The Monthly state newsletter for the Tennessee Chapter Sierra Club

Volume 49, Number 4 - July/August 2016



41% of U.S. Coal Comes From Public Lands – A Program That Needs Reforming

Over 100 people gathered at the Tennessee Theater in Knoxville, TN, on Thursday, May 26, 2016 as part of the U.S. Bureau of Land Management's (BLM) review of coal leasing policy on public lands. Fifty-five people spoke at the hearing with 50 advocating for clean, renewable energy.

Background

Forty one percent of U.S. coal comes from land owned by taxpayers. It's managed by several federal agencies with BLM handling leasing and production. Coal companies pay fees to the federal government to mine the coal with 51% of the fees going to the federal government and 49% to the state where the mine is located.

In January, 2016, Sally Jewel, Secretary

of the Department of Interior, announced a "pause and review" of the coal leasing program due to concern that taxpayers were not getting fair market value for the coal, that the leasing process was unfair, and that coal has a significant impact on health and global climate change.

The coal leasing rules have not been changed since the Reagan presidency. The pause affects only new leases, not those that are pending or existing. It will stay in effect until the review is completed in about three years. The review will include the first-ever comprehensive look at the climate impacts.

Telling BLM what should be included in the review is a key first step in the process.

(continued on page 8)

Fall Chapter Meeting October 14-16 Pickett State Park

Put it on your calendar! Our Quarterly Chapter Meetings are a great way to get to know people from across the state that share a common goal of exploring, enjoying and protecting our environment. It's also a great opportunity to learn the about conservation issues in Tennessee.

The Fall meeting, hosted by Harvey Broome Group, will be held at Pickett State Park, a 19,200-acre park contiguous to the new Pogue Creek Canyon State Natural Area, and to the 120,000-acre Big South Fork National Scenic River and Recreation Area. Pickett was the first state park in the Southeast to be certified a dark sky viewing location by the International Dark-Sky Association. (Find Pickett on the web at http:// tnstateparks.com/parks/about/pickett.)

Chapter committee meetings will be held during the weekend, as well as a Chapter business meeting on Sunday morning. Sit in on one or all, or take off and enjoy the park and its many offerings. The park has miles of fantastic trails that show off the spectacular scenery of the Cumberland Plateau, with its many interesting geologic features. We'll enjoy a spacious dining area and bunk-style accommodations in the Group Camp. Of course, if you'd rather use your own tent, that's OK, too. And we'll have a 1.75-mile loop hike to an overlook in the new Pogue Creek Canyon State Natural Area, plus a star-gazing event, in addition to a hike led by Tennessee State Naturalist, Randy Hedgpath. Yet another attraction at this year's fall meeting is a not-to-be-missed silent auction. For additional information, contact Ron Shrieves, HBG Chair (email ronshrieves@ gmail.com).

SUMMER RETREAT STERCHI LODGE AT MAX PATCH JULY 22 THRU 24

Come enjoy the mountains of East Tennessee for a weekend at Sterchi Lodge, right on the border of TN & NC. We'll have great food, good hikes, good friends and some learning as well. Plus me to just hang out -- high in the mountains, on Sterchi's wide wrap around porch, with rocking chairs, picnic tables, humming birds buzzing around the wild flowers, and spectacular mountain views

Saturday night's program will feature Wenona Kunesh and Sandy Kurtz, treating us to a program on their adventures at the Paris climate conference and the Sierra Student Coalition experience.

We'll offer hikes on Saturday and Sunday morning on Max Patch Mountain, which is the nearby bald on the Appalachian Trail, always a special place for hikers. For those not hiking, try your hand at learning to make salsa! Chef Alice will be teaching a class in Salsa Making, and you'll go home with a jar of your own.

The "Early Bird" rate, for those who register by July 15 (e-mail or phone) is \$40/person. After that it goes up to \$50. This covers lodging as well as breakfasts and Saturday night dinner - but bring your own trail lunches. Kids 15 and under free! College students are \$15, and scholarships are available - contact Barb Kelly - bk1rivers@gmail.com. Pay when you arrive. Everybody will have a part of either the cooking or clean-up of the meals and the facility.

Sterchi Lodge has dormitory style accommodations, with modern bathroom and shower facilities. You need to bring your own pillow, bedding or sleeping bag, towels, soap and other personal items. Outdoor activities include a children's playground and a nature trail, as well as a volleyball court and basketball goal.

The Chapter ExCom will hold its business meeting on Sunday morning.

The Cherokee Group is the host group. To register, and for more information, contact Cherokee Treasurer Barbara Hurst - barbaraduckhurst@hotmail.com or 423-886-9503.

Sterchi is about 80 miles from downtown Knoxville. Directions from Knoxville:

- Take Interstate 40 East through Newport and across the North Carolina state line
- •Take the 1st North Carolina exit -- Exit 7 -- Harmon Den
- •Turn left at the bottom of the exit ramp -- the road turns to gravel almost immediately.
- Drive approximately 6.8 miles and make a sharp left turn just past a brown forestry sign. (You will also see a sign pointing to Max Patch at this turn).
- Drive approximately 2 more miles, passing the Max Patch Trailhead on the right and a large pond with a boardwalk on the right.

•The driveway to the Lodge is on the left approximately 2/10 of a mile past the pond.

NOTE: Be cautious using some GPS units as they may direct you over an impossible route!

The Lodge has 2 street addresses and the driveway is marked with both: 5000 Round Mountain Road, Del Rio, TN and 6303 Max Patch Road, Hot Springs, NC

Tennes-Sierran

The bi-monthly newsletter of the Tennessee Chapter of the Sierra Club.

SEND CHANGE OF ADDRESS TO:

*Email: address.changes@sierraclub.org *Snail Mail: clip the Moving? coupon below and mail

*Address changes are processed much faster if you include your Sierra Club membership number. To find your membership number, look on the address label of

SEND ARTICLES TO:

E-mail: c.demetreon@mchsi.com USPS: Chris Demetreon, Editor 201 Oakridge St. Toulon, IL 61483 815-915-9282

ARTICLE SUBMISSION GUIDELINES:

Submission Target Date is July 29 for the September/

1. E-mail and e-mail attached files are preferred. Send to c.demetreon@mchsi.com either with embedded text messages, or attached files. Attached files are preferred. Word is preferred but Apple users may send articles in

2. Photographs should be scanned in a .jpg or a .tif file format then either attached to e-mail or mailed via U.S. Postal Service on a 3 1/2" diskette or CD RM. Please include a stamped, self-addressed envelope if you would like your diskette or photo prints returned.

3. Hard-copy handwritten or typewritten articles may be accepted: however, pre-approval from the Editor is required.

4. Any materials submitted via USPS mail will not be returned unless a stamped, self-addressed envelope is

5. Concerns or complaints should be addressed to: Barbara Kelly, Communications Committee, bk1rivers@ comcast.net. The opinions expressed in the Tennes-Sierran are those of the contributors and do not necessarily reflect the official views or policies of the Tennessee Chapter, or the Sierra Club.

Target Date for September/October is **July 29, 2016.**

All meetings and outings notices, articles, and photographs should be in by then.

Send material to Chris Demetreon at c.demetreon@mchsi.com



All Creatures Great and Small



"Every good thing, great and small, needs defense"

- John Muir

Join Sierra Club and help protect all creatures, great and small.

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| Membership Categories | Individual | Joint |
|------------------------|------------|----------|
| Special Offer | □ \$15 | |
| Standard | □ \$39 | □ \$49 |
| Supporting | □ \$75 | □ \$100 |
| Contributing | □ \$150 | □ \$175 |
| Life | □ \$1000 | □ \$1250 |
| Senior | □ \$25 | □ \$35 |
| Student/Limited Income | □ \$25 | □ \$35 |

Contributions, gifts and dues to Sierra Club are not tax deductible; they support our effective, citizen-based advocacy and lobbying efforts. Your dues include \$7.50 for a subscription to Sierra magazine and \$1 for your Chapter newsletters

Enclose a check and mail to Sierra Club, P.O. Box 421041, Palm Coast, FL 32141-6417

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Soon to be updated, due to ExCom Elections.

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Please notify the Editor when changes are needed

Sierrans Round Up Allies to Defend the Smokies and Other National Parks

by Dr. Cliff Cockerham

We had come to D.C. from all over the nation, making the case at an EPA hearing that the agency should take extra steps to protect air quality in the Great Smoky Mountains National Park along with all of the other national parks across the country. Taken together, the outpouring of support was overwhelming at the first of two public hearings on the Obama administration's proposed Regional Haze Rule Revisions held on Thursday, May 19, 2016 at the William Jefferson Clinton East Building on Constitution Ave. in Washington, DC.

In part, I was speaking as a Tennessean about the beauty and majesty we enjoy in the Smokies, known around the world for its diversity of plant and animal life. Awash with natural beauty and home to four distinct seasons of weather, it is not surprising that this is America's single most visited National Park. However, on this day I was also part speaking as part of a team of current and former biomedical researchers, practitioners, and physicians attesting to the fact that air quality in our national parks speak not only to the state of the parks and their visitors, but to our national commitments protecting the air quality of the nation and to some extent, the entire planet. The Sierra Club, working closely with the National Park Conservation Association and Earth Justice, brought in fellow members of Physicians for Social Responsibility from as far West as California, as far North as Maine, as far South as Texas, and as nearby as Atlanta.

Against that backdrop, we strongly asserted our commonly held belief that every visitor to national parks & wilderness areas deserves to experience clean air, clear views, and the pristine beauty that we have come to associate with some of America's greatest national treasures. We then went on to share our deep concern that these vistas

are frequently obscured by regional haze, caused by emissions from diverse fossil fuel combustion sources that are spread out over vast geographic regions.

Under the Clean Air Act (CAA), the Regional Haze Program was created to reclaim and protect clear views in national parks. Of course, we acknowledged that the Regional Haze Rule has certainly helped reduce visibility-impairing pollutants, but we also pointed to definite loopholes in the existing law and lamented that as a direct result, many of our parks are decades – if not centuries – from reaching the intended goal of clean, healthy air.

Three points, in particular were common amongst most speakers.

Point 1: The CAA in its current form is not strong enough to protect our parks and wilderness areas."

Point 2: A proposal from the Obama Administration can change that and now is the right time to make this change, placing our parks on a more rapid path toward clean, healthy air.

Point 3: Air pollution adversely impacts the health and well-being of all our citizens, our children, our neighbors, and in altering the climate, it effects the life of the planet itself

The primary component of the regional haze plaguing national parks and in fact, that nation, is Particulate Matter (PM) pollution released in emissions from fossil fuel combustion in motor vehicles, electric power production plants, industrial facilities, manufacturing operations, etc. These and other pollutants are linked to environmental damage, in general, and serious health problems. Nitrate and sulfate particles directly contribute to acid rain formation; making lakes, rivers, and streams unsuitable for many fish and other freshwater life. Chemical reactions in the atmosphere give rise to secondary pollutants, the most well-

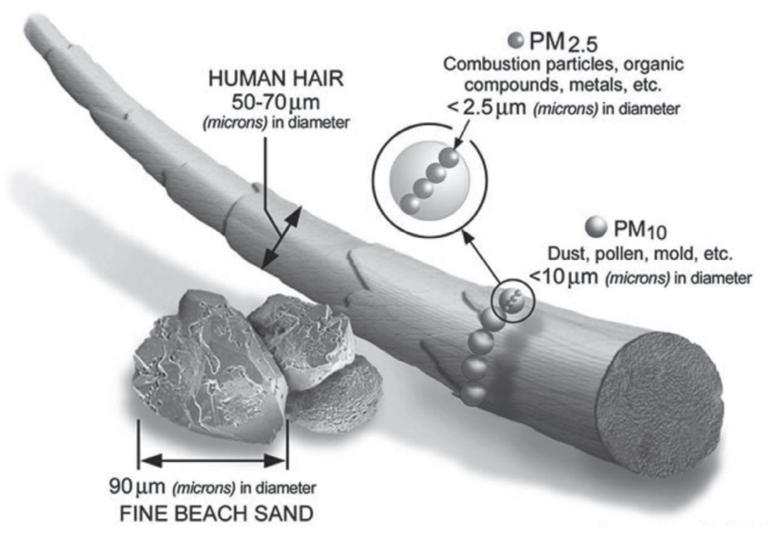
known being surface level ozone that forms where people can and do breathe it in at great cost to their well-being.

But my greatest concern is that breathing in these very small particles gives rise to respiratory illness, decreased lung function, and is even linked to premature death. Moreover, data has been rapidly accumulating over the last decade revealing that Particulate Matter (PM) pollution is associated with a much wider range of elevated disease outcomes than would seem obvious at first glance. PM2.5 refers to particulate matter with a diameter less than 2.5 microns. By comparison, a typical human hair is 100 microns in diameter. So, few are surprised to learn than PM2.5 penetrates deep into the lungs, crosses the tissue barrier into blood, and is able to inflict damage on far reaches of the human body.

Not surprisingly, the main environmental cause of premature death in the U.S. is no longer related to poor sanitation and a lack of clean drinking water but is instead, attributable to air pollution exposure. A majority of medical research indicates that increased exposure to 2.5 micron PM increases mortality, morbidity, related hospital admissions, and co-morbidity. Long-term exposure to 2.5 micron PM is linked to diabetes, adverse birth outcomes, neurological development disorders, diminished cognitive function, etc.

Throughout the nation, but with special concern in the Southeastern states, we are profoundly aware of the obesity epidemic and the need to promote improved health through outdoor exercise. However, we face an alarming fact given the findings of Li and others [Journal of Epidemiology & Community Health, 2015] that "...exercising in environments with high levels of air pollution can increase the risk of health problems ranging from asthma attacks

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CHEROKEE GROUP (Chattanooga)

Strategy/Business Meetings: July 11 and August 8 (2nd Monday) 6:30 P.M. Held at Second Presbyterian Church, at the corner of E. 7th Street and Pine, 700 Pine Street [parking is free in their Pine Street lot, across the street from the church] Come add your ideas and share your concerns. We're planning for energy justice team as well as the fall Drive Electric Day. We've got committees on outings, clean energy, forest watch/protection, mining/fracking issues, and room to support YOUR concern. Come share! The building looks like an old school - knock on the door, and if somebody doesn't answer, call 423-718-5009 for a door-unlocker! All are welcome!

July Program: 4th Monday, May. 28, 7:00 P.M. What's going on in the Gorge? Rick Huffines, Executive Director of the Tennessee River Gorge Trust, will talk about the many activities that the Trust is currently engaged in. These include bird monitoring and banding operations at the Bird Observatory, a water quality program to monitor perennial streams in the Gorge, and a two-year Climate Change Vulnerability Assessment on the lands in the Gorge.

And a short hike on the Pot Point Nature Trail is in the works.

The public is very welcome, healthy snacks are served. Invite your friends!! .

August Program: 4th Monday, August 22, 7:00 P.M. at Green|Spaces, 63 E. Main St., Chatta. 37408: Green Corridor Concepts: Can industry and environment coexist? Bill Phillips, Senior Partner at Envision Ecology, will talk about his philosophy for incorporating responsible environmental practices into commercial development and give examples of how it works in practice. And a hike at Volkswagen is in the works for August.

Learn about local Sierra Club outings and advocacy activities. The public is very welcome, healthy snacks are served. Invite your friends!! Look for our banner.

CHICKASAW GROUP (Memphis)

Check http://www.facebook.com/Chickasaw. Group/ for meeting information.

HARVEY BROOME GROUP (Knoxville)

June 14, 2016, 7:00 P.M. - Tales from the Trail as the Appalachian Trail: Tennessee Valley Unitarian Universalist Church, 2931 Kingston Pike, Knoxville. Chaplain. Bert Emmerson, AT Chaplain, Trail name "Wildcat"

July – no program meeting. Enjoy the long evening outside at one of your favorite places.

August 9, 2016, 6:00-8:30 P.M. - Harvey Broome Group Picnic: Meads Quarry at Ijams Nature Center. All Sierra Club members, families and friends are invited to this annual event. This year it will take place at Meads Quarry, Ijams Nature Center. Hiking, Mountain Biking, Swimming will be available. The HBG will provide a grill and burgers (veggie and meat). Please contact Mac Post (mpost3116@aol.com) to so that we will have enough on hand and to find out what you might contribute to the potluck including salad, fruit/vegetable, etc., and of course dessert.

Everyone is welcome! All programs are free and open to the public. You do not have to be a member to participate in Harvey Broome Group events.

MIDDLE TENNESSEE GROUP (Knoxville)

July 11, 2016 (Monday) - - 6:15 P.M. - ICO MEETING: Come join our Nashville Inspiring Connections Outdoors Group as we meet at the Mad Platter restaurant at 1239 6th Ave. North, Nashville. We will discuss our outings for disadvantaged kids and senior citizens, and training. Contact Craig Jervis at cmjervis@comcast.net to make sure the meeting is still on. Put "ICO" in the subject line.

July 14, 2016 (Thursday) – at 7:00 P.M. – PROGRAM: "Fly Fishing the Caney Fork River"

Susan Thrasher will be our guest speaker. Susan is an FFF certified fly fishing enthusiast with a passion for sharing her knowledge with others. She is the owner and operator of Southern Brookies Fly Fishing located on the banks of the Caney Fork River in Lancaster, Tennessee. For more information on Southern Brookies, go to www.Southernbrookies.com.

Susan's presentation will cover scenery and wildlife along the Caney Fork River, river access points, fishing regulations, the TWRA stocking Program, places to stay close to the river, and local outfitters. This program will be held at 7:00 P.M. at Radnor Lake Visitor Center. You must enter Radnor Lake from Granny White Pike, which may involve ignoring your GPS. The program is free and open to the public.

July 19, 2016 (Tuesday) - at 6:30 P.M. LOCAL ISSUES MEETING: Everyone is welcome at this local issues and business meeting. We are in the midst of changing our meeting location, so please contact Jim at (225) 281-4089 or jamesmredwine@gmail. com to find out where we will be meeting and to let him know that you plan to attend. Put "MTG Sierra" in the subject line. We look forward to seeing you.

August 11, 2016 (Thursday) – at 7:00 P.M. – PROGRAM: "Paddling Basics & Local Paddling Destinations!"

Our program speaker, Michael "Smiley" King, is an advocate for a variety of paddlesport disciplines including recreational, touring, whitewater, kayak fishing, and stand up paddle boarding. Michael partners with federal, state, and local agencies, municipalities, organizations, watershed groups, clubs, manufacturers, dealers, & outfitters, to promote both paddle sports and environmental stewardship.

Michael volunteer manages Paddle Adventures Unlimited, a free meetup group with 4,300 members. Nashville's annual Cumberland River Paddlefest (with over 2,000 attendees in 2015) is hosted by Paddle Adventures Unlimited. Michael is an advocate for increasing access to waterways, and connecting communities to the environment as stakeholders and stewards of streams. Michael is a 6th year Tennessee Scenic Rivers Association board of director's member; ACA L2 River Kayaking Instructor; NOLS Wilderness First Aid, CPR, AED, & First Aid Certified; and a Jackson Kayak exploration team ambassador. This program will be held at 7:00 P.M. at Radnor Lake Visitor Center. You must enter Radnor Lake from Granny White Pike, which may involve ignoring your GPS. The program is free and open to the public.

August 16, 2016 (Tuesday) - at 6:30 P.M. LOCAL ISSUES MEETING: Everyone is welcome at this local issues and business

meeting. We are in the midst of changing our meeting location, so please contact Jim at (225) 281-4089 or jamesmredwine@gmail. com to find out where we will be meeting and to let him know that you plan to attend. Put "MTG Sierra" in the subject line. We look forward to seeing you.

August 29, 2016 (Monday) - - 6:30 P.M. - ICO MEETING: Come join our Nashville Inspiring Connections Outdoors Group as we meet at the Mad Platter restaurant at 1239 6th Ave. North, Nashville. We will discuss our outings for disadvantaged kids and senior citizens, and training. Contact Craig Jervis at cmjervis@comcast.net to make sure the meeting is still on. Put "ICO" in the subject line.

September 8, 2016 (Thursday) – at 7:00 P.M. – PROGRAM: "Becoming a Tennessee Naturalist"

Our program speaker, Nancy Garden, will present a program on The Tennessee Naturalist Program, which is an education training course designed to introduce the natural history of Tennessee to interested adults. Nancy will discuss how the program began, what it covers, how participants use their training, and how to participate in the program. This program will be held at 7:00 P.M. at Radnor Lake Visitor Center. You must enter Radnor Lake from Granny White Pike, which may involve ignoring your GPS. The program is free and open to the public.

September 20, 2016 (Tuesday) - at 6:30 P.M. LOCAL ISSUES MEETING: Everyone is welcome at this local issues and business meeting. We are in the midst of changing our meeting location, so please contact Jim at (225) 281-4089 or jamesmredwine@gmail. com to find out where we will be meeting and to let him know that you plan to attend. Put "MTG Sierra" in the subject line. We look forward to seeing you.

October 3, 2016 (Monday) - - 6:30 P.M. - ICO MEETING: Come join our Nashville Inspiring Connections Outdoors Group as we meet at the Mad Platter restaurant at 1239 6th Ave. North, Nashville. We will discuss our outings for disadvantaged kids and senior citizens, and training. Contact Craig Jervis at cmjervis@comcast.net to make sure the meeting is still on. Put "ICO" in the subject line.

October 13, 2016 (Thursday) – at 7:00 P.M. – PROGRAM: "Tiny Houses"

Our program speaker, David Latimer, a Nashville native and builder, is embracing the tiny house movement. He is convincing many that living in a 300 square foot house makes sense. David will discuss this popular movement, explain the basics of transitioning to a tiny house, discuss the personal and societal benefits, and answer questions. This program will be held at 7:00 P.M. at Radnor Lake Visitor Center. You must enter Radnor Lake from Granny White Pike, which may involve ignoring your GPS. The program is free and open to the public.

October 18, 2016 (Tuesday) - at 6:30 P.M. LOCAL ISSUES MEETING: Everyone is welcome at this local issues and business meeting. We are in the midst of changing our meeting location, so please contact Jim at (225) 281-4089 or jamesmredwine@gmail. com to find out where we will be meeting and to let him know that you plan to attend. Put "MTG Sierra" in the subject line. We look forward to seeing you.



CHEROKEE GROUP (Chattanooga)

The Cherokee Group's Outings and activities are always open to the public and members of the Club from across the state! Pre-registation with the trip leader is a must for all outings. Also check our Meetup - Green Events page for the latest news on outings.

Check out our Facebook and Meetup -Green Events pages for hiking info that is in the works: July - a short hike on the Pot Point Nature trail, and August - a hike at Volkswagen. Dates still being determined! Families welcome.May 21 (Sat) - Joyce Kilmer Memorial Forest.

OUTINGS LEADER TRAINING: Are you willing to go through a short training to be certified as a Sierra Outings Leader? We'll be setting this up in late July. Please call Barb Kelly, who will be arranging training - 423718-5009 or bk1rivers@gmail.com. We'd love for you to begin taking people to the places you love -- the surest way to get others to help preserve them!

CHICKASAW GROUP (Memphis)

Time and dates of outings are to be determined. For information check: http://www. facebook.com/Chickasaw.Group/

HARVEY BROOME GROUP (Knoxville)

See our website for July/Aug outings details www.sierraclub.org/tennessee/harveybroome/outings.

MIDDLE TENNESSEE GROUP (Nashville)

We have an active outings schedule and want you to come along! Many times our outings are planned too late to be included

10 Essentials for Hiking



Sierra Club outings offer a variety of wilderness and near-wilderness experiences. It is important to realize that while all trips are guided by a leader, it is ultimately the responsibility of the individual to operate in a safe manner. To this end, the following is a list of essential items which should be modified according to the particular type of outing. These are:

- 1. Adequate map
- 3. Compass 4. Rain gear
- 5. Extra clothing (it is a good
- idea to always have a wool hat)
- 6. Matches
- 8. Flashlight
- 9. Extra food, water 10. The tenth essential: You
- decide what is the most important thinkg to bring!

in this newsletter. To check out our outings, please click on the outing of choice at http:// www.meetup.com/Middle-Tennessee-Sierra-Club-Outings-and-Adventures/events/ calendar/

Cherokee News

Please Like Us: on Facebook -- our Organization Page: https://www.facebook.com/CherokeeSierra on Facebook - our Group Page: https://www.facebook.com/groups/65310596576/ Join our MeetUp -- Green Events-- Group: http://www.meetup.com/greenhome-107/

Keep those e-mall addresses coming so you will get our E-News: send your e-mail address to Alice at demetreon1981@gmail.

Sierrans Round Up Allies to Defend the Smokies and **Other National Parks**

(continued from page 3) heart or lung pathologies."

Particularly disturbing are the findings of Raz and others [March 2015] that exposure to 2.5 micron PM "air pollution is a modifiable risk factor for autism, and reduced exposure during pregnancy could lead to lower incidence of ASD [autism spectrum disorder] and reduce the substantial, increasing economic burden of ASD on families and on society."

Another common air pollutant from fossil fuel burning is airborne Polycyclic Aromatic Hydrocarbons [PAH]. In Environmental Health Perspectives [March 2012] Perera and others established that "High prenatal PAH exposure, was positively associated with anxiousness, depression, and attention deficit among children ages 6-7."

Perhaps most important, we need to attend to the fact that this is a global problem of far-reaching impact and startling magnitude. Lelieveld and others reported in the leading scientific journal Nature [September 2015] that outdoor air pollution led to 3.3 million premature deaths worldwide just in the year 2010. Their calculations suggest that the annual cost in human life could double by 2050.

Taken together, this data strongly suggest to me that there is NO safe level, where an adverse health outcome will not occur with exposure to these pollutants. What really varies may come down to matters of detection and diagnosis. But the good news is that, at every point, reducing exposure has measurable positive impacts for the American people and for the planet.

Data from 51 U.S. cities analyzed by Pope and others (2009) revealed that after adjustment for changes in other risk factors, reduction in long-term exposure to 2.5 micron PM from 1980 to 2000 was strongly associated with delivering a 2.7 year increase in life expectancy overall.

Even when the rate of PM reduction was declining when intervention efforts were slowed down and the absolute quantity of the PM reduction was also diminished, as was the case in the previous decade, Correia and others documented in the Journal of Epidemiology [January 2013] that against this backdrop "Air pollution control in the last decade has continued to have a positive impact on public health." Clearly, it is not too late for us to do better. No degree of improvement appears to fail to deliver a return on investment.

At that point, I felt obliged to address the costs of controlling air pollution since many industry spokespersons point to this as a major barrier to effective intervention, leading directly to the common misperception that such reductions undermine the American economy and the future of productivity (Trasande and others, 2011). For this, I needed only turn to the EPA's own 2011 study: "The Benefits and Costs of the Clean Air Act from 1990 to 2020."

On the one hand, the combined public and private costs of meeting the requirements of the 1990 Clean Air Act Amendment rose

annually from 1990, and by 2020 those costs are projected to reach an annual value of about \$65 billion/yr. But one has to put that in context. Substantial air quality improvements lead to reductions in "related premature death and illness, improved economic welfare of Americans, and better environmental conditions. The economic value of these improvements is estimated to reach almost \$2 trillion for the year 2020."

That's a \$2 trillion gain per year over a \$65 billion annual cost. If we cared about nothing but money, it seems incomprehensible that we could possibly do anything other than take meaningful and decisive action to aggressively reduce the release of fossil fuel combustion emissions. But in point of fact, that cannot and should not be the case.

Over the past decade, the Regional Haze Rule has helped to reduce emissions of visibility-impairing pollutants for which we must be grateful. But the reality is these special places we call parks are often obscured by regional haze caused by cumulative emissions from a myriad of sources spread over wide geographic areas.

Loopholes in existing clean air protections mean it could take centuries for this truly American vision to become a lived reality. Such a level of air pollution threatens the national parks, an American legacy that enlightens the world. It directly harms the people who breathe the air of this planet today, as well as in the decades and centuries ahead.

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Pollution Threatens Summer Olympic Game

By Eleanor Ripoll

The 2016 Summer Olympics are fast approaching, and athletes, coaches, organizers, and tourists alike are preparing to descend on Rio de Janeiro in August to celebrate this age-old tradition. But as the opening ceremony draws closer, some major issues are rising to the forefront of the international community -- including issues within Rio's own Guanabara Bay, a place where long distance swimmers, rowers, and sailors will be competing in the water.

As Brazil has known for many years, the water conditions in Guanabara Bay are less than ideal. Back in 2009, when Rio was in the running to be one of the locations for the 2016 Olympic Games, Brazilian officials argued that hosting the Olympics would help to resolve the pollution and water contamination problems and pressure the country to clean up the sewage in the lakes. The Brazilian Olympics spokesperson went so far as to promise the country would remove 80 percent of the sewage from Guanabara Bay by the start of the Olympics.

Now, with only four months to go before the opening ceremony, the rowing, sailing, and long distance swim teams training in the Bay are finding out the hard way that the sewage in Guanabara Bay is still a major problem. In response to this, the Brazilian Olympics spokesperson has now said that only 65 percent of the sewage in the Bay will be able to be removed before the games begin -- a drastic 15 percent drop in the



last eight years. The IOC, or International Olympics Committee, has yet to comment on the situation.

To make matters worse, Guanabara Bay is used as a service center for nearby oil and gas fields and as a shipping lane for oil tankers -- both parts of a destructive industry which affect everything—from wildlife to plants, from fishermen to water quality—in the Bay.

But the local fisherman have been fighting to protect the Bay and their way of life for years. Alexandre Anderson, one of these fishermen, has been calling on Brazil to stop using Guanabara Bay as a source for oil transportation. His efforts to save the Bay have led to 12 arrests and 28 lawsuits, all in the name of protecting his livelihood and stopping the toxic pollution of the Bay.

But despite his best efforts, the oil

shipping has persisted, and on top of the already destructive practices of the fossil fuel industry, the shipping within Guanabara Bay specifically has further complicated the sewage issues.

As a precaution for the athletes who will be competing in and around the water, both sailing and rowing coaches have asked their teams to try not to come in contact with the water, to soak any and all clothes that they wore while training in bleach, and to rinse themselves off in antibacterial mouthwash between their events to prevent any sort of illness. But despite all of the precautions, some athletes have still reported becoming sick and experiencing flu-like symptoms.

And if all of these environmental concerns weren't enough, Brazil is currently experiencing a Zika virus epidemic. Zika, the increasingly widespread virus transmitted by mosquitoes, has been widely covered in the news as of late but still doesn't have a cure. This increasingly serious disease could potentially put Olympians at risk, but luckily the virus has not been reported in Rio as of yet.

As the hugely popular Summer Olympic Games approach, the world will be closely watching Rio de Janeiro and the efforts of the Brazilian government to solve the pollution crisis. Millions of people will be converging on this global hotspot in mere months, and only time will tell if the city is prepared to protect and prioritize the well being of the local residents, the fishermen, and the athletes.

In New York, Clean Energy Hearings Set Stage for Renewable Energy Boom, Job Creation

New York has shown some extraordinary leadership in the Northeast over that last six months. In December 2015, Governor Cuomo directed New York's Public Service Commission (PSC) to create a Clean Energy Standard (CES) which will require that New York power 50 percent of its electric sector with renewable energy by 2030. This goal would put the state on a path to meet its requirement to reduce climate pollution 40 percent by 2030.

Then, in early 2016, Governor Cuomo announced that New York would permanently move off coal by 2020 and create a transition plan for coal affected communities, both necessary steps in helping him achieve his 40 percent carbon reduction target while supporting a just a fair transition for workers and communities.

And lastly, in January 2016, the Commission approved the Clean Energy Fund, an over \$5 billion, 10-year funding program to accelerate energy efficiency adoption and increase funding for renewable energy programs such as the Governor's successful NY Sun program. The Commission also opened a proceeding to develop the CES program and the Commission released a white paper outlining how the CES might work. The Commission stated that a final proposal will be considered in June, a final plan decided in July and

scheduled twelve public hearings across New York to hear input on the CES throughout the month of May.

Since the hearings started the Sierra Club, in collaboration with several different advocacy groups throughout the state, have been advocating for a strong, enforceable Clean Energy Standard that includes a large-scale offshore wind program along with a requirement for utilities to increase renewable purchases each year and increased investment in renewable energy to provide local, good paying jobs both up and downstate.

Let's break down why these three priorities are important and will benefit both Governor Cuomo's goal and New York citizens.

Ensuring offshore wind is in the Clean Energy Standard would help launch an entirely new industry. With the capacity to power millions of homes, foster diversity in renewable energy development, produce millions of dollars in economic investments and spur new economic development and manufacturing opportunities the benefits will be felt statewide. In addition to jumpstarting an New York based offshore wind industry, the Clean Energy Standard should also prioritize in-state local renewables. Increased solar, onshore wind and offshore wind will give New York the opportunity to become a regional incubator for a growing industry, all

while making deep cuts in the state's climate pollution.

Beyond establishing an enforceable yearly target for renewable energy growth, the Commission should also establish an enforceable energy efficiency targets for utilities with a requirement that at least two percent annual energy savings are achieved. Neighboring states have already surpassed this amount of annual energy savings and have significant reductions in consumer's electricity costs.

The CES should not be a route to importing already-existing hydropower from Canada. Let's make sure our power is home grown, prioritizing local economic development within our state. Whenever possible, the CES should promote community and local ownership of renewable energy so that New Yorkers reap the full economic benefits of a clean energy economy.

By requiring utilities and public energy authorities to purchase a certain amount of renewable power each year, creating an offshore wind requirement and investing in local, renewable energy the CES will help the Governor achieve his goal of generating 50 percent of New York State's electricity from renewables by 2030 provide jobs and cuts in electricity costs to residents and help curb climate disruption.

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Interest In Electric Cars Is Rapidly Accelerating, So Why Are They Hard To Find?

By Mary Lunetta and Gina Coplon-Newfield

The first quarter of 2016 was the best ever for electric vehicle (EV) sales in the U.S., despite incredibly low gas prices. In 2013, Tesla's Model S was named "Car of the Year" by Motor Trend. In 2011, the Chevrolet Volt won "Automobile of the Year" by Automobile Magazine and was included on Car and Driver's "10 Best" list. That same year, Nissan's Leaf as

named "World Car of the Year" and was honored in Popular Mechanics' 2010 "Breakthrough Awards." I could go on, but you get the picture.

These cars are technologically very impressive, consumers are clearly interested, and the fact people can receive up to \$12,500 in federal and state rebates for buying or leasing one depending on where they live and what type of plug-in they buy undoubtedly sweetens the deal.

That being said, EVs must be available all over the United States, right? Unfortunately, no. Not by a long shot.

Robert John, a retired chef living outside Austin, Texas, recently tried to test drive a Chevy Volt. When he couldn't locate one at a local dealership, he finally called a dealer back to ask where he could go to find one. After he waited more than 20 minutes for them to check their inventory data, he was finally told there were no Volts within a thousand miles of him. When he asked why that was, the person he spoke to apologized that she could not answer his question and thought there must be a mistake with their system.

It wasn't a mistake. Right now, 26 models of plug-in electric vehicles from 17 automakers are available to be purchased or leased in California, but fewer than half of these models are available anywhere else in the nation. And Tesla stores, not adhering to the dealership model, are banned or restricted in a few dozen states, including in Connecticut where a Tesla ban was recently upheld.

And Robert isn't alone. James in New Jersey had to travel to three different dealerships in order to find one with the Nissan LEAF in stock. He eventually had to buy his LEAF in a neighboring state. Robin Woerner was looking to test drive a Mercedes B-Class Electric Drive but was told the all-electric model is no longer available in her home state, Connecticut.

The Zero Emission Vehicle (ZEV) mandate, which California pioneered a few years ago and nine other states adopted (Oregon, New York, New Jersey, Rhode Island, Vermont, Maryland, Maine, Massachusetts, Connecticut), requires automakers to sell increasing numbers of EVs in the coming years. Governors of eight of these states have committed to a combined goal of 3.3 million ZEVs on their roads by 2025.

This goal is definitely achievable, especially considering the majority of drivers in California and the northeastern states are interested in electric vehicles -- but automakers and dealers need to put greater effort into production, inventory, training, sales, and marketing in order for it to become a reality. Fortunately, among some automakers in certain areas of the country, this effort is underway and working well.



Thanks to the survey data coming in from Sierra Club's Rev Up EVs campaign, we know that certain dealerships have plenty of EVs available for test drives and boast strong sales.

When Felipe Davila test drove a Chevy Volt this month at Courtesy Chevrolet in San Diego, he learned from Robby Holley, the sales consultant he spoke to, that the Volt is their highest selling car after the Chevy Cruz with an average of 20 to 30 Volts sold every month at their location.

"Our staff have regular monthly trainings on the Volt's technology and maintenance," Robby said. "I also drive one, so I can speak

to customers about how great the car is as a customer myself."

Charged magazine recently highlighted that dealerships often receive only one or two vehicles, a main reason for EV sales remaining modest. Customers need and deserve more selection.

Heath Carney, Electric Vehicle/Sustainability
Manager, and John
Sullivan, Dealer Principal
at the Sullivan Chevrolet/
Auto Group in Roseville,
California, write, "At our
dealerships, we have found
that we need at least 10 Volts
for sufficient selection, and
we should have at least 20
to 30 during periods of peak
demand."

"Individual manufacturers

set their own criteria and that will be unique to their dealer networks, so the inventory of electric vehicles will vary from make to make," said Eric Cahill, who recently completed a dissertation on electric car sales at the University of California Davis. "Automakers are barred by law from forcing vehicles on dealers, but they can encourage dealers to stock a certain number or mix of EV inventory through various financial

incentives."

Automakers are required to manufacture these cars, so if the supply is not meeting the growing demand then it's important to understand why that is and how automakers, dealers, and government agencies can work together to effectively shift that trend and improve the EV marketplace and the consumer experience.

In addition to working with automakers to fill these gaps, it is important to clarify where EVs are available to test drive and, ideally, to be leased or purchased. That's why the Sierra Club is interested in knowing which dealerships have these cars available and which ones don't.

We invite you to join our Rev Up EVs campaign (http:// content.sierraclub.org/evguide/

rev-signup). All you need to do is call or visit a dealerships near you, test drive an EV (if they are in stock), and let us know about your experience by filling out a short survey. We'll provide important lessons learned from the survey results to policymakers, automakers, and auto dealers.

The increased sales of electric vehicles is an important element in the fight against climate disruption and for consumer choice. Demand is beginning to increase for these cars -- but if potential buyers have to waste their time just trying to find one to test drive, then the road to fully clean transportation will be much longer than need be.

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So Join the Crowd Go Paperless Today!



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41% of U.S. Coal Comes From Public Lands – A Program That Needs Reforming

(continued from page 1)

The Numbers

- There are 306 federal coal leases in 11 states covering over 480,000 acres.
- 85% of leased coal is from Wyoming's Powder River Basin (TVA plants, including Kingston, burn Powder River Basin coal. There is some leased coal in KY and AL)
- There is a 20-year supply of coal under lease now (7.75 billion recoverable tons)
- Total U.S. coal production declined 10% from 2014 to 2015 and will fall another 12% in 2016.
- U.S. coal exports declined 24% from 2014 to 2015 and will fall another 10% in 2016.
- Leased coal provides 14% of U.S. electricity.
- Leased coal is responsible for 13% of U.S. greenhouse gas emissions.
- From 2006 -15 leased coal output was 4.3 billion tons that produced \$9.55 billion in federal revenue.
- Royalties paid by coal companies (8% and 12.5% for underground and surface mined coal respectively) have not changed in 30 years. Offshore oil and gas royalties are 18.5%.
- Coal mining directly employed 90,000 people in 2012, but fell to 74,000 in 2014.
- There are \$3.6 billion in self-bonded reclamation obligations. (Coal companies must set aside funds to repair environmental damage done as a result of mining. They are allowed to "self-bond", meaning they control those funds. Bankruptcy puts the funds in

jeopardy and potentially shifts responsibility to the public. Three of the largest U.S. coal compaies have declared bankruptcy.)

The Issues

The Knoxville hearing was one of six around the country that constitute the "scoping" phase of the coal lease review. The purpose of this stage of the process is to identify issues and actions that will be included in a later Programmatic Environmental Impact Statement (PEIS) that will be used to determine new coal leasing policies and rules.

The BLM identified issues and needed reforms to be addressed in the review:

Climate protections –

- Assess the impact that mining, burning and disposing of coal waste has on society.
- Incorporate those costs into the lease amounts coal companies pay.
- Disclose how federal coal leasing affects the amount of solar and wind generated energy that is available.
- Evaluate an alternative to coal leasing that would phase it out entirely.

Taxpayer protections –

- Increase royalty rates that have not changed in 30 years and are well below those for gas and oil leases on federal land.
- Include the external costs of using coal like the impacts on health and the environment, into the royalty rates.

Reclamation and Bonding -

 Determine whether "self-bonding" for reclamation of land is a workable system. Companies are responsible for reclaiming mined lands, but holding bonds themselves to fund reclamation puts those funds in jeopardy when companies go bankrupt. Alpha, Arch, and Peabody, three of largest coal companies in the U.S. have filed for bankruptcy. All hold unfunded self-bonding obligations.

Coal Exports -

• BLM must evaluate whether shipping our carbon emissions overseas is in the public's best interest.

Public Comments

Speakers came not only from Knoxville and other Tennessee towns, but also from Kentucky, Alabama, Virginia, West Virginia, Washington DC and Montana.

Also, representatives for Congressman Phil Roe (R-TN) and Congressman Morgan Griffith (R-VA) spoke. Roe's spokesperson said the program was working well, that the review was unnecessary and that it was giving a fair return to the taxpayer. Griffith's spokesperson characterized the hearing as another part of "Obama's war on coal" and said local power companies in Griffith's district would produce from 30% to 50% of their power from coal by 2030.

Five speakers from the public opposed the review of the federal leasing program. Fifty speakers applauded the "pause and review".

Written comments may be sent to the BLM until July 28, 2016.

Email: BLM_WO_Coal_Program_PEIS_Comments@blm.gov

Mail: Coal Programmatic EIS Scoping Bureau of Land Management 20 M St. SE, Room 2134 LM Washington, D.C. 20003

More information at: http://www.blm.gov/wo/st/en/prog/energy/coal_and_non-energy/details_on_coal_peis.html

What Does the Middle Tennessee Group of the Sierra Club do?

This is a question posed throughout the year, by others, and by ourselves. Well, one thing that we've been doing for years, is our education program – led by our education chair, Joy Mayfield. During the month of May, I witnessed Joy's presentations to 8 separate elementary class-

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Non-Profit Organization U.S. Postage PAID Nashville, TN Permit No. 3225 rooms. Whether she was describing the benefits of trees and fielding questions (such as, "do they help with global warming?"), or focusing binoculars and explaining how to birdwatch with her puppets, watching a few of Joy's presentations to over 100 third and fourth graders, makes me proud to be a part of our local Group. Looking at those young people, I was reminded of a prior student's belated thank you letter to Joy – Joy had volunteered with a high school environmental club; years later, after one of the students graduated, became the youngest member of the National Sierra Club Board of Directors, and still later, was employed in the environmental field, he wrote Joy a letter, thanking her.

So far this year, we've planted trees at Pennington Bend (an area affected by flooding); we 've presented monthly programs to the public on topics ranging from the Urban Green Lab to Monarch butterflies; we've presented a power point to the Williamson County Democratic Party; we've hosted tables at both Columbia State Community College and Nashville's Earth Day celebrations; we've provided water and hiking outings to adults; we've helped Nashville ICO provide outings to kids; we've written letters supporting and opposing legislative and administrative actions affecting the environment; we've attended Metro Nashville Council meetings to support earth-friendly ordinances and zoning decisions, and we've probably done a few other things that I am forgetting.

What an amazing group of volunteers we have. We could do more, and we're trying to, but we sure could use your help. Please join our meetup page, come to our programs and planning meetings, and/or let me know you'd like to help. You can contact me directly and I'll get you in touch with the right volunteer to get you started. Email me at garberb@hotmail.com, and put Sierra Club in the subject line. I hope to hear from you soon!

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