

# [ the sylvanian ]

winter 2015

Pennsylvania Chapter Sierra Club • [pennsylvania.sierraclub.org](http://pennsylvania.sierraclub.org)

**clean water**

**agriculture**

**[ eco abc's ]**

**what students should learn about the environment**


**endangered species**

**climate change**

**urban sprawl**

**green vs. gray infrastructure**

**dealing with waste...**

 **SIERRA CLUB**  
FOUNDED 1892

explore, enjoy and protect the planet.

# [ from the editors ]

## eco abc's

On these cold January mornings, Pennsylvanians are tempted to say, "Hey! Maybe we need a little Global warming." But we have to distinguish between weather and climate. A few cold days in January and February don't balance out the year's global temperature, and, globe wide, 2014 was one of the warmest.

We might also note that one theory developed recently argues that wobbles in the so-called Polar Vortex\* which send waves of cold air our direction are themselves caused by warming in the Arctic Circle that disrupts traditional wind currents. Who knows? We don't.

But we are faced today with issues Pennsylvanians care about -- forests and streams, wildlife, clean air and clean water, agriculture, urban sprawl, and, of course, fracking. These are "right-now" issues we care about and can do something about.

We write in this issue about the things school age young people should know. But of course old folks like us should know about them too.

WENDI TAYLOR AND PHIL COLEMAN  
Co-editors of *The Sylvania*

\*For more on Polar Vortex, see: [HYPERLINK "http://webbox.com/redirect.asp?u=http://www.climate.gov/news-features/event-tracker/wobbly-polar-vortex-triggers-extreme-cold-air-outbreak"](http://webbox.com/redirect.asp?u=http://www.climate.gov/news-features/event-tracker/wobbly-polar-vortex-triggers-extreme-cold-air-outbreak)<http://www.climate.gov/news-features/event-tracker/wobbly-polar-vortex-triggers-extreme-cold-air-outbreak>



Wendi Taylor



Phil Coleman

**SAVE *the* DATE**

**April 25, 2015**

**4<sup>th</sup> Annual Stargazing Awards Banquet**  
**Stone Valley Recreation Area, State College**

Join us in celebration of the efforts of our tireless volunteers.  
RSVP information to be sent via email in late February.



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# [ the sylvanian ]

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This publication is dedicated to serving  
the Sierra Club Pennsylvania membership,  
and is a forum for internal policy  
discussion and debate among those  
truly concerned with protecting the  
environment. Opinions expressed herein  
are the personal opinions of their authors  
and may or may not reflect Sierra Club  
policy.

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accepted.

**SIERRA CLUB MISSION STATEMENT:**  
To explore, enjoy and protect the wild  
places of the earth; To practice and  
promote the responsible use of the earth's  
ecosystems and resources; To educate and  
enlist humanity to protect and restore  
the quality of the natural and human  
environment; and To use all lawful means  
to carry out these objectives.

Sierra Club's sexual harassment policy  
can be found online at [http://mitchell.  
sierraclub.org/leaders/policies/sexual-  
harassment.asp](http://mitchell.sierraclub.org/leaders/policies/sexual-harassment.asp) or by contacting the  
Harrisburg office.

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## [ eco abc's ]

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## [ on the cover ]

Sydney Willis, Strategy Design Studio, shows students learning and thinking about environmental issues. What students should know about the environment is discussed throughout our special report – Eco ABC's.

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next deadline: March 15

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### chapter directory

Due to space restrictions, the Chapter Directory was not included in this issue. To view the directory, go to [http://pennsylvania.  
sierraclub.org/PA\\_Chapter\\_2008/chapter-  
directory.html](http://pennsylvania.sierraclub.org/PA_Chapter_2008/chapter-directory.html)

# [ the view from harrisburg ]

by Joanne Kilgour, Chapter Director



## 2014 ELECTION RESULTS: A WIN IN THE GOVERNOR'S RACE, NEW CHALLENGES IN GENERAL ASSEMBLY

In a year that proved extremely challenging for progressive candidates throughout the country, Pennsylvania – with the help of hard working Pennsylvania Sierra Club volunteers and staff – achieved one of the few bright spots with the election of Tom

Wolf as our new Governor. Wolf is the first challenger to defeat an incumbent since 1968 when the state Constitution was changed to establish a two-term limit for the office. This is an historic accomplishment in its own right, let alone in a year in which the incumbent's party will go on to control both chambers in the General Assembly.

Wolf, a Democrat, will occupy the Governor's Office while the House of Representatives will be controlled by a Republican majority of 119, holding 35 more seats than the Democratic minority. Republicans will also maintain control of the Senate with 30 seats to the Democrats' 20, adding three seats over last session's majority.

## HOUSE AND SENATE LEADERSHIP

Significant leadership changes include Sen. Jake Corman, former Chairman of the Appropriations Committee, succeeding in his challenge of Sen. Dominic Pileggi for the position of Majority Leader. There is speculation that with the newly elected (and more conservative) members of the caucus felt that Sen. Pileggi was too weak on certain conservative agenda issues, such as labor. Following this development, some thought Sen. Pileggi may seek to run for one of the State Supreme Court vacancies, but Pileggi has now said that this is not his intent.

In the House, Rep. Mike Sturla challenged Rep. Frank Dermody for his position as Minority Leader, causing some excitement during leadership elections, but Rep. Dermody will retain his role as Democratic Leader. Rep. Sturla will also retain his role as Policy Committee Chair. Changes to House Republican Leadership include Rep. Turzai moving into a new role as Speaker of the House and Rep. Dave Reed becoming the new Majority Leader.

## SENATE REPUBLICAN LEADERSHIP:

President Pro Tempore: Sen. Joe Scarnati (R-25 Jefferson)

Senate Majority Leader: Sen. Jake Corman (R-34 Centre)

Chairman Senate Appropriations Committee: Sen. Pat Browne (R-16 Lehigh)

Majority Whip: Sen. John Gordner (R-27 Columbia)

Majority Caucus Chairman: Sen. Bob Mensch (R-24 Montgomery)

Senate Majority Caucus Secretary: Sen. Richard Alloway (R-33 Adams)

Senate Caucus Administrator: Sen. Chuck McIlhinney (R-Bucks)

Senate Majority Policy Committee Chairman: Sen. David Argall (R-Schuylkill)

## SENATE DEMOCRATIC LEADERSHIP:

Senate Democratic Leader: Sen. Jay Costa (D-43 Allegheny)

Democratic Whip: Sen. Anthony Williams (D-8 Philadelphia)

Democratic Chair Appropriations Committee: Sen. Vincent Hughes (D-7 Philadelphia)

Democratic Vice Chair Senate Appropriations Committee: Sen. John Blake (D-22 Lackawanna)

Democratic Caucus Chairman: Sen. Wayne Fontana (D-42 Allegheny)

Democratic Policy Committee Chair: Sen. Lisa Boscola (D-18 Lehigh)

Caucus Secretary: Sen. Larry Farnese (D-1 Philadelphia)

Caucus Administrator: Sen. John Yudichak (D-14 Luzerne)

Sen. Eugene Yaw will again be the Majority Chair and Sen. Yudichak will again be the Minority Chair of the Senate Environmental Resources and Energy Committee.

## HOUSE REPUBLICAN LEADERSHIP:

Speaker of the House: Rep. Mike Turzai (R-28 Allegheny)

Majority Leader: Rep. Dave Reed (R-62 Indiana)

Majority Whip: Rep. Bryan Cutler (R-100 Lancaster)

Appropriations Chairman: Rep. William Adolph (R- 165 Delaware)

Caucus Chair: Rep. Sandra Major (R-111 Susquehanna/Wayne)

Policy Committee Chairman: Rep. Kerry Benninghoff (R-171 Centre and Mifflin)

Caucus Administrator: Rep. Brian Ellis (R-11 Butler County)

Caucus Secretary: Rep. Donna Oberlander (R-63 Armstrong, Clarion and Forest)

## HOUSE DEMOCRATIC LEADERSHIP:

Democratic Leader: Rep. Frank Dermody (D- 33 Allegheny, Westmoreland)

Democratic Whip: Rep. Mike Hanna (D-76 Clinton, Centre),

Caucus Chairman: Rep. Dan Frankel, (D-23 Allegheny County),

Caucus Secretary: Rep. Rosita Youngblood (D-198 Philadelphia)

Caucus Administrator: Rep. Neal Goodman (D-123 Schuylkill County)

Policy Committee Chair: Rep. Mike Sturla (D- 96 Lancaster County),

Appropriations Committee Chair: Rep. Joe Markosek (D-25 Allegheny, Westmoreland)

Rep. Greg Vitali will continue in his role as Minority Chair of the Environmental Resources and Energy Committee and Rep. John Maher will take over for Rep. Ron Miller (who is no longer in office) as Majority Chair.

## WOLF NOMINATES QUIGLEY AND DUNN TO ENVIRONMENTAL DEPARTMENTS

As we were going to press, Governor-elect Tom Wolf announced his choice for two vital Departments: Cindy Dunn to serve as Secretary of the Department of Conservation and Natural Resources (DCNR) and John Quigley to serve as Secretary of the Department of Environmental Protection (DEP).

John Quigley and Cindy Dunn are well known to the environmental community as effective leaders who are dedicated to protecting the health of Pennsylvania's citizens and protecting the environment and natural places.

Quigley and Dunn join an administration already committed to environmental protection. Wolf himself served on the board of the Alliance for the Chesapeake Bay. Katie McGinty, Wolf's chief of staff, and John Hanger, Wolf's Secretary of Planning and Policy, both led

the DEP under Governor Ed Rendell. Hanger and Dunn have each led PennFuture, an environmental organization often allied with the Sierra Club and Conservation Voters.

"These Departments have tremendous power to protect our air, land and water; to promote clean energy; and to hold polluters accountable," said Joanne Kilgour of the Sierra Club Pennsylvania Chapter. "The proven environmental credentials and spirit of cooperation coming from the new Wolf administration offer great hope for positive change for Pennsylvania's environment."

## WHAT WE KNOW ABOUT WOLF'S ENVIRONMENTAL AGENDA

Throughout the campaign, and following the election, Governor-elect Tom Wolf has made several statements about his environmental agenda. With a more conservative General Assembly, Wolf as Governor may be forced to accomplish much of his agenda through executive action. Wolf's environmental agenda as announced prior to his inauguration included:

- Appointing qualified individuals to lead the Department of Environmental Protection and the Department of Conservation and Natural Resources and to join his cabinet as secretaries of these agencies;
- Proposing a budget that bolsters funding for the Department of Environmental Protection to account for staffing and capacity needs of the agency and to provide oversight of natural gas drillers;
- Supporting legislation to enact an extraction tax on natural gas;
- Addressing the lack of transparency in the natural gas sector by requiring drillers to publicly disclose chemicals used in the hydraulic fracturing process and lifting the current gag order on physicians;
- Supporting and facilitating greater

local control of gas development;

- Advancing a multi-pronged approach to address the restoration of abandoned mine drainage including (1) supporting legislation to hold coal-mining companies responsible for clean-up and environmental damages, (2) engaging academics and the private sector to develop cost-effective approaches to abandoned mine drainage restoration, and (3) directing additional funding from both state and federal sources;
- Expanding Pennsylvania's Alternative Energy Portfolio Standards and restoring some funding for the Pennsylvania Energy Development Authority;
- Accelerating new investments in Pennsylvania in energy efficiency retrofits of commercial and residential real estate by engaging the private sector and developing new programs and policies to spur growth;
- Directing his Secretary of the Department of Environmental Protection to produce a report that is based on science, which includes meaningful emission reduction targets and policies to help meet these goals;
- Requiring the State to meet green building standards on all state-owned new large building projects, building projects in which a state agency is leasing at least 90 percent of the square footage, and renovations of state-owned or leased buildings that meet this "size" criteria; and
- Targeting existing state workforce and education dollars toward the development of a public/private green jobs training program.

## LEGISLATIVE OUTLOOK AT START OF 2015-2016 SESSION

In anticipation of a roughly \$2 billion structural deficit, both Governor-Elect Wolf and key members of the legislature

continued on page 22

# [ exploreenjoy...pennsylvania ]

## allegheny national forest: laurel mill - "...remote back-country recreation...!"

by Gary Thornbloom

Laurel Mill Cross-Country Ski and Hiking Trail System include trails that are friendly to both beginners and intermediate skiers. The easiest trails are flat, with straight stretches, and have wide bridges over small streams. Interconnecting loops make it easy to choose your distance. Advanced skiers can challenge sections of trail that are not groomed, and by skiing the entire 10.7 miles of trail can easily enjoy a day of skiing. A pavilion with a fire ring, and restrooms are at the trailhead.

The Laurel Mill trailhead is located in Elk County three miles west of Ridgway on Township Road 307, also called Spring Creek Road. You can learn current snow conditions, and rent skis or snow shoes by contacting Country Squirrel Outfitters at 814-776-6285 or [www.countrysquirreloutfitters.com](http://www.countrysquirreloutfitters.com).

Allegheny National Forest (ANF) is Pennsylvania's only national forest and includes 513,300 acres. Laurel Mill is in the southeast corner. In 2011 I skied trails on the south side of the highway; this included Perseverance, One Mile, and Sparrow Nest loops. Kirk Johnson, Friends of Allegheny Wilderness (FAW) Director, accompanied me on this trip. The area we skied in is part of what FAW - [www.pawild.org](http://www.pawild.org) - has proposed to be protected as the Clarion River Wilderness Area. Kirk says the Allegheny, like all national forests, is managed for multiple uses, but unfortunately wilderness preservation is the most underrepresented use of this particular forest, and it needs to be significantly increased.

The trails on the south side of the highway are in an area that FAW has

proposed for wilderness protection under the Wilderness Act of 1964. This area is currently designated as a Remote Recreation Area. These are relatively large areas where wildlife habitat and recreation are the use. The Forest Service can change this designation at any time, whereas Wilderness Areas, designated by Congress, are protected in perpetuity.



As we skied into the mature, mixed hardwood forest, I soon noticed that unlike many other trails this one showed no signs of snowmobile use. There were snow covered ski tracks, but the only other tracks were coyote, deer, porcupine, squirrels, and mice. Older, snow covered, wildlife tracks could have been from other animals. It is always fun to guess the tracks, follow them far enough to often confirm the guess, and then to

read any additional story that is written in the snow.

We followed the Cook-Eli Connector, and went right when we got to Perseverance Loop. Again we stayed to the right on One-Mile Loop and Sparrow Nest Loop. Once on Sparrow Nest Loop the trail is more rustic, is not groomed, and is described in the ANF brochure as "best suited to hiking." We found it fine for skiing.

Along the Sparrow Nest Loop is an area that includes a meadow as well as some large white pines. Hemlocks are the understory. The trail skirts the hemlocks and meanders through many white pine seedlings. Here we have a pine forest in the making! That is the forest that once blanketed Pennsylvania. Protection as a Wilderness Area would let this forest return.

On my next outing to Laurel Mill I may try Hemlock Loop and experience Spillway Hill, Suicide Slide, and Brigg's Dike as well some scenic views. I might also enjoy off trail skiing or snow shoeing in this modestly-sized roadless area. Kirk said, "from the steep oak and mountain laurel-shrouded hillside that drops down to the national wild and scenic Clarion River, to the plateau top where the Laurel Mill trail meanders, FAW's proposed Clarion River Wilderness Area provides abundant opportunity for remote backcountry recreation."

And remote backcountry recreation is all the incentive I need to get me out and into the woods in every season.

# [ ecoabc's ]

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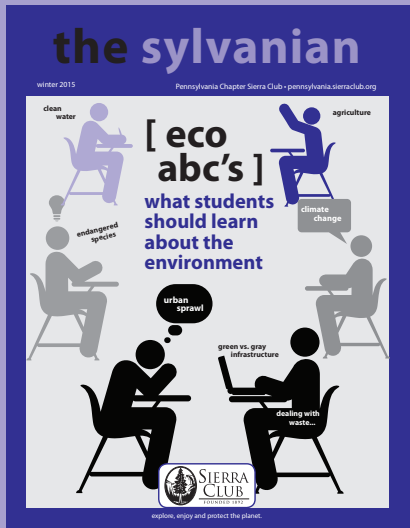
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## eco abc's

by Phil Coleman

We all agree that students should learn their ABCs, that reading, writing, and arithmetic should be central to a public school education. But we begin to find something short of unanimity when we expand beyond that list. We want young people to learn some history, some geography. Beyond that, what else should they learn?

Here comes the environmentalists' question: what should our children learn about environmental issues? In this *Sylvanian*, we have tried to compile a list – the basics everyone should know.

- Air pollution,
- water supply and contamination, climate change,
- protection of forests and natural areas,
- protecting oceans,
- excessive dependence on fossil fuels,
- urban sprawl,
- species extinction,
- agriculture

– these are some of the subjects we would like our students to learn about. But such issues are not automatically inserted into the curriculum. And they are not necessarily issues teachers know enough about.

In this issue of the *Sylvanian*, we touch briefly on these issues. And we ask you, our readers, do your children know and respond to environmental questions? They can add and subtract. They can discuss  $2x + y$ . They know subjects and predicates. They can name some of the presidents. They can spot Africa on a globe even if they can't locate the Ivory Coast. But they need to know more. How can we educate them?



[ecoabc's]

# on course for an un-natural disaster: the problem and what can be done

by John Rossi, Chapter Conservation Climate Change Committee Co-Chair

One of the more depressing facts of life is that the world is headed for an un-natural disaster of biblical proportion due to humanity's increasing production and burning of fossil fuels, such as coal, oil, and natural gas. 2014 is poised to become the hottest year in recorded temperature history. If the thermometer continues to rise at its current pace, the world will be an average 7.2 degrees Fahrenheit (4 degrees Celsius) hotter by 2100.

Climate scientists predict such an increase will unleash catastrophic climate change, melting the world's glaciers and ice caps, dramatically raising sea level, creating much more powerful hurricanes and storms, and drying out the interior of continents. Food production will be disrupted and decline, islands and low-lying coastal cities submerged, which will create millions of environmental refugees.

## The primary source of this coming disaster can be found in the production and burning of fossil fuels.

They are the world's primary sources of energy that power industry, agriculture, and transportation, as well as heat and cool homes and offices. These energy sources were formed millions of years ago from the decomposition of buried plant matter and other organisms as a result of heat and pressure underground. Fossil fuels contain significant amounts of carbon which are released into the atmosphere as carbon dioxide when they are burned. Coal con-

tains the most carbon and natural gas the least (29 percent less than oil; 44 percent less than coal), with oil in between the two.

The carbon dioxide released from burning fossil fuels rises into the atmosphere and traps solar energy in the form of heat in it—the “greenhouse” effect. According to the U.S. Department of Energy's Carbon Dioxide Information Analysis Center the three primary sources of CO<sub>2</sub> in the atmosphere are “coal (43%), oil (33%), [and natural] gas (18%).”

## Natural gas also contributes to global warming through the emission of methane,

its primary ingredient and energy source. While CO<sub>2</sub> is the most important greenhouse gas, methane is a very potent greenhouse gas—between 30 and 80 times more potent than CO<sub>2</sub>. While much of the methane in the atmosphere is released through natural processes, such as the decomposition of plant matter in swamps, the extraction and distribution of natural gas for fuel also releases significant quantities. And, much like CO<sub>2</sub>, methane emissions are currently increasing.

The result is that record high amounts of greenhouse gases are being produced and released into the atmosphere. In 2013, scientists from the Scripps Institution of Oceanography found that carbon dioxide in the atmosphere reached a concentration of 400 parts per million parts. The last time there was this much CO<sub>2</sub> in the atmosphere was 3 million years ago, when woolly mammoths and saber-toothed tigers

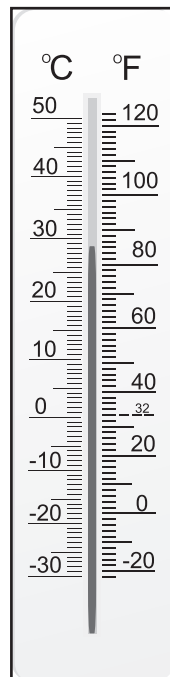
roamed the planet.

Fortunately, since global warming is caused by humans, we can correct the problem. But the longer we deny it or delay action to cut greenhouse gas emissions, the more damaging, difficult and expensive it will be to cut them. Now is the time to reduce the release of CO<sub>2</sub>, methane and other greenhouse pollutants.

What can we do to stop global warming? The most effective institution capable of making cuts to greenhouse gas emissions is government, particularly national governments. Tragically, there is widespread denial about global warming or an unwillingness to take action among the political class in the United States and in many countries. This means that education and political action—broadly defined—are the two most important things we can do to reduce global warming. We need to do everything we can to educate the broader public about the causes and consequences of global warming as well as solutions to the problem. We need to identify and support candidates who are willing to take action to reduce greenhouse gas emissions and increase energy efficiency and the use of non-polluting, renewable energy.

## If we do not take concerted, systematic action, the climate will continue to warm and human-caused, global warming will upend our environment and humanity with it.

For more information on global warming and related issues, please contact John Rossi at [jpr2@psu.edu](mailto:jpr2@psu.edu).





## clean air is good for your health

by Nancy F. Parks, Clean Air Research Committee Chair

Any day that you can't breathe is a day when you don't have a life! As any asthmatic knows, any day spent in a hospital or emergency room is lost; lost to play, lost to your friends, lost to work, lost to your family, lost to exercise, lost to exploration.

Have you noticed that you don't feel as well running outside when you are next to a highway compared to running in a park away from traffic? That is because high traffic highways accumulate dangerous levels of pollution.

Our state and federal governments work hard to protect our health through important laws like the national Clean Air Act of 1990. Just last year clean air activists finally convinced the EPA that air quality should be monitored next to highways. By July Pennsylvania will be required to modify its outdoor ambient air moni-

toring plans to enforce new air quality regulations for fine particle inhalable soot and ozone smog in all areas adjacent to highways.

But governments can't do it alone. We have a hand in their success. Overuse and misuse of coal, oil and natural gas are big parts of our air quality problem.

We can do the big thing by continuing to advocate against dirty use of fossil fuels.

In addition, each of us can be responsible for our own health, and part of a healthy lifestyle is being responsible for living in a least wasteful way.

### HOW CAN YOU HELP?

- Don't waste electricity. Turn off the lights when you leave a room;
- Don't hold open the refrigerator door;
- Drink water instead of commercial sugar drinks that are costly and pol-



## CAN YOU?

Turn up the air conditioner thermostat, and turn down the heat.

luting to manufacture;

- Run the air conditioner at a warmer temperature. Setting the thermostat to 75 to 80 degrees will still be more comfortable than outside, as you are also drying out the humidity;
- Walk to get where you are going whenever you can; If you can't walk, car pool or use public transportation.
- Get outside! Get off the computer games and your cell phone and gulp the fresh clean air; and
- Explore the world around you: climb trees, go fishing, walk your dog, or hike a trail.

Don't let air pollution rob you of any moment of your life.

### answers to crossword puzzle

(from page 24)

#### Across

- CLARION RIVER
- CARY GRANT
- SYLVAN
- CLEAN AIR
- THOREAU
- FOSSIL FUELS

#### Down

- LAUREL MILL
- POLAR BEAR
- SILVER BACKS
- CARBON DIOXIDE
- YUCCA MOUNTAIN
- ALCOSAN
- EL NINO
- KNOWLTON
- WOLF



[ ecoabc's ]

# why green infrastructure is better than gray

by Tom Hoffman

Whenever it rains in many older industrial cities like Philadelphia and Pittsburgh, we humans dump millions of gallons of raw sewage into our rivers. Rain water running off big parking lots, roofs and streets goes into our storm sewers, which are the same sewers that carry raw sewage. When there is too much water for our treatment plants to handle, the only choice is to let it go into the rivers. This is NOT a sustainable solution – we have to fix this problem.

Philadelphia and Pittsburgh, our state's two major cities, have both been told by the federal government to clean up their sewage. They have taken two very different approaches. Philadelphia has chosen to go "green" by planting trees, building parks, installing roof gardens and other strategies to soak up the water where it falls and keep it out of the sewers altogether. This is called a green infrastructure approach.

In stark contrast, the Pittsburgh area sewer authority, ALCOSAN, is moving towards building super sewers the size of subway tunnels under our rivers. When it rains, stormwater and sewage would go into these tunnels. Later it would get removed with big pumps and get treated. Because the tunnels are made of concrete, which is gray, this is called a gray infrastructure approach.

The choice between green and gray is one that is very important for everyone – especially for today's young people. Since the tab for this will be picked up people who pay sewer rates, the younger you are the longer you will be paying for this. Our young people have the most at stake in this choice.



Here are two big reasons why a green choice is better.

Since today's youth will be paying the longest, it is important that they get the most back for their money

A green approach creates long term and sustainable jobs installing and maintaining green infrastructure. A green approach brings revitalized urban neighborhoods where people want to live. A green infrastructure approach reduces flooding and results in cleaner water.

One of the most critical issues facing today's youth is climate change. Choosing green can help cities lessen the impacts of climate change and contribute to reducing CO2.

Trees are a "two-fer". They reduce stormwater runoff and they capture CO2, the biggest contributor to climate change. Urban areas with lots of green infrastructure have cleaner air and cooler temperatures. Since climate change is the most important issue facing us today, it would be foolish to spend \$3 billion on anything that doesn't help the situation. Because the gray approach uses fossil fuels to pump the water out of the tunnels, it may actually make the situation worse.

A green choice is a choice for a more livable planet and investments in our urban environments. It's the right choice.

If you would like to know more about the green choice, contact Tom Hoffman at [tom.hoffman@sierraclub.org](mailto:tom.hoffman@sierraclub.org)

**CAN YOU?**  
**Explain the difference between green and gray infrastructures?**

# waste: the unwanted by-product of consumption

by Wendi Taylor

We are swimming in waste. Each year Americans create 110 million tons of coal ash, 2,200 tons of nuclear waste, 250 million tons of municipal waste, 3.4 million tons of electronic waste, 1.37 billion tons of solid animal waste and an undetermined amount of fracking waste. We put the waste in landfills, burn it in incinerators, put it in holding ponds and impoundments, inject it into the ground, or hold it submerged in pools or in casks lined with lead.

**Waste is the unwanted by-product of consumption. No matter what we do with it, our waste has a way of not staying where we put it, which creates big problems.**

Landfills leak and can contaminate ground water. They also produce methane gas. About 23 percent of the methane emitted in the United States is emitted from municipal landfills, according to the Environmental Protection Agency. Methane contributes to global warming and results in climate change.

Burning waste produces ash that is filled with heavy metals, which are poisonous to the environment and people.

Holding ponds and impoundments filled with toxic liquid have a way of rupturing or overflowing. When that happens, the whole area is contaminated.

Injecting our waste into the ground has become suspect. Areas with injection wells, which never experienced earth-

## CAN YOU?

**Reduce,  
reuse,  
recycle.**

quakes before, are now having frequent earthquakes.

And then there is nuclear waste. It is such a vexing problem that we are just holding it in nuclear plants around the country, submerged in pools of water or stored in casks on site. The nuclear material is dangerous to humans for hundreds of thousands of years. No one wants to live near it, nor do they want it moving through their cities in trains or trucks. People are afraid of it. Plans to store the nuclear waste in Yucca Mountain in Nevada were cancelled. Even if it had been built, it would not have been able to hold all the nuclear waste that currently exists, about 72,000 tons of it.

We have not solved our waste problem, even though we have been burning coal to make electricity since the 1880's, making nuclear waste since the 1940's, and generating municipal waste since the urbanization of America. Technology has not solved the problem and so we are left with a very simple solution to our waste problem. Reduce it, reuse it, or recycle it.

**To reduce waste we have to reduce our consumption, which also means that we throw away less.** We have to stop buying things that we don't need. We have to be more discerning about our purchases to buy things that will last. We

should avoid buying disposable items.

Reusing things is another way to reduce our waste. Used books are just as readable as new books. Instead of throwing out clothes, donate them. Instead of buying a new appliance, try to have it fixed or buy a used, reconditioned one.

Recycle things you don't want. Most of the things we throw out can be recycled and turned into products once again. Right now in the United States, only 35 percent of the things that can be recycled are. We have to do a better job.

DO YOU  
HAVE  
SOME-  
THING  
ON  
YOUR  
MIND?



Consider this your invitation to say it on our blog. Yes, the Sierra Club Chapter has a blog that allows our members to share their thoughts, ideas and peevs with the rest of us on Sierra Keystone Conversations.

THE PROCESS IS SIMPLE.

Submit your blog to:  
wendi.taylor@verizon.net

Or, of course, you can just be a regular reader. Find it at:  
<http://sierraclubpa.blogspot.com/>

[ ecoabc's ]

## oceans are life-sustaining

by Linda Small

The oceans play an important role in sustaining all life on earth, including human life. The oceans are being threatened by many human activities, so it's very important to understand what the oceans do for us and why we must act to preserve them.

Over half of the world's oxygen comes from ocean plants. Sea level itself is critically important to our lives; most of the world's people live within 60 miles of the coast and much of the world's food comes from along the coastline. Over 3.5 billion people in the world depend on the oceans for food.

The oceans directly affect the earth's climate on a local and global scale, influencing temperature and precipitation patterns. Those who live near the beach are familiar with cooling summer afternoon sea breezes, which are caused by the temperature differences between the land and ocean. On a much larger scale, England and northwestern Europe have

milder winters because of the warmer waters brought to the region by the Gulf Stream ocean current. Global climate patterns shift when ocean temperatures change during El Ninos, causing droughts in some areas and very wet patterns in others. Climate affects food production, energy use and more, so ocean temperatures and currents have a huge impact on our everyday life.

Three immediate threats to the life sustaining services the oceans provide must be understood.

Global warming is harming the ocean's ability to provide us with food, ocean acidification is having several harmful effects, and sea level rise is affecting major cities and food production.

In addition to warming the atmosphere, global warming is heating up the ocean. Warming ocean temperatures lead to changing or eliminating habitats. In Maine, shrimp season had to be cancelled because warm water temperatures caused a shrimp population crash. Coral reefs, home for many of the world's fish, are dying due to higher water temperatures, pollution and other problems. By the year 2050, the reefs may be extinct, and the fish and animal community depending on the reefs will suffer.

Much of the excess carbon dioxide released by burning fossil fuels is absorbed by the ocean, making it more acidic. The

ocean is 30 percent more acidic than it was before the Industrial Revolution. Ocean acidification hurts the ability of some ocean life to grow, and it makes some fish lose their ability to sense predators or locate prey. Krill, the tiny creatures near the bottom of the Antarctic Ocean food chain, are being affected



## CAN YOU?

**Talk to friends about climate change and how it affects the oceans and how the oceans affect us.**

by more acidic waters and the population may crash by the end of the century. Oyster production in the United States has already suffered significant harm as ocean water is often too acidic for the oyster hatcheries.

The sea level is forecast to rise at least two feet by 2100 with global warming. In addition to the obvious flooding of coastlines, drinking water supplies will be contaminated by salt water intrusion as seas rise.

The oceans sustain life and helps define our climate. We must work to preserve them from catastrophic manmade changes.

## a forest is more than trees

by Jeff Schmidt

When Europeans first came to the “New World”, they found vast tracts of unbroken forest. This was especially true in the lands that would become known as Pennsylvania. In fact, our state’s name is derived from 1) William Penn and 2) “sylvan”, which Webster’s defines as “belonging to a wood or forest”. With nearly all lands covered with dense, old growth forests, the name was very accurate. However, as Europeans pushed west across Pennsylvania, much of the forested lands were cleared for agriculture, or to exploit the valuable timber. The old growth hemlock trunks were highly valued for the tallest masts on newly-constructed sailing ships. By the late 1800’s Pennsylvania’s vast forests were clear cut, leaving a wasteland in the wake. It has taken more than a century for many of these forests to recover.

Forests provide an array of ecological services that benefit many species, in addition to the economic value to humans. Best known is the value of habitat for wildlife and plants. While many species can live in open lands or the edge of fields, many others can only exist in unbroken forests, far from openings that create habitat fragmentation. Some bird species travel thousands of miles to

nest and raise their young in Pennsylvania’s deep interior forests, free from the predators that thrive in fragmented habitat. A thick forest canopy provides ideal conditions for species of amphibians, shrubs and fungi that cannot exist in sunny areas. Forests are also an important place for recreation and renewal. Whether you are a hunter or angler hoping to bring home a meal from the forest’s bounty, or a hiker or bird watcher who enjoys studying nature, forests provide refuge from an increasingly chaotic and congested world.

Benefits of forests extend well beyond their borders. Forests protect streams from erosion and pollution, thus maintaining healthy fish and crustacean populations downstream. These, in turn, provide food for those higher on the food chain, including birds, and mammals such as muskrat and otters. The forests provide shade for streams; increasingly important as climate change causes our atmosphere and waters to warm. And most important: forests capture and store the greenhouse gas carbon dioxide, while exhaling oxygen.

In Pennsylvania today, about 59 percent of the state is considered “forested”. But much of these lands are privately owned small woodlots, fragmented by roads, fields, and various forms of development. Many of the “forests” in these woodlots are poorly-managed, and their value for habitat, water quality protection and carbon storage is seriously diminished. It is



difficult to regulate tens of thousands of private landowners to protect the values of their forest lands.

We also have publicly-owned forest lands, including a 2.2 million acre state forest system, a 500,000 acre national forest, and 1.7 million acres of state game lands. For many years, Sierra Club has worked to convince our public lands managers to maximize environmental stewardship of our lands. We have met with varying degrees of success. We need everyone to get involved. After all, we all are owners of these public lands.

### CAN YOU?

Enjoy a walk  
in the woods, and  
pick up some  
litter along  
the way.

[ ecoabc's ]

# turning our backs on sprawl

by *Dennis Winters*

Sprawl, or fringe development, has been described as the most economically, environmentally, and socially costly pattern of residential development ever devised. This form of land use is undesirable because of its reliance on the automobile and big detached buildings (culminating in so-called “McMansions”). The excessive consumption of finite resources is an unsustainable way of human habitation. Because of the dependence on automobiles and other light duty vehicles for everyday life, sprawl is a major source of air pollution (sulfur dioxide, volatile hydrocarbons and nitrogen oxides (the precursors of ozone), and carbon monoxide...all criteria pollutants listed in the Clean Air Act. **The fossil fuel energy-intensive nature of sprawl inevitably results in a much larger “carbon footprint” for suburbanites than that of urban dwellers.**

Development on the fringe also causes the overconsumption of water largely for the maintenance of yards and landscaping; the loss of biodiversity through the loss of habitat; the increase in obesity because of reliance on the automobile even for short trips – instead of walking or cycling. Finally, sprawl results in increased racial and economic disparity through the loss of urban tax base and political clout.

## SO WHERE DO WE GO FROM HERE?

Well, thousands of acres of land waiting for development lie in the vacant land in those urban areas that have suffered from abandonment in the past. Relatively

small investments in the redevelopment of vacant lots, in both single parcels and those in combination, lying fallow in most cities offer numerous beneficial uses:

- Stormwater absorption and flood control
- Air temperature regulation
- Wind speed mitigation
- Air purification (the absorption of pollutants)
- Carbon sequestration
- Habitat for both plants and animals
- “Green corridors” for wildlife
- Recreation space
- Community garden space
- Social “public places”
- Adjacent property value enhancement
- Neighborhood beautification

Many of the uses listed above are the very ones sought by people moving to the suburbs in the past. Now with the unsustainability of sprawl becoming more and more apparent, converging populations of Baby Boomers and Millennials are becoming an attractive market for urban housing markets and other businesses. Today the American Millennial generation and Baby Boom empty-nesters, together, number over eighty million. Both groups are more environmentally conscious than their forefathers who imagined an infinite amount of space and gasoline that would permit every American to leave the city behind. Both groups, young professionals and empty nesters, are the primary driving force behind a phenomenon that could be called “reurbanization.”

Sprawl did not happen by accident. The decisions of big business and government provided both the incentives and the investment necessary for development on the fringe to become a reality. Low- and no-cost post World War II home mortgages and the Federal Aid Highway Act of 1956 that created the Interstate Highway Program, are just two examples of public policies that have led to sprawl and the unsustainable lifestyle have become the social norm.

With the collapse of the home mortgage market and a deteriorating transportation infrastructure, **we can see signs of the unsustainable nature of sprawl.** Fortunately reuse of the abandoned vacant land in our cities offers a way to reclaim a lifestyle that is better for us, and the planet.

**CAN YOU?**  
**Walk, ride a bike, leave the car at home once in a while.**

# you are what you eat

by Tom Church

Farming methods have obviously changed over the years. Way before our time, people grew what they needed for personal family and neighbor use. If they had a surplus, they might trade with a neighbor or sell some surplus for staples. They found that if they grew the same thing in the same place year after year, the yield and quality dropped. So they rotated crops, turned livestock into the field, or grew something and plowed it under to enrich the soil. This all makes sense. One use would renew the field for another. When the field was wounded, they let it heal. This is a closed, sustainable system.

What is “sustainability”? There is a huge debate between the advocates for “monoculture” farming practices and the folks who use “sustainable” practices. Advocates

of monoculture say they can grow more and do it cheaply. Sustainable practice advocates point out that whatever farmers grow pulls nutrients from the soil. Balanced, natural soil provides a balanced food supply of vitamins and minerals. Balanced soil is also alive with microbes essential for plants to fight pests and disease. This balance is lost in monoculture farming. Soil is a living entity. It needs to heal, to be replenished, before it can grow the same crop with the same nutritional value.

After the balance is upset, it's only natural that the plants get weaker and less pest and disease resistant.

Monoculture farmers think that conquering and controlling the soil can increase the amount of product a field can provide by creating a sterile environment and then introducing supplements

as needed. So monoculture farmers apply biocides and pesticides that don't discriminate between good and bad elements and then they have to react to new problems. They test and study, and then provide fertilizers. But the things they add only restore a minute fraction of the diverse and complex growing system they have destroyed. They can never provide the same crop.

The amazing and wonderful ecosystem relationships are gone. Gone is the symbiosis developed by centuries of adaptation and natural selection. This leaves a field that has no

weeds or pollinators in the growing season; it looks like a war zone after harvest. And the effects are not confined to the field. Additives leach out into the surrounding area water supply, continuously expanding the damage.

Add to that the chemicals introduced by animal factory farming and we've got a real mess. We may have full bellies but we are what we eat, including antibiotics, pesticides, and no telling what else. Our bodies are confused. We try to guess how to restore the balance that was in the soil, so we take a pill or many pills -- vitamin and mineral supplements. But the nutritional balance in organic foods is lost.

Maybe farmers had it right in the first place. Buy Fresh; Eat Local.

**CAN YOU?**  
Buy fresh,  
eat local



[ ecoabc's ]

# extinction of species: why should we care?

by Gwen Chute

In ordinary times, the extinction of species occurs only rarely. Mammals, for example, have become extinct at a rate of about one species every seven hundred years. This “normal” rate is commonly referred to as “background extinction.” Mass extinctions, however, during which species disappear in catastrophically higher numbers over drastically shorter periods, have occurred only five times in the entire history of life on Earth. The most recent and familiar of these “extinction spikes” at the end of the Cretaceous period resulted in the disappearance of dinosaurs.

Now, the extinction rate has once again skyrocketed to alarming levels such that we are said to be experiencing a sixth extinction. Examples include the worldwide extinction in the wild of many species of amphibians (survivors of all five of the previous extinctions) and plummeting bat populations across North America and Europe.

Are scientists right to be alarmed by these events? What does it matter if some animals can be seen only in zoos and others disappear forever? After all, humans have demonstrated the resourcefulness, ingenuity and intelligence to grow and provide food for burgeoning populations, travel to outer space, and conquer deadly diseases. But here’s the thing— we don’t live in a bubble.

Each living organ-

ism is connected to others, forming an ecosystem, and each depends on the others for survival. These connections are often referred to as the “web of life.” When one species (whether plant, mammal, insect, amphibian, reptile or fish) is removed from the web, the fabric of the ecosystem itself begins to unravel.

**When large predators such as wolves are removed from the ecosystem, their prey animals overproduce** and deplete the plants on which they and other species depend. When bats are wiped out, flying insects like mosquitoes proliferate to spread disease, and pollination of food crops by nectar and fruit eating bats is jeopardized.

According to Elizabeth Kolbert, author of *The Sixth Extinction* (2014), it is now indisputable that humans are responsible for the massive imbalance that has resulted in this sixth extinction. Habitat destruction via non-sustainable agriculture, industrialization and fragmentation;

poaching, sport and commercialized hunting of predators and large mammals like wolves, elephants, rhinos and lions; the introduction of foreign plant and animal species; and pollution of water, soil and air that has warmed the oceans and is melting the ice at the top and bottom of the globe, threatening the survival of polar bears, seals and more - all have con-

tributed to this massive imbalance. We have thoroughly disrupted the ecosystem of which we are a part. In doing so, we are putting ourselves at grave risk.

American biologist Edward O. Wilson perhaps has said it best. **“Humanity is a biological species, living in a biological environment,** because like all species, we are exquisitely adapted in everything: from our behavior, to our genetics, to our physiology, to that particular environment in which we live. The earth is our home. Unless we preserve the rest of life... we will be endangering ourselves by destroying the home in which we evolved, and on which we completely depend.”

**If we fail to care and therefore fail to act, we do so at our own peril.**

## CAN YOU?

**Write a letter opposing practices that threaten Polar Bears, Elephants, Butterflies, and Bats.**



## rolling coal

by Nancy F Parks, Chair, Clean Air Research Committee, PA Chapter,

**H**ave you ever been walking along a road side on your way to the local post office when thick black smoke envelops you? As you cough, actively shielding your lungs and nearly suffocating within the black cloud, you wonder: What happened?

### You have just experienced “rolling coal.”

And you want to know: Can this be legal? How can the driver of that diesel-fueled pickup truck get away with turning on his smoke switch in public? This can't be allowed under the Clean Air Act? Can it?

I've experienced rolling coal here in my agricultural valley as I have driven my Prius; my neighbors have been doused with black smoke as they have regularly protested our wars in the Middle East from here in Penns Valley. Some of them are war veterans.

### The act of “rolling coal” has been around for a

**long time.** Young men sometimes smoke out young women as they drive by. Black smoke has been seen at truck-pull competitions at county fairs and at local raceways for a long time. Now it's a form of illegal political protest; engine tampering is prohibited under the Clean Air Act. By tampering with a diesel engine, it can be made to accept fuel with a rich air-to-fuel ratio. The fuel that cannot be properly combusted is released as black soot. Traditionally, competitive drivers dump this extra fuel into their diesel engines for power, by flipping the “smoke switch”. But can this infrequent black cloud of diesel smoke really be a problem?

Diesel Hub certainly thinks so. They believe that drivers who use these small

protests of disrespect of rolling coal are damaging the image of diesel and the attitude of consumers toward diesel engines, hindering future consumer growth and adding pressure on diesel equipment manufacturers.

### More importantly, EPA knows it is a problem.

Diesel fuel spews nitrogen oxides and soot. For 30 years, the Sierra Club has said that the smaller the soot particle (PM 2.5), the worse the health effects. The small particles in diesel exhaust are particularly dangerous.

Smaller fine particle soot (PM 2.5) can be suspended in the air we breathe for days to weeks at a time while larger (PM 10) particles of air pollution remain in the atmosphere for a relatively short time. PM 2.5 can settle deep in the lungs of young children, whose respiratory systems are revved higher than adults, and adults, who breathe more deeply during exercise. The small particles of diesel exhaust are more dangerous because they attach toxins such as polycyclic aromatic hydrocarbons, nitroaromatics, benzene, dioxins and more. These chemical toxic hitch-hikers on particles are held in the lungs for longer periods of time along with their attached toxins.

Rolling coal perpetrators should find a better way to protest, one that does not add more pollution to the air we all breathe.

Diesel-fueled Engines are More Polluting

Diesel fuel pollution releases twice the nitrogen oxides (NOx) of a gasoline-fired engine and three times the fine particle



soot. In 1997 diesel-fueled, freight-moving vehicles accounted for 26 percent of all nitrogen oxide emissions in the United States, including both light duty pickups and heavy duty diesel engines.

In Pennsylvania 60 percent of on-road emissions came from all diesel fuel vehicles, light duty and heavy duty, in 2011. That year, EPA found that mobile sourced PM2.5 fine soot was 11.8 percent (12,966 short tons) of all PM 2.5 emissions (110,119 short tons PM 2.5), while 55 percent of these mobile emissions were from on-road vehicles in Pennsylvania. Diesel light duty pickup trucks, capable of rolling coal, were 2 percent of on-road emissions (137 short tons).

Nationally, EPA found a total of 15,517,527 short tons of NOx were emitted in 2011, and mobile sourced NOx was 57 percent (8,919,374 short tons) of all NOx emitted. On-road mobile emissions were 64.9 percent of the total nationally in 2011.

By comparison, here in Pennsylvania, EPA found that mobile emissions in 2011 were the largest source of NOx at 49.7 percent of total emissions. Of that, on-road emissions were 73 percent of all mobile emissions. Diesel fueled vehicles accounted for 43 percent of on-road emissions, of which light duty diesel fueled pickups accounted for 1 percent of on-road emissions.

## looking back on the fall 2014 election

Electing candidates that are friendly to the Club's position on environmental issues is an important way for the Sierra Club to achieve its goal of protecting the environment.

Since the Fall edition of The Sylvania was filled with candidate endorsements, it seems we should take a little space in this issue to report back on how the Sierra Club's endorsed candidates did in the 2014 General Election.

The Club endorsed 44 candidates: seven for U.S. Congress, 33 for the PA House, three for the PA Senate, and one candidate for Governor. About 66 percent of our candidates won. All 27 of the endorsed incumbents won. However, only two candidates who were not incumbents managed to win their posts, Tom Wolf for governor and Art Haywood, who ran for an open seat in the 4th Senatorial District in Delaware County.

The Sierra Club contributed a total of \$3,300 to the political campaigns of our endorsed candidates, through the Club's Political Action Fund, and provided many volunteers, who made calls, knocked on doors and worked the polls on November 4th.

This year, for the first time, the Sierra Club hired a firm to call our members to encourage them to get out and vote. The weekend before the General Election, the club reached about 11,000 of our member households. The message did not mention any candidate or party; it just encouraged people to vote. We hope they did!

### 12<sup>th</sup> Annual Appeal Addressing Party

February 17 – 20  
10:00am – 4:00pm

101 S. 2<sup>nd</sup> St, Suite 4  
Harrisburg PA 17101

Join us in Harrisburg to help hand address and stamp appeal letters. Stay for a little or stay for a lot – all assistance is appreciated. Refreshments and lunch provided.

RSVP to Carli Feldman no later than February 6 to 717.232.0101 or [carli.timpon@sierraclub.org](mailto:carli.timpon@sierraclub.org).

## national club elections coming soon

The annual election for the Club's Board of Directors is coming soon. Those eligible to vote in the national Sierra Club election will receive in the mail (or by Internet if you chose the electronic delivery option) your national Sierra Club ballot. This will include information on the candidates and where you can find additional information on the Club's web site.

The Sierra Club is a democratically structured organization at all levels. The Club requires the regular flow of views on policy and priorities from its grassroots membership in order to function well. Yearly participation in elections at all Club levels is a major membership obligation.

If you want to request an electronic ballot, which will save the Club money and paper, please sign up at [https://secure.sierraclub.org/site/SPageNavigator/Membership/EBallot\\_Information.html](https://secure.sierraclub.org/site/SPageNavigator/Membership/EBallot_Information.html)

Members frequently state that they don't know the candidates and find it difficult to vote without learning more. You can learn more by asking questions of your group and chapter leadership and other experienced members you know.

Visit the Club's election web site:

<http://clubhouse.sierraclub.org/people/committees/board/board-election-2015.aspx>

This site provides links to additional information about candidates and their views on a variety of issues facing the Club and the environment.

You should use your own judgment by taking several minutes to read the ballot statement of each candidate. Then make your choice and cast your vote. Even if you receive your election materials in the mail, please go to the user-friendly Internet voting site to save time and postage. If necessary, you will find the ballot is quite straightforward and easy to mark and mail.

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## [ chapter elections ]

### club members elect at-large delegates to two-year terms

Last month the members of the Sierra Club in Pennsylvania voted to elect Don Miles, Jeff Schmidt, and Nancy Parks as their at-large delegates who will represent the members' interests on the Sierra Club's Executive Committee for the next two years.

The Chapter has six at-large delegates, who serve two years. Each year, an election is held to fill half of the positions. This year, members were asked to vote for three of the four candidates running. Justina Wasicek also ran for at-large delegate.

The election was supervised by the Election Committee, chaired by Roy Fontaine. The ballots were counted on December 23, with David Hafer as a witness. Of the 96 single ballots and 22 joint ballots cast, one single ballot was de-

clared invalid because the member voted for all four candidates, in violation of the directions for voting. This single case would not have altered the outcome of the election.

"Thanks to all the candidates for their service to the club," Fontaine said.

Miles is the Pennsylvania Chapter's delegate to the Sierra Club's Council of Club leaders, Schmidt is the co-chair of the Public Lands Committee and Nancy Parks is the chair of the Air Research Committee.

# [ coleman's lantern ]

## cornucopia of delights

by Phil Coleman

*"We live in a world which is so full of sights and sounds that it is almost overwhelming. ... No two people will ever hear or see the same thing in an identical object, and therefore, objects cannot be what we seek in our search for truth. ..."*

Socrates, Phaedo

*"We seek to perceive them and we cannot see them; we seek to hear them and we do not hear them."*

H. D. Thoreau, Walden

Thoreau is a most extravagant writer. Every phrase, every sentence stretches the language. He is known today more by what he is reported to have said than by the way he said it. But try reading Walden — slowly — once again. Reading a few lines takes me off on a new and different tangent. It is my own tangent. He would carry you away somehow differently, on your own celestial course.

What he says about seeing and hearing reminds me of the struggle I have to understand and even enjoy what is around me. I hear the angry squawk of a heron. I can see him in my mind's eye and I know he is trying to bluff some lesser bird who has come too close.

Or I can read about the heron in my bird book. I can learn his height and wing span. I can see a map of his territory. I can read about his cousins. The bird book describes his voice as "frahnk, frahnk, frahnk!" For some reason, that reminds me that Cary Grant never did say "Judy, Judy, Judy!"

I see a pretty blossom, I enjoy its pink softening to white. But some part of me says that I should be able to name the flower. Why? Would knowing its name tell me anything I don't already see and feel?

Of course, in one sense it would. I could learn its species, genus, etc., and discover that like the heron it has a range.

I might learn that in its own way it says, "frahnk, frahnk, frahnk!"

As I walk two hours before sunrise this morning, I see Orion in the western sky. It is a distinctive, perhaps the most obvious constellation. Since I have heard and read a bit about Orion, I know he is the hunter. I see his belt, his dagger, his

shoulder, legs and head. It would be so easy to forget all that and just see a random few stars. But then I have to remember that most people think that Orion is a set of stars in some close relationship to each other.

They don't know that the closest is 240 light years from us, and the farthest is 1300 light years from us. That means it is 7,644,000,000,000,000 miles away from us. Imagine that.

The light of Alnilam has been traveling toward us for 1300 years. It seems to us just a dim fixed spot.

The light of Rigel started on its journey 660 years ago. Even so, it is the brightest star. Alnitak, the brightest star in the dagger, is 700 light years away. It is 100,000 times as bright as our sun. Thoreau didn't know that.

He lived a century too early.

But, so what? What perceptions are important to me? Whatever they are, a biologist's perceptions of the heron, her knowledge of that squawking bird, her need to know, to classify, etc., is different from mine. The astronomer's perception of the stars in Orion probably has nothing to do with their apparent arrangement as a constellation.

Thoreau had read Darwin's *The Voyage of the Beagle* before he wrote *Walden*, but he had not read *Origin of Species*. It had not been published yet. He did not know what we know of evolution.

His knowledge of astronomy was strictly 19th century and did not extend beyond awareness of our galaxy. But he loved to push the limits.

His suggestive, metaphor-crammed rhetoric knew no bounds.



# [ poem ]

## In Wildness is the Preservation of the World

(In Tribute to Thoreau) by Sherry Knowlton

An explosion of green.  
The silverback emerges from the jungle.  
Heart racing from the mock charge,  
I spend the next hour entranced by his family  
Gentle giants of the highland mists.

*Hear the drums of danger beat.  
Jungle felled for crops to eat.  
Brutal tramp of soldiers' feet.  
Starving villagers hunt bush meat.  
The last mountain gorillas in desperate retreat.*

Lumbering across the golden savannah,  
Mother and child pause to graze.  
Delighted at this rare sighting,  
We shadow the pair in our vehicle.  
Prehistoric beasts of the African plains.

*Hear the bells of danger ring.  
Poachers kill; the horn's the thing.  
Asian markets clamoring  
For the rise it's said the horn will bring.  
The last rhinos at risk of vanishing.*

Striding across the frozen tundra,  
Massive white bears advance to the ice.  
I watch in amazement  
When two youngsters stand to tussle.  
Kings and queens of the polar north.

*Hear the trumpets of danger sound.  
Rising temperatures warm the ground.  
Later ice, fewer seals found.  
In summer, life or death is measured by the pound.  
The last polar bears, fated to be starved or drowned?*

Joining together across nations,  
People can step back from the brink.  
I watch, heart filled with hope  
At each small measure taken to save our planet  
The gorilla, the rhino, the polar bear can survive.

*Hear the whispers of hope grow loud.  
The last humans can act now to save the wild.*

*Sherry Knowlton is a lifetime member of the Sierra Club and was active in the PA Chapter in the 1970's. Sunbury Press recently released her first novel, *Dead of Autumn*, a thriller set in the forests of southcentral Pennsylvania. Her website is [www.sherryknowlton.com](http://www.sherryknowlton.com).*

## a view from harrisburg *(continued from page 5)*

HB 1576 of last session – known as the Endangered Species Coordination Act. In addition, despite having succeeded in undermining existing stream buffer requirements with the passage of HB 1565 at the end of 2014, industry interests may attempt to further weaken riparian buffer requirements and facilitate development. Rep. Kate Harper's green buildings bill, HB 34 of last session, and what was Rep. Ron Miller's HB 343 that addresses water well construction standards, are also likely to arise in 2015. Mirroring a statement made by Governor-Elect Wolf, Rep. Karen Boback may seek support for a bill to require the creation of a Marcellus Shale health registry.

In addition, Rep. Greg Vitali, is circulating a co-sponsorship memoranda that would impose a moratorium on new oil and gas leases of state parks and forests, create a dedicated funding stream for the PA Sunshine Solar Program, further clarify appropriate uses of Oil and Gas Lease Fund monies, improve the Alternative Energy Portfolio Standard requirements for renewable energy; and amend Act 129 to address energy efficiency and conservation program needs.

### 2013-2014 PENNSYLVANIA ENVIRONMENTAL SCORECARD RELEASED: HOW DOES YOUR ELECTED OFFICIAL MEASURE UP?

The Sierra Club, along with Clean Water Action, and Conservation Voters of PA, released a joint Pennsylvania Environmental Scorecard near the end of the 2013-2014 legislative session. Compiling and tabulating votes from key environmental votes of the past session, we graded lawmakers in the state House of Representatives and state Senate on whether their votes supported protection of public health, natural resources, and the environment.

Eighteen members of the House and five members of the Senate received perfect scores of 100 percent:

- State Senators Andy Dinniman (D - Chester), Vince Hughes (D - Philadelphia), Daylin Leach (D - Montgomery), Leanna Washington (D - Philadelphia), and Anthony Williams (D - Philadelphia)
- State Representatives Brendan Boyle (D - Philadelphia), Kevin Boyle (D - Philadelphia), Matthew Bradford (D - Montgomery), Tim Briggs (D - Montgomery), Mary Jo Daley (D - Montgomery), Dan Frankel (D - Allegheny), Robert Freeman (D - Northampton), Ed Gainey (D - Allegheny), Patty Kim (D - Dauphin), Thaddeus Kirkland (D - Delaware), Stephen McCarter (D - Montgomery), Erin Molchany (D - Allegheny), Phyllis Mundy (D - Luzerne), Mark Painter (D - Montgomery), James Roebuck (D - Philadelphia), John Sabatina (D - Philadelphia), Steve Samuelson (D - Lehigh), and Steven Santarsiero (D - Bucks).

Forty-two more Representatives and four additional Senators achieved passing grades, with scores ranging from 75 percent to 92 percent.

But the scorecard includes votes on legislative attacks that did become law, including provisions to authorize funds

raised from the opening of State Parks and the reopening of State Forests to natural gas drilling and a Sewage in Our Streams bill that threatens the health of important waterways by allowing for higher levels of degradation in sewage systems.

Perhaps most alarming, some legislators failed to cast even one key vote for the environment and received a score of zero. They were:

- State Senators Scott Hutchinson (R, Centre) and Scott Wagner (R, Centre)
- State Representatives Kerry Benninghoff (R, Centre), Stephen Bloom (R, Cumberland), Michele Brooks (R, Mercer), Martin Causer (R, McKean), Gordon Denlinger (R, Lancaster), Daryl Metcalfe (R, Butler), Kathy Rapp (R, Warren), Tommy Sankey (R, Clearfield), and Will Tallman (R, Adams)

A copy of the scorecard is available on our website at: [http://pennsylvania.sierraclub.org/PA\\_Chapter\\_2008/Politics/PA-Env-Scorecard-2013-2014.pdf](http://pennsylvania.sierraclub.org/PA_Chapter_2008/Politics/PA-Env-Scorecard-2013-2014.pdf).

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# [ meetings and outings ]

## Meetings and Outings

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<http://pennsylvania.sierraclub.org/moshannon/outings.html>

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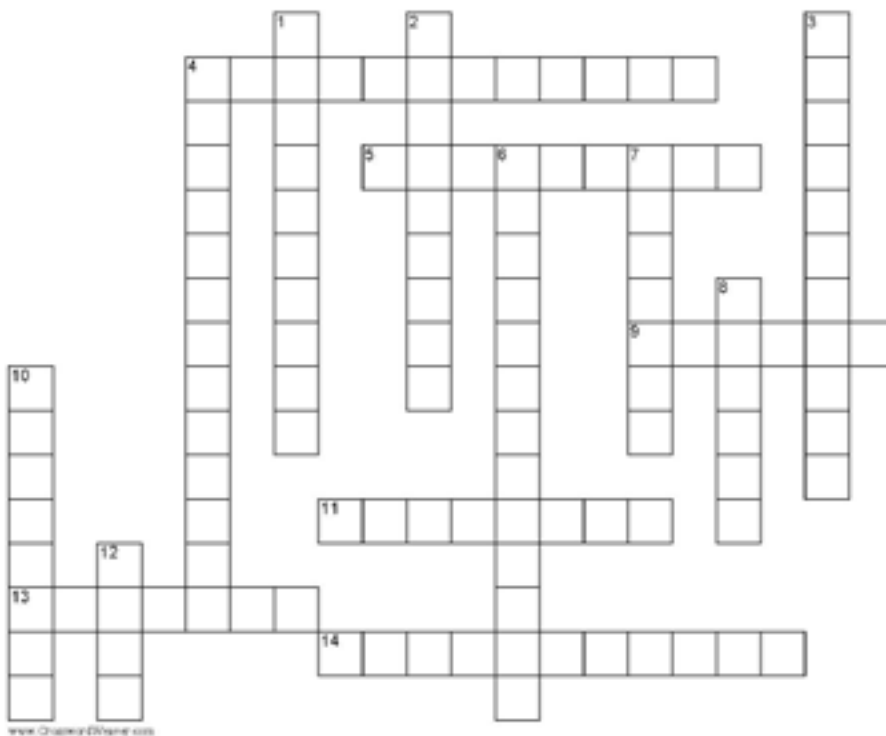
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explore, enjoy and protect the planet.

# [ winter crossword ]



## Across

- 4 Proposed wilderness area
- 5 Did not say "Judy, Judy, Judy!"
- 9 Belonging to a wood or forest
- 11 1990 act
- 13 A most extravagant writer
- 13 Power Company in SE Pennsylvania
- 14 Climate culprits

## Down

- 1 Remote backcountry recreation
- 2 A threatened species
- 3 Gentle giants of the highland mists
- 4 Greenhouse gas
- 6 Abandoned nuclear waste site
- 7 Building super sewers
- 8 Pacific Ocean Current
- 10 Sierra member, poet
- 12 Governor elect

answers on page 9