

West Virginia Highlands Conservancy
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The Highlands Voice

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

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And so it begins

Getting Ready for the Legislative Session

Even if 2021 seems like a long way off, it is time to start planning for the 2021 session of the West Virginia Legislature. As usual, we can count on a legislative session that is at times dull, at times chaotic, at times satisfying, and at times frustrating.

The first step comes as the West Virginia Environmental Council settles upon its legislative priorities for the coming session. The Environmental Council is made up of several groups, including the West Virginia Highlands Conservancy. While the groups share the same general vision of a safe and livable environment for West Virginia, there is the same diversity of opinion that one would expect in any diverse group.

Any diversity of opinion is resolved through a process that begins with each group submitting its ideas for legislative action. This is going on right now. The West Virginia Highlands Conservancy is getting together its ideas on what things it believes should be the legislative priorities.

The leaders of the Environmental Council (representatives from member groups) will consider the ideas submitted and come up with a list of issues that the lobby team will work on. The makeup of the lobby team is different each year, depending upon

the availability of resources and personnel. If past practices are a guide, there will be a lobbying coordinator who does much of the lobbying along with several volunteers who lobby as time and enthusiasm allow.

We are so early in the process that right now there is no list of issues. We can count on the return of some old favorites such as a fight over Water Quality Standards. These are the limits on how much pollution West Virginia will allow in its rivers and streams. Someone is always trying to loosen the requirements. The arguments can get technical and arcane but it still comes down to how clean our water will be, a core value for most of the groups involved.

Last year there was progress toward encouraging renewable energy in West Virginia and the long, slow slog toward finally dealing with abandoned gas wells. There may be attempts to build on the progress. It may be something completely different.

No matter what the 2021 Legislature brings, it is time to haul the sausage grinder out of the basement, dust it off, and get ready. It will be here before we know it.

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Thoughts from our President

By Larry Thomas

September and 2020 are flying by at what certainly seems to be warp speed. So much has been accomplished and yet so much is still on our plate to keep us busy. Certainly the passage and signing into law of the **Great American Outdoors Act** and, as stated in last month's *Highlands Voice* article, **Atlantic Coast Pipeline in the Rearview Mirror** are two great accomplishments along with other issues reported in *The Highlands Voice* during the year are to be celebrated. Again, I want to thank our membership for your much-appreciated continued support, as we travel through this unpresented time with Covid-19. Support, which allows us to continue "Preserving West Virginia for future generations".

Reading Senator Manchin's weekly newsletter this week, I found the following that I believe is an especially important request from the Senator. West Virginians suffer every day from lack of adequate technology. This is but one example.

BROADBAND

The sad fact is that many places in West Virginia simply do not have access to reliable broadband and the lack of access affects West Virginians every day. Back in 2015, the FCC released a coverage map that stated 99.9% of Americans had wireless coverage. I knew then what I know now: That is just plain wrong.

That's why I'm asking all West Virginians to submit your internet speed-tests, so we can prove to the FCC that our broadband coverage is well below the stated coverage. So far, your efforts have helped the FCC acknowledge that our providers are overstating their coverage, but we must continue to show where and how widespread the lack of broadband coverage is in West Virginia.

[Take a Speed Test at One of These Links](#)

<https://www.speedtest.net/speedtest> <http://www.dslreports.com/speedtest>
<https://www.speakeasy.net/speedtest/>

[Submit the Results of Your Speed Test Here](#)

<https://www.manchin.senate.gov/speedtest>

Allegheny-Blue Ridge Alliance and the Conservation Hub Program

Last month Lew Freeman, Executive Director, Allegheny-Blue Ridge Alliance gave us some insight into what is next for the Alliance. This month Lew and Dan Shaffer, ABRA Geospatial Consultant are back to tell us about the exciting new program recently announced to the public. See the article *The Conservation Hub: Strengthening Environmental Analysis and Improving Public Participation*. I believe that you will agree that it is a program that is long overdue.

Monongahela National Forest Project Reviews

The WVHC Public Lands Committee continues to review current projects in the Mon and will continue to do so. Here are some we are watching.

Gauley Healthy Forest Restoration Project

The committee and other organizations are aware of a project called the Gauley Healthy Forest Restoration Project. The

project is adjacent to, and east of Richwood and extends eastward to the Cranberry Mountain Nature Center. <https://www.fs.usda.gov/project/?project=57335&exp=overview>

The Forest Service is planning on categorically excluding this project from the usual NEPA document, which means no public comment, so little or no information has been forthcoming about the project. The committee and other organizations are frustrated, after numerous attempts failed attempts to get information to review about the project. They will continue the efforts. On July 31, Allegheny-Blue Ridge Alliances on behalf of its 51 member groups filed a Freedom of Information Act Request. Lew Freeman is keeping the committee up to date on the progress of that request to include a recent meeting with representatives of the Forest Service representatives.

Panther Ridge Wildlife Enhancement Project

During the comment period, WVHC and other organizations requested copies of the Specialist Reports that had been completed as a part of the Draft Environmental Assessment for the Panther Ridge Wildlife Enhancement Project. We have now received those reports in an email that in part stated. "The ID Team and I worked very hard to complete the instructions that were identified by the Reviewing Official in order to address the concerns that you brought forward before the decision for this project was made. We took a hard look at your comments, as well as the instructions that were provided. Now that the NEPA process has been completed for this project, I wanted to send you copies of the final specialist reports. There are several files, so I will be sending you a total of 5 separate emails." The committee is in the process of reviewing the reports.

West Virginia Wildlife Center

Scrolling through the West Virginia Department of Natural Resources website, I found this announcement.

Renovated State Wildlife Center is open with new health precautions

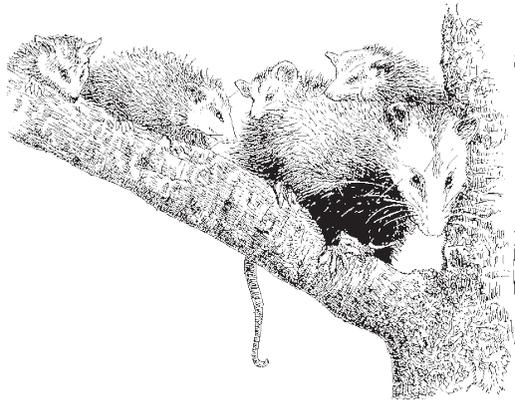
Like many businesses, the West Virginia State Wildlife Center was shut down during the peak of the COVID-19 outbreak. But the unplanned closing had a silver lining, according to Office Assistant Judy Channell. "Our staff was able to catch up on many small projects on the grounds and in buildings," she said. "We have a new concessionaire for the gift shop, and we made some minor repairs/changes in that building to assist them with their new layout. We also painted the kitchen in the snack bar. And we did some work on the fishing pond that included building a new bridge."

If you find yourself looking for something to do one day, you might consider a visit to this wonderful facility with its wildlife exhibits. You can find additional information at <https://wvdnr.wordpress.com/2020/07/29/renovated-state-wildlife-center-is-open-with-new-health-precautions/>

(Larry has a few more thoughts on the next page)

More Thoughts from President Larry (Continued from p. 2)

This coronavirus situation is seen to be escalating again throughout the world. It has certainly turned our world upside down. We need to continue staying safe and really need to follow the precautions recommended by the Centers for Disease Control and Prevention along with local health and other safety guidance. I continue to see reports that many individuals are traveling to the mountains, wanting to get out and away from it all. Getting out continues to be recommended. Maybe we will see one another on the mountains.



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

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

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

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

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The Conservation Hub: Strengthening Environmental Analysis and Improving Public Participation

By Lewis Freeman, Executive Director, Allegheny-Blue Ridge Alliance and Daniel Shaffer, ABRA Geospatial Consultant

Among the lessons learned from the recent fight against the Atlantic Coast Pipeline project were the limitations that regulatory agencies often have in conducting in-depth analysis of a project's impacts, particularly when multiple projects would produce cumulative impacts. Also, the complexity of many projects creates challenges for members of the public wishing to comment and participate as stakeholders in decision-making processes. Specifically, we learned:

- Developers are prone to take short-cuts in assessing environmental impacts and underestimating the real consequences of a project. Often this is done to expedite a project, sometimes under the guise of supporting the public good.
- Regulatory agencies often lack the capability to provide the depth of analysis to which a project should be subjected. Further, agencies are sometimes disinclined and/or unable to evaluate projects as to their cumulative environmental impacts.
- Political pressures on agencies can lead to hasty and incomplete evaluations of a proposed project, thus undermining the legitimacy of agency assessments and resulting in potential legal vulnerabilities for permits.
- The complexity of many projects creates challenges for interested members of the public who wish to comment and participate as stakeholders in decision-making processes. Better analytical tools are needed to help the public's understanding of a project's impacts and facilitate their commenting.
- Relevant information is too frequently not available to the public, thus complicating its ability to evaluate a project's impact on the environment and affected communities.

In late August, 2020, Allegheny Blue Ridge Alliance announced a new program to address these and other deficiencies of the permitting and regulatory processes that govern projects in the central Appalachian region: The Conservation Hub.

ABRA's Conservation Hub program promotes responsible resource management by providing data-focused tools that enhance a project's transparency, strengthen its accountability to regulatory agencies and facilitate public participation in its evaluation process. The Hub is a regional information and mapping portal, tailored to specific projects in the central Appalachian Highlands region of Virginia and West Virginia encompassing 52 counties (26 in VA and 26 in WV, see map below). The program will also serve as an information resource on the natural resources and character of the region. Projects beyond the region will be considered on a case by case basis.

How the Conservation Hub works

The Conservation Hub is an outgrowth of the mapping system developed for ABRA's Construction Surveillance Initiative

(CSI), a program that was created to monitor construction activity of the now-cancelled Atlantic Coast Pipeline. (Note: The CSI program will continue operating until restoration of the ACP route has been completed.)

The Hub website, accessible from the ABRA homepage (www.abralliance.org), will create a network of regional project information and geographical data, map-based tools and narratives, regulatory information and instructions on how to leverage the whole.

From the Hub homepage a user can choose from a list of highlighted projects under study or informative maps and narratives about specific plant and animal species, conservation initiatives, etc. Each Hub Project or narrative has its own webpage dedicated to describing that activity and any issues or concerns brought by that project's sponsor, as well as links to related regulatory documents and any sensitive species that may be affected. A Hub project will typically also have an online map or a Story Map that includes both geographical data and narrative media.

On the Hub homepage, the user will also find direct links to geographic data categories and a search bar that will allow them to browse all the data hosted by the Hub. Some data that are accessed from outside parties will also appear here. A searchable data catalog describing information hosted or accessed by the Hub will also be available. This will allow the user to directly view and download data to analyze offline or share

with partners. Any of the data layers maintained by the Hub can also be added to a project map or to a thematic (or even blank) map of choice. In addition, users may upload their own data or provide links to online sources with which they are familiar.

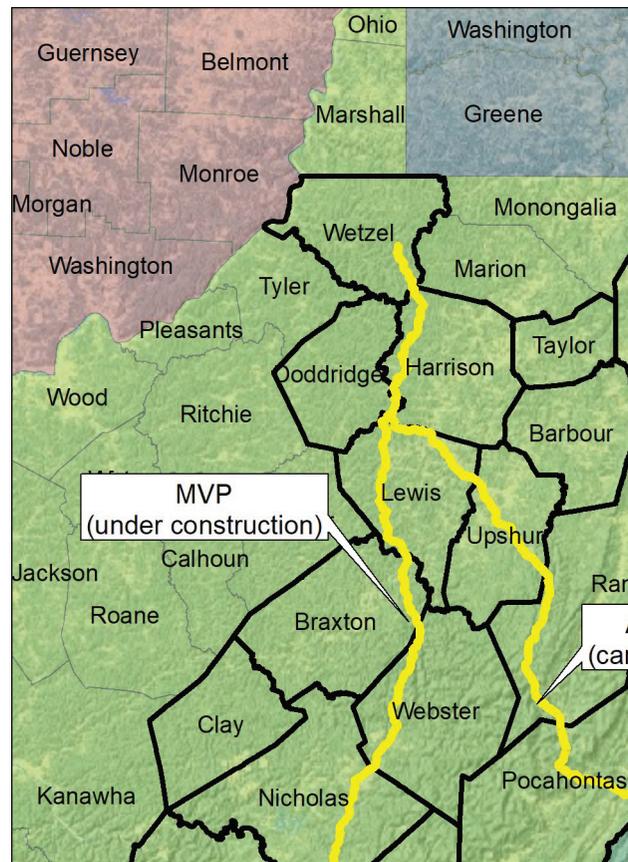
Regulatory information relevant to individual development projects will be accessible from the description page and from related data layers in their respective web maps. A searchable catalog of state and federal regulations relevant to all projects will be built up as projects require them.

Specific issues of concern, such as stream sedimentation, landslide risk, changes in forest core habitat, etc. will be described in a searchable "glossary" of sorts. This glossary will also be built up over time as required by Hub Projects.

A "What's New" section will highlight new or upcoming projects, news stories, events, etc.

Finally, a section containing training materials and online training events (only, for now) is also found on the Hub homepage. This resource will allow Hub users to quickly get up to speed on the many tools now at their disposal and effectively leverage the insights they provide.

(More on the next page)



Conservation Hub's principal study area

The Conservation Hub (Continued from previous page)

What type of projects are suitable for the Hub and how are they chosen?

ABRA has undertaken some trial projects as the Hub program has been developed. They include:

- Greenbriar Southeast – A proposed project involving timber harvesting in a portion of the Monongahela National Forest located in Pocahontas County, WV. A mapping system is being developed to assist concerned conservation groups to evaluate the project's impact on watersheds and animal and plant species.
- Rocky Forge Wind Farm – A proposed ridge-top wind farm in Botetourt County, VA. A mapping system has been developed to aide local conservation groups to monitor the project's impact on water quality and plant and animal species.
- Corridor H – A highway project in northern West Virginia. The Hub is providing analytical tools that help assess the impact of a portion of the project on endangered species in Tucker County, WV.
- Shenandoah Rail Trail Partnership – Public, private, and non-profit groups in Rockingham and Shenandoah Counties, Virginia are examining converting an unused railroad into a 38.5-mile pedestrian and bike trail. The Hub has provided aerial drone videography to this partnership and is exploring the creation of a mapping system to help promote the project.
- The Candy Darter – The first of the Hub's Informative Maps & Stories, the Candy Darter map and description page focus on this brightly-colored fish that was recently placed on the Endangered Species List. As an indicator species, dependent on clean, cool water, gravel

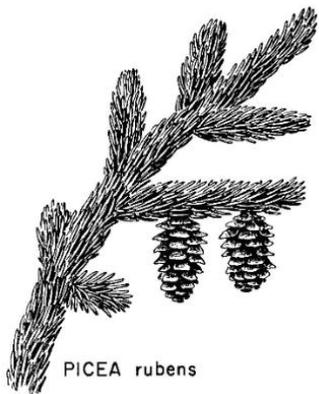
and cobble stream beds, and predominantly forested watersheds, the Candy Darter's struggle to survive paints a sobering picture of the health, and cumulative loss, of high-quality aquatic habitat across the central Appalachian Highlands. This habitat is under threat by projects such as the Mountain Valley Pipeline and, potentially, dozens of U.S. Forest Service projects, only some of which require detailed analysis before approval.

Who can propose a project for the Conservation Hub?

ABRA member organizations, including West Virginia Highlands Conservancy, and allied conservation groups are encouraged to propose projects for which they believe the Hub could be helpful in evaluating. Hub projects are chosen in consultation with the Hub Advisory Committee, which includes three-members of the WVHC Board. ABRA staff will focus on assembling the technical details of a Hub project. A sponsoring organization of a project, such as WVHC, would provide much of the following: narrative text; relevant studies and geographical data; regulatory information and agency staff contacts; and other information necessary to assure the Hub project is as comprehensive as possible and to facilitate the creation of a project description page and various map-based tools. Building a Hub project is a collaborative effort.

For further information on the Conservation Hub or to propose a possible Hub project, contact one of us – Dan at dshaffer@abralliance.org or Lew at lew@abralliance.org – or our colleague Ben Cunningham at ben@blueridgegeographics.com.

Red Spruce Seedlings Available for Spring 2021



The West Virginia Highlands Conservancy currently has a limited number of Red Spruce seedlings available for Spring 2021. Quality container-grown seedlings, grown from seeds collected in the West Virginia Highlands for forest restoration and research purposes.

When we have a surplus, we make them available to the public. All proceeds support our Red Spruce Ecosystem restoration efforts.

Quantities Limited

Red Spruce (Picea rubens)

2 year plug, 10-15 inches tall. These quality container-grown seedlings are the same product we have been using in restoration projects very successfully for nearly 20 years. CASRI Partners have planted nearly a million of them!

For 2021 we have an extraordinary opportunity to offer Red Spruce plugs from 5 different seed sources; Dolly Sods, Spruce Knob, Stuart Knob, Panther Knob and Top of Allegheny. Or you can order a mix of available sources.

100 - \$250 (FOB Morgantown), 100 Shipped (via UPS) - \$300, 1,000 - \$1,250 (FOB Morgantown)

Plants are available for pick-up April 15-30, 2021 in Morgantown, WV.

Limited availability - Minimum order 100.

Trees can be purchased online at www.wvhighlands.org, or send a check to; West Virginia Highlands Conservancy, PO Box 306, Charleston, WV 25321. Specify source preference.

For more information contact: Dave Saville at david.saville12@gmail.com

To learn more about the Red Spruce Ecosystem, and our efforts to restore it, visit; www.restoreredspruce.org

If you cannot use any spruce seedlings, consider donating.



Democrats Should Halt Changes to Environmental Law

By Rupert Cutler

Once upon a time in America, Republicans led the way in science-based initiatives to protect the environment. For example:

- The Morrill Act created land grant colleges to teach agricultural science. Ours is Virginia Tech, where an entire college is devoted to the study of natural resources and the environment and agriculture majors study environmental restoration and agro-environmental stewardship. The Morrill Act was signed by Republican Abraham Lincoln.

- Our national parks, like the Blue Ridge Parkway, have been called “America’s best idea.” Republican Theodore Roosevelt established 150 national forests, 51 federal bird reserves, four national game preserves, five national parks and 18 national monuments on more than 230 million acres of public land.

- The Magna Carta of our nation’s environmental laws is the National Environmental Policy Act. Its purpose is “to declare a national policy which will encourage productive and enjoyable harmony between man and his environment and to promote efforts which will prevent or eliminate damage to the environment.”

Republican Richard Nixon signed this Act into law and soon afterward created the Environmental Protection Agency.

The National Environmental Protection Act requires the preparation of an environmental impact statement for federal projects such as highways, pipelines, dams, mines on public land, and timber sales that are done with federal funds or with a federal permit. The statement must include alternatives, describe cumulative impacts (such as climate change), and be subject to public review and comment. It gives United States citizens a voice in every federal road, housing project, airport or major infrastructure development.

It is a “look before you leap” law that was badly needed. In the 1950s and ‘60s federal urban renewal and highway construction were destroying neighborhoods (like Gainsboro in Roanoke), dams were flooding parks, mines were polluting rivers, and clear-cut timber sales were devastating forests in the Monongahela National Forest in West Virginia and throughout the West.

In remarks released as he signed NEPA at his “Western White House” in San Clemente, California on January 1, 1970, Mr. Nixon stated that the country would have to work in a bipartisan fashion on the environment “because it is now or never.” And his State of the Union speech to Congress on January 22, 1970, included an environmental theme. Said the Republican president:

“Shall we make our peace with nature and begin to make reparations for the damage we have done to our air, to our land, and to our water? Restoring nature to its natural state is a cause beyond party and beyond factions. It has become a common cause of all the people of this country.”

Fast forward to today. The “new” position of the Republican Party on protecting the environment — that it is less important than corporate profits — was evident in the story under the July 16 Roanoke Times headline, “Conservation law curbed to speed project permits.”

On July 15, President Donald Trump purposefully weakened the regulation governing the enforcement of the National Environmental Policy Act. Trump declared in Atlanta when he announced the new rule that “mountains and mountains of red tape”

and lengthy permit processes have held up major infrastructure projects across the country.

The weakened rule will allow agencies to develop categories of activities that do not require an environmental assessment at all. It will free federal agencies from having to consider the impacts of infrastructure projects on climate change. It does so by eliminating the need for agencies to analyze a project’s indirect or “cumulative” effects on the environment and specifying they are only required to analyze “reasonably foreseeable” impacts.

The change will have an outsized impact on low-income neighborhoods. It is a critical tool for civil rights. The polluting effects of a new toxic waste incinerator or pipeline compressor station or highway bringing heavy traffic cannot be considered in isolation in neighborhoods that already have high numbers of industrial sites.

Writing in *The New York Times*, Lisa Friedman observed that the final rule “is not likely to be safe from the Congressional Review Act. Under this law, Congress can overturn a federal agency’s rule-making within 60 legislative days of its finalization, something Democrats have pledged to do next year if they have the votes.”

Trump’s end run around the law passed by Congress in 1969 by issuing a new interpretation of the law in the form of a changed regulation should not stand. If a court does not nullify the Trump regulation, President Biden and a Democratic Senate and House should do so as a first order of business in 2021.

For further reading, see *The Republican Reversal: Conservatives and the Environment from Nixon to Trump* by Roanoke native James Morton Turner (Harvard University Press, 2018).

Mr. Cutler lives in Roanoke. In 1970 he wrote the Secretary of Transportation’s memo on NEPA requirements to transportation agencies. As assistant secretary of agriculture in the Carter Administration he was responsible for many environmental impact statements including the EIS for the Forest Service Roadless Area Review and Evaluation. He taught environmental policy at Michigan State University, the University of Virginia and Hollins University.

This piece first appeared in The Roanoke Times.

Leave a Legacy of Hope for the Future

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

Join Now !!!

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____ Email _____

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

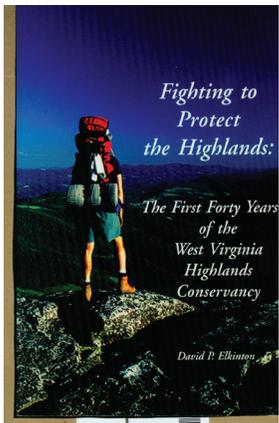
Mail to West Virginia Highlands Conservancy, P. O. Box 306, Charleston, WV 25321

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

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

GET A GREAT HISTORY BOOK

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



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

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

To order your copy for \$15.95, plus \$3.00 shipping, visit the Conservancy's website, wvhighlands.org, where payment is accepted by credit card and PayPal. Or write: WVHC, PO Box 306, Charleston, WV 25321. Proceeds support the Conservancy's ongoing environmental projects.

SUCH A DEAL!
Book Premium With Membership

Although *Fighting to Protect the Highlands, the First 40 Years of the West Virginia Highlands Conservancy* normally sells for \$15.95 plus \$3.00 postage. We are offering it as a premium to new members. New members receive it free with membership.

Existing members may have one for \$10.00. Anyone who adds \$10 to the membership dues listed on the How to Join membership or on the renewal form will receive the history book. Just note on the membership form that you wish to take advantage of this offer.

Tell a Friend!

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

Person you wish to refer: _____

Address: _____

Email _____

Your name: _____

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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:

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- * 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.

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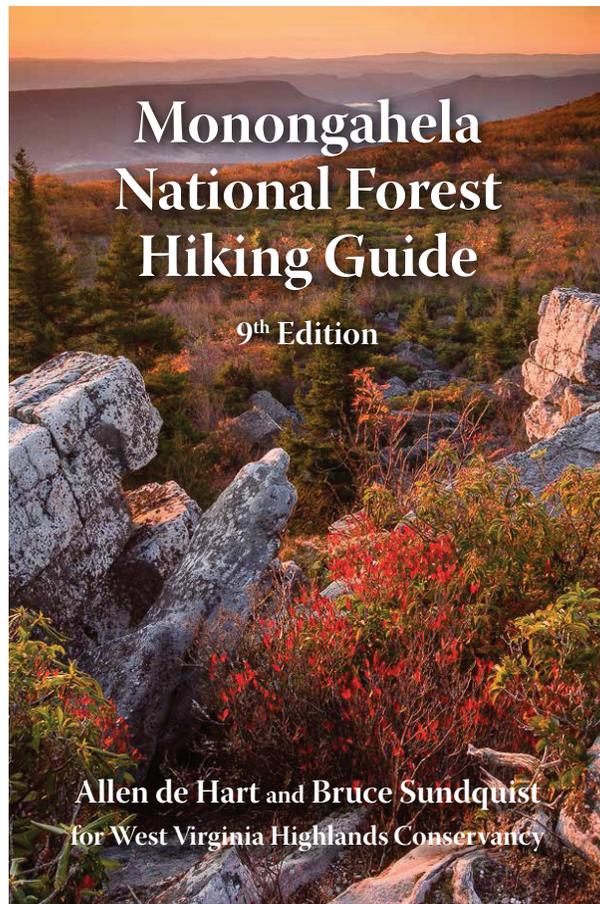
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No matter how you receive it, please pass it along. If electronically, share the link. If paper, hand it off to a friend, leave it around the house, leave it around the workplace. It's not just for reading. It's for reading and passing along.

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Rule Change Allows More Methane into the Air

By John McFerrin

The United States Environmental Protection Agency has eliminated a rule which had limited leaks and flares of methane from oil and gas wells.

Why methane matters

Methane is the main component of natural gas. Emissions of methane matter because methane is a potent greenhouse gas. While carbon dioxide is the greenhouse gas that gets the most attention, in the short term methane is much more potent. According to the Intergovernmental Panel on Climate Change, over twenty years methane warms the planet 86 times as much as carbon dioxide.

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

When burned, methane produces about half much carbon dioxide as an equivalent amount of coal. This difference has prompted advocates of natural gas to promote it as an environmentally friendly alternative to coal. If, on the other hand, substantial amounts of methane are leaking then the advantage is less.

How bad is the problem?

The Environmental Protection Agency estimates that the rule will lead to economic benefits of \$100 million per year through 2030 while leading to the release of about 850,000 tons of methane to the atmosphere over the same period. It has justified the rule because, according to its data, leaks from oil and gas operations have remained steady over the last decade while natural gas production has soared.

Several scientists disagree. Robert Howarth, an earth science specialist at Cornell University, told *The New York Times* that recent research has shown that 80% of the papers published show that methane from oil and gas leaks is two to three times the EPA estimates. He estimates that North American gas production was responsible for about one third of the global increase in methane emissions over the last decade.

Methane releases have the potential to cancel any benefit from carbon dioxide production brought about by the Paris Climate Acted. That agreement requires countries to reduce carbon dioxide emissions. Even if they succeed in doing so, any global cooling effect could be offset by increases in global warming caused by methane.

The economics of methane regulation

In most situations, the waste products that come from any activity are just that: waste. They are not the goal of the activity but rather a byproduct that someone must avoid or dispose of. Utilities do not operate coal fired power plants because they want to produce smoke. They produce electricity; the smoke is just a byproduct that they have to work to eliminate or reduce.

Methane is different. It is not just a byproduct of production; it is the goal of the production. The whole point of gas wells, pipelines, etc. is to deliver methane to customers. If operators can reduce the methane that escapes to the atmosphere, they have more methane to sell.

This makes the economics of methane regulation different from other types of pollution control. In most, if not all, other situations, the cost of pollution control is just that, a cost. It does not produce any revenue. With methane, eliminating leaks, etc. is not just a cost but adds revenue by leaving the operator with more methane to sell.

The fact has been used as an argument for not requiring that methane be controlled. Industry representatives have argued that the revenue from having more methane to sell is plenty of incentive for companies to plug all leaks, etc. No government regulation is necessary.

As a part of an earlier rulemaking (deciding whether to make companies control leaks from gas production on public lands), the Bureau of Land Management studied the question of how much it would cost to control the leaks, etc. It estimated the value of the gas that would be saved and sold and the cost of equipment necessary. It found that requiring companies to control leaks would result in a decrease in profits of fifteen hundredths of one per cent.

A little politics (just in case there is someone, somewhere who has not had enough lately)

Early in his administration, President Trump issued Executive Order 13783, Promoting Energy Independence and Economic Growth, directing agencies to review existing regulations that potentially “burden the development or use of domestically produced energy resources.” In announcing this rollback, the Environmental Protection Agency referred to this Executive Order as justification.

Executive Order 13783 was the justification for several other deregulation initiatives, many of which involved undoing Obama era regulations. There is a procedure for undoing regulations of a previous administration, particularly those finalized late in the term of the previous President. If we have a new President next year there may be some undoing of the undoing.

EPA Administrator was in Pittsburgh when he announced the new rule. This prompted the *Pocono Record* to offer this opinion: “Environmental Protection Agency Administrator Andrew R. Wheeler has bestowed upon Pennsylvania the singular dishonor of being the site of the Trump administration’s most egregious act of environmental vandalism.”

More to come

As usual, litigation is on the horizon. EPA Administrator Wheeler had barely gotten his mouth shut from announcing the rule before various groups were threatening/promising litigation.



Migratory Birds Dodge a Bullet (at least for now)

By John McFerrin

Migratory birds will now receive greater protection than they otherwise might have, thanks to a decision by a United States District Court in New York. The Court vacated a legal opinion issued by the United States Department of the Interior interpreting the Migratory Bird Treaty Act. The interpretation dramatically narrowed the protections of the Act. With the narrowing interpretation vacated, the birds now have the protections under the Act that they have traditionally had.

Background (If you already know what the MBTA does, fly to the next section)

The Migratory Bird Treaty Act is the United States' effort to implement a 1916 treaty between the United States, Mexico, and Great Britain (agreeing on behalf of Canada) to protect birds that migrate among



Scarlet Tanager, ready to head for Mexico and South America

the three countries. The treaty was later expanded to include Russia and Japan. It prohibits pursuing, hunting, taking, capturing, killing, or attempting to do the same migratory birds, their nests, or their eggs. The list of birds protected by United States law goes on and on--three species of cranes, three species of cowbirds, sixteen species of owls, fifty five species of warblers (by my count), etc. etc. etc., for pages and pages, birds that only the most enthusiastic birder would even know existed. If you want to see the whole list, go to 50 Code of Federal Regulations § 10.13.

Protection for all birds on the list is not absolute. Some birds on the list are hunted for sport or even food in some rare instances. The Secretary of the Interior has issued regulations listing some birds that may be pursued, hunted, killed, etc. Absent a regulatory exemption, the killing, capturing, etc. of birds on the list is prohibited. Enforcing the Migratory Bird Treaty Act was up to the United States Fish and Wildlife Service, a branch of the United States Department of the Interior.

Historically, the Fish and Wildlife Service has used more of a persuasion approach to enforcement. It would do things such as send companies notices of the dangers their facilities posed to migratory birds, issue industry guidance, and informally negotiate

remediation. If none of this worked, the Fish and Wildlife Service would pursue fines and enforcement actions against recalcitrant companies. As a result, prosecutions were rare. The exceptions were instances such as British Petroleum's Deepwater Horizon oil spill which killed more than one million birds.

What happened

For a century everybody--agencies, the birds, the public, everybody--assumed that the Migratory Bird Treaty Act protected birds from all killing, whether specifically intended or not. Going out and intentionally killing a bird was, of course, prohibited. Doing something that killed migratory birds, even when killing the birds was not the specific goal of the activity, was also prohibited.

Statutes are not always perfectly clear. In such a situation, the attorney for the agency often issues an opinion saying what the statute means. With the Migratory Bird Treaty Act, the top attorney for the Department of the Interior issued an opinion saying that the Act meant what the Fish and Wildlife Service had always said it meant: the Act prohibits both the purposeful killing of migratory birds and activities which kill birds even if the killing is not the purpose of the activity. That was in early January, 2017.

By late 2017 there was a new administration and a new lawyer issuing the opinions. The new lawyer issued a new opinion which said that the Act only prohibited killing of migratory birds if the killing was the purpose of the activity. If the birds just happened to get in the way of another activity, that was just their bad luck. The Act did not protect them. Under the new interpretation, taking a gun and blazing away at migratory birds would still be illegal. If an oil company left its waste pit uncovered and migratory birds landed there and died, the Act was irrelevant.

Several environmental groups cried foul, as did Attorneys General of eight states (not West Virginia). They filed suit in the District Court for the Southern District of New York.

After considering the matter, the Court ruled that the interpretation that the Department of the Interior/Fish and Wildlife Service was using all along was correct. The Migratory Bird Treaty Act meant what the public, the birds, the Fish and Wildlife Service had historically thought it meant: birds were protected both from purposeful killing and from killing where bird deaths were not the goal but only a byproduct of some activity. The Court vacated the contrary interpretation, livening up its opinion with a reference to *To Kill a Mockingbird*. Along with the usual legal analysis, mumbo-jumbo etc., the Court said, "It is not only a sin to kill a mockingbird, it is also a crime...That has been the letter of the law for the past century."

Birds Not Out of the Woods Yet

While migratory birds can chirp a sigh of relief that they still have the same protections that the Migratory Bird Treaty Act always provided, that is not the end of the story. The United States Department of the Interior has also proposed a regulation which would adopt the same interpretation of the Act recently vacated by the Court.

It is not clear what will happen next. Regulations enacted by agencies are not supposed to change statutes passed by Congress. Regulations are only supposed to fill in details that the statute itself

(More on the next page)

I Love Science!

By Dr. Rick Landenberger

When I was studying ecology and forestry in the 1980s and 1990s, older forests were misunderstood. Conventional wisdom posited that older forests were generally carbon-neutral, emitting as much carbon into the atmosphere as they absorbed. But our understanding has recently changed: what we call “over mature” forests are actually carbon sinks, sucking up carbon dioxide at higher rates than they give back to the atmosphere as they age, and storing it mostly in the soil. This has big implications for conservation.

This new understanding represents a fundamental change in how we value and protect our forest resources; indeed, it represents a complete 180 degree turn in knowledge of how older forests affect climate change. Not only are older forests great wildlife habitat, wonderful filters of precipitation, excellent air purifiers, biologically and ecologically diverse, brakes on flood waters, and effective at cooling the landscape, but they help reduce atmospheric carbon dioxide, the major driver of climate change.

The Earth in total is a closed system. Elements, or ‘matter’, cycle from one pool to another but never leave the Earth’s system; they are conserved and cycle continuously. The many pools are either sources or sinks of a given element. So, for instance a carbon source is a pool where carbon is decreasing in total concentration, whereas a sink is where the carbon concentration is increasing. The Earth’s spheres – its biosphere, pedosphere, geosphere, hydrosphere, and atmosphere – comprise an open system through which cycling of carbon and oxygen occurs.

You might ask why understanding such information is important - after all, it is only recently that we’ve learned much about the true nature of biogeochemical cycles, in a way that it is testable and verifiable. Understanding biogeochemistry is important because human societies not only depend completely on sustaining biogeochemical cycles in some semblance of ‘normality,’ but also because we are altering them at a rate that is far from ‘sustainable’. The carbon cycle in particular is intimately tied to forest health and the role that trees play in minimizing negative impacts from climate change.

When the changes became most dramatic – during the industrial revolution in the 19th and early 20th centuries – scientists began to develop quantifiable cycling models. With respect

to carbon, Swedish scientist Svante Arrhenius (1859 – 1927) accurately estimated the changes in concentrations of carbon in the atmosphere as it left its source as coal (the geosphere pool) and entered the atmospheric pool as carbon dioxide gas. A brilliant physical chemist, Arrhenius came up with a very accurate estimate of how increasing carbon dioxide would alter Earth via the so-called ‘greenhouse effect’, warming the earth over the next several centuries – and believe it or not, his estimates were (are) accurate.

Who knows what we’ll learn next about older forests? Hopefully there will be sufficient examples to study and use as a blueprint to restore our home, the only planet we have. Protecting old forests, rather than harvesting, is now a focus of organizations around the world, and it is a priority of West Virginia Land Trust.

Note: This article originally appeared in the newsletter of the West Virginia Land Trust. Doctor Landenberger is the Science and Management Specialist with the West Virginia Land Trust and Associate Professor of Geography in the Department of Geology and Geography at West Virginia University.



Evie with some of the old growth the West Virginia Land Trust works to protect. This is in Doddridge County.

Birds and Bullets, the rest of the story (continued from the previous page)

did not include. It would be odd for an agency to proceed with a regulation which offers an entirely different interpretation of the Migratory Bird Treaty Act, an interpretation the judge has just vacated.

At the same time, the Department of the Interior has not announced that it is withdrawing its proposed regulation. It has said that “no decisions have been made while we review the ruling, and we do not have a timeline for when the review will be complete. Updates will be posted here when available: <https://www.fws.gov/regulations/mbta/>” It also has the opportunity to appeal the decision, an option it still may choose.

Possible Help from Congress

Congress could eliminate any confusion about what the Migratory Bird Treaty Act means. There is currently pending a bill (H.R. 5552: Migratory Bird Protection Act of 2020) which would make clear that the Act prohibits not just purposeful actions to kill birds. It would prohibit actions in which the bird deaths result incidentally from other activities which do not have killing birds as their primary goal. It would, in other words, settle once and for all that the historic interpretation of the Act, the interpretation the Court just gave it, is the right one.

The Bill faces an uphill climb. Its number of co-sponsors is creeping up (there are now 94, none from West Virginia) but there is still no groundswell of support. There is no corresponding legislation moving through the Senate. It was introduced in January, 2020, and has been assigned to a committee but the committee has taken no action.

We Have Lost a Great Friend

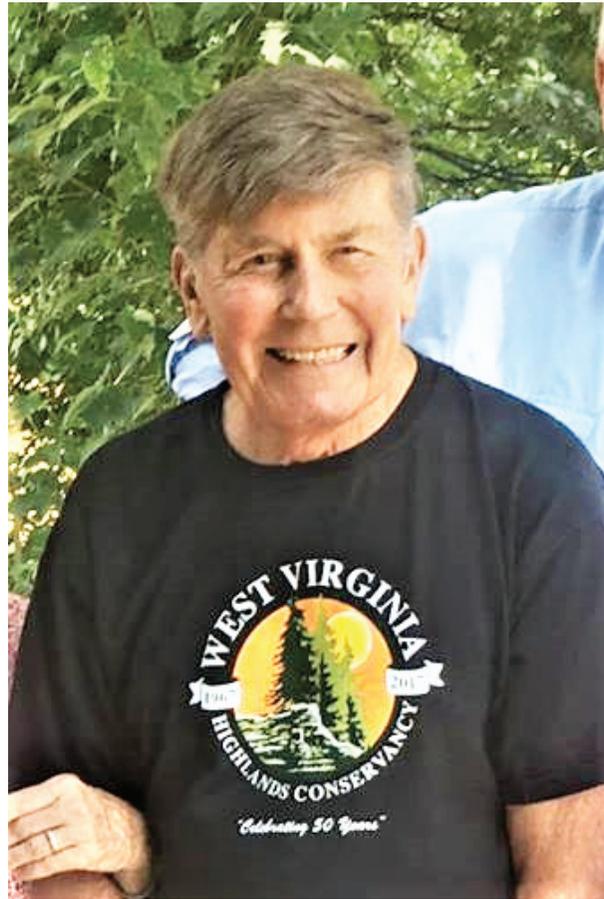
Dr. Wayne Campbell Spiggle, Jr. devoted husband and father, physician lover of the outdoors and a West Virginia Highlands Conservancy member and Board member, died on Friday, July 31, 2020.

Dr. Spiggle was born in Davis, WV, September 1, 1934 to Wayne C. Spiggle, Sr. and Margaret Lenora (Gnegy) Spiggle. He was educated in Davis public schools and later attended Berea College where he received his B.A. degree in agriculture. He later entered Medical School in West Virginia University and also studied at the Medical College of Virginia, followed by his internship in Charleston. He specialized in internal medicine for three years at WVU.

He was dedicated to his family, medicine, agriculture, and environmental protection and served all with passion and honor. He was a co-founder of the Braddock Medical Group where he worked for 37 years, attending physician at both Sacred Heart and Memorial Hospitals, attending physician in the Allegany Community College and Sacred Heart Hospital cardiac rehabilitation program, a clinical instructor at the University of Maryland's School of Medicine, medical director of the Fort Ashby Medical Foundation Clinic, President of Med Chi the Maryland State Medical Society, member of the Executive Committee of the Sacred Heart Hospital's medical staff, as well as an associate of the American Thoracic Association and the American Society of Internal Medicine.

He and his wife, Betty, owned and operated a beef cattle farm in Short Gap, WV. He was named Farmer of the Year in 1982 by the Mineral County Soil Conservation Committee, outstanding district tree farmer in 1983 by the West Virginia State Forestry Department, and was cited in the Potomac Valley Soil Conservation District. Dr. Spiggle hosted Markus Witschi from Hindelbank,

Switzerland through the International 4-H Youth Exchange to teach him American farming customs. He was the chairman of



the Board of Visitors for the University of Maryland's Appalachian Environmental Laboratory at Frostburg, president of the Nemaocolin Chapter of Trout Unlimited, and a member of the West Virginia Conservancy, the Maryland Conservation Council, and the Citizen's Coalition on Surface Mining. His citizen activities included membership with Allegany County Chamber of Commerce, Mineral County Farm Bureau, and the Frostburg State College Foundation Executive Committee. He was elected and served as Mineral County Commissioner for six years.

Some of the many awards he was granted over the years include: 1990 A.H.

Robins Award for community service, named the 2013 Most Loyal West Virginia Physician by the West Virginia University School of Medicine Alumni Association, and was elected to the Alpha Omega Alpha Honor Medical Society for his work as a preceptor in the AHEC Clinical Education Program. He was awarded the 1991 Public Service Award from Common Cause/West Virginia for taking the lead in banding together a group of citizens in Mineral and Allegany Counties to form a coalition in fighting a landfill site that posed a hazard to the environment, helped develop Allegany Health Right to insure treatment for low income citizens, and, was instrumental in creating WVRx a public-private partnership that works with pharmaceutical companies to dispense donated medicines to West Virginians who are without prescription drug insurance.

Dr. Spiggle was preceded in death by his father Wayne, mother Lenora, stepmother Isabel (Eshelman) Spiggle, brother David, and daughter Lynn. He is survived by his beloved wife Betty (Sutton) Spiggle, brother George and wife Nancy Spiggle, children, Sheryl and husband Jascha Lee, Lora and husband Dan Boe, Jennifer Suttie, Lee Brown and wife Pam, and, Dianne and husband Craig Scott. He also leaves his grandchildren, Jacob and Elliot Lee, Nick Yared, Kendall Harrison, Albert Boe, AndiJo Suttie, Ashlee and husband Ethan Cook, Ben Brown and wife Candace, Amber and husband Justin Nieves, and, Alyssa and Eliza Scott; and, his great grandchildren Finn, Emilia, Jocelyn and Alex Cook, Wyatt and Mason Nieves, and Jayce Grumblatt.

Note: There are additional remembrances of Wayne on the next page.



Wayne

A tribute by Larry Thomas

July 31, I lost an incredibly special friend and mentor.

I met Dr. Spiggle towards the end of 2009 when we were forming a regional nonprofit organization to provide environmental and other information on industrial and other projects proposed throughout the Allegheny Highlands. From the beginning we worked extremely hard getting the organization off the ground and then accomplishing the goals that were established. Afterwards, Dr. Spiggle agreed to become the Organizational Director when that organization became a member of the Highlands Conservancy.

Throughout our friendship, Dr. Spiggle became a wonderful mentor for me. In addition to many subjects, I remember the hours and hours of discussions we had, me drawing on his many years' experience of working in the environmental community. Then, there was writing articles and making presentations based on what we had learned from the extensive research we have completed.

Even when he became unable to attend Highland Conservancy Board and other organization meetings I would call before each of the meetings and discuss everything on the agendas, seeking his opinion on the various issues. Then after the meetings I called to give him the full details of each meeting. He was so interested in keeping up with what was going on in each group. Even though he was not physically at the meetings, his opinions and council were right there at the table.

I know how much I am going to miss his never-ending support. Dr. Spiggle has left me a wonderful gift of his knowledge and experiences that I will forever treasure. Eleanor Roosevelt once said, "Many people will walk in and out of your life, but only true friends will leave footprints in your heart". Dr. Spiggle has indeed left his footprints in my heart.

Wayne

A tribute by Cindy Rank

Every organization has a myriad of unsung, unrecognized, heroes, stalwarts for whatever cause(s) the organization is committed to. Individuals whose consistent, constant and firm support and actions behind the scene promote the health and well-being of others. Individuals who are willing to be on call, ready and able to speak and act on behalf of the group when called upon to do so.

Wayne Spiggle was one of those people. His kind and selfless spirit permeated all that he did.

For WV Highlands Conservancy, Wayne's commitment and enthusiasm expressed itself in his concern about the impacts of mining from at least the acid mine drainage woes of the late 1980s through the more recent mountaintop removal battles of the 2000s. His concern focused on West Virginia to be sure, but he was also an outspoken opponent of steep slope mining in neighboring Maryland - especially in the Cumberland area where he practiced medicine.

His involvement in environmental health issues ranged from mining to deep shale gas development to wind turbines and how those activities affected persons living near the behemoth turbines or in communities plagued by water loss and pollution.

Whatever the battle, Wayne was there, if not always in person, certainly in spirit. Wayne's profound interest in protecting the health and well-being of the earth and its human inhabitants was part and parcel of his efforts at spreading the word, educating folks as to why such concerns were so important.

From his official obituary it's clear that we in the WV Highlands Conservancy were not the only beneficiaries of Wayne's committed advocacy. Community and religious groups throughout the region can boast of having Wayne embody the core of their mission.

All of us who have been graced with Wayne's presence these many years will remember him fondly and with an immense amount of gratitude.

Cool Facts about the Cerulean Warbler

- On the wintering grounds in South America the Cerulean Warbler usually is found in mixed-species foraging flocks, associating with tropical tanagers and other resident species.
- When re-nesting after a failed first nest, the female often uses spider web from the old nest to start construction on the new nest. Fresh lining is gathered for the new nest, but spider web may be too valuable and time-consuming to waste.
- The female Cerulean Warbler has an unusual way of leaving a nest after sitting on it a while. Some people call it "bungee-jumping." She drops from the side of the nest, keeping her wings folded to her sides, and opens her wings to fly only when she is well below the nest.



ClimateWise: The Causes of Climate Change

By the Highlands Conservancy Climate Change Committee.

There are a number of causes for climate change; some are natural and some are anthropogenic – man made. Greenhouse gases are the main drivers of climate change. Most greenhouse gases in the atmosphere are natural. Without water vapor, naturally occurring carbon dioxide (CO₂), and other greenhouse gases, Earth would have an average temperature of 0° Fahrenheit (F) instead of the 59°F that we currently enjoy. However, the burning of fossil fuels has significantly increased the amount of CO₂ in the atmosphere and CO₂ levels are greater today than at any time in the last 800,000 years (see <https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide>).

One can think of greenhouse gases acting as a blanket to keep heat in. The energy we receive from the sun in the form of sunshine is partially reflected back into space by clouds, snow, and ice; really anything white. The rest of the energy is absorbed by lands and oceans. At night this energy is radiated back into the atmosphere in the form of invisible infrared energy. Greenhouse gases absorb this outgoing infrared energy and get warmer, re-radiating energy both upward into space and downward toward the surface. The more greenhouse gasses in

the atmosphere, the more energy that is re-radiated to the surface, and the warmer our climate becomes.

Not all greenhouse gases are the same. Methane, the main component of natural gas, is a potent greenhouse gas. Over a century, methane traps between 28 and 36 times more heat in the atmosphere than carbon dioxide does, according to the EPA. (See <https://www.epa.gov/ghgemissions/understanding-global-warming-potentials>). But methane breaks down over a relatively short time frame – about ten years.

That stands in stark contrast to carbon dioxide, which is a less potent greenhouse gas than methane, but is more prevalent and much longer lasting. “CO₂ emissions cause increases in atmospheric concentration of CO₂ that will last **thousands of years**” (emphasis added), according to the EPA. (Ibid.) That means that some of the emissions of carbon dioxide from the beginning of the Industrial Revolution in the 1850s are having an impact on our climate today. And it means that even if we stop burning all fossil fuels today, some of the carbon dioxide emissions already in the atmosphere will continue to affect the climate in 2100 and well beyond.

Two other facts about carbon dioxide are important. First, half of all the carbon

dioxide put into the atmosphere since the beginning of the Industrial Revolution has been emitted in the last three decades – it really is the baby boomer generation that is largely responsible for fouling the atmosphere. Second, we already have too much carbon dioxide in the atmosphere. We reached a level of 416 parts per million (ppm) of carbon dioxide in the atmosphere in April 2020. Scientists believe that if we want to avoid the worst impacts of climate change, we need to reduce that level to 350 ppm.

Because of the long-lasting impact of CO₂ and its concentrations in the atmosphere, simply reducing future carbon dioxide emissions is not enough. We will need to take carbon dioxide out of the air through natural means such as preserving existing trees and planting new trees or through technology. Next month’s version of ClimateWise will outline some of the basic options for reducing greenhouse gases in order to try and avoid the worst impacts of climate change.

This article is adapted from a longer publication, *A Citizen’s Guide to Climate Change*, which will be released in September by the West Virginia Climate Change Alliance. The *Guide*, according to the Alliance, is “written by West Virginians for West Virginians and for those who treasure our state.”

A New Use for Public Lands?

Public lands, especially our National Forests, are managed for “multiple use.” By statute, they are required to be managed for the often competing values of recreation, grazing, timber, watershed protection, wildlife and fish, and wilderness.

Historically, that management has included energy production and mineral extraction. In the past, that has meant coal, oil, and gas. Most of this has taken place in the western United States. While most, if not all, of the coal production in the eastern United States is on private land, out west things are different. In places like Wyoming, most of the coal that is mined comes from public lands.

This is true of natural gas as well. While in the east most of the natural gas production is from private land, much of the production out west comes from public land.

Developments in the last few years, however, have moved energy production on public lands beyond the mining of minerals. According to a report by the Yale Center for Business and the Environment and the Wilderness Society, renewable energy projects are becoming more common on public lands. According to the report:

In 2019 there were 96 utility scale solar, wind, and geothermal projects operating on public lands with a total generation

capacity of over 5,000 megawatts (MW), enough energy to power over two million homes. The best available data show that rent and royalty payments from renewable energy development on public lands have contributed over \$660 million in 2019 dollars to federal, state, and local governments since 1982. This report concludes that the capital costs for construction of the renewable energy projects operating on public lands have contributed over \$13 billion in 2019 dollars to the economy since 1996. Estimates show that these projects have generated over 12,000 construction jobs and over 1,700 operations and maintenance jobs.

All of the projects included in the report are in the western United States. Most are in either Nevada or California. In terms of production, the largest producer of electricity from public lands is solar power.

Like renewable energy in all situations, renewable energy on public lands is not something we are accustomed to. It may or may not ever come here. Out west, however, it is increasingly common.

In the Company of Trees

By Danske Dandridge

If one wishes to be taken into the intimate confidence of a great tree, and to get the full enjoyment of its strength and beauty, he should lie upon his back on the greensward beneath it, cross his arms under his head by way of pillow, and let the eye climb slowly up the mighty trunk from root to topmost limb. Thus have I lain beneath an ancient White Oak; thus watched the infinitely varied play of light and shade through the dense foliage; thus noted the delicate tracery of the leaves against the blue of the sky, and learned by heart each wrinkle of its rugged bark. This is the way to study the varying characteristics of trees, and to learn many a sylvan secret only revealed to the real lovers of nature, upon whom she has graciously bestowed eyes to see and the heart to feel her beauty and her mystery. I have spent a summer afternoon moving slowly from trunk to trunk, from Oak to Maple, from Maple to Sour Gum, from Gum to Walnut, and then to Ash, to Poplar, and back again to the old White Oak, most satisfying of all.

Sometimes the sun would smile upon me through an opening in the boughs, or a light-hearted vireo warble a lullaby; the orioles whistle plaintively; the friendly squirrels pretend to scold, and scurry away from branch to branch, only to hasten back to peep again and drop a tiny acorn on my cheek. The great white clouds sailing far overhead; a distant hawk leisurely cleaving the air on his strong wings; a few drops from a flying scud—all these become stirring incidents, fraught with healing and refreshment to the heat-worn nerves and weary brain of the house-dweller. Should the eyes close into delicious slumber the great tree stands guard over its puny visitor, filling one with a sense of security and of being cared for as by a mighty and gentle nurse.



Thus has it chanced to me to be overtaken by a summer shower, and to be awakened by the first cool splash of rain-drops upon my brow. The Oak had no need of mackintosh and umbrella; it was only necessary to turn the water-proof side of its varnished leaves uppermost, and stand quietly to take whatever came, strong in the security gained by a hundred years of storm and sun. The foliage of the tree protected its sleeping guest as long as possible,

but now, with a gentle warning splash, the drops fell more and more quickly; little streams ran down the trunk, following the corrugations in its rough bark; the leaves twinkled merrily as they shed their burden of moisture in my face. Then the sun came out a moment, and the whole tree sparkled joyously like the countenance of a friend who is bringing you welcome news.

This was originally printed in *Garden and Forest*, July 20, 1892. It is part of a collection *The Garden at Rose Brake*. Justin McHenry collected the essays and provided the introduction. Among other things, he is notable as a former student of West Virginia Highlands Conservancy Past President Cynthia Ellis.

Caroline "Danske" Dandridge (1854-1914) was a prominent West Virginian gardener, poet and historian. In numerous articles published in the leading gardening magazines of the time, Dandridge brought readers to her country estate on the outskirts of Shepherdstown, West Virginia, a place she called Rose Brake.

On the other hand...

Another Use for Public Lands



(Both photos at Wallace Hartman Preserve)

HIGHLANDS CONSERVANCY BOUTIQUE



- ▶ 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 S-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.



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 and the pre-curved visor is light green. 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, black and red.. The front of the cap has I ♥ MOUNTAINS. The heart is red. The red and black 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