic volunteers. You can have a say in what happens in your state parks.
- If your local state park or forest does not have a foundation – establish one! The state level foundation can help you get started (www.wvspf.org) and guide you along the way. It may seem like an overwhelming task to establish a new foundation, but every great journey starts with that first step. Think about the legacy

you could leave behind.

- Join and support a local or state conservation association. If you're reading this, you are probably already a member of the West Virginia Highlands Conservancy (thank you!). But there are so many other grassroots organizations that need your help. The WVHC is partnered with several great organizations that always need help, such as Friends of Blackwater, Friends of Cheat, WV Rivers Coalition, West Virginia Environmental Council, WV Sierra Club, Greenbrier Watershed Association, Avian Conservation Center of Appalachia, etc. There is sure to be an organization that fits your personal interest.
- Volunteer your time in the field on conservation projects. Some great examples that were recently highlighted in the Highlands Voice include: Dolly Sods Wilderness Stewards; CAPABLE (Cheat Aquatic Pollution And Baseline Ecological Monitoring Program); CASRI (Central Appalachian Spruce Restoration Initiative).
- Perhaps most importantly - If you see something taking place on our public lands that doesn't look right, let someone know. Contact the park or forest administration, document what is happening, follow up and make sure it is addressed. In many cases, the administration may be unaware of what is actually happening on the ground, or may be uninformed about the potential consequences (or both). I recently was able to have a positive impact in Kanawha State Forest, when road maintenance had the potential to impact rare and vulnerable plant populations. By bringing the issue immediately to the forest leadership, we were able to work together to avert a negative outcome.

As an informed and engaged citizen, you can make a difference!

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.

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 johnmcferrin@aol.com or by real, honest to goodness, mentioned in the United States Constitution mail to WV Highlands Conservancy, PO Box 306, Charleston, WV 25321.

Join Now !!!

Name_____

Address_____

City _____State _____ Zip _____

Phone _____Email _____

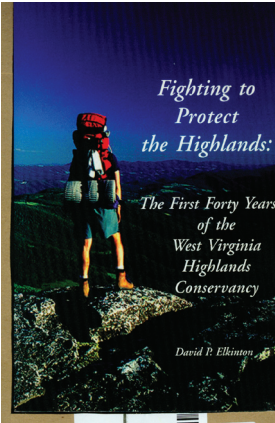
Membership categories (circle one)			
	Individual	Family	Org.
Senior	\$15		
Student	\$15		
Introductory	\$15		
Other	\$15		
Regular	\$25	\$35	\$50
Associate	\$50	\$75	\$100
Sustaining	\$100	\$150	\$200
Patron	\$250	\$500	\$500
Mountaineer	\$500	\$750	\$1000

Mail to West Virginia Highlands Conservancy, P. O. Box 306, Charleston, WV 25321

West Virginia Highlands Conservancy
Working to Keep West Virginia Wild and Wonderful

You may also join on-line at www.wvhighlands.org

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 twenty-year board member, not only traces the major issues that have occupied the Conservancy’s energy, but profiles more than twenty 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. Or write: WVHC, PO Box 306, Charleston, WV 25321. Proceeds support the Conservancy’s ongoing environmental projects.

SUCH A DEAL!

Book Premium With Membership

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.

The Future of Energy in West Virginia

By John McFerrin

The West Virginia Center for Energy and Sustainable, part of the West Virginia University College of Law, does research and analysis aimed at strengthening opportunities for West Virginia and its residents in the context of nationwide trends to reduce carbon emissions and pursue sustainable energy policies. One of its fellows—Tim Cronin—spoke at the 2021 Fall Review of the West Virginia Highlands Conservancy.

For most of its history, and certainly for the last century, West Virginia has been guided by the idea that this alternative energy stuff was all well and good but if we wanted to have a real economy we had to base it on coal. The attitude was that birds and bunnies were sentimental fluff; coal kept the lights on.

Mr. Cronin's message was that it does not have to be that way and, in fact, we are already set on a course away from that. Both First Energy (parent of Mon Power and Wheeling Power) and American Electric Power have committed themselves to carbon neutrality by 2050. In a filing with the Public Service Commission, First Energy has said that it plans to achieve carbon neutrality by 2050 or earlier and "move beyond" West Virginia coal-fired power plants by 2050 or earlier. American Electric Power has said it will reduce emissions 80% by 2030 and achieve net-zero by 2050. It estimates 51% of its generation will be renewable energy by 2030. Its West Virginia coal plants are scheduled for retirement by 2040.

There is considerable doubt that this is soon enough to support an all out effort to slow climate change but that is still the direction we are headed.

There are several things driving this switch to renewable energy. The first is cost. Since 2009 the cost of solar and wind electricity generation has fallen by 90% and 72% respectively.

The move toward renewable energy is also driven by demand. Mr. Cronin had a list of dozens of major companies—everybody from Amazon to Mars to Wal-Mart—who demand renewable energy when making their sighting

decisions. He quoted the Executive Director of the West Virginia Development Office about the problems his office has in recruiting companies when West Virginia cannot offer solar power.

Mr. Cronin also quoted the West Virginia Commerce Secretary, "Invariably that will be the first or second question in terms of criteria: Where does your state stand in terms of renewable energy? Frankly, we don't ever make the cut."

He also pointed to public opinion surveys that show overwhelming support for solar power.

The growing popularity of renewable energy (and the other side of the coin, the growing unpopularity of fossil fuels) is reflected in the capital markets. Banks are becoming reluctant to finance fossil fuel based projects. Mr. Cronin quoted the investment firm BlackRock as well as several banks on their plans to avoid investments in coal in the future. He quoted American Electric Power as saying, in effect, that if big banks are not going to loan to coal based companies it will have no choice other than to look to renewable energy.

The presentation also included estimates of jobs created or lost by a change to renewable energy. In comparing what he called Ramped Up Renewables and continuing with coal, he presented estimates that Ramped Up Renewables would create almost 3,000 full-time jobs from renewable energy and energy efficiency installations alone. Through 2030, there would be a net increase of 1,155 full-time jobs. Through 2035, the net impact on jobs would be zero.

Mr. Cronin described two options: Ramped Up Renewables and continuing on the coal dependent path we have followed in the past. This is what he described as the bottom line:

The direct energy costs are similar, but Ramped Up Renewables:

- Creates more jobs and income through 2030.
- Diversifies our economy – decreasing dependence on coal and beginning the

building of a new energy economy.

- Greatly reduces financial exposure to CO2 risks and fuel costs.
- Avoids significant costs due to adverse health impacts

There are policy choices that would we could make to encourage movement toward renewable energy. One is a carbon fee, a charge that is placed upon emitters of carbon dioxide based upon how much they emit. Emitters of carbon would be free to decide how they would reduce carbon dioxide emissions.

The second is the Clean Electricity Performance Program previously proposed as part of President Biden's Build Back Better plan. The Clean Electricity Performance Program would have provided utility companies with financial assistance for increasing the percentage of energy they generate with clean energy sources by 4% annually, and penalizing utility companies that failed to meet the 4% threshold. This clean energy standard was removed from Build Back Better. Without it achieving carbon neutrality will be more difficult although still possible.

His presentation was entirely economic. From the data he and his organization have collected, it appears that an economy based on renewable energy will produce more jobs and electricity at a cheaper price than an economy based on coal and natural gas. He kept trying to read the Zoom room and saying things such as "this group is probably more interested in the environmental aspects" but he was really all economics. From cost to jobs to economic development, his data shows that renewable energy is the way to go.

This is the last of our summaries of presentations at the 2021 Fall Review. We have another Review coming up the weekend of October 15, 2022. Watch for more details in later issues of *The Highlands Voice*.

Painted Trillium – *Trillium undulatum*

One of the most beautiful Spring flowers to be found in the mountains of West Virginia is the Painted Trillium. Mainly only found at elevations above 2500 feet, the painted trillium can be seen at the highest forested elevations well into June. It is characterized by delicate white petals that are “painted” with stripes of pink and purple that extend from the center. At the right time in Otter Creek Wilderness, you can find hundreds of these trilliums in the damp woods and along the hillsides.

According to Strausbaugh and Core “Flora of West Virginia”, there are six native trilliums in the state. Trilliums are always characterized by three leaves and a center flower with six stamens. There are many common names that have evolved over the years for native trilliums. One of the best known is *Trillium grandiflorum*, or Large Flowered or White Trillium. These large white flowers (sometimes fading to pink) can be seen in most areas of the state, and are sometimes found in very large groupings, even along roadways. Another common trillium is *Trillium erectum*, the Ill Scented Trillium or Wake Robin. Their flowers are usually dark reddish-purple, but can also be yellowish. *Trillium sessile* is sometimes called a Toad Trillium. It has very unique marbled green leaves and deep red upright flowers.

For a lovely short video about trilliums, check out this from WVPB’s Edible Mountain:

<https://www.wvpublic.org/top-stories/2022-05-05/edible-mountain-please-dont-pick-the-trillium>

To learn more about the beautiful native flowers of West Virginia, consider becoming a member of the West Virginia Native Plant Society, www.wvnps.org, and follow it on Facebook.



Candy Darter and Hellbender Snorkeling Outing

Online RSVP form: <https://forms.gle/TY1TZGoL8zv7TmGa7>

Candy Darter and Hellbender Snorkeling Outing

DATE: July 16, 2022

TIME: 1-3PM

LOCATION: Monongahela National Forest - Greenbrier Ranger District Office, 7409 Staunton Parkersburg Turnpike, Bartow, WV 24920

TRIP LEADE(S): Chad Landress, USFS Forest Fisheries Biologist

TRIP DESCRIPTION (difficulty, distance): Medium difficulty. **NOTE:** snorkeling and swimming is optional. **Snorkeling gear and wet suits provided by USFS** (but feel free to bring your own gear). Meet at 1PM at USFS office. Get geared up there and drive a few miles to the East Fork Greenbrier River to snorkel and view wildlife in the river. Prepare to get wet (river shoes, swimsuit, towel, change of clothes) and bring a snack and water. Kids are welcome if accompanied by an adult.

Thank you to the Mon National Forest for their support of our outings program.

NOTE: there are no guarantees that we will see candy darters or hellbenders...but this will be their habitat and we do hope to see them!



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 Dave Saville at WVHC50@gmail.com. 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 2 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.)



Roster of Officers, Board Members and Committee Chairs, and Board of Directors

PRESIDENT: Larry Thomas, P.O. Box 194, Circleville, WV 26804, (304) 567-2602,
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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 backcountry 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.

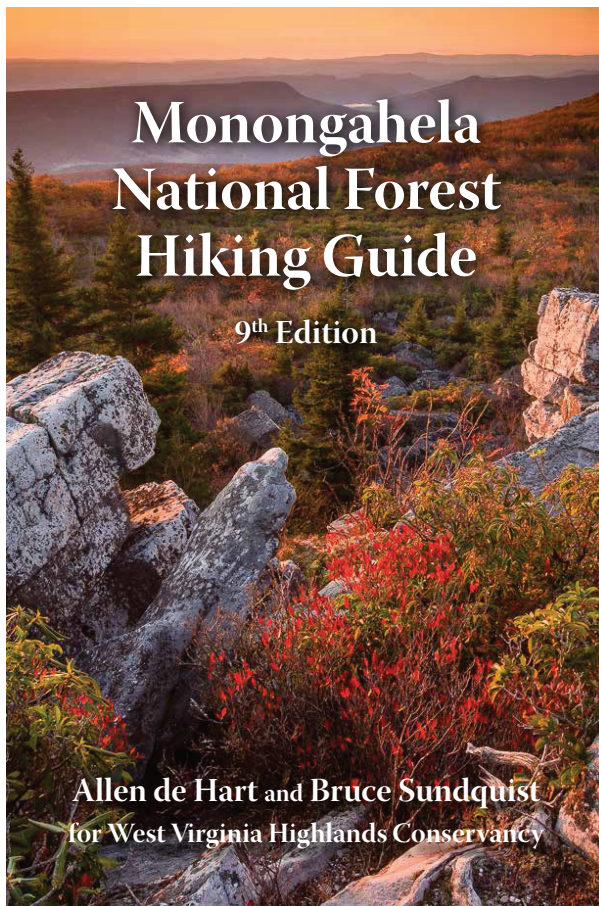
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HATS FOR SALE

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 (heart) Mountains on the back. It is soft twill, unstructured, low profile, sewn eyelets, cloth strap with tri-glide buckle closure.

The I ❤️ Mountains 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

Dolly Sods Stewards Training

By Dave Johnston

The Dolly Sods Wilderness Stewards program took a big jump forward on May 15 when about 30 new volunteers participated in Trailhead Stewards training. The training provides the background knowledge and techniques the Stewards will use at the trailheads to educate visitors about Leave No Trace principles, wilderness etiquette, and special considerations for Dolly Sods.

The program was begun as a partnership between the West Virginia Highlands Conservancy and the Monongahela National



Forest in the summer of 2021, in response to the impacts of increased visitation to Dolly Sods. The Trailhead Stewards have been very well received by the public, who are grateful for tips on what to expect in the wilderness and assistance in planning a hike or overnight trip.

During the first season the Stewards were able to have volunteers at the three busiest trailheads about 25% of the time during weekends. Looking to expand the pool of volunteers so that the trailheads could be covered most of the weekends this year, the Stewards launched a publicity program in early spring to invite new volunteers to join the effort. Stories about the program ran on WV Public Radio and on “West Virginia Outdoors” on WV MetroNews, as well as numerous statewide and local newspapers. This generated strong interest among new volunteers.

The training was held at the Seneca Rocks Discovery Center. Brooke Andrew, the Trails, Volunteers, and Partnerships Program Manager for the Monongahela National Forest, presented an overview of the Dolly Sods Wilderness and how it fits in with the other publicly-managed lands and other natural areas in the vicinity. She reviewed key locations in Dolly Sods and the impacts that have been observed as more visitors are attracted to the location, particularly in backcountry

areas. She explained the seven Leave No Trace Principles and rules and regulations for wilderness areas and for the National Forest in general.

Dave Johnston, the Coordinator for the Wilderness Stewards, went over the key messages that the Stewards want to relay to visitors, and gave tips and learnings based on the experience of the Stewards during the previous year. He highlighted the “Authority of the Resource” approach used by the Trailhead Stewards to influence the knowledge, attitudes and behaviors of visitors to the wilderness toward supporting the wilderness character of Dolly Sods.

After this classroom training, each of the new Stewards will meet up with an experienced Steward at a trailhead to complete their training. They will have an opportunity to watch the experienced Steward interact with visitors, and the ways we work our key messages into the pleasant conversation. The trainee then has an opportunity to try it themselves, and receive observations and feedback from the veteran. After this experience the new Stewards will be able to schedule themselves at trailheads when it is convenient for them.

After the training the trainees were joined by current Dolly Sods Wilderness Stewards for a picnic hosted by WVHC. At the picnic, two pairs of Stewards, Frank and Judy O’Hara and Chris Longe and Liz Olmo, were honored for their dedication during the inaugural year of the Stewards. All of them were had a frequent presence at the trailheads and participated in other Wilderness Stewards activities, including solitude monitoring and serving on the Wilderness Stewards Subcommittee.

The next training for Trailhead Stewards is tentatively scheduled for August. For more information or to sign up, see the WVHC website (wvhighlands.org) and the link for the Dolly Sods Wilderness Stewards.



Dolly Sods Wilderness Stewards Upcoming Activities

By Dave Johnston

In addition to the ongoing Trailhead Stewards program, where volunteers are posted at the trailhead every weekend, the Wilderness Stewards have several other efforts that should kick off within the next month or two. Following on last year's successful forays, volunteers will again conduct solitude monitoring surveys of backcountry trails. And a long-planned comprehensive survey of the many campsites that have sprung up in Dolly Sods is expected to be implemented this summer. Finally, the first trail maintenance project may be undertaken later in the year.

Given that "outstanding opportunities for solitude" is one of the key values of wilderness called out in the Wilderness Act, evaluating the status of the opportunity is an important activity for Wilderness managers. Last year the Wilderness Stewards assisted the Forest Service in conducting a total of 13, four-hour surveys of encounters with other hikers and campers along three representative trails within the wilderness. This year we are planning to expand the program using an "enhanced" protocol that will provide more statistically useful data to the Forest Service.

The Stewards plan to conduct the surveys at least twice this year, in the summer and fall. Volunteers will hike designated trails on randomly chosen dates, and will record the number of groups and the total number of other people encountered along the trail or in campsites. Each survey will last about four hours and cover about five to eight miles of trail. Training will be provided.

Campsites are always a focus of concentrated impact in a wilderness. They are an unavoidable marker of human presence, and when they go overboard they can become so ubiquitous that they detract from the wilderness itself. Collections of sites in close proximity can become small towns on weekends, and tend to lead to cutting of standing trees, construction of camp furniture, destruction of vegetation, and a party atmosphere. Even relatively dispersed sites can be encountered so frequently that the solitude of the wilderness experience is compromised.

Campsites in Dolly Sods have proliferated in the past few years. A preliminary survey done last year suggested that as many as 300 sites are now present. In order to get a handle on the number of sites and their degree of impact the Wilderness Stewards will be working with the Forest Service to do a comprehensive survey of the sites throughout Dolly Sods. Volunteer teams will focus on specific areas at a time, and will identify campsites, record their location and make detailed measurements and observations about the conditions of each site and its proximity to other sites.

We are currently working with the Forest Service experts on the details of what these surveys will entail and how they will be conducted. We expect to have the plans worked out during June, and target beginning surveys during July or August, probably lasting through the end of the year. We will need volunteers who are interested in getting into the backcountry "working" an area to assess the campsites in a zone. Some overnight trips may be an option. Thorough training and practice sessions will be provided.

Trails in Dolly Sods are notoriously muddy, rocky, challenging to negotiate, and difficult to maintain. To some extent this is an appropriate part of the "Dolly Sods experience", and consistent with the intentionally primitive nature of the wilderness. But some trails are poorly routed and so untenable that they actually impact the environment around the trail, which often includes wetlands and the habitat of wild and endangered creatures.

Some level of intervention is needed to both protect the environment and provide reasonable visitor access. The Forest Service is tasked with minimizing the intrusion of human engineering of trails against the need to preserve and protect the natural character of a wilderness. Thus doing trail maintenance in Dolly Sods entails additional considerations, and studies must be conducted to identify the locations of greatest need and prescribe the actions that would have the least impact on the wilderness.

The Wilderness Stewards are working with the Forest Service to identify the areas of greatest need, where trail conditions have the greatest impact on both user experience and the adjacent habitat. We hope that this will lead to projects to remediate some of the worst "hot spots" in Dolly Sods during the current season. If we are able to do this, we will be mobilizing work crews in late summer or fall, with training and tool provided by the Forest Service.

If you would like to join us in participating in any of these activities, please visit the WVHC website (wvhighland.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 be contacting you once these programs are ready to be implemented.

Solar Electricity Program Points to Progress

By Tom Rodd, Director, West Virginia Center on Climate Change.

On May 16, three expert speakers at a “hybrid webinar” hosted in Morgantown WV by the West Virginia on Climate Change (“WV3C”) discussed the topic “Utility-Scale Solar – a Revolution in Progress.” Here’s a summary of some of their key points:

1. David Feldman from the National Renewable Energy Laboratory told how the cost of solar electricity produced by photovoltaic panels has fallen rapidly in the past two decades, and is now competitive with fossil-fuel and nuclear-generated electricity everywhere in the United States. In areas like the Southwest, where the sun shines a lot, solar electricity is cheaper to produce, but it’s still quite competitive in places like West Virginia, Ohio, and even Seattle. This is great news!
2. Feldman and the other speakers also showed how large “utility-scale” solar panel installations that feed into the power grid are growing everywhere – most of all in States that have mandatory renewable energy standards for their utilities, and where there is a strong business demand for low-emission electric power. (Unfortunately, West Virginia is behind the curve in this area.) Rooftop solar array installations are also growing rapidly, as well as “community solar,” a middle-ground approach where local initiatives can create panel installations.
3. The continued (and accelerated) rapid solar growth that the low cost of producing solar electricity *should* mean is potentially hampered by various uncertainties – including the cost of panels due to charges of illegal tariff avoidance by China; and delays in getting approval to hook solar arrays to the grid.
4. This webinar program pointed to the encouraging growth of private business initiatives to do the real work of making this energy revolution happen. Speaker Danny Chiotos is the Sales and Market Development Director at Mountain View Solar in Berkeley Springs, WV. Speaker Betsy Arlen is Director of Development and Real Estate for Sun Tribe Development, a provider of large-scale renewable energy solutions. They are our heroes!

The program format joined an in-person audience in Morgantown and an online Zoom audience. There were a lot of good audience questions and good speaker presentations and responses, and the program was recorded and will be available on the WV3C website, wvclimate.org. I think that this hybrid format, building on the kind of online-only programs that COVID inspired, has a lot of potential.

The next WV3C webinar is scheduled for Wednesday, July 27, at 7:00 PM USET. This webinar will be online-only (although we originally planned an in-person component). The topic is “Blue is the New Green’ – Labor Unions Tackle the Climate Crisis.” Get more information and register at wvclimate.org. Our next hybrid webinar

will be hosted at the University of Charleston on Monday, October 3, at 7:00 PM USET. The topic will be “What Just Happened -- and What’s In Store,” talking about climate policy and the November elections. Again, get more information and register at wvclimate.org. Best wishes to all!



Tom Rodd and
Danny Chiotos

Tell a Friend!

If you have a friend you would like to invite to join the West Virginia Highlands Conservancy just fill out this form and send it to West Virginia Highlands Conservancy, Box 306, Charleston, WV 25321.

Person you wish to refer: _____

Address: _____

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Filling out the form, etc. is, of course, the old school way of doing things. If you prefer, just email the information to Crys Bauer. at WVHC50@gmail.com.

The way it works: Anyone you refer gets *The Highlands Voice* for six months. At the end of the six months, they get a letter asking if they want to join. If they join, we’re happy. If not, then maybe next time.

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- 1) Get a Kroger Plus card, either, a) go to a Kroger store and asking for one at the customer service desk, or b) go to Kroger.com and click on «Register» and fill out the information and click «Create Account.» Next, add a Plus Card by clicking on «Get a Digital Plus Card online today,» fill in your name, and enter your ten-digit phone number where it says «Alt ID», and click «Save.»
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- 3) After you click on «Save» in one of the above, an «Account Summary» screen will come up. At the bottom of that screen is «Community Rewards.» Click «Enroll» and fill out the required information there, click «Save», and it takes you to a new page, then click «Search» and click on button in front of West Virginia Highlands Conservancy, then click «Enroll.» You're done!

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