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Hyperloop Drawbacks and Battery Technology Hopes







A cut-away view of the chassis of a Nissan Leaf EV showing the lithium ion battery. PHOTO BY TENNEN-GAS: CC-BY-SA-3.0

West Virginia needs good jobs, and the world needs clean and efficient energy.

Two companies eyeing development in the state have taken very different approaches to these issues. One is considerably more viable than the other.

Hyperloop: As described in last summer's issue, Hyperloop is a new mode of transport to carry pods loaded with passengers and cargo through a vacuum tube at the speed of sound using magnetic levitation. (See

Virgin Hyperloop, Mountain State Sierran, Summer 2021 issue.) Think of the vacuum tubes at your bank's drive-up window, but moving objects between cities at 767 mph.

In October 2020, West Virginia was selected out of 17 states to build a testing and certification center for Virgin Hyperloop One (VHO) on 800 acres between Tucker and Grant counties. Given the infrastructure needs (rights of way, miles and miles of tunnels or concrete pylons) and the cost,

not to mention the need to travel at the speed of sound, I suggested that beefing up Amtrak would be a much greener and more cost-effective alternative. Apparently, VHO's developers also decided that Mach 1 passenger travel at ground level was not such a hot idea.

In late February of this year, VHO announced that it was downsizing its project in WV, laid off 111 people (half of its staff), and now plans to focus on freight transport only, saying that global supply chain issues had an effect on the new objective. Do consumer goods even need to travel at Mach 1? West Virginia deserves a viable research and development facility that truly addresses energy needs and climate change.

Battery Technology: Energy storage is key to solving the climate crisis, because the sun

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SIERRACLUB.ORG/WEST-VIRGINIA

VIEW FROM THE CHAIR: Training is the Key to an Effective Club

2022 is a year of change for the West Virginia Chapter and for the Sierra Club as a whole. What started as a hiking club is now the oldest environmental organization in the United States. We're still a hiking club, but now we're also a highly influential voice for the environment.



BY AILEEN CURFMAN

We know that if the Club speaks with one voice, it is louder and more powerful. But what should that voice be saying?

Environmental threats vary locally. Each of the 64 Sierra Club chapters will have different priorities.

How do we address local issues while supporting, and drawing support from, our large national organization?

To help chapter leaders grapple with these questions, the Sierra Club has created a series of eight workshops for orientation or "onboarding" of leaders. This online training has been recorded for future use. Each workshop focuses on a specific area: utilizing the Sierra Club's digital resources, managing chapter finances, creating a program plan or strategy, and more. Presenters provide links to the Sierra Club's large library of reference materials.

I'm finding these onboarding sessions immensely helpful, and I'm happy to be seeing other leaders from our chapter in some of these trainings. We are developing the skills to create a new roadmap to a better future. In time, our most active volunteers will have a well-rounded tool kit for building a stronger chapter and more effective campaigns, whether we are working to protect forests, detect leaky gas pipelines, or share our love of the outdoors.

The Sierra Club has also introduced a catalog of online courses for chapter leaders. Do you need to know how to post events on the Sierra Club's internal calendar? There's a short class on that. Are you hosting a meeting and want to welcome many different voices from your community? "Hosting Inclusive Meetings" is full of helpful ideas.

As a new volunteer I often felt lost. These trainings will give our volunteer workforce a deep understanding of the Sierra Club's role in the environmental movement, together with the skills to help us forge a stronger chapter—one with a powerful voice for our state's air, water, land, and people. Please check out the volunteer opportunities posted in this issue of the *Mountain State Sierran* and see if one of them is right for you. Helping hands will guide you as you learn your new role. I know I'm eager to put some of my new skills to use.

I'm also eager to welcome Alex Cole, a new Senior Organizing Representative with the Sierra Club's Beyond Coal Campaign. It's been my pleasure to collaborate with him in the past, when he worked with another state organization. He brings a passion for the environment and a "can do" attitude to everything he undertakes. Look for more information about Alex on page 11 in this issue.

West Virginia Sierra Club Chapter Directory

Email contact for all officers and staff: **sierraclub.wv@gmail.com**Term ends at first meeting of indicated year.

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PROPOSED PROCESSING PLANT IN MASON COUNTY:

Another Dangerous Lifeline to Coal

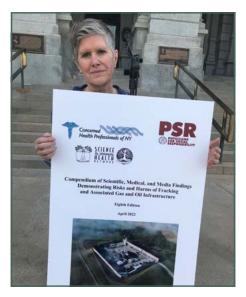
Mason County, along the Ohio River, has become the focus for a lot of new industrial expansion lately. The latest offer is a new coal processing facility from the Scottsdale, Arizona-based company **Frontieras North America.**

The technology Frontieras has patented is referred to by the company as Solid Carbon Fractionation (SCF). The company states that SCF is a validated process that results in the delivery of FASForm liquid and gas offerings, as well as a cleaner version of coal known as FASCarbon. I reached out to Dr. Sandra Steingraber, Senior Scientist at the Science & Environmental Health Network (SEHN), to try to find some additional information that wasn't based on industry PR.

Dr. Steingraber in turn reached out to colleague Ted Schettler, M.D., who is the director of the science program at SEHN. Dr. Schettler shared with me the first paragraph of the summary of the patent on this technology and some additional comments. The paragraph reads:

"This invention involves a coal treatment process that permits removal of moisture, sulfur, hydrocarbon compounds (referred to as volatile matter), and other components in a continuous-feed process by applying heat and steam, with hydrogen recirculation, in an oxygen deficient atmosphere. The result is separation of the volatile matter into valuable gas and liquid fractions for use or further processing in addition to a highly upgraded coal product."

Dr. Schettler's commentary is quite telling: "This looks to me like a lifeline to the coal industry ... And thrown in for extra measure is the idea that plastic waste could also be processed. Waste plastics can be highly problematic in pyrolysis [low oxygen or oxygen deprived] facilities because they commonly contain significant amounts of PVC. When PVC undergoes pyrolysis, hydrochloric acid is generated, [which is] highly corrosive and damages equipment. Many pyrolysis efforts have failed for that reason and were shut down. My guess is they



Dr. Sandra Steingraber, Senior Scientist, Science & Environmental Health Network. PHOTO COURTESY OF SEHN

will concentrate on coal processing. I see no mention of carbon capture . . . "

Dr. Schettler's analysis of the coal process is also telling: "Apparently this process is carried out in a low oxygen environment (pyrolysis). The coal is treated with heat and steam. A temperature gradient facilitates off gassing of volatiles from the coal at various temperatures along the gradient, allowing them to be collected separately. A contaminated wastewater stream is generated, requiring treatment [emphasis mine]. The final coal product at the end has a higher energy value per ton than unprocessed coal. Thus the claim of lower CO2 emissions per kWh generated. No discussion of carbon capture that I can see. Many (or most) of the products from this process will ultimately be sold and burned as fuels, thus releasing CO2 later in their lifecycles. And the final product could be used as coke in steelmaking."

Did alarm bells go off for you as you read that the way they did for me? A wastewater stream requiring treatment; CO₂ still being released, without capture of any kind, not just from SCF but

of this sounds good to me.



Coverage by media outlets also mentions the potential for hydrogen generation from facilities like this, but I can't stress enough that the only hydrogen we should be generating is what's referred to as green hydrogenhydrogen generated from a renewably powered electrolysis process that separates out hydrogen atoms in water molecules. We cannot accept hydrogen derived from fossil fuels. One of hydrogen's potential promises is in decarbonizing the process of steelmaking, so why wouldn't we be investing in green hydrogen for steelmaking instead of more coke from a process like this?

Even if this company starts talking about carbon capture, utilization, and storage (CCUS), CCUS is incredibly dangerous, extremely costly, and not commercially viable. For a lot more information provided by SEHN on CCUS, visit carboncapturefacts.org.

This company is promising hundreds of permanent jobs, massive community investment, and massive growth of the tax base in Mason County. I understand why residents don't want to pass that up. But West Virginia deserves better than just another dire threat to public health and our environment, and yet more destabilization of our global climate system. This plant is another pseudo-solution masquerading as progress.

Bitcoin Mining - A New Abuse of the Mountain State?

BY BETSY JAEGER LAWSON

Last November, a classified notice quietly appeared in the Morgantown **Dominion Post for an air-quality permit** from the WV Department of **Environmental Protection (DEP) to** construct a "data center" in the Morgantown Industrial Park, to be named Marion Energy Partners (MEP).

Nothing indicated what the facility was for, but a little digging revealed that MEP is a shell company for Northeast Natural Energy (NNE), which had drilled four frack wells nearby a decade earlier. Forty people participated in a DEP public hearing on January 11. By then, everyone decided that the purpose was to generate (mine) Bitcoin. (See Bitcoin Mining in Mountain State Sierran Spring issue.)

To no one's surprise, the DEP approved the air quality (i.e., construction) permit for this mysterious facility on March 7. The Dominion Post reported the story and ran two editorials about why people here have a right to know the purpose of the facility. Delegate Evan Hansen (D-Monongalia) introduced a bill to require such information, though the bill went nowhere in the industryfriendly legislature. Local members of the Sierra Club, Mon County Clean Air Coalition, and the League of Women voters joined forces to learn more and to protest.

WHY THE CONCERN?

Bitcoins are basically 64-digit numbers that only exist within participating computer systems. Each one is linked to every other one in a blockchain.

Bitcoins are created when banks of purposemade computers try to guess the 64-digit target numbers, called hashes. Right now, the chances of doing so are one in 27.55 trillion. The more computer power you have, the more guesses you can make quickly. So, Bitcoin miners have warehouses packed with powerful computers, racing at top speed to guess the big numbers while using



Members of the Sierra Club, Mon Valley Clean Air Coalition, and local residents met with Yvonne Taylor (front left) and Joseph Campbell (behind Yvonne), activists from the Seneca Lake Guardians protesting the Greenridge Bitcoin Facility in upstate New York. PHOTO BY BETSY LAWSON.

mind-bending quantities of energy in the process. Further, because every Bitcoin transaction must be verified along the entire blockchain to prevent fraud, this also requires a vast network of computers using a lot of energy.

Since China has banned cryptocurrency mining, Appalachia is becoming increasingly attractive for companies in this business. These companies are rebooting old power plants to provide the tremendous amount of energy they need. A former coal-fired power plant, Greenidge Generation in Dresden, New York, using natural gas, now produces about 44 megawatts to run 15,300 computer servers entirely in the service of Bitcoin. The Greenidge facility emitted the equivalent of over 220,000 metric tons of carbon dioxide over the course of last year. It sucks 134 million gallons of water a day out of Seneca Lake—without filtering it for aguatic life—and dumps it back into a nearby trout stream at up to 108 degrees Fahrenheit. Earthjustice and the Sierra Club have already warned that nearly 30 power plants in upstate New York could be used for similar purposes. Grant Town Power Plant (of Joe Manchin fame) tried to save itself by pivoting to cryptocurrency mining, but the Public Service Commission rejected the proposal.

In Limestone, Tennessee, a "data center" owned by Red Dog Technologies and powered by BrightRidge was approved by the local county commission. The county is now suing the center, citing zoning violations and "immediate and irreparable injury, loss, and damage" to residents, because the huge fans used to cool the engines sound like a jet plane idling. The fans operate continuously, growing louder at night and on weekends, making a good night's sleep impossible. So it's no wonder there's so much secrecy about the proposed "data center" in Morgantown.

On April 10th, the Dominion Post ran a long interview with the CEO of NNE, Mike John, with questions about the facility and about a proposed geothermal well. WVU was awarded a \$7.5 million Department of Energy grant to drill an exploratory well at the company's industrial park site; it would be a simple borehole drilled three miles vertically to assess the geothermal heat potential in this region. John said, "there's no timeline to build the data center, if they build one, because there's no set date to drill the geothermal well, which is now their first priority." The results of that project, he said, will clarify everything they want to CONTINUED ON PAGE 5

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Rockwool Admits Permit Violations, but Regulatory Agencies Fail to Act

As Rockwool nears a full year of operation at its Ranson facility, the clock is ticking for the insulation company to apply for its Title V operational air permit with the WV Department of Environmental Protection (DEP), a legal requirement. According to a May letter from DEP to Rockwool, the application is due by June 22. The public will finally have an opportunity to weigh in on Rockwool's air permit.



BY LYNN DELLES



Dark skies over Rockwool on the morning of May 4. PHOTO COURTESY OF JEFFERSON COUNTY FOUNDATION.

In an annual compliance certificate submitted in March, Rockwool admitted its air permit does not reflect what it actually built and how the facility is actually operating, which is a violation of the Clean Air Act. In addition, the certificate admitted exceeding its permitted emission limits for carbon monoxide and other pollutants. Rockwool admits it will have to redo its R14 air permit for plant construction, which means Rockwool has been operating this past year in a way that does not reflect requirements of the permit issued. It also admits that it can actually operate with lower emissions. Two months after the certificate was submitted, no apparent action has been taken by DEP or the EPA to ensure Rockwool's facility is in compliance with its permit.

In March 2020, Rockwool admitted it changed its permitted fuel source, with DEP's approval. Rockwool failed to inform DEP at that time that its facility would not be constructed and operated in accordance with the plans and specifications filed in its permit application, a requirement of state code. DEP failed to require Rockwool to provide any further information—allowing this

violation to go unnoticed for two years. The Jefferson County Foundation brought its concerns about this to DEP and, later, with the help of local, regional, and federal representatives, to the EPA. After consultation with DEP, however, the EPA decided to not act "at this time."

CONSEQUENCES PASSED TO THE RESIDENTS OF THE REGION

Meanwhile, Rockwool continues to operate directly across the street from a Title 1 elementary school with a diversity rating twice that of the state average and where more than 50% of the students qualify as economically disadvantaged. The hundreds of children attending school at North Jefferson Elementary continue to breathe toxic emissions during their formative physical and cognitive development period.

While there are no consequences for Rockwool for its failure to build appropriate, best-available technologies for its facility, the residents of the area are left to suffer from these violations and inactions. In addition, neighboring communities in Loudoun County, Virginia (a non-attainment

zone for ground level ozone) and Maryland are also left to push West Virginia and the EPA to enforce the Clean Air Act.

The Jefferson County Foundation will be watching carefully the Title V process; we will push for further action should Rockwool once again try to cut corners and expect DEP to simply accept inadequate protections and procedures. Rockwool can and should make its operations safer so that air emissions are less harmful to human health and the environment. Clearly, the residents of this region must do everything necessary under the Clean Air Act to reduce emissions and protect the air, the environment, and human health.

Lynn Delles is the Director of Strategic Communications for the Jefferson County Foundation, Inc.

BITCOIN | CONTINUED FROM PAGE 4

do there regarding their proposed data center. "It's impossible for me to explain what's going to come next until we drill that well and see what it looks like." His evasive responses did not refute the speculation about a Bitcoin facility.

Bitcoin is one of many cryptocurrencies, and if it were a country, it would rank in the top 30 for energy use. Even if Bitcoin used entirely renewable energy (its use is about 40 percent now), that is energy not available for homes, industry, or transportation. Bitcoin consumes huge amounts of energy to make a tiny number of participants extremely wealthy with absolutely no benefit to anyone else. Can Morgantown or the planet afford such a "data center"?

WV Legislative Recap – 2022

The WV Legislature adopted several bad bills during the 2022 session, and the best we can say is that it could have been worse. Please pay attention and help us elect better legislators!

BY JIM KOTCON

BAD BILLS PASSED

Mining Mutual Insurance Company

SB 1 creates a quasi-private entity to provide bonds to prop up the most high-risk coal companies that cannot otherwise get bonds through the free market. In theory, the companies that profit from coal extraction should pay to clean up their sites. But the bill (and a subsequent budget appropriation) allocated \$50 million of taxpayer funds to the WV Department of Environmental Protection (DEP) to finance these mining bonds. These coal companies are the most likely to fail and forfeit their bonds, leaving taxpayers to pick up the tab. Additionally, any U.S. coal operator can seek coverage through this new entity, meaning that West Virginia taxpayers may end up subsidizing risky, out-of-state companies that would compete with more stable West Virginia companies. This horrible precedent may rank as one of the worst bills of all time.

Lift of Ban on Nuclear Power Plants

SB 4 repealed the previous statute, which did not actually ban nuclear power plants but did require that no nukes be sited in West Virginia until a safe and secure permanent repository for nuclear waste was established. That common-sense provision was apparently too high of a hurdle. Some environmentalists actually supported the bill on the theory that low-carbon sources of electricity were needed, but the facts remain that nuclear power is too expensive and too slow to meet our needs. Given the climate crisis, the Sierra Club argues that we should invest in the "cleanest, safest, fastest, and cheapest energy sources first," and nuclear is none of those.

Change Solid Waste Laws

HB 4084 exempted these so-called recycling facilities from major state solid waste laws. The plastics industry argues that such facilities

can safely recycle plastics into new products and recover energy that is otherwise wasted. But these facilities are unlikely to ever be profitable, except as "waste-to-energy" facilities, and will serve primarily as yet another way to prop up the petrochemical plastics industry. New facilities are being discussed in several locations, and it will be important for citizens to overcome the industry propaganda.

Weakening Water Quality Standards

SB 279 weakened several water-quality standards, and, worst of all, created a loophole for large industries to establish "site-specific" standards exempt from legislative review. This places local citizens and communities at a significant disadvantage, as they must overcome industry-funded lobbying at the local level, without adequate state review.

Public Lands Privatization

HB 4408 allows long-term private contracts to develop state parks. These can include gambling casinos, off-road-vehicle facilities, and many other types of for-profit developments that have nothing to do with the primary purpose of our beloved state parks: ecological preservation and recreation. (Note, however, it could have been worse. See ATV, Casinos, page 10.)

OTHER ENVIRONMENTAL BILLS PASSED

A few bills created new regulatory programs within the DEP. HB 4098 regulates geothermal energy. HB 4491 sets additional requirements for carbon capture and sequestration facilities. HB 4003 addresses rare earth minerals and elements obtained from treating acid mine drainage. While several provisions are troubling, overall, it will be important to follow rule-making over the coming year.

Aboveground Storage Tanks

BAD BILLS

DEFEATED

The regulatory programs created after the 2014 Elk River spill have been rolled back year after year, and a major effort by the gas industry has sought exemptions for their tanks. HB 2598, this year's bill, would have relaxed inspection requirements on oil and gas tanks located within zones of critical concern, which are five hours or less upstream of our drinking water intakes. It would have eliminated the requirement that a certified professional engineer inspect and certify tanks and would have changed the requirement of secondary containment inspections from 14 to 30 days. Thanks to all of your calls and emails, we were successfully able to kill this bill.

Exempting Wholesale Generators from Zoning Rules.

HB 4553 aimed to exempt wholesale generators from local community zoning ordinances. While we support renewable energy and the idea of a proposed solar farm in Jefferson County, even the Sierra Club agrees that granting exemptions from local zoning was too much.

CONCLUSIONS

While some minor improvements were adopted to address needed funding, major gaps to fully fund our air, mining, and gas regulatory programs still need to be addressed. A critically important area will be to correct severe deficiencies in bonding requirements for coal mining reclamation and gas well plugging.

To learn how your legislators voted, check out the Sierra Club's 2021-22 Legislative Scorecard, available at: https://www. sierraclub.org/west-virginia/political

Energy Campaign to Tackle Inadequate Bonds for Fossil Fuels

THE PROBLEM WITH WV MINE RECLAMATION

BY JIM KOTCON

In 1977 the federal Surface Mining and Reclamation Act (SMCRA) was established, requiring that coal operators reclaim their mine sites as mining is completed. In order to accomplish this, SMCRA requires coal operators to post a bond adequate to cover the cost of reclamation as part of their mining permit. In West Virginia, however, the required bond does not cover the cost of reclamation.

To cover the shortfall, a "Special Reclamation Fund" (SRF) was created to cover the cost of reclamation for sites that went bankrupt or forfeited their bonds. The SRF is funded by a tax of 27.9 cents per ton of coal mined. As less coal is mined here, reclamation liabilities far exceed the money available in the SRF. The "underbonding" of West Virginia reclamation sites and the pending bankruptcy of the SRF could end up costing state taxpayers hundreds of millions of dollars, according to a 2021 Legislative audit: https://www.wvlegislature.gov/legisdocs/reports/agency/PA/PA_2021_722.pdf

This report showed that the cost of reclamation exceeds \$6,000 per acre and the average bond set by the WVDEP is only \$2,882 per acre. Only 7.6% of total reclamation liabilities are covered by forfeited bonds. Over 90% of reclamation liabilities are covered by the 27.9-cents-per-ton reclamation tax. As mining continues to decline, there will be less money coming in and higher reclamation costs. The report also showed that we have over \$500 million in "at risk" bonds but only \$190 million in state reclamation funds, and that 67% of mining bonds are held by a single company. Bankruptcy by that company would threaten the reliability of the SRF.

The 2021 Legislative audit report recommended that bonding rates be increased or the state impose limits on insurer risk or taxpayer liability. But the 2022 Legislature instead passed SB 1 (See Legislative Recap 2022.), which did not include any of the recommended actions but, instead, put taxpayers on the hook for \$50 million to

support mining operations that could not get a bond from private sources.

WV'S GAS INDUSTRY HAS SIMILAR PROBLEMS

While no federal law mandates bonds for oil and gas wells, WV state law requires that gas companies post a bond to assure wells get plugged and sites are reclaimed after they stop producing. Unfortunately, bonds are capped at \$5000, well below what is needed to plug wells. Even worse, larger companies are allowed a "blanket bond" of \$50,000 for all wells they operate. That provision assumes gas companies are "too big to fail." (That always works, doesn't it?) With some companies holding hundreds or thousands of wells and with the cost of well closure often averaging over twice the cost of the bond, there is a real concern that West Virginia taxpayers will be left to pay for many hundreds of millions of dollars.

ACTION

To address this problem, the WV Chapter of the Sierra Club, in cooperation with the WV Environmental Council, has launched an energy campaign. While the need to address climate change will take national and international efforts, there is a real risk that West Virginians will be left to clean up the mess from abandoned fossil fuel sites. But legislators will only respond if they hear from local constituents. We need your help to support legislation that will:

- Raise bond limits for mining and gas bonds
- Require more stringent bonding authority
- Take the liability away from the taxpayers

Please join the Campaign. We will provide training and support throughout 2022 to help you contact your legislators, write a Letter to the Editor, or help with other quick action. Contact Jim Kotcon at jkotcon@gmail.com or call 304-594-3322.

TRANSITION | CONTINUED FROM PAGE 1

doesn't shine 24/7, and wind doesn't always blow. There are various ways to store energy:

- Pumped storage uses electricity to pump water or rocks uphill, which can be released downhill when the energy is needed.
- Hydrogen energy storage converts electrical power into hydrogen via the electrolysis of water. The hydrogen gas can then be released when needed as fuel in a combustion engine or a fuel cell.
- Batteries store chemical energy by allowing for a free flow of electrons using an electrolyte solution that is in contact with electrodes at the positive and negative ends. Batteries have been called the glue of the clean-energy economy. According to the World Economic Forum, "Battery technology is key to reducing the bulk of the world's greenhouse gas emissions. It's central to both the automotive and energy sectors' transition to zero emissions." There are many types of batteries composed of different minerals and metals.

Lithium-ion rechargeable batteries, already widely used in smart phones and laptops, are also essential for electric vehicles and much else, like helping to power the world's electric grids. But these batteries have downsides. They tend to overheat and can cause combustion. Mining the raw materials, mainly lithium and cobalt, requires large quantities of energy and water. Cobalt mining takes place in the Congo where workers, including children as young as seven, suffer abusive conditions. Further, these batteries are difficult to recycle. So improving lithium ion battery technology is key to a greener future.

SPARKZ, an energy start-up developing cobalt-free lithium-ion batteries, announced plans to open a research and development center in West Virginia at a press conference in Charleston this past March 18th, featuring U.S. Secretary of Energy Jennifer Granholm,

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West Virginia Birds: Diminishing Numbers

Goldfinch.
PHOTO BY PHIL FIDDYMENT,
CC BY 2.0.

West Virginia offers a panorama of bird habitats. It has lush wetlands, old pastures, and forested mountains. Our central location attracts both northern and southern U.S. birds. According to the West Virginia Division of Natural Resources, 170 bird species breed here. This past February, the Wheeling-based Brooks Bird Club published a list of 354 bird species that have been seen in the state.

But in 2019, researchers from the Breeding Bird Survey published an alarming report. Since 1970, the bird population has declined by about 2.9 billion adults across the U.S. and Canada. This report was the result of a collaboration between U.S. and Canadian wildlife agencies. Research continues, using highly skilled volunteers who survey local bird populations according to a strict protocol.

In West Virginia, the five species with the greatest declines are the grasshopper sparrow, prairie warbler, yellow-breasted chat, Kentucky warbler, and brown-headed cowbird.

Following publication of Rachel Carson's *Silent Spring* in 1962, the pesticide DDT was recognized as harmful to birds. After the chemical was banned, many observers expected populations to increase. Others were not surprised by a continued decline. In an interview in the Martinsburg Journal on September 29, 2019, bird authority Wil Hershberger commented, "In 1987, I started teaching what we call Birding 101, which is a birding identification class. Comparing those field trips to today, there were significantly more birds."

Some scientists think that climate change leads to population declines because of changes in migration patterns, food availability, and exposure to disease. But researchers haven't yet unraveled this complex bundle of causes and effects.

We do know that human activity is causing most of the population loss. Forests and grasslands are increasingly uprooted by residential, commercial, and industrial projects. Landscaping plans often fail to include plants that provide food and shelter. The typical suburban lawn is a classic example.

What's more, we humans contribute to the spread of avian diseases when we keep birds captive or move them around. Avian influenza is endemic in certain wild water birds. Initially, migrating waterfowl brought the disease to poultry farms. Poultry are now often kept in crowded quarters, where the virus spreads rapidly.

Contact between farm flocks and wild birds can spread this fatal illness to the birds that visit our feeders. They, in turn, infect other visitors to our outdoor buffets. During outbreaks of any illness, feeders should be removed, sanitized, and left down.

As a caring resident of our planet, how can you support the birds that share your living space?

The Cornell Laboratory of Ornithology offers these tips:

- Make windows safer, day and night.
- Keep cats indoors. Outdoor cats kill more birds than any other non-native threat.
- Plant native species, not lawns.
- Avoid pesticides in your yard and when buying groceries.
- Drink shade-grown coffee.
 You'll help more than 42
 species of North American songbirds.
- Reduce your use of plastics and advocate for less plastic production.
- Watch birds, and share what you see.

For more information:

- https://tinyurl.com/wvbirds
- https://tinyurl.com/ brooksbirdclub
- https://tinyurl.com/cornell-bbb



BY AILEEN CURFMAN

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Volunteers Welcome!

The West Virginia Chapter is currently looking for volunteers for the following opportunities:

Membership—We are looking for two or three volunteers who would greet new members with a note to thank them for their support, and offering them ways to connect with others through our Outings program, local Group activities, and our social media. The number of new members averages about 65 per month. The Chapter will provide training, a monthly list of new members, and suggested wording for the note, which the volunteer can personalize. The Chapter will pay for postage, stationery, and similar costs. This opportunity is perfect for folks who enjoy creating a sense of connection.

Political Committee—Several volunteers would join with four other committee members. The Chapter's political committee evaluates legislators' votes on environmental issues, provides a scorecard for each legislator, and recommends endorsements of candidates who work to protect the environment. Most importantly, the Political Committee works with candidate campaigns to elect pro-environment leaders and hold anti-environment politicians accountable. Success with this committee makes all of our conservation campaigns easier.

If you are concerned, and want to do more than just pay your dues each year, or if you are ready to reach out and engage with other committed members, please consider volunteering for one of these committees. We welcome your talents, your time, and your ideas! If one of these opportunities appeals to you, please email sierraclub.wv@gmail.com.

It's Back - Marcellus Academy 2022

If you are looking for a way to make a difference on climate, clean energy, and water quality, but are not sure where to start, we have great news!

Mark your calendars for July 22-23 for the renewed Marcellus Academy. This weekend workshop will train volunteer activists on how to bring about meaningful regulation of the Marcellus shale drilling industry and the adverse impacts it brings to West Virginia and the world.

The full agenda is coming soon, and topics will include an overview of the technologies used, environmental risks, and how to monitor the sites in your back yard. We will also develop action plans to implement our legislative campaign to assure adequate bonding for well closure, clean-up, and site reclamation.

The workshop will be held at Buckhannon Wesleyan College. All expenses (lodging, meals, and mileage) will be covered by the WV Chapter of Sierra Club for the first 25 to register, so do it now! Apply by sending your name, address and phone number to jkotcon@gmail.com. Please indicate whether you can attend both Saturday and Sunday, because preference will be given to those who can spend the whole time.

Still smiling at the end of a winter day on the Tuscarora Trail, Morgan County, WV. PHOTO BY CHRIS CRAIG

TRANSITION | CONTINUED FROM PAGE 7

Secretary of the Interior Deb Haaland, Sen. Joe Manchin, and WVU President Dr. E. Gordon Gee, among others.

"We are thrilled to play a role in the creation of a domestic battery supply chain. We must end our reliance on cobalt and China's dominance in the global battery supply chain," said Sanjiv Malhotra, founder and CEO of SPARKZ. The site for the company's factory should be announced soon.

SPARKZ plans to partner with the United Mine Workers of America to recruit and train former coal miners for research and manufacturing positions with plans to hire 350-400 employees. It's the skills those people developed in coal mines that Malhotra says makes them well-suited for battery production. "Battery manufacturing requires a lot of safety training. The mine workers are possibly in the only industry that comes close to the kind of safety training we would be providing," says Malhotra.

Meanwhile, WVU's Water Research Institute expects that its pilot project to extract rare earth elements from Acid Mine Drainage will start producing results this summer. The Infrastructure and Jobs Act allots \$700 million for abandoned Mine Lands projects in West Virginia over the next five years. If there could be synergy here with the SPARKZ facility, we could really see a win-win for West Virginia and the Planet. Wouldn't that be a novel experience?



ATV's, Casinos, and Amusement Parks Not Coming to a State Park Near You!

Think back to a day you recently spent in one of your favorite state parks or forests enjoying hiking, birding, fishing, picnicking, or other peaceful outdoor activities. Picture that same place, but now with an imposing casino creating traffic congestion and noise or, alternatively, sharing the trails with loud ATV riders out for a thrill. During the recent legislative session, our lawmakers came precariously close to passing a bill that might have opened the door to such development.



A cabin at Cacapon Resort State Park near Berkeley Springs, West Virginia. PHOTO BY ACROTERION, CC BY-SA 4.0

West Virginia House of Delegates passed House Bill 4408, which allows for the expansion of privatization and commercial development on our public lands. If passed by the Senate in its original form, this bill might have made it possible for high-impact commercial development to be built on our treasured public lands. This bill ultimately did pass the Senate, but thanks to some quick-acting, determined conservation groups and citizens, changes were made to the bill that we hope will prevent these types of developments from occurring.

Prior to the passage of HB 4408, private development had been allowed in only six state parks, with a maximum renewable lease period of ten years. In its original form, HB 4408 would have expanded the authority of the WV Department of Natural Resources to enter into contracts for private development in all state parks and forests and extend leases up to 50 years.

Absent from this piece of legislation were any restrictions as to the types of new facilities that could be built. Many organizations and citizens voiced concern that that the lack of restrictions in the bill could open the door to incompatible development such as

casinos, racetracks, amusement parks, or ATV trails. Also missing from its original language were requirements for public hearings or environmental impact studies.

Proponents of the bill claimed that its passage would increase the viability, accessibility, and affordability of these lands, because they would become more profitable and require less taxpayer funding. They also suggested that fear of incompatible, high-impact private development was unwarranted, since any development on state land is subject to codes designed to protect these lands from such encroachments.

Led by the efforts of WV Rivers Coalition, several groups, including the WV Chapter of the Sierra Club, came out against this legislation. They were joined by many citizens and even one former WV State Park Assistant Superintendent, Ken Caplinger. WV Rivers Coalition's Executive Director Angie Rosser lobbied for changes before the Senate Finance Committee. State Senator Stephen Baldwin (D-10) indicated "HB 4408 takes the prize for causing the biggest stir this session." The Senate passed HB 4408, although several amendments were made to the text helping to ease concerns. Thanks to the quick response from the good folks of WV, the following improvements were made to HB 4408.

- The longest lease term was reduced to 40 years.
- A requirement for public hearings for the private contracting of new facilities was added.

The following language was added to the bill: "Any facilities constructed under the authority granted under this section must be in accordance with the purpose, powers, and duties of the Section of Parks



and Recreation as provided

by \$20-5-3 of this code." This state law says, "The purposes of the Section of Parks and Recreation shall be to promote conservation by preserving and protecting natural areas of unique or exceptional scenic, scientific, cultural, archaeological, or historic significance, and to provide outdoor recreational opportunities for the citizens of this state and its visitors."

What remains in the bill is that all state parks and forests are now vulnerable to private development, with the exception of Watoga State Park. Its status as an International Dark Sky Park protected it. No provisions were added to exclude specific types of development such as casinos or ATV trails, although the inclusion of language related to \$20-5-3 provides some assurance these incompatible types of development will not be permitted.

Last-minute changes made to HB 4408 helped to ease initial concerns about the types of development that could be allowed in our parks and forests. We must, however, stay vigilant. Participation in public hearings will be crucial to making sure development is compatible with state law. Fortunately, the private sector has shown limited interest in constructing facilities in the original six parks where private development had already been allowed. With the amendments made to this bill, we're hopeful that future commercial interest by private developers will be minimal.

West Virginians have shown time after time their desire to protect and support our state public lands. The WV Chapter of the Sierra Club stays committed to protecting our public lands and thanks everyone who participated in these recent efforts to amend this piece of legislation. Spring has arrived, and it's a great time to get out in our parks and forests. Enjoy these lands you've helped protect!

Meet Alex Cole

Beyond Coal Campaign's New Senior Organizing Representative For West Virginia

After team interviews with several highly qualified applicants, the West Virginia Sierra Club extends a warm welcome to Alex Cole, Beyond Coal Campaign's new Senior Organizing Representative for West Virginia. Sierra Club lacks a strong presence in many areas of West Virginia, and Alex will serve as an ambassador for our chapter and for West Virginia's water, air, wildlands, and communities. He will lead Sierra Club's work by partnering with other Sierra Club staff, community volunteers, and others to build grassroots power that will help our state move toward a just, equitable, and sustainable future.

Alex comes to us after working for several years as an organizer for the Ohio Valley Environmental Coalition (OVEC), which recently closed its doors. While at OVEC, he cooperated with our chapter on several environmental issues, including the planned petrochemical hub in the Ohio Valley and the Rockwool factory in Jefferson County.

Alex, we look forward to getting to know you and working with you to protect our beautiful and beloved West Virginia! —Chapter Chair, Aileen Curfman



Like most young people born and raised in WV, I thought that I had to leave to make a living, to make something of myself. I made it as far as Ohio University, which admittedly isn't that far, but I thought I would never look back.

At that time, Ohio University's Sierra Student Coalition was in the middle of a campaign to shut down the coal-burning power plant that ran the campus. At the very beginning of my freshman year and at the behest of a new friend, I went to my first Sierra Club Meeting. It was in the largest conference room in the University Center, and it was standing room only. It was a formative moment for me. My parents raised me outdoors so that I would have a love of nature, but I had always felt outnumbered in that respect at my high school. For the first time, I felt like I was part of a much larger community: I found my people, and they were concerned about what was happening to my home in the context of the larger world. I felt much less isolated.

Within that group, I met a lot of second-generation Appalachian refugees—the children of people who fled West Virginia and Kentucky for Ohio in the 70s and 80s. Naturally, I gravitated toward these people. They had a nostalgia for where I was from (and where I was trying to escape from) that changed my entire perspective.

Mountaintop removal was at the forefront of everyone's minds at that time, and though I had seen and been on several strip mines growing up and even got to tour Big John at the Hobet mine as a Cub Scout, I had no idea of the scale of destruction—or the amount of care and energy people who lived so far away had for West Virginia and our plight.

At that point, I added an environmental geography major to my history course load and began my journey to becoming a professional environmentalist. I organized on campus, met as many like-minded people as I could, and founded a Geography Club with those people that still survives to this day, mostly going on camping trips, organizing mural paintings, Earth Day events, and trash cleanups around Athens.

By the end of my degree program, my advisor, disappointed that I didn't want to go to grad school, asked me what I wanted to do with



Alex Cole will continue his work for the West Virginia environment as Senior Organizing Representative for West Virginia on Sierra Club's Beyond Coal Campaign.

my life. I told him anything that would allow me to move back home, live on my family's farm in Pliny, and make things better.

Meeting the people I did at OU made me recognize how privileged I was having a homeplace to return to. Somehow, through lots of hard work and many miracles of fate, my family had kept our 200-acre ridgetop farm intact through six generations, albeit abandoned since the 1980s. So, I devoted my life to the goal of homesteading there, living off the grid as sustainably as I could, regenerating the land that my ancestors survived off of, and rebuilding the community connections that had been suffering through many generations of depopulation.

Like many, I have struggled to get by. I have worked many jobs, written for a newspaper, organized a union, fought the petrochemical industry up and down the Ohio River, and never lost track of the ultimate goal of making things better. I never thought it would come full circle like this, that I would end up working for the same organization that set me on this path all those many years ago. To the Sierra Club, the West Virginia Chapter, and all our members, I am eternally grateful, and I hope I can live up to your needs and expectations. Thank you for hiring me, and I hope I can serve you well.

PRIME TIME FOR SIERRA CLUB

Outings

BY CHRIS CRAIG

Recent rains and cool weather have made for a long and beautiful spring in the Mountain State. People feel less penned in than they did during and toward the end of the pandemic, but many are still looking for opportunities to get out and enjoy the outdoors close to home. A number of our hikes have filled up.

As you can see in these listings, we have some exciting adventures planned, and there will likely be more announced throughout the summer. Keep an eye out for events that interest you at www.sierraclub.org/west-virginia/events or our Facebook or Meetup pages, and sign up early.

We try to provide events for varying interests, skill levels, and regions. But we are limited by the small number of leaders. If you have an interest in helping get people out on environmentally focused outdoor adventures, contact me at ccraig@laurellodge.com to find out more about being a local outings leader.

We're also trying to keep people safe. There are still some nasty bugs around, and we remain committed to following reasonable protocols to keep our outings participants healthy as the coronavirus evolves from epidemic to endemic. Whether on our outings or on your own, take care of yourself and others.



A chilly April morning didn't keep some hardy Sierrans from joining Ken Kendall (front, center) on his inaugural Sierra Club outing, April 2022, at Eidolon Nature Preserve, Morgan County, WV. PHOTO BY CHRIS CRAIG.

Sunday, June 12, 2022

Day Hike: Friendship Hill Walking Tour and Hike

The Friendship Hill National Historic Site, located north of Point Marion, PA, includes 9.6 miles of trails. All of these trails form good loops from short to medium distance. The trails wander around the meadows and woodlands that surround the Albert Gallatin home located on the Monongahela River. This hike begins in the parking lot by the kiosk, heading up towards the bronze statue of Albert Gallatin. We will follow the Main Trail (green markers). The hike takes you by the house and then by the Monongahela River heading south. The trail is fairly easy except for the stairs heading down toward the south point of the trail. When heading back north, the trail widens to the width of a road

Distance/ 4 miles, EASY

Difficulty:

Duration: 120 min

Bring: snack, water, sunscreen, and shoes

for the varied terrain

Meet: 9 am. The parking lot by the Kiosk,

Friendship Hill National Historic Site, 223 New Geneva Rd., Point

Marion, PA.

Leader: Adrienne Epley Brown

adrienne_epley@yahoo.com

702-465-9119

Nearest town: Point Marion, PA

Cancellation We will carry on in drizzle but postpone in case of a downpour.

policy: Additional

Our meeting point at the kiosk is information: located at the Friendship Hill National Historical Park, on New Geneva Rd (PA Route 166) south of

> Pekar Rd. From the park entrance, continue to the first pull-off on the right-hand side. There is no entrance

fee to the site.



Two Sierrans among the Bluebells. On the Mason Dixon Hike in April. PHOTO BY JIM KOTCON.

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Saturday, June 18, 2022

Day Hike: Appalachian Trail, Blackburn Center to Buzzard Rock and Rocky Knoll, WV/VA

Continuing our series of AT hikes in Northern Virginia, we will hike out and back between the Blackburn Center and the scenic Buzzard Rock overlook. Those completing the full hike will then go out and back south of the Blackburn Center. Most of our hike will be on the ridge, avoiding the famed "Rollercoaster" section a bit to the south. There will be some rocky sections on the trail. Be prepared for possible high temperatures, as we'll be close to the summer solstice. The hike is suitable for adults and children (accompanied by an adult) capable of the distance on uneven terrain. Well-behaved dogs on leashes are welcome.

Distance/ 10.4 miles, MODERATE. Option for **Difficulty:** 5.6 miles, MODERATELY EASY.

Duration: 6 hours. Option for 3 hours.

Bring: Plenty of water, lunch and possibly snacks. Protection from bugs.

Meet: 10 am. Blackburn Center, 34899 Appalachian Trail Road, Round Hill, VA. From VA Route 9 between Hillsboro, VA and the WV line, turn south on VA 751 (Cider Mill Road) for 1.5 miles, then right on VA 719 (Woodgrove Road) for 2 miles. Turn right on VA 713 (Appalachian Trail Road). Park at the first parking area within the Blackburn Center, about 2 miles up the hill from Woodgrove.

Leader: Chris Craig

ccraig@laurellodge.com

We will cancel in heavy rain.

304-433-1260

Nearest town: Round Hill, VA

Cancellation

policy:

Additional We aim to keep everyone healthy. information: Please do not attend if you are ill or have recently tested positive for COVID-19. Masks are welcome but not required, and we will practice Wednesday, July 13, 2022

Evening Hike: Cooper's Rock Ice Cream Social and Rock City Trail

This gathering is an opportunity to meet Sierra Club members and learn about our work in the community while enjoying homemade ice cream. The social begins at 5 pm. We will be located at Picnic Shelter 2, adjacent to the visitor's center, overlook, and playground. At 6 pm we will begin the hike to the Rock City Trail. This easy to moderate trail runs from Picnic Shelter 3 through the area known as Rock City.

Distance/ 1 mile, EASY

Difficulty:

Duration: 60 min

Bring:

snack, water, sunscreen, and shoes

for the varied terrain.

Meet: 6 pm at the Shelter 2, located by

the Cooper's Rock Overlook

Leader:

Adrienne Epley Brown adrienne_epley@yahoo.com

702-465-9119

Morgantown, WV Nearest town:

Cancellation

We will carry on the hike in drizzle policy: but postpone in case of a downpour.

The ice cream social will continue

Coopers Rock State Forest is

in the event of rain.

Additional information:

named for Coopers Rock, a series of sandstone cliffs above the Cheat River Gorge. Legend has it that a fugitive hid near what is now the overlook. The site features a historic iron furnace and several structures constructed by the Civilian Conservation Corps in the 1930s. https://wvstateparks.com/park/ coopers-rock-state-forest

Saturday, July 16, 2022

Day Hike: Weverton - River and Cliffs, Knoxville, MD

Though not long, this hike will take us from the banks of the Potomac River to cliffs with one of the best views of that river. It will take us on a very short segment of the C&O Canal towpath and a longer stretch of the Appalachian Trail, including switchbacks up South Mountain. Along the way, we'll see some of remnants of Caspar Wever's failed 19th-century attempt to copy the busy water-powered industry upstream in Harpers Ferry. Be prepared for some mud as we scout out ruins along the river and a big climb and descent between the parking lot and cliffs. Be prepared for July heat by bringing lots of water and a sizeable snack for a rest after the climb. This hike is suitable for adults and children in reasonable shape, though those sensitive to heat should watch the forecast. Dogs are discouraged due to the possibility of a busy trail with many switchbacks. There is no charge for the hike, though contributions are welcome.

Distance/ 3.5 miles

Difficulty: MODERATELY DIFFICULT

Duration: 3 hours

Bring: Plenty of water, lunch and possibly

snacks. Protection from bugs.

Meet: 9 am. Weverton parking lot, off MD

Route 67, just north of US340. Note, this parking lot can be very busy on weekends. Be prepared to park along the access road if the lot is full, and look for us beside the lot.

Leader: Chris Craig

ccraig@laurellodge.com

304-433-1260

Nearest town: Knoxville, MD

Cancellation We will cancel in heavy rain or if

> lightning is likely. policy:

It looked like spring, but there was still a nip in the air as 20 Sierrans hiked Antietam National Battlefield in early April. Along with spring wildflowers, the group shared a bit of history here at the famed Burnside Bridge. PHOTO BY ED WHEELESS.



Saturday, August 13, 2022

Day Hike: Tuscarora and Sleepy Creek Mountain Trails, Morgan County, WV

This hike in the Sleepy Creek Wildlife Management Area will include the beautiful views from Devil's Nose but also lots of woods and steep climbs and descents. Trails will range from the well-kept and well-marked Tuscarora Trail to little-used trails atop Sleepy Creek Mountain. Be prepared for August heat, and if that heat is intense, we may shorten and reduce climbs by doing an out-and-back hike. This hike is suitable for adults in good shape. Well-behaved dogs on leashes are welcome. There is no charge for this hike, but donations are welcome.

> Distance/ Difficulty:

8.6 miles, DIFFICULT

Duration:

5 hours

Bring:

Lots of water and a packed lunch. Encounters with ticks are likely:

Bring or wear protection.

Meet: 9:30 am. Small parking lot at the end of Audubon Road, near Hedgesville, WV. From WV Route 9 (10.6 miles west of I-81) turn south on Mountain Lake Rd for 1.5 miles. Turn right on Audubon Rd. and continue through sharp turn for 3 miles to small parking lot at dead

end.

Leader: Chris Craig

ccraig@laurellodge.com

304-433-1260

Hedgesville, WV **Nearest town:**

Cancellation We will cancel in heavy rain and may

alter and shorten in intense heat.



Sunday August 21, 2022

Day Hike: Quebec Run Mill Run Trail

Join us on this woodland walk through ferns, rhododendrons, and hemlock. There will be a few areas that could require some scrambling. The Quebec Run Wild Area is located along the eastern slope of Chestnut Ridge in Fayette County. This heavily forested, 7441-acre area of land extends eastward to Big Sandy Creek. Nearly all of the Quebec Run and Tebolt Run watersheds are within the Wild Area. No development of a permanent nature is permitted in the area, in order for it to remain "wild." Hiking, biking, hunting, fishing, and the pursuit of peace and solitude are allowed. Big Sandy Creek and Mill Run are stocked with trout, and the lower reaches of Quebec and Tebolt Runs contain native trout. The forest is mixed mesophytic, with sugar and red maple, yellow poplar, mixed oaks, rhododendron, hemlock, and more. The forest is mostly third growth, resulting from extensive timber harvesting by the Summit Lumber Co. of Uniontown around 1938-40. Many of the old logging roads and tram roads are in evidence, along with dark brown sawdust piles that give mute testimony to the once active portable sawmills.

Difficulty:

Distance/ 2.5 miles, MODERATE

Duration: 120 min

Bring: snack, water, sunscreen, and

shoes for the varied terrain

Meet: 10 am. Mill Run Parking Lot

(39°45'49.7"N 79°39'49.1"W), off Quebec Rd, near Farmington, PA. Contact the trip leader for

detailed directions.

Leader: Adrienne Epley Brown

adrienne_epley@yahoo.com

702-465-9119

Nearest town: Farmington, PA

Cancellation We will carry on in drizzle but

policy: postpone in case of a downpour Additional Detailed area map can be found

information: at https://www.dcnr.pa.gov/

StateForests/FindAForest/Forbes/

Pages/Hiking.aspx

Saturday, September 17, 2022

Day Hike: Appalachian Trail, Snickers Gap to **Rocky Knoll**

Our exploration of the AT in Northern Virginia and WV continues with this out-and-back hike north from Snickers Gap. Six miles of our hike will be along the famed Rollercoaster section, with steep and challenging grades. We will be rewarded with several good views and areas of geological interest and southern forests. Be prepared for changing weather, with possible intense heat. This hike is suitable for adults in good shape. Well-behaved dogs on leashes are welcome. There is no charge for this hike, but donations are welcome.

Distance/ 9.2 miles, DIFFICULT

Difficulty:

Duration: 6 hours

Bring: Lots of water, a packed lunch, and some snacks. Bring or wear

protection from bugs, especially

Meet: 9:30 am. VDOT Commuter

parking lot at southwest corner of the intersection of VA Routes 7 and 601. (Access from eastbound

7 or from 601 south of 7.)

Leader: Chris Craig

ccraig@laurellodge.com

We will cancel in heavy rain.

304-433-1260

Nearest town: Bluemont and Round Hill, VA

Cancellation

policy:



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Before her passing in May, Mary Reed was a stalwart defender of the environment and other good causes. PHOTO COURTESY OF MARY REED'S FAMILY.

EPSC Honors Activist Mary B. Reed BY GAIL KOHLHORST

The Eastern Panhandle Group is donating and planting a tree at the North Jefferson Elementary School in Jefferson County to commemorate the late Mary Reed's years of hard work opposing the Rockwool plant.

Mary faithfully protested the presence of the Rockwool Manufacturing Plant and its negative environmental impact during the time of its planning through its first six months of its operation. She participated in many demonstrations, attended meetings, and even made a trip to Denmark to walk across the country in protest of Rockwool, a Danish corporation. Mary continued to organize Friday protests against Rockwool's pollution when many others had given up. She had a fabulous collection of protest signs which were displayed every Friday along the Route 9 bike path.

The Rockwool plant is located directly across the road from North Jefferson Elementary School and in close proximity to four other Jefferson County public schools. Although protests, including those of the Sierra Club and other local environmental groups, did not prevent the Rockwool Plant from becoming operational, they kept the community aware of the pollution threatening our environment and encouraged the community to support legal actions and monitor air and water pollution.

Mary B. Reed grew up in Brunswick, Maryland and moved to the Eastern Panhandle in 1971 with her four children. She wore many hats in her life and spent over a decade of volunteering for the Boy Scouts of America. Mary was a dedicated swim coach and volunteered her time to her church. It was a passion of hers to leave this world a better place for her five grandchildren and all children of world. Mary was an avid gardener and a lover of nature, the earth, the environment, peace, and gratitude.

The *Mountain State Sierran* is published quarterly by the West Virginia Chapter of Sierra Club and distributed to all paid members—in print (when requested) or electronically. \$1 of each member's annual dues helps offset the cost of producing this newsletter.

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Please contact the Editor for submission guidelines or advertising rates. Contributions to the newsletter may be sent to ccraig@laurellodge.com.

DEADLINE FOR THE 2022 FALL ISSUE: **AUGUST 6, 2022**

Opinions expressed in the *Mountain State Sierran* are those of the contributors and do not necessarily reflect the opinions of the Sierra Club.



SUMMER 2022



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Chapter ExComm Meeting

The next meeting of the WV Chapter of Sierra Club Executive Committee will be held online at

10 am - 2:30 pm, Saturday, July 9.

Email sierraclub.wv@gmail.com or call 304-314-2709 for more information or to receive the link.

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Public Officials

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Washington, DC 20510

The Hon. Joe Manchin (D)

(202) 224-3954 manchin.senate.gov

The Hon. Shelley Moore Capito (R)

(202) 224-6472 capito.senate.gov

U.S. HOUSE OF REPRESENTATIVES

Washington, DC 20515

The Hon. David McKinley (R, 1st)

(202) 225-4172 mckinley.house.gov

The Hon. Alex Mooney (R, 2nd)

(202) 225-2711 mooney.house.gov

The Hon. Carol Miller (R, 3rd)

(202) 225-3452 miller.house.gov

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Member, WV Senate or House of Delegates Bldg 1, State Capitol Complex Charleston, WV 25305

WVlegislature.gov has contact information for all state legislators. (877) 565-3447 or (304) 347-4836

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