

Mountain State Sierran

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January/February 2012

Economics of Shale Gas Energy

DUELING SCARE TACTICS

Beth Little

At a special Pocahontas County Commission meeting on November 17, someone accused the county commission or maybe the hydrogeologist — it wasn't clear who was being accused — of using scare tactics. The hydrogeologist was Paul Rubin, who gave a presentation on the dangers of drilling and fracking in karst, which is the limestone cave geology underlying much of Pocahontas County.

Aubrey McClendon, CEO of Chesapeake, said, "Natural gas prices, if they went through the roof because they couldn't extract shale gas in this country, then 70 percent of American homes on natural gas heat will be cold; 35 percent of American homes, businesses and factories that use electricity from natural gas will be dark; and crops that require natural gas fertilizer will not be grown." (Talk about scare tactics!) McClendon refers to opponents of fracking as environmental zealots or "fractivists."

This tactic is used to support the argument for continuing the advancement of drilling for natural gas with "fracking" (horizontal hydraulic fracturing) in the Marcellus shale and other shale plays around the country. The argument goes on with assertions that shale gas is cheap and abundant, and the Pickens plan calls for the mass conversion of power plants and truck fleets to natural gas. T. Boone Pickens is on TV frequently touting this plan, and the rest of the time he is in Congressional offices lobbying Congress to support it. The idea is that since shale gas is a domestic resource, we will be able to free ourselves from dependence on foreign oil and the threat of international terrorism. (More scare tactics.)

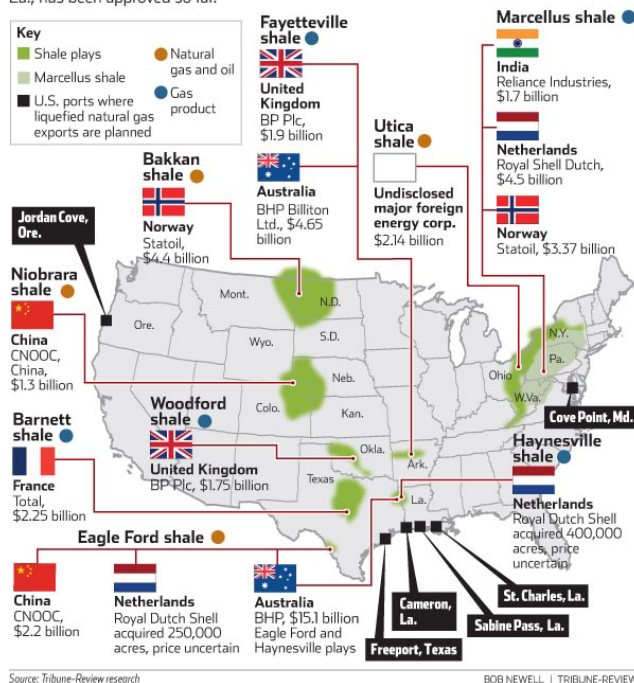
But here are some background facts that put this argument in question.

At present, natural gas is trading at about \$4 per thousand cubic feet. That is cheap. Arthur Berman, a Houston-based geoscientist who is a consultant to the gas industry, says that a well head price of over \$7 per thousand cubic feet is needed for shale gas drillers to make a profit. The price from 2005 to 2008, when the Marcellus shale gas play took off, peaked at over \$12, but the drilling frenzy has created an oversupply, and the price has gone through the floor.

So why are operators continuing to drill? The traditional approach to low prices for the industry has been to shut in wells. But the new technology is expensive, and operators have had to borrow heavily. With all the hype, Wall Street has been happy to comply, but shale wells are depleting so quickly

Foreign flurry

These are some of the billion-dollar-plus foreign investments in natural gas and oil shale plays. Permit applications to export liquefied natural gas from six American port terminals have been filed with the Department of Energy. Only one, at Sabine Pass, La., has been approved so far.



Source: Tribune-Review research

BOB NEWELL | TRIBUNE-REVIEW

that wells have to be drilled continuously to maintain cash flow. Given the very heavy debt burdens of many shale gas operators, drilling is the only way to meet debt service. Financial analysts and journalists began referring to this in late-2009 and early-2010 as a drilling treadmill they could not get off.

The quick depletion of shale wells refers to the fact that the supply of shale gas drops steeply after the first year or two of production. Even refracking the wells doesn't help much. Tax revenues also drop. An excellent example of this can be seen by examining the audited accounts of the city of Fort Worth, which is in the Barnett shale play. In 2008 the city received approximately \$50 million in revenues from gas. This dropped precipitously in 2009 to about \$19 million.

There is also a question about the claims of abundance, since shale gas is replacing the production of conventional natural gas, which is declining sharply. However, that would take more space than I have, and this is already long. (All

data come from industry or government sources, which I will be glad to provide to anyone who contacts me — blittle@citynet.net).

Meanwhile, gas industry lobbyists have been going to Washington and asking to convert six LNG (liquid natural gas) import terminals (see map) to export terminals, and they have received the first permit for an export terminal at Sabine Pass, Louisiana. In the past, the US has been a net importer of natural gas. (Some of the land for the import terminals was acquired by eminent domain, which is legal for importing LNG, but not for exporting, so there is a legal question here that may be challenged.)

The move to exportation is because of the price in Asian markets. Natural gas in Asia is indexed to the price of crude oil. While gas trades here for around \$4, it's trading at \$12 to \$15 in Asia. So operators can extract, pipe, refine and ship to Asia for about \$9, and sell their product for a very nice profit. The *Oil & Gas Financial Journal* says, "The Chinese are willing to pay a premium to secure North American resources necessary to feed the growing Asian economy." If you have kept up with shale plays in the news, you will note that quite a number of joint ventures have been done with the Chinese, the Indians, the Australians, and others (see map again).

Let's say shale operators convince Congress to legislate the Pickens plan and we begin mass conversion of power plants and truck fleets to natural gas. We now become much more dependent on natural gas because we think, having been told, that it is a cheap and abundant source of energy. In the meantime, gas operators begin to export American natural gas to Asian countries to grow their economy. So the gas industry is now being paid handsomely

continued on p. 2 — Energy Economics

CALENDAR

- Jan 6 Return Mon Ballots
- Jan 12 Mon Group Meeting
- Jan 18 Return Chapter Ballots
- Jan 21 Chapter ExComm in Morgantown
- Feb 8 Progressive Lobby Day at Capitol
- Feb 9 Mar/Apr Newsletter Deadline
- Feb 9 Mon Group Meeting



Explore, enjoy and protect the planet

**Chapter History Series:
No. 1 — Newsletters**

When space allows, I plan to include bits of Chapter history in this newsletter. As editor, I hold a set of archived newsletters for our Chapter. (Kathy Gregg, our Chapter historian, holds another set, among other documents.) It is interesting to look back and recall what was happening in the early days of our organization, and useful to understand how we got to where we are now and who led us there.

Our entity started out in 1975 as the West Virginia Group of the Potomac Chapter, which at the time encompassed West Virginia, Maryland, Delaware, and the District of Columbia.

After a shaky couple of years, the Group got organized, elected an Executive Committee in 1977, and started mailing a regular news bulletin, called *The Monongahela Circular*, to its members. The first issues were type-written, cut-and-pasted, photo-copied, and mailed to a couple of hundred members in West Virginia. The frequency quickly increased from twice a year to its bi-monthly norm by 1983.

The Monongahela Circular was a useful recruiting tool, reporting on environmental issues of the day, listing outings, and inviting folks to meetings. Membership in West Virginia rose quickly, until there was a critical mass large enough to petition national for Chapter status. That status was granted in 1984, when we officially became the Sierra Club in West Virginia (and later, the WV Chapter of Sierra Club).

Beginning in 1985 (Vol. 11), the Chapter newsletter was known by its current name, the *Mountain State Sierran*. (It is easy to figure out how old our Chapter is by subtracting 10 from the current Vol. No.) The current masthead first appeared at the top of Vol. 14, No. 1 (1988) and has been used ever since, with minor changes as the national Sierra Club updated its logo. The current tabloid format has been used since 1990.

WV Newsletter Editors

1975-76	??
1977-79	Martha Keating
1980	??
1981-82	John Ostrowski
1983-85	Mary Davis
1986-89	Jim Sconyers
1990-92	Mary Davis
1992-94	Candice Elliott
1994-2001	Vicki Moss
2001-09	Sally Wilts
2009-now	Candice Elliott

Sierra Club bicyclists in Washington, DC for the Cherry Blossom Festival
— photo by Dan Soeder

New EPA Rules on Mercury and Air Toxics for Power Plants

When the Clean Air Act Amendments of 1990 were signed by then President George H. W. Bush, few people thought that the provisions requiring power plants to reduce toxic emissions would remain unfulfilled more than 20 years later. The second George Bush Administration issued mercury rules that were ruled by the courts as unacceptably weak. Now EPA must comply with a court order to issue final rules by Dec 16, 2012, and as of this writing, remains on track to do so. The rules would require power plants to comply by Jan 1, 2015.

Power plants are the last unregulated source of mercury emissions. But utility industries are still fighting, and in November, WV Senator Manchin proposed legislation to delay the rules for two additional years.

Mercury damages developing brains in children, leading to impaired verbal ability and affecting memory and fine motor and visual spatial skills, according to US-EPA. Most mercury is absorbed from food, especially fish, meat and milk, as it magnifies in the food chain. One in every six babies born in America has unhealthy levels of mercury, and some religious groups are now calling this a “pro-life” issue.

The new rules would also limit other air toxics including acid gases and carcinogens like arsenic. EPA estimates that the rules would also reduce particulate pollution and save up to 17,000 lives EACH YEAR (Senator Manchin wants to delay this two additional years). They would produce \$5 to \$13 in benefits for every dollar in pollution control costs and would also create thousands of construction jobs at power plants.

Some utilities insist that they cannot meet the EPA schedule and would have to shut down power plants, creating rolling blackouts. But 12 states have already required the mercury controls, and utilities in those states were able to meet that timeframe.

If you are curious about who is releasing air toxics in your neighborhood, a searchable map, with links to EPA’s Compliance History for numerous facilities, is available at: <http://www.npr.org/news/graphics/2011/10/toxic-air/#4.00/39.00/-84.00>

What You Can Do:

Contact Senator Manchin and ask him to drop his bill delaying these sensible mercury standards. Tell him we have already waited too long and he is putting too many lives at risk.

And for you sushi lovers, download the Safe Sushi app for your cell phone, or select the Safe Sushi Poster, available at: <http://www.beyondcoal.org/dirtytruth/mercury>

**2012 Sierra Club Calendars
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S&H: \$5 unless picked up in
Morgantown, Charleston, or E. Panhandle*



*McKinley Bill Slashes Protections
Against Coal Ash Hazards*

Legislation to block EPA rules that would limit hazardous disposal of coal ash passed the US House of Representatives in October. The bill was sponsored by WV Congressman David McKinley.

After a disastrous spill of coal ash in Tennessee in 2008, EPA began developing rules to provide strong federal enforcement over disposal of coal ash. Hundreds of thousands of people commented to EPA in 2010, overwhelmingly calling for strict enforcement and tough standards. But the McKinley bill overturns that public involvement and allows utilities to continue dumping coal ash in landfills without adequate leachate collection, ground water monitoring, or other environmental safeguards.

The EPA rules would label coal ash as a hazardous waste because, well, it is hazardous. Although it was thought to be relatively innocuous for many years, we now know that coal ash leaches arsenic, selenium, and other hazardous materials into water. Industry claims that designating coal ash as “hazardous” would create a “stigma” and inhibit “recycling” of coal ash into other products. But the EPA rules specifically exempt recycled products such as concrete or wallboard that do not create a hazard. And the lack of federal oversight means that the majority of coal ash is dumped in landfills because it is easier and cheaper than recycling it into safe products.

Now Senator Manchin has introduced a companion bill in the US Senate. For those who live in the shadow of ash impoundments, the Manchin/McKinley bill is a serious threat to their health and their property.

What You Can Do:

Contact Senator Manchin and ask him to support strong federal regulation of coal ash disposal. Let him know that coal ash recycling and protecting health are compatible, but that his bill actually threatens both.

**West Virginia Environmental
Council Lobby Day, February 8**

Join us at the State Capitol in Charleston for the annual WVEC Lobby Day. This year, we will be teaming up with citizen organizations promoting civil liberties, women’s rights, and other causes in a “Progressive Lobby Day” on Feb 8 from 9 AM – 4 PM. Lobby your legislators, talk to like-minded progressives, and help keep West Virginia moving forward. And stick around for the annual WVEC fundraiser that evening.
For more details, call 304-594-3322.

Energy Economics — continued from p. 1

for that gas, much more than can be paid in America. So the domestic prices are inevitably going to rise, and operators will be making money hand over fist.

But what about the American consumer, who, thanks to the genius of Congress, has had their electricity converted to be dependent on natural gas. Plastics manufacturers are right now ramping up production because they claim natural gas is a cheap and abundant source, so they are going to use it as feed stock for plastics and bring jobs back to the US. (How many of you caught the story about how WV legislators are upset that Chesapeake signed a contract to pipe gas to Louisiana instead of a cracker plant in WV)? Truck fleets will be dependent on natural gas to supply inventory around the country, only now, natural gas prices have gone through the roof due to exportation and Asian demand.

So Aubrey McClendon’s prediction may come true BECAUSE of the shale boom.

Nobody knows for sure what could happen with shale gas drilling — how much water will be contaminated or whether our homes will be cold and dark — because the future is always uncertain. But the shaky financial picture on top of the frantic rush to drill raises the question: Is this really the highest and best use of our beautiful West Virginia land, water, and air?

A Canadian Perspective on Climate Change

Danny Little

Okay, first of all, we Canadians feel cheated. It was originally called "Global Warming" which caused great excitement up here in the frozen north. Was this the end of long, hard Canadian winters? Would we beat our shovels into ploughshares? Did this mean our credit cards would only be used to buy our insanely expensive gas now instead of scraping frost from our windshields?

Seriously though, we know mankind is hurrying the climate change process along, but on the other hand, we see the improvements we have made over the past fifty years in Canada and realize that we are serious about doing our part. For example, Nova Scotia has a far-reach-

ing pesticide ban becoming law on April 1. We already have tough laws in place protecting our forests, lakes and streams and although, like the US, we are a race of consumers, we temper that with rules governing our waste, such as the use of clear garbage bags (and how many you can place at the curb) to ensure people are not throwing things into the landfill that do not belong there.

Upon seeing what acid rain was doing to our lakes, streams and rivers, we enacted more laws in order to protect them. Farmers were hit with tough new rules covering the types and amounts of fertilizers that could be used on their land. Our automotive safety inspections had exhaust measurements added to the checklist of items which must be passed before a vehicle is allowed on the road. Canada is a clean country. Maybe not quite "Disneyland" clean, but pretty close.

Our overwhelming concern is what flows across the border from the US into our air and waters and how powerless we are to do anything about that. Unlike the US, we see the results of climate change every day. Nobody in Canada is in denial about it. Our summers are noticeably hotter, but even more obvious, those massive piles of snow we lived with year after year have only been showing up now and then — lately, more then than now.

One of our major concerns is the massive volumes of methane gas stored below our tundra and what might happen if the warming trend picks up any more speed. If huge amounts of it are released into the atmosphere in a short period of time, the least of our (and your) worries will be a polar bear lounging around on a northern beach wearing a pair of sunglasses and drinking an ice cold Coke.

I guess we carry a sense of acceptance that changes in our climate will take place regardless of what we as Canadians do at this point. Having said that, we also have an incredible optimism that taking better care of our environment now will slow that change down so that as a race, we will have time to adapt and survive.

Canadians also realize that access to fresh water is soon to become a massive issue in North America. As the weather becomes warmer and water scarcer (don't even get me started on "fracking" — what are they thinking?), will Americans give up their lawns and the seemingly endless pools you see when looking at any American city on Google Earth?

Canada sits on the largest reserves of fresh water in the world. We have huge deposits of ... well, everything, from coal to uranium buried in our soil. As the CIA Fact Book <https://www.cia.gov/index.html> notes, we are "a land of vast distances and rich natural resources." (Although we do everything in our power to hide it, we are a bit smug about the whole thing.) We're fearful of what will happen when a more powerful country decides they need our resources more than we do.

So you see that optimism I mentioned a while back is tempered with a bit of fear for our future. Not so much from what climate change will do to us — we're a hardy people and we will survive. Although climate change does scare us, what others might do to us due to the results of climate change in their country scares us more.

Danny Little lives in Halifax, Nova Scotia. He is the author of the novels *Unheard*, *Unseen* and *Conflict in the North*.



Chapter to consider electronic *Sierran* at Jan ExCom meeting

Paper or electronic? For the past two years, we have offered members the opportunity to opt-OUT of receiving the regular paper edition of the *Mountain State Sierran* and receive an e-mail notice of the online version instead. About 130 members (less than 10%) have elected this option to save the Chapter money and resources.

Yet, we have e-mail addresses for more than 700 of our members and could save the Chapter significantly more by sending the electronic newsletter to each of them instead of the paper version.

At the next Executive Committee meeting in January, we will be discussing this issue further. It is possible that sometime next year, we will be switching to an electronic version for everyone with an e-mail address and giving members the opportunity to opt-IN if they wish to continue receiving the paper edition.

We will announce our decision in the next two newsletters before implementing any changes.

Anyone with comments or questions may refer them to the Newsletter Editor at: candice.k.elliott@gmail.com

ExCom meeting Jan 21, Morgantown

The next Chapter ExComm meeting will be held at the home of Jim Kotcon and Candice Elliott on Tyrone-Avery Rd in Morgantown, Saturday, Jan 21. The meeting will commence at 10 AM and continue throughout the day.

All current members are welcome to attend. For the agenda, contact Jim Sconyers. For directions, contact Jim Kotcon or Candice Elliott. (Contact info on back page.)

Sierra outing participants at an overlook above Harper's Ferry, and the Potomac River at Maryland Heights.

— photo by Dan Soeder

View from the Chair

Dawn of Extreme Energy Era — *Jim Sconyers*

One energy era ends, another begins.

We are seeing the end of the easy, cheap energy era. Just ask any serious coal-industry insider. The easy-to-access coal seams in Appalachia are almost played out.

Welcome to the dawn of The Extreme Energy Era (eerie futuristic theme background music please).

What is *extreme energy*? What are the signs that we're entering The Extreme Energy Era? Let me give you a few examples.

- **Tar Sands Oil** — First they have to cook it to get it out of the ground. Then it's much dirtier than "regular" oil to burn.

- **Marcellus/Shale Gas** — Deep drilling, thousands of feet, through freshwater aquifers, and hydrofracking to break up the rock and free up the gas. Ruins millions of gallons of water at every well, toxics in fracking fluids need safe disposal. A dozen wells on a single pad, repeated fracking over a decade. No more the simple low impact gas wells of Grandpa's era.

- **Mountaintop Removal Coal** — Blowing up whole mountains and burying pristine streams under waste material to get at thin little layers of coal. Communities eradicated, employment reduced by 80 percent.

- **Deepwater Offshore Oil Drilling** — Remember BP's experience in the Gulf? Need I say more?

- **Nukes raise their ugly head again** — Think Fukushima ... multiple meltdowns, radiation in the soil and air and water. Months later the cores are still running out of control.

Extreme energy requires extreme technology. Think mammoth coal draglines ... Horizontal shale-gas drilling thousands of feet underground ... Cooking tar sands in place to get it flowing ... Oil platforms in deep oceanic waters.

Extreme energy poses extreme risks. Mountaintop removal poisons streams and home water wells. Marcellus gas takes billions of gallons of fresh water and turns it into toxic waste to hide away somewhere. Tar sands oil would be piped over one of the most critical fresh water aquifers on the planet, where one spill could mean unprecedented disaster. Deep water oceanic oil drilling proves itself prone to nearly unstoppable blowouts that pollute thousands of square miles of fragile aquatic ecosystems.

We keep raising the stakes for the planet step by step. Yes, if you want oil and gas and coal we can get it for you, say the energy exploiters. We aren't going to mention the risks — see no / hear no / speak no. Consumer, don't look behind the curtain!

Are these risks and devastation worth the price? And we know the price, let's not pretend otherwise. Extreme energy is on target to wreak havoc on this poor planet like we can only begin to grasp. Our grandchildren will pay the human price, and they will not have kind thoughts of us for letting it happen.

Is Extreme Energy just one of those unavoidable necessary evils of the world? Not at all, it is a completely avoidable evil. Like the price, we know, too, the solution. It's been said over and over: Read the handwriting on the wall and stop the cycle. It is absolutely essential that we embrace the clean energy future that is built on clean, renewable, sustainable energy. We will never blast, frack, or radiate our way to a liveable future.

WVU SSC News and Updates



It's time for America to get smart about energy and be less dependent on dwindling oil reserves. We need to increase our use of clean, renewable energy sources like wind and solar power. Let your voice be heard.

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Please contact the Editor for submission guidelines or advertising rates.

Contributions to the newsletter may be sent to the Editor at

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414 Tyrone Avery Rd.
Morgantown, WV 26508

**Deadline for
Mar/Apr issue
February 9**

Opinions expressed in the **Mountain State Sierran** are those of the contributors and do not necessarily reflect the opinions of the Sierra Club. This newsletter is published bimonthly by the WV Chapter of the Sierra Club and distributed to all paid members.

Hannah Spencer

We stayed busy this fall and finished up the semester with a bang. At our last meeting of the semester, we voted for new officers. **Joey James** will be our new President, **Brianna Horton** will act as Vice President, **Miranda Miller** will be our Secretary, **Hannah Largen** will be our Treasurer, and there will be three of us working closely with outreach and media: **Tyler Semler**, **Maria Panaccione**, and myself. We are looking forward to a great year!

Continuing our connection with WV4MOM, we have been tabling at a local dorm complex to get students to sign a petition for a Moratorium on Marcellus. We have been very successful and have extended the tabling to include a video petition against the Keystone XL Pipeline. We have come to the conclusion that people seem to be more interested when we tell them these issues can potentially contaminate drinking water (or any water source).

A few weeks ago, some of the SSC members volunteered with Friends of Deckers Creek to collect water samples and measure water flow on certain points along the creek. It was such a great experience! The coordinators were great and we will definitely be volunteering in the future.

We have great news to share with all of you!

Doug Gilbert, acting V.P., holds a poster at SSC tabling efforts for the Keystone XL video petition.



Mountain Justice, a grassroots community-based campaign to end mountaintop removal coal mining, has decided to host its annual spring camp and workshop series — Mountain Justice Spring Break — in North Central WV. They will be centering discussions, workshops, and actions around local coal and natural gas issues. The SSC has been participating in the weekly planning conference calls, helping in site search and logistics, as well as the beginnings of the agenda and curriculum development.

If you're interested in being a part of Mountain Justice in NCWV, contact Miranda Miller, miranda.rae.miller@gmail.com. We are so excited to have Mountain Justice so close to us! We are currently having trouble finding locations around the Morgantown area so if anyone knows of a great place to set up camp please let us know.

We have also been attending Morgantown City Council meetings to discuss Marcellus drilling operations and actions around the area. Joey spoke

during a council meeting about the city asking WVU to adopt the policy that they will not allow natural gas drilling on university property. The city sent a follow-up email to Joey, but nothing more has come of the idea.

In mid-December, we met with Clement Solomon, President of the WVU Office of Sustainability, to try to establish ties between the Office of Sustainability and the Sierra Student Coalition. Updates from this meeting will be forthcoming in the next issue!

Upcoming Mon Group Meetings

Thurs, Jan 12, 6:30 pm
WV Botanic Garden, Cheat Lake

We will have a family-friendly nighttime wildlife adventure. Mountaineer Audubon leaders will guide us to search for owls at the WV Botanic Garden on Tyrone Rd in the Cheat Lake area of Morgantown. See the listing in the Outings for full information.

Thurs, Feb 9, 7:00 pm
Friends Meeting House, Morgantown

Program: Disposal of natural gas drilling and fracturing waste.

Amanda Pitzer, executive director of Friends of the Cheat, will share with us what she has learned while fighting a proposed landfill for gas drilling waste in Preston County.

Friends Meeting House is at 648 E. Brockway, Morgantown. Sarah Smith, wvusmitty@gmail.com or 304-685-1120.

Perspectives on Outings

Many Travels

— Dan Soeder Outings Chair

I have been on the run this fall and winter like never before. A lot of things at work are requiring my attendance at numerous meetings, and I've been traveling almost every week since the middle of September. Much of it has been "local" — Washington, DC, for an American Association of Petroleum Geologists meeting, State College for a Marcellus Shale summit at Penn State, Philadelphia for a meeting with the EPA and Temple University, and Pittsburgh for a review of the DOE carbon sequestration program. Other trips have been a bit farther; I was in Minneapolis for the Geological Society of America annual meeting in October, and up in Calgary the week of Thanksgiving to talk to the Geological Survey of Canada about shale gas.

I try to get out and walk the local trails when I get to new places. So much time is spent in the car or sitting on an airplane getting there, followed by sitting around all day in a meeting. Walking the streets, sidewalks and trails of a new place in the evening is about the only exercise I get when on travel, with the possible exception of running through airports. Walking doesn't require any equipment except a pair of shoes,

so it is a great exercise when traveling. Some travel is close enough to allow equipment; I brought my bicycle in the car to the Washington meeting and went for a ride on the Mount Vernon trail along the Potomac the last afternoon before driving home. I'm going to take it up to Philadelphia on one of these EPA trips to ride the bike trail along the Schuylkill River.

You can learn a lot about a new place by walking around. I never fully appreciated the size of the Penn State campus driving through it. It is reportedly four miles from end to end, and after walking across it and back, I can believe that. I used to live near D.C. and there are lots of places in and around Our Nation's Capital to visit on foot or by bicycle. I find new places in Pittsburgh every time I visit. Many of the buildings in downtown Minneapolis are connected by covered, heated and lighted pedestrian bridges, which must be quite handy in the winter up there. Calgary is one of the most pedestrian friendly cities I've ever visited. They have sidewalks everywhere, footbridges that cross main roadways every few blocks, and crosswalks where yellow caution lights flash when you push the "cross" button, and traffic stops. Amazing! Many

towns have rail trails, hiker-biker trails, and other dedicated trails that are usually well-marked, safe and go through the most scenic parts of the city. I find that it is almost always rewarding to hike or ride them.

It isn't always necessary to get on an airplane to visit a city. There are some great places to hike or bicycle in Morgantown, Fairmont, Elkins, and probably many other towns in West Virginia. Farther afield but still close are Pittsburgh, Washington, Baltimore and Cleveland. No one ever said Sierra Club outings have to be in the woods. If you have a favorite city walk or a ride, let me know, and maybe we can turn it into an outing.

I had a break over the holidays, but then the travel starts up again in January. I'm looking forward to a Duke University environmental workshop in Durham, NC; a trip to Ocean City, MD for an outdoors teachers' conference; and a trip down to the Yucatan in Mexico for the North American Carbon Atlas Partnership meeting. That one alternates between countries, and I'm thankful the January meeting fell on Mexico's turn, instead of Canada's. Looks like I might get in a few good hikes.

See you outside!

Upcoming Outings — Winter / Spring

Last Outing of 2011

Sat, Dec 31, 2011

Deckers Creek and Caperton Trails

rated moderate — Finish off 2011 with a brisk walk on the Morgantown waterfront trails. Meet at Ruby McQuain Park in downtown Morgantown at noon for several out and back hikes totaling about six miles. Dress for the weather. Optional pub stop afterward for a hot toddy to warm up.

Leader: Dan Soeder, 304-568-2164, Dan.Soeder@sierraclub.org

Nearest town: Morgantown, WV

Web info: www.montrails.org

2012 Outings

Thurs, Jan 12 (alternate date, Jan 19)

Owl Walk at WV Botanic Garden

rated easy to moderate — Join us for a family-friendly wildlife adventure as we search for owls at night in the WV Botanic Garden on Tyrone Rd, located in the Cheat Lake area of Morgantown. Meet in the upper parking area for a 6:30 PM start.

Mountaineer Audubon members LeJay Graffious (lejaygraffious@gmail.com or 304-379-7505) and Derek Courtney will be our guides and answer birding questions. Afterwards, we are invited to the home of Candice Elliott and Jim Kotcon on Tyrone-Avery Road for chili and hot chocolate.

Dress appropriately for weather conditions. Night outings require all participants to have a primary and backup light source. Each person should also carry a chemo-luminescent light stick, available at low cost in automotive stores, to allow the trip leader to locate them in the dark. Those under 18 must be accompanied by a parent or legal guardian. The number of participants is limited to twelve, and all participants must pre-register with leader.

Leader: Ann Devine-King, 304-594-2636, atdtking@gmail.com

Co-Leader: Sally Wilts

Nearest town: Morgantown, WV

Sat, Jan 14

Coopers Rock Day Hike

rated moderate — Join a new leader and walk off some of those leftover calories from the holidays with a moderate hike at one of the state's most beautiful forests. Step off at 10 AM from the Day-Use Lot for a hike of about 7 miles. Please contact outings leader for details. Dress for the weather, including proper footwear; bring water and snacks. Trekking poles are helpful on snow or ice.

Leader: Aaron Vedock, 540-805-0019, amvedock@hotmail.com

Co-Leader: Gwen Jones

Nearest town: Morgantown, WV

Web info: www.coopersrockstateforest.com

Sat, Jan 21

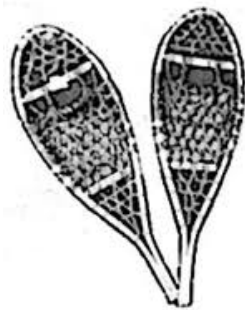
Cacapon Resort State Park

rated strenuous — Although this hike covers a distance of only about 7 miles, it will be strenuous with steep uphill and downhill. Hiking time is about three hours. Please contact trip leader for details if you are unsure of your stamina. Dress for the weather, and bring plenty of water, lunch and snacks. If there is snow or ice, hiking poles are a good idea. Meet in the lodge at Cacapon Resort State Park at 10 AM (there is no admission charge to enter the park).

Leader: Pam Peitz, 240-818-6554, pampeitz@comcast.net

Nearest town: Berkeley Springs, WV

Web info: www.cacaponresort.com



Sat, Feb 11

High Rock

rated moderate — This is an out-and-back, approximately 5.5 mile-roundtrip, fairly steep hike with easy footing on the AT. The hike starts on MD 491, and will last about 2.5 hours. Bring a snack or lunch for eating at the top on the rock outcropping which has a great view. Meet at the Food Lion on Rt. 64 in Smithsburg at 10AM. Contact leader for details.

Leader: Pam Peitz, 240-818-6554, pampeitz@comcast.net

Nearest town: Smithsburg, MD

Web info: www.summitpost.org/south-mountain

Sat, Feb 11

Snowshoe at Blackwater Falls State Park

rated easy — See Blackwater Canyon in its winter finery. Snowshoe into Blackwater Falls State Park on the Pase Point Trail to a little-visited, but very scenic, overlook just above the confluence of the North Fork and the main stem of the Blackwater River. Distance is about 2 miles with virtually no elevation change. Then visit Lindy Point, a spectacular crag on the other side of the Canyon. Distance to Lindy Point is about 1 mile total. Both sites are perched on the rim of the Canyon with great views. Outing is appropriate for all levels including novice. Optional finish by warming up at a local bistro. This outing is snowshoe-only and weather dependent: enough snow to snowshoe, not too much to get there. All participants must supply their own equipment. Please pre-register with leader.

Leader: Jim Sconyers, 304-698-9628, jimscon@gmail.com

Nearest town: Davis, WV

Web info: www.blackwaterfalls.com

Sat, Feb 18

X-C Ski at Blackwater Falls State Park

rated moderate — Cross-country ski on 5-6 miles of trails in Blackwater Falls State Park and Monongahela National Forest. The route will be from the Blackwater Falls Trading Post parking lot to Pase Point, with overlooks and great views of Blackwater Canyon. This outing is not for beginners; some moderate skill level on X-C skis is needed to enjoy this trip. All participants must supply their own equipment. Please pre-register with leader.

Maryland Chapter Outings

Our neighboring chapter to the east has an active outings program, with many trips coming into West Virginia or western Maryland. These outings, by highly experienced leaders, range from easy to strenuous, and are open to everyone. Join an outing by checking out their calendar at

maryland.sierraclub.org

Allegheny Group Outings

Sierra Club members in the Pittsburgh area belong to the Allegheny Group. They have a moderately active outings program as well as links to other local outdoor activities. Visit their website for an outings calendar and more details at

alleghenysc.org

Potomac Region Outings (PRO)

This is an activity section of the Sierra Club Virginia Chapter, with an extensive outings program run by leaders who live in and around the Washington, D.C., area. A calendar of activities, information and updates can be found on their website at

www.sierrapotomac.org

West Virginia Chapter Outings

For updated listings of outings sponsored by the West Virginia Chapter, check our Chapter website at

westvirginia.sierraclub.org

leader; outing will begin at 10 AM.

Leader: Brent Carminati, 304-567-2865, brentcar1@frontiernet.net

Nearest town: Davis, WV

Web info: www.blackwaterfalls.com

Sat, Mar 24

Gambrill State Park, Frederick Cnty, MD

rated easy to moderate — This is a 5.5 mile, two-hour wooded hike with a couple of good views of Frederick and Middletown Valleys. The walk is moderately easy with a few short uphill sections. Please pre-register with leader; outing will begin at 10 AM.

Leader: Pam Peitz, 240-818-6554, pampeitz@comcast.net

Nearest town: Frederick, MD

Web info: www.dnr.state.md/us (click on parks and choose Gambrill from the drop down menu).

Sat, Apr 21

Laurel Fork Special Management Area

rated easy to moderate — Six mile loop day hike on trails following old railroad grades along two mountain streams with mini waterfalls and cascades. Most of the trail is easy, with an elevation change of about 700 feet, a few small creek crossings, some rocky areas of the trail, and one short switchback elevation drop. This is a great hike for beginners, but there is a limit of 10 participants. The hike will start at 10 AM in the Locust Springs Picnic Area off Rt 28 at the Pocahontas/Pendleton County lines. Contact leader for details.

Leader: Brent Carminati, 304-567-2865, brentcar1@frontiernet.net

Nearest town: Thornwood, WV

Web info: www.patc.us/hiking/destinations/va_lauref.html

Sat, May 19

Spruce Knob/Seneca Creek Backcountry

rated moderate — Enjoy a scenic 8-9 mile loop hike atop the tallest mountain in West Virginia. The hike will start at 10 AM on the Lumberjack Trail near the crest of Spruce Knob, then take the Huckleberry Trail down to the Seneca Creek Trail and return. Lumberjack and Seneca Creek trails are fairly level and easy trails; the Huckleberry section has a moderately steep downhill grade with rocky areas. Hike is okay for beginners. Participants should bring rain gear, lunch and water, and wear sturdy footwear. Camping is available nearby at Spruce Knob Lake. Please pre-register with the leader.

Leader: Brent Carminati, 304-567-2865, brentcar1@frontiernet.net

Nearest town: Whitmer, WV

Web info: Search Google for Spruce Knob-Seneca Rocks to get Forest Service websites.



Abbreviations Used

AMC	Appalachian Mountain Club
AT	Appalachian Trail
GWNF	George Washington National Forest
JNF	Jefferson National Forest
MG	Monongahela Group
MNF	Monongahela National Forest
NPS	National Park Service
NRA	National Recreation Area
NWR	National Wildlife Refuge
PFD	Personal Flotation Device (lifejacket)
SF	State Forest
SP	State Park
SNP	Shenandoah National Park

Sierra Club Liability Policies For Chapter Outings

Sierra Club outings are open to everyone, members and non-members alike. Each outing is intended to be a wholesome, safe, and enjoyable experience in the outdoors. Participants must have suitable clothing, gear, and stamina, and are encouraged to select activities that match their individual abilities for outdoor adventures.

The Club offers a variety of outings from "easy" to "moderate" to "strenuous" that suit all activity levels. The difficulty of each outing is clearly designated in the announcement. Reservations are generally not required unless noted, but the outing leader may be contacted in advance for questions about the terrain, the difficulty and recommended gear.

Activities are normally held "rain or shine," but may be postponed at the leader's discretion for safety reasons in the event of inclement weather. Participants are reminded that all outdoor activities carry a degree of risk, and some take place in locations where professional emergency medical aid may be two or more hours away. People with health concerns should consult a physician to determine the advisability of participating in these or similar activities. The leader is responsible for the safety of all participants, and has the final authority to decide whether or not an individual may participate on a specific outing. Sierra Club safety policy requires that helmets be worn on bicycling outings, and a personal flotation device (PFD) be worn when using personal watercraft such as kayaks or canoes.

Unless noted in the announcement, Club outings are intended for adults. Children and

dogs are not normally permitted, unless an outing is so designated. Minors (under 18 years of age) must be accompanied by a parent or a legal guardian, or they must have both 1) a signed permission slip, and 2) the leader's prior consent to participate in the Club outing. Sierra Club outings officially begin and end at the trailhead.

Travel to the official starting point and back, even from an advertised meeting place, is the sole responsibility of each participant. While the Club encourages car-pooling, such arrangements are strictly between the riders and the drivers, and are not a part of the outing. Participants assume full responsibility and liability for all risks associated with such travel.

All participants on Sierra Club outings are required to sign a standard liability waiver, which can be viewed on the web at www.sierraclub.org/outings/chapter/forms or by calling 415-977-5630.

The Sierra Club does not charge for chapter outings, although payment of park entrance fees, a share of campsite rental costs, permit fees, equipment rental charges, etc. may be required from the participants. The Sierra Club practices "leave-no-trace" trail techniques, including hiking and camping on durable surfaces, minimizing campfire impacts, packing out all trash, respecting wildlife, being considerate of other visitors, and leaving the environment as it was found.

The Sierra Club's California Seller of Travel identification number is CST 2087766-40. Registration as a seller of travel does not constitute approval by the State of California.



Sierra Club

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email: governor@wvgov.org

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email to WV Legislature:
cglagola@mail.wvnet.edu
(Put name of recipient under subject)

Messages for legislators can be left at:
1-877-565-3447 or 304-347-4836

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

website: www.legis.state.wv.us
has contact information for all state
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