

West Virginia Highlands Conservancy
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The Highlands Voice

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All over but the shouting

What Happened at the 2022 Legislative Session

By Luanne McGovern

The sixty day session of the West Virginia Legislature was completed at the stroke of midnight on March 12, 2022. In total, there were 2216 bills introduced, of which only 293 were finally passed (13.2%). Here is a roundup of various bills that were of particular interest to the WV Highlands Conservancy.

The Good News

The good news is that a whole slate of bills that would aid in the introduction of Off Road Vehicles (ORVs) into state parks and forests did not pass. These bills were primarily introduced by Senator Mark Maynard (R-Wayne, District 6). When looking at these bills individually, none of them appear to be particularly bad, but taken in

totality, there is a clear plan for motorization of our state lands. Only SB 560 allowing motorized e-bikes on state lands was passed by the Senate, but was not taken up by the House. The bills were:

- SB 560 (Defining Class 2 e-bikes);
- SB 562 (Creating Adopt-A-Trail volunteer programs for public land under DNR jurisdiction);
- SB 563 (Authorizing dispersed camping on state properties under DNR jurisdiction);

(More on p. 3)

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Thoughts from our President

By Larry Thomas

Sunday, March 20 was the first day of spring, but Old Man Winter wasn't quite ready to leave the highlands. Since then, we have had snow, heavy winds and freezing temperatures that have done a lot of damage. Birds have been migrating and mammals who have been sleeping during the long winter are reappearing, certainly a sure sign of spring.

March has been a busy time at the Conservancy, as you will see from the articles in this issue of *The Highlands Voice*. The West Virginia Highlands Conservancy board and its committees have been alert and continue to seize opportunities for the protection of West Virginia's highlands.

WVHC Legislative Committee and the 2022 Legislative Session

It seemed that the whole world was watching this year's legislative session which ended March 12. Sixty days seemed like an eternity as we watched good and bad legislation introduced and then followed to see those that did and did not move through the process. See the great article recapping the legislative session in this Highlands Voice.

WVHC Public Lands Committee

WVHC filed an objection to the Draft Decision Notice and Finding of No Significant Impact for the Greenbrier Southeast Project (GSE) and received response from the Forest Supervisor addressing each of the twenty-seven issues stated in the objection that has now been reviewed by the committee. The Supervisor concluded that the Greenbrier Southeast Project Final EA, DDN/FONSI, and supporting documents in the project record were in compliance with all applicable laws, regulations, and policies, and with the Monongahela's Forest Plan. The only exceptions he addressed were in regard to Issues 7, Candy darter – failure to conduct an adequate cumulative effects analysis and 18, Inadequate cumulative effects disclosure associated with soil disturbance, and he instructed the Forest to correct those exceptions as follows:

- **Issue 7 instruction:** Disclose the cumulative effects as provided by NEPA implementing regulations for the candy darter and its proposed critical habitat. Consider all relevant past, present, and reasonably foreseeable future actions on private, State, and Federal lands with similar effects overlapping in time and space with direct and indirect effects from the proposed action.
- **Issue 18 instruction:** Disclose the cumulative effects as provided by NEPA implementing regulations for the soils resource. Consider all relevant past, present, and reasonably foreseeable future actions on private, State, and Federal lands with similar effects overlapping in time and space with direct and indirect effects from the proposed action.

Based on the committee's review of the response to issue 6, Candy darter – inadequate effects analysis and reliance on mitigations which stated:

The Final EA has considered the potential for sediment production and delivery to streams documented in the Greenbrier Southeast Project Watershed Analysis Process (in the project record). *This document shows monitoring data for forest-wide stream sediment changes that are not directly associated with management activities but instead are driven by natural processes.* These data show streams in wilderness areas increasing in fine sediment and some streams in areas of management decreasing in fine sediment. Therefore, it appears that the project planning conducted by Monongahela National Forest staff is successful in protecting streams from any quantifiable changes in sediment delivery. [emphasis added]

The committee has requested additional information as follows:

We have obtained the cited document. It does not show or provide the data used in the analysis. Instead, it provides a qualitative summary of results for selected example sites. Because the findings reported in this document are central to your dismissal of our concerns about National Forest Management and preservation and restoration of candy darter critical habitat, we request a listing of the specific data used in the analysis. We wish to obtain the actual data values that "show streams in wilderness areas increasing in fine sediment and some streams in areas of management decreasing in fine sediment." We also request any spreadsheets or data tables used in the analysis.

Other WVHC Committee Activities

Committees are working on other projects and issues including rerouting of a section of Corridor H, preparing recommendations that individuals can do to combat climate change, preparing for the 2022 Dolly Sods Stewards program activities, monitoring water pollution and mining issues, and planning a Fall Review in October. Committees are always looking for members, so if you are interested, let us know. The WVHC committees are listed here in the Highlands Voice.

Trash in Our Public Lands - Information from Leave No Trace

With warmer weather activities increase and the potential for trash being left on our public lands also increases. Many individuals do not realize that these items take much longer than we might think to decompose, and we must dispose of waste properly anytime we are in the outdoors. A great article concerning this problem can be found at [Skills Series: Trash Timeline - Leave No Trace \(Int.org\)](#).

Time to get out and enjoy the highlands. I hope to see you along a trail soon. Don't forget Earth Day on April 22nd.

More about the Legislature (Continued from p. 1)

- SB 564 (Mapping of public roads);
- SB 565 (Establishing resident and nonresident wildlife viewing stamps);
- SB 566 (Requiring Department of Commerce to develop plan for adventure travel recreation promotion in WV).

Be assured that these and similar bills will be reintroduced in 2023 by Senator Maynard and friends.

HB 2598 (Modifying the inspection requirements and the definition of an above ground storage tank) passed the House, but was not taken up by the Senate. This bill would have lessened the inspection requirements for aboveground tanks in “areas of critical concern”, i.e. upstream of drinking water intakes. This was a big win for the future of safe drinking water in West Virginia.

The Not Totally Bad / Not Great News

HB 4408, also widely known as the Park System Privatization bill, passed but with important amendments. The concerted voices from across the state were heard in Charleston, and the final bill has somewhat reduced concerns that our state parks and forests will be subject to inappropriate new private developments. The amendments were:

- The length of term for contracts to operate existing facilities remains untouched - 10 year term/10 year renewal.
- The possible maximum private development contract term was reduced from 50 to 40 years.
- Language was added to require that any new private development must be in keeping with the purpose of the park system to “Promote conservation by preserving and protecting natural areas of unique, exceptional, scenic, scientific, cultural, archaeological, or historic significance and to promote outdoor recreational opportunities.”
- Prior to any private development contract being signed, a public notice will be issued and a public hearing held in the county in which the subject park or forest is located.
- Watoga was granted an exemption from being the site of any new private projects due to its international “Dark Sky” status.
- Any contracts for new private development being considered by DNR Director must also be approved by Commerce and Tourism Secretary and the Economic Development Secretary.
- If a DNR Director signs a private development contract and then leaves office, he or she cannot be employed by the private company until a year has passed.

The battle against privatization of our state parks and forests will now be on a case-by-case basis, and we all must be advocates, ready to speak up at public hearings, for or against future projects. The new DNR Director appointed by Governor Justice (Brett McMillian) was a vocal advocate of this bill, so we can envision that there will be plenty of fights in the future.

The Bad News

SB 279 (Authorizing DEP to promulgate legislative rules) was signed into law on February 11, 2022. The law strengthens some water quality standards, but weakens criteria for several suspected carcinogens and toxic chemicals. Legislative oversight of site-specific human health criteria changes will be ceded to the Governor.

SB 480 (Relating to DEP Office of Oil and Gas) would have increased funding for oil and gas inspectors. The bill was passed by the Senate but not taken up by the House. Currently, the Department of Environmental Protection Office of Oil and Gas (OOG) only has nine inspectors overseeing approximately 75,000 wells and 28,000 tanks across the state. That’s one inspector for every 8,000 wells. SB 480 would have imposed an annual fee of one hundred dollars per well. Low producing wells would be exempt. This fee would produce enough revenue that we could have had one inspector for approximately every 4,000 wells.

The Hard to Say News

Depending on the details and where you stand on these issues, these bills could have either positive or negative impact.

SB 4 (Repealing ban on construction of nuclear power plants) was signed into law on February 1, 2022. It repeals the previous law that outlawed nuclear power plants to be built in WV.

HB 4003 (Relating generally to commercial benefit of substances removed from waters of the state by the treatment of mine drainage) was passed by both houses. It details how Rare Earth and Critical Minerals from Acid Mine Drainage would be owned. To learn more about these rare earth elements, see the stories in the January, 2022, and March, 2022, issues of *The Highlands Voice*.

HB 4084 (Relating to advanced recycling) was passed and would establish facilities separate from solid waste authorities.

HB 4098 (Relating to geothermal energy development) was passed to provide regulation of geothermal energy facilities.

HB 4491 (To establish requirements for carbon dioxide sequestration) was passed to provide regulation of carbon capture facilities.

For more details on the 2022 Legislature, check out the updates from our partners at the WV Environmental Council. www.wvecouncil.org

What I Learned Covering the 2022 WV Legislature

By Luanne McGovern

This was my first year covering the Legislature for the WV Highlands Conservancy, and I learned a lot in a very short period of time. Some days it was pretty exciting, and other days it was dreadfully discouraging. But here are a few of my personal takeaways, that will hopefully help me be more effective next year.

- Nothing can beat seeing the legislative process in person. I attended many Senate and House sessions and several committee meetings. Watching the ebb and flow of the process, understanding when something really boring was in actuality very important, watching the body language of the Members – you can't experience this on a video feed. I highly recommend the experience to all West Virginians.
- All the power is in the committees. All.The.Power. I now understand why committee chairperson positions are so important, as they control the flow of all bills to be voted on. The committee chair can stop a bill in its tracks, or push it quickly through for a floor vote. If you want power in Charleston, you run a committee.
- We as citizens have a huge voice, if we use it. I did not appreciate the combined power of constituent voices until seeing the impact this year. The more we call (not email) and talk to our legislators, the more they have to listen. But those communications are best

when they happen early, before the bill reaches the floor for a vote. Again, the committees have all the power, and the committee members are the ones that need to hear the citizen's voice.

- With great trepidation, I testified in the Senate Natural Resources committee meeting. I was astounded at the response. Multiple people came up to me and commented that "No one but lobbyists ever speak at these meetings!" One of the Senate Doorkeepers came over just to hear me speak. It felt crazy! I like to think that I did have an impact, as the bill did not progress to the Senate floor. But it showed me how much of an impact we as citizens can have on the process, if we take the time to do it.
- When President Lyndon Johnson was in the Senate he was called The Master of the Senate because he understood how to use the arcane rules to his advantage. I saw this clearly in action in the final days, as bills were pushed through with little review or public knowledge. The last few days of the session can be the most dangerous.

Overall, it was a fascinating experience. Hopefully you can join us next year!

Little Bitty Birds

By Cynthia D. Ellis

Ruby-throated Hummingbirds add a special dimension of pleasure to many locations in West Virginia as the temperatures warm. Here are some brief notes about those tiny fliers and their kin.

Ruby-throats are the one hummingbird species routinely seen in West Virginia. In recent years there have been enough visits by vagrant Rufous Hummingbirds to warrant their inclusion on the State Bird List. Two other species each have single verified reports; they are Mexican Hummingbird [Preston Co., 2003] and Black-chinned Hummingbird [Jefferson Co., Oct.-Jan, 2006-07].



Ruby Throated Hummingbird

Down in the Kanawha Valley, in recent years, Ruby-throats have made their first appearance in the time period of April 11-19. Feeders should be cleaned and refilled at least every 3rd day. A solution of four parts water to one part white sugar is recommended with no red dye.

May your hopes for seeing these little wonders be realized this year!

Here is more info on arrival dates: [see "maps"] [Hummingbirds \(journeynorth.org\)](http://Hummingbirds.journeynorth.org)

And, from Brooks Bird Club, more on the Bird Records Committee and State Bird List West Virginia Bird Records Committee - Brooks Bird Club



Rufous Hummingbird

Plant Trees, Have Fun!

Appalachian Headwaters, the West Virginia Land Trust, and Green Forests Work will be hosting a tree planting event on Saturday April 30th at the new Mammoth Preserve. Please join us to help the forest restoration effort at this former mine site and get an opportunity to see the Preserve yourself. This project was made possible, in part, by the West Virginia Highlands Conservancy who secured the land for reforestation, preservation, and the reduction of pollution.

The Preserve encompasses 4,800 acres and after reforestation is complete will be opened up as a hiking and mountain biking destination that is expected to draw outdoor enthusiasts from around the region. At the event, we hope to plant 2,000 trees and volunteers are needed. If you would like to attend, please RSVP to Mike Becher at mbecher@appheadwaters.org by April 15th. We'll meet on the 30th in the parking lot of the Smither's Municipal Building at 11:00.

Note: To learn more about the Mammoth Preserve, see the October, 2020, issue of *The Highlands Voice* <https://www.wvhighlands.org/highlands-voice/2020/10%20October%202020.pdf>.

Disclosure: In spite of the name of the location, it is unlikely that participants will encounter any Mammoths, Woolly or otherwise. You should go anyway; it will be fun.

Homecoming

A fox framed by a barn door

stares at me.

He does not run away.

He seems to know something

Like two people in love.

I am I and you are you.

No one really knows the other.

A brown creek tumbles over flat stones

like the ones daddy skipped on the bay.

Shadows feel like cobwebs.

Later, I stare at sunset from an airplane window

My spirit diminishes as we lift.

Donna Isaac

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

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.

Mountain Valley Pipeline Update

3 Years behind schedule

 No completion date in sight

 Crushing legal and regulatory challenges

The MVP still has major hurdles to overcome. Unless it gets through them all, the project will NEVER be completed.

Court cases still facing the project:

- Challenges by Wild Virginia and partners to both Virginia and West Virginia Clean Water Act certifications
- Challenges by Wild Virginia and partners to two earlier FERC approvals

MVP must get permission from FERC to bore under 180 streams

MVP must seek permission from the Forest Service, for the third time, to allow it to degrade Jefferson National Forest habitats, through a public process that could take months



MVP must be granted a permit to cross hundreds of streams and wetlands, which cannot be processed until the Fish and Wildlife Service acts

MVP must obtain a new biological opinion and incidental take permit from the Fish and Wildlife Service, again for the third time

MVP must apply again for a right-of-way to cross our public lands

A STATE OF UNCERTAINTY

NextEra Energy, a company with nearly one-third partnership in MVP states, **“The continued legal and regulatory challenges have resulted in a very low probability of pipeline completion.”**



MVP continues to violate water quality requirements, which could result in further regulatory challenges.

600+

**STREAMS AND
WETLANDS TO
CROSS**

Wild Virginia will continue to fight to protect the many valuable environments we still have to save from the MVP.



In a court ruling, MVP loses permit to cross through Jefferson National Forest



In a ruling, court rejects Endangered Species Act approval



U.S. Army Corps of Engineers commits to withhold key permit



3 billion dollars over budget

WHATS NEXT?

Each legal and regulatory victory brings us closer to our goal of stopping the MVP. You can count on Wild Virginia to keep you updated on the battle against the MVP. We will continue to provide you with the tools, resources, and guidance needed to be an effective advocate and help ensure this project never gets through all the hurdles it faces.



Note: This graphic comes to us from Wild Virginia, to whom we express our thanks. Wild Virginia and the West Virginia Highlands Conservancy have cooperated extensively in opposition to the Mountain Valley Pipeline.

Greenbrier Watershed Association Talks to Senator Manchin

March 21, 2022

The Honorable Joe Manchin, III
United States Senator
306 Hart Office Building
Washington, DC 20510
Dear Senator Manchin,

The Greenbrier River Watershed Association, founded in 1990, is one of the oldest watershed associations established in our state. Our board, representing almost 500 members, is reaching out to urge you to take action on the climate crisis.

Recently, you joined Secretary of the Interior, Debra Haaland on her visit to West Virginia. She visited the New River Gorge National Park and Preserve, where she spoke on the importance of outdoor recreation economy, its impact on local communities and “connecting the public to nature”. Our watershed group speaks this same language. But you should have brought her just a little further over to the east, to see our beautiful Greenbrier River, the longest free flowing river left in the Eastern US, and then explained to her why you support the Mountain Valley Pipeline’s plans to bore under this special river. Show her the land that was taken unwillingly from its owners so private companies can export the gas. You would also see the current mudslides and erosion dumping mud into the streams.

Building new gas infrastructure, such as the Mountain Valley Pipeline will take years to come on line and won’t help the current crisis. It will only deepen global dependence on fossil fuels, further empowering Russia and damaging the climate. You recently stated “What we do know is that Russia has weaponized energy” and you “want to match it or be better than theirs” encouraging President Biden to invoke the Defense Production Act to ram completion of this pipeline through, which is only 55% complete. But Russia’s invasion of Ukraine proves that America must move swiftly to a clean energy economy that will lower costs, protect our national security, and secure our energy independence. In terms of long-term global political stability, the most important thing we can be doing is minimizing our contributions to climate disruption. This has been recognized repeatedly by the Pentagon, and requires investments in clean, renewable energy, not fossil fuels. It is unacceptable for you to lead us down this collision course with fossil fuels rather than put our transition to clean renewable energy onto a faster track.

Passing the climate provisions in the Build Back Better legislation as adopted by the House of Representatives would provide \$555 billion for transitioning the United States economy to clean energy. According to Princeton University this investment in the U. S. economy would come close to achieving the 50 percent reduction in greenhouse gas emissions by 2030 as well as reducing premature

deaths annually by 7,000 and reducing American household energy expenditures by \$300 a year by 2030.

We know that clean, renewable energy produced right here at home is the path to true energy independence. Renewable energy jobs are booming while fossil fuel jobs are declining. West Virginia has to potential to become the state that provides a model for the future, for other states to look up to. Please lead us into a clean future.

Thank you for your consideration,

Greenbrier River Watershed Association
John J. Walkup III, President
Louanne Fatora, Coordinator

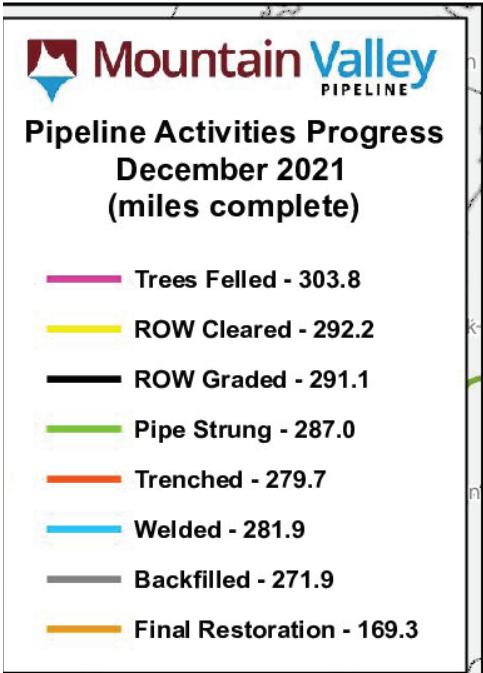
What Does “Finished” Mean?

During discussions of the Mountain Valley Pipeline, it is often referred to as “nearly finished.” In the litigation over the failure, so far, to comply with the Endangered Species Act (*The Highlands Voice*, March, 2022) the Court referred to it as “mostly finished.”

But is it really finished, or even mostly finished?

That depends upon what we mean by “finished.” Pipeline construction is a series of steps: cut down the trees, clear the right of way, dig the ditch, plop in the pipe, weld the pieces

together, cover it up, restore the land. If we define finished as having cut all the trees, it is 100% finished; all the trees are gone. If we define finished as having completed all the steps, it is about 55% finished. As this chart shows, for every step it is a different fraction of the way toward being “finished.” Whether or not it is “mostly finished” depends upon how close to the having completed all the steps it has to be before it can be considered “finished.”



A Better Route for Corridor H

By Hugh Rogers

Our story so far, Parsons to Davis chapter: The West Virginia Division of Highways (DOH) has been sued before over its Original Preferred Alignment (OPA). A settlement agreement in 2000 required it to come up with alternatives to spare the Blackwater Area and its historic district. From a tangle of possibilities, DOH found a Northern Route that protects this landscape and skirts the small towns, rather than building a massive interchange between them.

However, when DOH re-started the project in 2019, it showed maps with only the old Original Preferred Alignment, blasting straight across the Blackwater. More than 80% of public comments on this proposal requested a Northern alternative.

Now, DOH is updating old environmental studies, with a view toward gaining federal approval (and money) next year, and beginning construction in 2024. Besides wildlife and wetlands, geology and vegetation, this review must take into account “changes in the project area”. The vague phrase encompasses social and economic conditions.

Changes there have been, indeed. The number of local businesses more than doubled between 2012 and 2021; as the population grew, home sales set new records. Davis and Thomas are destinations for many more travelers.

Blackwater Falls State Park now attracts more than 1 million visitors annually. The Park is applying for Dark Skies designation—an internationally significant marker, not only for astronomers but for any vacationers seeking relief from urban spaces. The Park, the Monongahela National Forest, the Blackwater Industrial Complex on the rail-trail south of Thomas, *all* these natural and historic sites would be drastically affected by the sight and noise of an intrusive multilane highway.

Over the past twenty years, local residents and organizations have worked to build hiking and biking trails between the two towns. These cooperative efforts would be jeopardized by a major highway intersection and associated commercial development.

One could say the highway planners have become victims of their own success. The corridor’s completion from the east as far as Davis (except for six miles from the Virginia line to Wardensville) helped to increase economic activity. And it convinced a lot of residents, old and new, about the need to preserve their towns’ charm and protect the Blackwater area.

DOH has hung on to the old alignment primarily because it would be cheaper to build. But what is the cost of not doing it right? Besides the impacts noted above, to the natural landscape, historic sites, and connections between the towns, two more could be mentioned.

Of particular importance to Thomas, truck traffic through town is an increasing annoyance. Going south, it uses the main shopping,

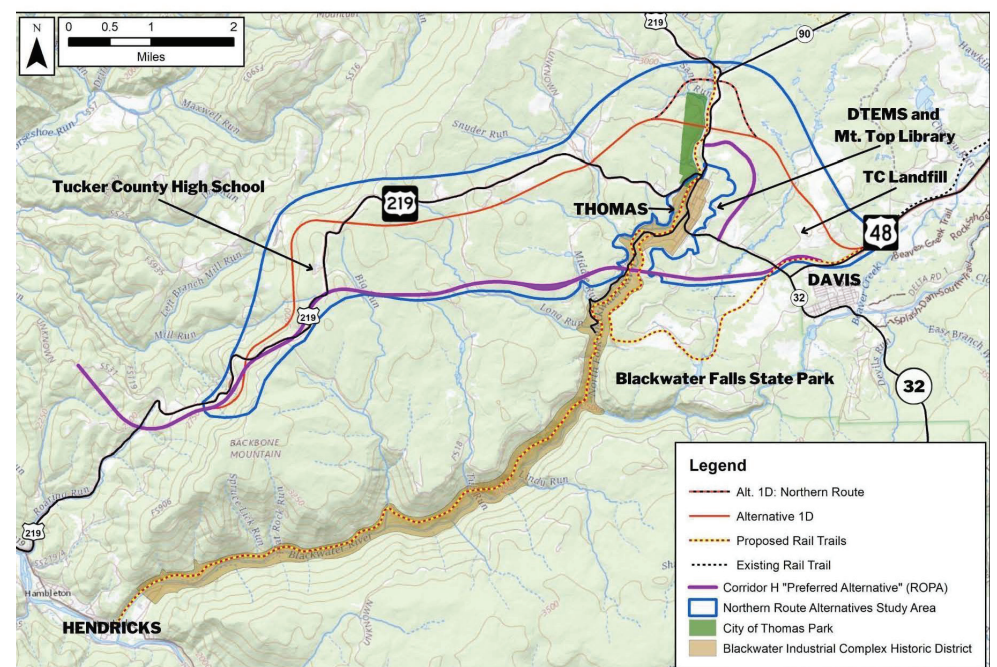
eating, live performance and gallery-going street. Northbound traffic is wearing out a retaining wall built by the CCC eighty years ago.

The Original Preferred Alignment would do nothing to solve the problem, so DOH tacked on a steep, two-lane truck route up the hill from Route 32. It is uncertain when or if this separate piece would be built (local officials and DOH employees are doubtful), or if it would be used by reluctant truckers, but clearly it would have negative impacts on the Davis-Thomas elementary/middle school and public library. The Northern Route would make this unnecessary.

The other problem is physical. On the OPA, the bridge that would cross the North Fork of the Blackwater River above the Coketon historic district would rest on an Abandoned Mine Lands reclamation site. The surface consists of old mine spoil; beneath are old mine workings, tunnels filled with acid drainage. This site should not be disturbed.

We’ve been warned about the placement of bridge supports in uncertain terrain. In the section of Corridor H now under construction, triple piers were set on “an old slide.” (The site is shown on the front page of the September *Voice*.) As a result, the assembly slipped downhill. DOH and Kokosing, the contractor, dispute what the latter was told about the slide.

There’s no secret about the terrain at Coketon, and there’s no need to go that way. With unprecedented funding from the federal infrastructure bill, we can choose the better route.



Proposed Northern Route Modification of Corridor H Alternative 1D
February, 2022

Supporting the Wilderness Climate: The First Season of Dolly Sods Wilderness Stewards

Part 5: The Stewards Step Up

By Dave Johnston

In the first four parts of this article, which is based on the presentation I made at the WVHC Fall Review, we looked at the provisions of the Wilderness Act of 1964 as they relate to the values of “wilderness character”, the history of Dolly Sods as a wilderness, and the impacts that growing visitation has had. In this installment we will look at how the Dolly Sods Wilderness Stewards was formed, what we do, and what we learned from the first season of experience.

In a future article we’ll look at what Dolly Sods Wilderness Stewards has planned for the future.

Inception

The surge in visitation to Dolly Sods that accompanied the onset of the pandemic in the summer and fall of 2020 did not go unnoticed within WVHC. The usage of the wilderness, and associated impacts, had been steadily increasing over the previous decade and was already a concern to many. The traffic jams at some trailheads, crowding of many trails, and increasing trail and campsite degradation spurred thoughts of “someone should do something about this”. After discussions, the WVHC Public Lands Committee decided to do something about it.

Members of the committee reached out to the Monongahela National Forest (MNF) and asked what we could do as volunteers to support the Forest Service’s mission to preserve and enhance the wilderness character of Dolly Sods. The Forest Service enthusiastically welcomed our interest. Over the course of several weeks in the spring of 2021 we worked out a set of volunteer activities that would supplement the work being done by the Forest Service, and also provide them with data they can use to better

target management of the wilderness.

The plan was shared with the Public Lands Committee and the WVHC Board, and approved subject to conditions related to WVHC being able to access and analyze some of the data. WVHC and the USDA Forest Service entered into a partnership agreement, and in June 2021 the Dolly Sods Wilderness Stewards was born.

Planned Activities

There were five elements in the original plan, one of which has been put on hold and another added.

Trailhead Registration Boxes: WVHC purchased the materials for the MNF to construct a registration box for all seven of the trailheads along Forest Roads 19 and 75, and volunteers are checking the boxes regularly to collect registration sheets, replenish supplies, and maintain the boxes. WVHC enters the non-personal data into a spreadsheet and delivers it and the original sheets to the MNF.

Wilderness Trailhead Stewards: The centerpiece of the Wilderness Stewards project, the Trailhead Stewards greet visitors at trailheads and help them understand the wilderness and plan a successful visit. In the process we work in messages about Leave No Trace principles, preparation and appropriate practices in Dolly Sods. Stewards provide maps, route advice and warnings about weather and trail conditions for those not prepared.

Campsite Inventory: New campsites have proliferated in Dolly Sods over the last few years, and they are having more impact. Volunteer teams will hike the trails and identify the location of all campsites, record their dimensions, associated social trails,

proximity to other sites, and observe the level of impact. The MNF can use this data to remediate unacceptable sites and devise visitor use management strategies.

Trail Maintenance: Many of the trails in Dolly Sods are muddy, eroded and unpleasant for hikers, but more importantly for a wilderness, poorly designed and maintained trails have an increasingly negative impact on the natural environment surrounding them. Teams of Wilderness Stewards will work under the direction of MNF staff to promote natural drainage, construct walking surfaces over wetlands, reroute or harden trails so that visitors are encouraged to stay on trails and reduce their impact.

Traffic monitoring: Originally conceived as a way for Stewards to provide car counts and monitor parking conditions, this element has been put on hold. However, traffic issues unquestionably affect wilderness character, so the Stewards will stay engaged with the MNF on way to address the problems.

Solitude Monitoring: Though not a part of the original plan, this fits in well with the Wilderness Act, which calls out “outstanding opportunities for solitude” among the values of wilderness character. Volunteers hike specified trails for a period of four hours and record the number of encounters with other hikers and campers. The MNF uses the data to assess achievement of this wilderness value.

Observation, Learnings, and Numbers

The Wilderness Stewards were active from early July until the end of the year. An initial group of Trailhead Stewards assembled

(More on the next page)

More about the Wilderness Stewards (Continued from previous page)

for a training by MNF staff and then hit the trailheads every weekend through mid-November. Registration sheets were picked up sometimes as often as twice per week during the busiest period. Teams of solitude monitors walked tens of miles of trails during September and October. And a special crew of volunteers conducted a preliminary survey of campsites along popular trails in preparation for a full-scale inventory this year.

Here are some of the things we observed, recorded, and counted during our first season:

Registration Boxes: The registration boxes were put in place by the Forest Service in mid-September. During the first month a total of 1200 parties registered, including about 3000 people and 36 dogs; the average party size was about 2.5 people. Backpackers and day hikers were split about 50:50. The backpackers were planning on spending an average of 1.7 nights on their trip. About 40% of all people entered the wilderness at one trailhead: Bear Rocks. Blackbird Knob and Red Creek were the next closest at about 17% each.

By the end of the year about 2000 parties, and 5000 people, had ventured into the backcountry. For the most part the averages above held, though there was a slight increase in the proportion of day hikers during the cooler months at the end of the year. Even after the gates closed on FR 19 and 75, we have continued to maintain and collect registrations at Red Creek, the remaining trailhead accessible by car. During the winter we have had about 155 parties and 369 people register for a wilderness hike.

Keep in mind that these numbers represent only those who voluntarily registered. We estimate that somewhere around 50% of actual visitors register, so the true numbers may be around twice those reported above. This also does not include those who entered at the FR80 trailhead through the Canaan Valley National Wildlife

Refuge or through the private Timberline development. And finally, it does not include those who visited the general area without going into the wilderness, particularly those who didn't go further than Bear Rock Preserve or the viewpoints, natural trails and picnic area along the Forest Roads.

It is too soon to draw broad conclusions about visitation levels at Dolly Sods; we will need at least a year of data before that can begin. Also, the Forest Service does not have equivalent data from previous years, so we cannot identify trends. But the numbers do nothing to discount the subjective impression that Dolly Sods is hosting a lot of people.

Trailhead Stewards: The Stewards have garnered a lot of attention since their inception, both from the positive reaction of visitors and in media coverage. While we did not expect a negative reception, we have been surprised and gratified by how receptive visitors have been to our key messages and how enthusiastic most have been about the assistance we give.

During the busiest season of the summer through the end of October we interacted with approximately 1500 people, covering the three most popular trailheads during the busiest times of weekend and holidays. Trailhead Stewards put in about 370 volunteer hours.

We found our most common conversations revolved around helping people plan a hike for their available time and hiking ability, and what they wanted to see and experience. We referred a significant number of people to Bear Rocks Preserve, the Northland Loop Nature Trail, or to other trailheads if they really were not ready for a wilderness experience. Many people arrived at Dolly Sods unprepared for the highland weather or primitive trail conditions, and we helped them prepare for what they were about to face.

While we aren't under any illusions that these trailhead interactions will turn

around the impacts of heavy visitation and poor backcountry behavior, we do think that we have encouraged a greater awareness and appreciation for the unique qualities and challenges present by a wilderness. Many people for whom a city park or drive-in campground has been their wildest experience are at least a bit better prepared to follow the Leave No Trace principles and special wilderness considerations. Even those with experience have been reminded of the importance of hiking gently and minimizing the impact of their camping practices. The Trailhead Stewards are no magic bullet or quick fix, but are at least part of the puzzle of preserving wilderness character in Dolly Sods.

During 2022 we will be expanding the presence of the Trailhead Stewards to cover more locations for a greater percentage of the busy times. Look for more information elsewhere in this issue or at the WVHC website.

Solitude Monitoring: A team of solitude monitors set out in pairs during late September and early October and completed 13 surveys. Three trails representing Very High, High and Moderate usage levels were hiked twice on weekdays and twice on weekends for four hours out and back, or about eight miles. Not surprisingly, a large number of encounters was recorded.

The largest frequency of encounters was recorded on weekends on the Bear Rocks trail. During one survey, the monitors recorded 139 people during their four hour hike, an average of 29.5 people per hour! But even averaging the weekend and weekday encounters, the average rate for the Bear Rocks trail was about 19 encounters per hour.

For comparison, the overall average encounters in the High Use (the Big Stonecoal Trail) zone was about 6 people per hour. For the Moderate use zone, the Wildlife and

(More on page 13)

Young Birders Taking Flight

By Victoria Sheeler

“Time in nature is not leisure time; it’s an essential investment in our children’s health (and also, by the way, in our own).” – Richard Louv, from *Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder*.

If you ask a passionate environmentalist how they got started, many will have their own “origin story.” Their interests may be rooted in outdoor recreation among environmental resources, such as hiking, kayaking, and climbing. Perhaps they, like many in West Virginia, found their passion through hunting and/or fishing, and the conservation that goes hand-in-hand. Some discover a love for nature through finding amphibians and macroinvertebrates while exploring streams as a child, or by climbing trees in spring as leaves emerge and flowers bloom. You’ll find a wonderful variety of origins, but one of the most common is admiring the majesty of birds.

It’s only natural for birds to be one of the most effective gateways into environmentalism. Birds are everywhere, found on every continent of the world. You can find birds with relative ease simply by paying attention throughout your day, even in an urban setting. At home, school, work, and everywhere in between, our feathered friends can be found living their lives in plain sight. The fact that they fly, in itself, is captivating. Many birds have bright colors and are just brimming with charisma, boisterous by design. They’ll sing, call, and display in unique and fascinating ways. All of these factors combined make birding attractive even at a surface level, let alone the incredible wealth of subject knowledge to delve into.

Birding has been a popular initiation into environmentalism for centuries, but has found a recent spike in interest. Since the onset of the COVID-19 pandemic, there has been a sharp increase in the sale of birdfeeders and bird seed, participating in citizen science,

bird-related web traffic/search trends, and usage of birding mobile apps. With the bustling nature of humans put on hold, birds naturally came out to the forefront, putting themselves on full display. As such, in these tense and troubling times, many turned to birds as a source of comfort and company - and rightfully so! Even as lockdowns ended, interest in birding has thankfully remained at an all-time high. All ages will find a wide variety of benefits from

birding, but few will find as much intrinsic value in it as children.

The countless families that recently began birdwatching and feeding have, intentionally or not, created an extremely valuable opportunity for their children. Even if it’s initially through a window, watching birds come and go will inevitably spark a child’s curiosity and lead them outdoors. Simply being outdoors carries massive benefits for our mental and physical health! As a child spends time outdoors, they explore and look around, gaining confidence and comfort in their natural surroundings. Nature provides the perfect playground, with countless discoveries to be had. Adults can actively nurture a child’s curiosity by asking questions and guiding them to resources and information, such as books, websites, and binoculars. They will start becoming familiar with birds commonly seen, such as the American robin and American goldfinch, learning their names and identification. On the other hand, they may also brim with excitement when an unfamiliar bird comes to the feeder at home or into view on a hike, scrambling to find out what it was.

Birding doesn’t just come with inherent physical/mental benefits, but also social. Feeding birds, watching birds, inquiring into birds - these all provide opportunities for bonding through nature and common interest. Doing these activities as a family spreads the joy of birding even to siblings who are originally uninterested, and may even bridge into other nature activities together. One method of engaging in birding as a family is by making scrapbooks of your visitors and/or sightings, recording observations and adding pictures/drawings.

Many other craft projects can be found online, such as schematics and tips for making bird houses, or how to make homemade birdfeeders out of pinecones, peanut butter,

(More on the next page)



More about the Young Birders (Continued from previous page)

and birdseed. A birdhouse can bring not just visitors to your home or area, but residents too! One of the most memorable early birding experiences one can have is seeing first-hand a pair of birds creating their nest, caring for their eggs, raising their young, and eventually leaving the nest.

As children come to love birds, they develop compassion and reverence for nature, aiding to the formation of an environmental identity. A genuine connection between a child and birds, or any animal, will inevitably lead into a desire to protect the ecosystems in which they live. Sparking a child's passion for the environment early on can have a monumental impact; by giving a child the opportunity to see birds first-hand, you may just have a hand in their own origin story as an environmentalist!

At the Avian Conservation Center of Appalachia, under the leadership of Katie Fallon, they are cultivating the next generation of birders and environmentalists through the West Virginia Young Birders Club. The WYBC aims to promote a healthy lifestyle through birding while encouraging an appreciation for West Virginia's native wild birds and Appalachian ecosystems. By creating opportunities for youth to view birds and experience nature together, this also instills a sense of community amongst the kids—something that is more important now than ever. The WYBC hopes to expand the club's outreach so that youth all across West Virginia have the chance to build long-lasting relationships with our avian friends and, by extension, the wonderful natural world around them.

The Rest of the Story about Wilderness Stewards (Continued from page 11)

Rohrbaugh Plains trails, the overall average was about 5 people per hour. The overall average number of people encountered in Dolly Sods was about 10 per hour

Because the Forest Service does not have results of previous surveys of this type, it isn't possible to determine how this compares with past visitation levels. But it should be possible to compare the absolute numbers against benchmarks for what is considered a reasonable "opportunity for solitude". The program is expecting to do ongoing monitoring during each of the seasons next year, and periodically through coming years, so it should be possible to begin to see trends.

Campsite Inventory: Full-scale implementation of the campsite surveys was not implemented last year, but is planned to be a major effort starting in the summer of 2022. However, during late November and early December several volunteers did informal surveys of the number and location of campsites along several trails. Using their phone GPS they recorded waypoints for each campsite they encountered near a trail, which were then transferred to GPS mapping software and spreadsheets. We covered about half of the trails in Dolly Sods, and reported nearly 150 campsites, so there may be as many as 300 throughout the full wilderness. This information will help us schedule and plan routes once the full inventory is begun.

Trail Maintenance: Because of the need for careful consideration of the impact of trail work in the wilderness, the Forest

Service was not able prescribe the needed remedial trail work last year. However, many trouble spots continue to adversely affect the natural environment, and we hope to at least work with the MNF to address the worst areas during 2022.

The Future

Next month I will go into detail on the ambitious plans we are developing for each of these projects during 2022; it will be a busy and exciting year!

However, I want to give advance notice of one of them: we are looking to greatly expand the presence and visibility of the Trailhead Stewards. Stewards will have new outerwear to identify and help them stand out at the trailheads, and will have new resources at their fingertips to respond to the needs of visitors. We will be making a push to expand the number of volunteers so we can cover more of the trailheads more of the time. A press release sent to local and statewide media in late March is already generating a rush of new volunteers.

We will kick off the season in mid-May with a combination of an in-person training for new Stewards and a picnic for all Stewards; this will be a great opportunity to network and share experiences with fellow lovers of Dolly Sods and help with the orientation of new Stewards.

If you would like to be part of making a difference at Dolly Sods please consider joining us! For more information and to join, go to <https://bit.ly/3pBjiyV>.

Opening Dates for Monongahela National Forest Recreation

Monongahela National Forest has announced the 2022 opening dates for developed recreation sites across the Forest. The dates may change based on local conditions. Visit the Forest's Recreation Conditions Report at <https://www.fs.usda.gov/recmain/mnf/recreation> for the most current information. Go to www.recreation.gov to make campground and picnic shelter reservations for some sites. Not all sites are available for reservations. Learn about ways to recreate responsibly and be considerate of others at: <https://www.fs.usda.gov/visit/know-before-you-go/responsible-recreation>.
Opening dates for recreation sites on Cheat-Potomac Ranger District (304-478-2000) in the Elkins and Parsons areas:

- Bear Heaven Campground – April 15
- Horseshoe Recreation Area – May 20
- Lower Glady Dispersed Camping – Area opens when snow-free; toilets open April 15
- Stuart Recreation Area – April 22

Opening dates for recreation sites on Cheat-Potomac Ranger District (304-257-4488) in the Petersburg and Seneca Rocks areas:

- Big Bend Campground – April 8
- Dolly Sods Picnic Area – April 15, weather permitting
- Forest Road 19 in the Dolly Sods area – April 1, weather permitting
- Forest Road 75 in the Dolly Sods area – April 15, weather permitting
- Gandy Creek Dispersed Camping - Area opens when snow-free; toilets open April 15
- Gatewood Group Campground – April 22
- Jess Judy Group Campground – April 8
- Red Creek Campground – April 15, weather permitting
- Seneca Rocks Discovery Center – April 1
- Seneca Rocks Picnic Area – April 2
- Seneca Shadows Campground – April 8
- Spruce Knob Lake – Lake open year-round; toilets open April 15
- Spruce Knob Lake Campground – April 22
- Spruce Knob Observation Tower – Area opens when snow-free; toilets open April 15

Opening dates for recreation sites on Greenbrier Ranger District (304-456-3335) in the Bartow area:

- Gaudineer Knob Picnic Area – Area opens when snow-free; toilets open April 15
- Island Campground – April 15
- Lake Buffalo – Lake open year-round; toilets open April 15
- Laurel Fork Campground – April 15
- Little River Dispersed Camping – Area opens when snow-free
- Middle Mountain Cabins – April 15
- Mower Tract Dispersed Camping – Area opens when snow-free
- Old House Run Picnic Area – April 15
- Stonecoal Dispersed Camping – Area opens when snow-free; toilets open April 15

Opening dates for recreation sites on the Gauley Ranger District (304-846-2695) in the Richwood area:

- Bear Run Dispersed Camping – Area opens when snow-free
- Big Rock Campground – March 22
- Bishop Knob Campground – April 20
- Cranberry Campground – April 4
- Cranberry Glades Boardwalk – Boardwalk open year-round; toilets open April 15
- Cranberry Mountain Nature Center – April 15
- Cranberry River Developed Dispersed Campsites – Area opens when snow-free; toilets open March 22
- Falls of Hills Creek – Area opens when snow-free; toilets open April 15
- North Bend Picnic Area – April 11
- Summit Lake – Lake open year-round; toilets open April 11
- Summit Lake Campground – April 11
- Third Bridge Dispersed Camping – Area opens when snow-free
- Williams River Developed Dispersed Campsites (Sites #1 - #18 located downstream of Tea Creek Campground) – No services, no fees and non-motorized vehicle access only due to road construction. Area opens when snow-free
- Woodbine Picnic Area – April 11

Opening dates for recreation sites on the Marlinton-White Sulphur Ranger District (304-799-4334) in the Marlinton area:

- Day Run Campground – April 4
- Highland Scenic Highway – Road opens

when snow-free; toilets open April 4, weather permitting

- Pocahontas Campground – April 11
- Rimel Picnic Area – April 4
- Tea Creek Campground – April 4
- Williams River Developed Dispersed Campsites (Sites #19 to #30 located near or upstream of Tea Creek Campground) – Area opens when snow-free; toilets open April 4
- Williams River Fishing Pier – Area opens when snow-free; toilets open April 4

Opening dates for recreation sites on the Marlinton-White Sulphur Ranger District (304-536-2144) in the White Sulphur Springs area:

- Anthony Creek Dispersed Camping – Area opens when snow-free
- Blue Bend Recreation Area – Campground and small pavilion opens March 22. Large Pavilion opens May 23.
- Blue Meadow Group Campground – May 23
- Hopkins Mountain Fireman's Cabin – June 1
- Lake Sherwood – Lake, boat ramp, trailhead, and vault toilets at beach and gatehouse – open year-round
- Lake Sherwood Entrance Road Dispersed Camping – Areas opens when snow-free
- Lake Sherwood Recreation Area – West Shore Camping Loop – April 11
- Lake Sherwood Recreation Area – remaining campground loops, group camping, picnic area, picnic pavilion and swimming beach – May 23. Day Use entrance fee will be charged beginning May 20.

Roadside camping, also called dispersed camping or boondocking, is available in many areas of the Forest year-round. For more information about recreation facilities, contact the District Office near the location you would like to visit. Contact information is listed at <https://www.fs.usda.gov/detail/mnf/about-forest/offices>.

Join Now !!!

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Address_____

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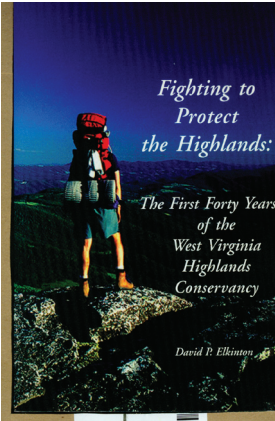
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Although *Fighting to Protect the Highlands, the First 40 Years of the West Virginia Highlands Conservancy* normally sells for \$15.95 plus \$3.00 postage. We are offering it as a premium to new members. New members receive it free with membership.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

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.

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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.)



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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.

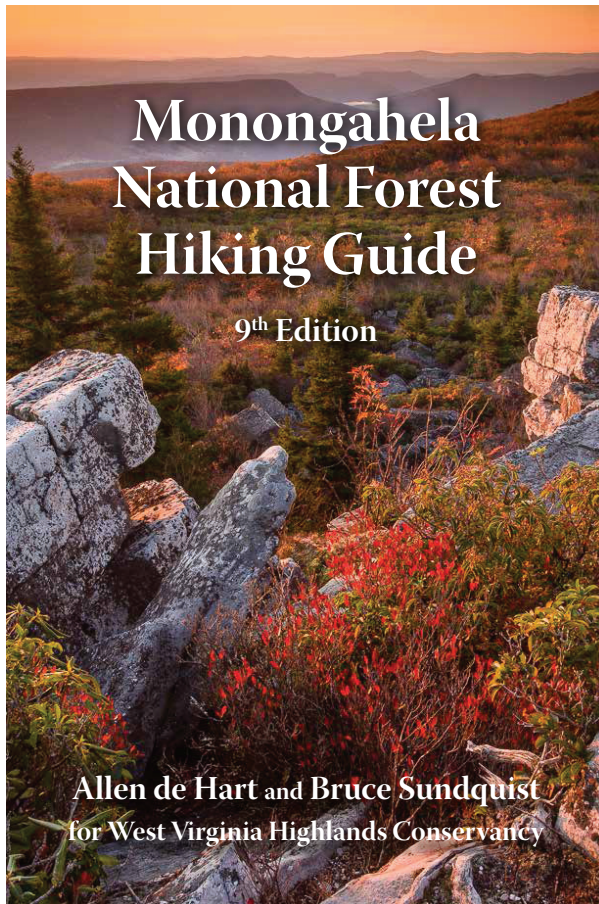
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HATS FOR SALE

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

Some ambivalence but mostly OK

“Forced Pooling” Comes to West Virginia

By David McMahon

Forced unitization bills, often termed “forced pooling” bills, have been very controversial for years. West Virginia Surface Owners Rights Organization (WVSORO) has always said a good forced pooling bill would be a good thing because it lessens the number of wells and well pads needed to produce natural gas for whatever market there is for natural gas. It is just that in prior years we have never seen a good bill, just one that favors industry over surface owners and those of our members who also own some minerals.

This year’s bill, SB 694, is not quite a “good” bill, but because of all the good surface protections it contains, and because it is OK to most mineral owners, and because the industry dominates the Legislature and could do so even more after the next election, WVSORO thinks this bill is OK and told the Legislature so. To see a copy of the bill [go here](#). It takes effect June 9, 2022 and we plan to have more information on our website by then.

Methane gas originates in shale formations laid down eons ago. Over the eons some of it creeps towards the surface and is sometimes trapped on its way upward in a porous and permeable sandstone formation that is topped with a denser cap rock formation above that keeps it from migrating further upward.

Until about 2008 almost all gas drilling was to the gas trapped in those sandstone formations. A vertical well was drilled through the formation and fractures were put into the formation for the gas to flow more freely to the well bore. Originally these fractures were created by nitroglycerine, but more recently by pumping water (and accompanying enabling chemical and sand) under enough pressure to crack and lift the above rock, and leave sand in the cracks! The gas then flows from

the permeable sandstone into the fractures and into the well bore and up the well casing to the surface.

The limitation of this gas extraction using vertical wells was that the well bore exposed to the rock was only as long as the formation was thick. The other limitation is that the gas trapped in the sandstone formations was somewhat limited because whatever gas migrated upwards from the originating shale formation into the sandstone was a lot less than what was left behind in the shale. The shale formation contains much, much more gas.

Why didn’t drillers drill the shale if it had more gas? Because it has almost no porosity or permeability. In the amount of time gas will flow a kilometer through sandstone, it will only travel one meter through a shale. So putting a vertical well through the shale formation will get very little gas flowing out of the shale into the vertical well bore and to the surface and to market.

Drillers first tried to get more gas out of shale by increasing the volume of water used to fracture vertical wells. Instead of the conventional practice of using the amount of water that can be held in a tractor trailer tank truck of water, they started using enough water to fill several Olympic swimming pools. That worked somewhat better.

But then along came horizontal drilling. Techniques were developed to put the motor turning the drill bit boring through the well bore at the bottom, far end of the drill pipe instead of using a motor at the surface to turn the whole drill pipe all the way down to the bit at the end of the drill pipe. Also, highly accurate inertial guidance systems were developed to accompany the drill bit as it created the horizontal bore. Those two factors coupled with the new large volume fracturing techniques created a revolution, a tsunami, of

horizontal drilling in shale formations like the Marcellus and the Utica and the Rogersville. These new wells cost several million dollars each to drill compared to several hundred thousand dollars it cost to drill a conventional vertical well. However, one of these horizontal shale wells produces 60 times the gas of a conventional vertical well, so they are much more economically efficient. You are unlikely ever to see a new conventional well drilled. (And the fact that many of the old wells as they play out will become orphaned is a problem to be discussed elsewhere.)

The most likely pollution problem from drilling a gas well occurs as it is first drilled vertically down through the water table. (Actually it’s second; the real most likely problem is spills on the well pads during drilling.) So if one well can serve to get the same gas as 60 wells, the chances of ground water pollution from this first step in drilling the well is reduced by 60 times.

Also, conventional vertical wells have to be spread out far apart, and there has to be a different well pad for each of those spread out wells. Several horizontal wells, however, can be drilled from one well pad — 6 or 8 or even more horizontal wells from one pad. So again, fewer well pads on surface owners (with the danger of spill prevention going bad also reduced). Of course that one pad is much, much bigger, but still it is a huge reduction in the total surface use and spill risk for the same amount of gas.

So the use of the drilling of horizontal shale wells has greatly increased. There would be even fewer of these wells drilled (and hopefully fewer well pads) if the horizontal wells could be drilled longer and longer. The greater the length of the bore exposed to the

(Keep going, more on the next page)

More about Gas Drilling (Continued from previous page)

formation (and fractured) the more gas comes up out of one well.

What has limited the full exercise of long horizontal well bore drilling technology is that the driller should typically have at least 640 acres of leased mineral acreage to drill these wells. If the driller can find one 640 acre mineral tract, that is all that is needed. But ownership of much of West Virginia, particularly in the area of the state being drilled by horizontal Marcellus Shale wells, is broken up into much smaller tracts. So the driller needs to get leases from the owner (or owners — there can be scores of heirship owners of a single mineral tract) of several separately owned, neighboring mineral tracts to put in a 640 acre “unit” for the drilling of the horizontal shale wells.

If the owner(s) of the mineral tract towards the end of a planned horizontal well bore will not sign a lease (or cannot be identified or located because there are so many heirs), then the driller has to make the horizontal bore shorter than the driller would otherwise make it. And remember the longer the bore the better, as noted before.

So the driller wants to be able to force tracts into their units so they can drill longer bores. That is why the drillers want SB 694. It allows a State, legislatively authorized commission to force tracts into a unit for drilling longer bores.

WVSORO respects the views of those who want to leave any possible stumbling block in the way of hydrocarbon energy production. But our position has always been that, for the reasons above, as long as horizontal methane gas wells are going to be drilled, legislation that will allow longer bores from fewer wells to be drilled from potentially fewer well pads is a good idea. And in fact these horizontal shale wells are being drilled now and will be for the foreseeable future. So a good forced

unitization bill is a good idea, but it has to be a good one. (Note that this is commonly called forced “pooling”. But variations of the root word “pool” are used for three different concepts in the existing statutes, so we use the word forced “unitization”).)

The problem with forced unitization bills introduced in the past years has been that the forced unitization legislation introduced in the past has done the good things such legislation can do for the drillers, but not done good things for surface owners, and has not been fair to forced mineral owners in determining how much the mineral owners will get paid up front and for royalties. SB 694 introduced this year is far from the best possible bill. But it is OK for WVSORO because it does have some significant beneficial provisions for surface owners.

First, the driller will still have to get the permission of the surface owner to put one of its big horizontal wells pads. Though the drillers would like that to be something that could be forced upon the surface owner, the bill does not provide for it! The driller has to get the surface owner’s agreement. And, we advise surface owners to ask for \$640,000 from the driller to agree to the placement of the pad on their surface! See our website for more.

Second, remember how one tract of minerals can have the ownership shared by scores of heirs? Sometimes it is not possible to find those heirs in order to pay them the royalty payments and signing bonuses to which they are entitled. Under SB 694, if those mineral owners do not show up in five years, the surface owner gets not only all the back royalties for those five years, the surface owner gets title to that share of the minerals, plus the surface owner gets all future royalties! The surface owner has to bring a court proceeding to do that. Check out our website

in a little while and we will explain how that is done — and when. You should wait a couple years after the wells are drilled.

Third, there are legislative findings in the bill recognizing surface owners’ rights added into the Code that can be used by courts in interpreting and carrying out the bill.

Fourth, about one-third of WVSORO members also own the minerals, or a share of the minerals, under their land. So if their minerals (but not surface) are forced into a unit they will get very fair royalties paid to them and they will get paid very fair up front money calculated off a weighted average of what the drillers paid to owners who did sign leases. The terms for forcing mineral owners into units whose with their minerals being held by production by leases that did not have pooling/unitization clauses, or with leases with old pooling/unitization clauses before 2008, are not so good unfortunately.

Fifth, the legislation adds a farmer and a mineral owner to the commission that determines whether to allow the driller to form the unit, and if so, how much the mineral owners should get paid.

So this is not to say that SB 694 is perfect. IF we could have drafted the legislation we could have drafted something even better in the devilish details. But what we got was good for surface owners. And with the political climate at the current Legislature, and the unpredictability of the future, we believed it was the wise thing to say that we were OK with this bill.

Note: This is from the West Virginia Surface Owners Rights Organization. Because of that, all reference to “us”, “our website”, etc. are to the West Virginia Surface Owners Rights Organization.



► The baby shirts are certified organic cotton and are offered in one infant and several toddler sizes and an infant onesie. Slogan is “I ♥ Mountains Save One for Me!” Onesie [18 mo.]---\$25, Infant tee [18 mo.]---\$20, Toddler tee, 2T,3T,4T, 5/6---\$20

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

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

The same items are also available at our on-line store: www.wvhighlands.org

T- SHIRTS

White, heavy cotton T-shirts with the **I ♥ Mountains** slogan on the front. The lettering is blue and the heart is red. “West Virginia Highlands Conservancy” in smaller blue letters is included below the slogan. Short sleeve in sizes: S, M, L, XL, and XXL. Long sleeve in sizes S, M, L, and XL. **Short sleeve** model is \$18 by mail; **long sleeve** is \$22. West Virginia residents add 6% sales tax. Send sizes wanted and check payable to West Virginia Highlands Conservancy ATTEN: Online Store, WVHC, P.O. Box 306, Charleston, WV 25321-0306.