

Fresh Air

The Quarterly Newsletter of the
Atlantic Chapter Mid-Hudson Group



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Mid-Hudson Sierra Club
P.O. Box 1012
Poughkeepsie, NY 12602

Summer 2016 Vol. 48 Issue 2

Chair's Corner

Joanne Steele

Thanks to your donations we were able to donate \$750 to help the sloop Clearwater with U.S. Coast Guard mandated repairs. She'll be plying the Hudson again in June, educating us and our children. In another matter, we were approached by the Save Alligerville Committee (SAC) for possible endorsement of their efforts in opposition to a special use permit granted to Crested Hen Farms by the Town of Rochester Planning Board for a wedding venue in an historic 1835 barn located on an ecologically sensitive agricultural property on the Rondout Creek in the hamlet of Alligerville. Since there is an eagle's nest on the property, we sent a letter (written by our Program Chair, JoyAnn Savino),

along with pertinent articles regarding eagles, to the property owners with copies to SAC and DEC.

I am pleased to have appointed Alison White to your Executive Committee, for a one-year term with unanimous Committee approval. Alison has been doing a great job as Chair of our Political Committee. Working with Atlantic Chapter political committee members, our Chapter endorsed Democratic Palatine Town Supervisor Sara Niccoli for the 46th NYS Senate seat.

Remember, it's your involvement which makes a livable future possible for us all. That will not happen without your involvement. It won't. Get involved! Keep involved!

Conservation Corner

Joanne Steele

On Tuesday, May 17, 2016 the Massachusetts Supreme Judicial Court found in favor of four youth plaintiffs, the Conservation Law Foundation and Mass Energy Consumers Alliance in the critical climate change case, *Kain et al. v. Massachusetts Department of Environmental Protection (DEP)*. The court found that the DEP was not complying with its legal obligation to reduce the state's greenhouse gas emissions and ordered the agency to "promulgate regulations that address multiple sources or categories of sources of greenhouse gas emissions, impose a limit on emissions that may be released... and set limits that decline on an annual basis." In 2012, hundreds of youth petitioned the DEP asking the agency to comply with the Global Warming Solutions Act (GWSA) and adopt rules reducing the state's greenhouse gas emissions, but that petition was denied. As a result of DEP's reluctance to comply with the GWSA, youth filed this case arguing that the DEP failed to promulgate the regulations required by Section 3(d) of the GWSA establishing declining annual levels of greenhouse gas emissions. "This is an historic victory for young generations advocating for changes to be made by government. The global climate change crisis is a threat to the well being of humanity, and to my generation, that has been ignored for too long," youth plaintiff Shamus Miller, age 17, said. [<http://goo.gl/kasy1K>]

Last month, the state of New York denied a permit for construction of the Constitution Pipeline (CP). Another, the Northeast Energy Direct project, was canceled by its developer. You Sierrans had a good deal to do with the CP permit denial, by repeatedly contacting Governor Cuomo. Thank you, all! Yet, the fire and sludge industry is on the move. Riverkeeper tells us that Global Companies LLC, one of the largest petroleum distributors in the Northeast, is close to transforming the Hudson Valley into a heavy crude oil (tar sands) superhighway. They have applied for a state permit that would allow it to bring the stuff into the Port of Albany via bomb trains and transfer it to river barges. But, it's so thick (sludge) that it must be heated (flammable) to move it. A judge ordered the state Department of Environmental Conservation to act within 60 days to approve or deny the permit. Global seeks for heavy crude boilers at its Port of Albany crude oil facility. Hopefully, Governor Cuomo will direct the DEC to request more time to complete a full environmental review of the proposal or to deny the permit if additional time is not granted. Time may be too short, or even gone, for you to now call the

Governor, but do it anyway! Call (518) 474-8390.

Anne Marie G. of the group Stop The Pipeline (STP) advises us with respect to what happens to the right-of-ways if CP is not built. She tell us, "STP is asking the Second Circuit Court of Appeals to void the easements as part of our challenge to FERC's certificate. They don't automatically expire, and based on the complaint CP filed on Monday (5/16/16) in the NDNY (Northern District of New York | United States District Court), I doubt CP will give them up without a fight. Easements that were signed by landowners are on the deed 'forever.'" Mary Finneran (pilgrimpipeline@googlegroups.com) muses: "...if one signs on with a corporation, one signs on forever, whereas eminent domain is usually project specific. This could actually be extended to property value, those people on the Constitution route who had eminent domain decisions may well end up with a clear property deed. Those who signed leases have the easement permanently on their deed. This would also be in addition to the liability clauses people might get stuck with if they sign, whereas, if one's property is taken by eminent domain, liabilities for damages are incurred upon the corporation." Wow! That's going to affect your property value!!

The world of solar energy has two interesting new contenders for the solar panel market. One, perovskites, cost far less to produce, shortening payback times from years to months. The other, a new organic solar cell, promises high efficiency at half the cost of silicon. The manufacturing processes of both are a lot less expensive than for silicon cells. A perovskite solar cell is most commonly a hybrid organic-inorganic material. They could get a higher efficiency than with silicon, which is governed by an efficiency ceiling of around 30 percent. The current downside has been that perovskites degrade in moisture and contain lead. They're working on it! The silicon panel industry is mature and nearly everybody is in it, which might pose a threat to the development of these new materials. Will the newbies be bought out and buried as we've seen before with technology in other venues? Must we figure that they will be hamstrung by the Silicon and/or Petro industries wherever possible? Well, maybe not. Wikipedia says (!) of the perovskite cells, "With the potential of achieving even higher efficiencies and the very low production costs, perovskite solar cells have become commercially attractive, with start-up companies already promising modules on the market
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by 2017.” I’m hopeful for both technologies! For information on some of the enemies of solar, check out Tim Dickinson’s, *The Koch Brothers’ Dirty War on Solar*, *Rolling Stone* (2/11/16), and Jeff Brady’s, *Nevada Solar Power Business Struggles To Keep The Lights On*, *NPR* (3/11/16). I should mention here that the situation in Florida is even more disgusting!

If you’re looking for an electric car, our Sierra Club has a “Pick-A-Plugin” quiz you can take to find one. I was surprised to find how many plug-in EVs (electric vehicles) there are. Our site says, “It all depends on how many miles a day you drive, whether you take frequent long trips, whether you have a place to plug in the car, how much money you’re prepared to spend, etc. Answer the questions below, and get started on your journey to pick a plug-in car.” Do consider that the plug-in market is maturing now, so you might be able to find a good used one. [<https://goo.gl/X2cF8r>] Besides paying for it, the biggest fear among potential plug-in owners is probably being marooned by a flat battery due to a dearth of charging stations here in the U.S. Well, a recent survey by Nissan found that Japan now has more electric car charge points than petrol stations (40,000+ vs. 35,000). A large number of those charge points are located in private garages and used mostly by a single owner. However, the “sharing” economy implies that a charging location version of Airbnb will make private owners’ digs available to other drivers using new apps for their GPS to locate all of them. [<http://goo.gl/0eaXLo>] However, your car may be hard to find! [<http://goo.gl/g56faS>]

Electrosmog—clouds of electromagnetic fields caused by Wi-Fi, phone signals and electricity in your home and on those towers—is endangering! A federal study by the National Toxicology Program (NTP), just concluded, showed statistically significant increases in cancer among rats that had been exposed to GSM or CDMA signals for two-years. [CDMA (Code Division Multiple Access) and GSM (Global System for Mobiles) are shorthand for the two major radio systems used in cell phones.] The study found that they cause cancer with a dose-response relationship. The more the exposure, the higher the risk. The U.S. NTP is expected to issue a public announcement...when? The NTP has notified the National Institutes of Health (NIH), the National Institute of Environmental Health Sciences (NIEHS), and the two federal agencies responsible for regulating exposures to cell phone radiation, the Food and Drug Administration (FDA) and the Federal Communications Commission (FCC). “This is a game changer, there is no question,” said David Carpenter, the director of the Institute for Health and the Environment at the University of Albany. “It confirms what we have been seeing for many years—though now we have evidence in animals as well as in humans.” Carpenter went on to add, “The NTP has the credibility of the federal government. It will be very difficult for the naysayers to deny the association *any* longer.” Well, are all the various agencies now in the process of planning the release of the NTP findings? It is deeply held that there is no risk. Wrong! Wrong! Set your cellphone (if you don’t toss it) on speakerphone. Do not hold it next to your head, nor groin, nor breast. When not using it, set it on Airplane Mode! [<http://goo.gl/mGm0EX/>]

Home of The Future Being Built in Woodstock

by Marie Caruso

One doesn’t have to travel far to see a house here in the Hudson Valley that could be the vanguard of the future in zero energy housing.

In Woodstock, Daniel Levy, Ph.D., a former industrial education professor and certified Passive House builder and consultant, is putting the finishing touches on a two-story, 2,350-square-foot home built with completely non-toxic, chemical-free materials while meeting all the criteria for “Passive House”—considered the world’s most stringent energy standard.

Most houses in the U.S., even those meeting Passive House standards, are built with wood and chemical foam. This one is built with autoclaved aerated concrete (AAC), which is sheathed with mineral wool, reinforced with steel rebar, and clad, on the outside, with fiber cement siding (looks similar to wood). The outside walls are 17 inches thick.

AAC is a lightweight pre-cast masonry product which is fire-, water-, pest-, and sound-resistant, and very strong and durable. It can be worked with woodworking tools and holds temperature extremely well. Although it’s been around since 1924, and is commonly used in many other countries, it is just starting to gain a foothold in the U.S., where it is manufactured by only one plant (Aercon).

The house sits on a concrete slab underlain with 10 inches of Foamglas insulation and a thick Stego vapor barrier. The ceiling is insulated with 24 inches of cellulose. The windows are all tilt and turn, triple-glazed, and imported from Europe.

The siting of the house and the eaves and overhangs are all designed to maximize sun exposure in the winter and minimize it in the summer. It is all electric, powered with a 7.56 kilowatt



system of photovoltaic solar panels on a steel roof. On an annual basis, these panels will generate more power than is needed for both this house and a studio apartment built above the attached garage. There is no chimney, as there is no combustion.

As the house is airtight, stale air is removed and fresh air provided through an energy recovery ventilation system. Heating and cooling are achieved with a ductless heat pump. The temperature remains even and comfortable in all seasons.

The house had amazing temperature retention even before the heating and cooling system was installed. According to Levy, last summer, without any AC, the house never got hotter than 70 degrees inside. And this past winter, with no heating system at all, the house never got colder than 45 degrees, even when the temperature outside dropped to 8 degrees below 0.

All the appliances conform to the strictest energy efficiency standards. The water heater and dryer operate with heat pumps, which draw heat from the surrounding air. Cooking is done by induction and baking by convection.

The solar panels have only been up about three weeks, but, despite many days of cloudy and rainy weather, they’ve already generated 820 kilowatt hours of power. The house is certified by Passive House Institute US (PHIUS) and has met all the requirements for the Department of Energy Zero Energy Home, NYSERDA, Indoor Air Plus, and more.

Levy is passionate about this method of construction and would like to get into the business of building smaller, more moderately priced homes to the same standards as this one.

He is quite open to giving tours and discussing his building techniques. He can be reached by phone at 410-961-8900 or through his website: www.greenspringbuildingsystems.com. The Mid-Hudson Group has arranged a visit on June 18th at 10:00 am. See the Programs listing on the back cover of this newsletter.

We Need Your Email Address

If you have not been receiving email news and updates from us (the Mid-Hudson Group), it may be that we do not have your email on file or your email has changed. If you would like to be an informed Sierran, please contact Dave Thomas, our Database Administrator: dave@davidalexanderthomas.com. Be sure to include your full name and email address in the body of the email.

GMO Crops and GMO Labeling

by Andy Moss

The fight to have GMO labeling of foods has been ongoing for a number of years. The food industry claims that it is too costly to add GMO ingredients to labels. However, the Campbell Soup company recently agreed to voluntarily change its labels at no cost to the consumer. I believe that what is really behind this is the desire to keep consumers ignorant of foods containing GMO ingredients and the potential harm to you and the environment.

What is GMO? A GMO (genetically modified organism) is the result of a laboratory process where genes from the DNA of one species are extracted and artificially forced into the genes of an unrelated plant or animal. The foreign genes may come from bacteria, viruses, insects, animals or even humans. Because this involves the transfer of genes, GMOs are also known as “transgenic” organisms. This process may be called either Genetic Engineering (GE) or Genetic Modification (GM); they are one and the same.

Americans eat genetically modified foods everyday. Millions of acres of **soy, corn, canola, and cotton** have had foreign genes inserted into their DNA. The new genes allow the crops to survive applications of herbicide, create their own pesticide, or both. In addition, the FDA just approved the first genetically modified animal that people can eat: farmed salmon.

Here are some important points about GMOs excerpted from:

Genetically Engineered Foods May be Far More Harmful than We Thought, by Jeffrey M. Smith

<http://www.westonaprice.org/health-topics/genetically-engineered-foods-may-be-far-more-harmful-than-we-thought>

Industry-Manipulated Approval Process in the U.S.

One would hope that our government would take every precaution before allowing GMOs in our food and environment. Once GMO crops are released into the environment, the pollen and seed movement contaminate the natural gene pool on a permanent basis. Moreover, the stated goal of the leading biotech company, Monsanto, is to genetically engineer all commercial seeds in the world. This would permanently replace the products of evolution and thousands of years of agricultural crop development with a new, untested technology.

Who is Responsible for GMO Contamination?

Farmers' crops have been contaminated with genetically engineered crops. And as long as the U.S. allows GMOs to be planted, this will continue. Farmers who don't want to grow GMO crops face significant burdens. To protect their crops, farmers must establish wide buffer zones, losing the use of significant amounts of land. They spend time and extra money to find non-GMO seeds. And if they are contaminated despite their efforts, they lose sales in organic and non-GMO markets.

Numerous U.S. Physicians now blame GMOs

Based on evaluations of GMO research presented at medical conferences, as well as recommendations by their peers, thousands of U.S. physicians now prescribe non-GMO diets to all their patients. The Institute for Responsible Technology has started hearing reports about significant and often dramatic improvements in health and alleviation of allergies and immune dysfunction, asthma, digestive issues such as gas, bloating, irritable bowel, colitis and leaky gut, arthritis problems, autoimmune diseases, anxiety... neurological problems and anything that comes from an impaired immune system response.

Bt-Toxin Damages Cell Walls

Bt-toxin kills insects by creating small holes (pores) in the cell walls of their digestive tracts, which in turn allow bacteria and other substances to pass through. The U.S. Environmental Protection Agency (EPA), which labels Bt corn and Bt cotton plants as registered pesticides, insists that Bt-toxin will have absolutely no influence on human or mammalian cells. But research published in the *Journal of Applied Toxicology* in 2012 proves otherwise. Researchers “documented that modified Bt toxins [from GM plants] are not inert on human cells, but can exert toxicity.” Bt-toxin disrupts the membrane in just twenty-four hours, causing certain fluids to leak through the cell walls.

Herbicide Dangers

Another danger concerns the large quantity of toxic herbicides used on GM herbicide-tolerant crops. The vast majority of GMOs are herbicide tolerant—they allow specific herbicides to be sprayed on fields without damaging the GM plant. Roundup (Glyphosate) Ready soybeans, for example, tolerate applications of Roundup herbicide. Herbicide-tolerant crops have led to an increase in herbicide use of five hundred twenty-seven million pounds in the U.S. over the first sixteen years, and significantly higher levels of toxic residues in GM food. Numerous studies in the past several years have implicated glyphosate, in cancer, birth defects, endocrine disorders, Parkinson's, and damage to gut bacteria. [Note: In a unique public testing project carried out by a laboratory at the University of California San Francisco (UCSF), glyphosate was discovered in 93 percent of urine samples during the early phase of the testing in 2015. Glyphosate was labeled a “probable human carcinogen” by the World Health Organization's cancer agency IARC in 2015.]

What You Can Do

Contact your legislators and ask them to support GMO labeling. Choose local and organic food whenever possible. Ask your store to offer more non-GMO products. Educate yourself about GMO issues.

GMO Labeling is about our “Right to Know”

Contributions Always Are Appreciated

The Mid-Hudson Group is your local group of the Sierra Club. As a grass roots environmental organization much of the work of the Sierra Club starts right within your community. Financially we are partially supported by dues which come to us from our Chapter (The Atlantic Chapter) and the National Club. Most important though, are our local efforts to raise funds. Our group frequently gets called on to assist with environmental concerns. Our most recent commitments to the environment have had an impact in many areas including Williams Lake; the Clearwater Sloop; the efforts to protect the state owned property at Belleayre; Wild Earth and more. We committed funds and our effort to each of these projects.

We welcome (and very much appreciate) any financial support that you can make to our local group. We not have an annual appeal for funds, but our members and friends are welcome to make contributions to assist in our work. Contributions can be sent to our group Treasurer, Ralph Pollard at: Mid-Hudson Sierra Club, PO Box 1012, Poughkeepsie, NY 12602. Make your check payable to **Sierra Club Foundation** in order to get a tax exemption or **Mid-Hudson Sierra Club** to allow the Group more flexibility in the use of the funds.

For further information about making a contribution contact David Friedman, Fund Raising Chair at Friedman_David@msn.com or 845-255-2635

Volunteers Wanted

We are seeking volunteers to help our group with member relations, social media, website updates, and other projects. If you can spare a few hours a week we could use your help. Contact our Volunteer Coordinator, Marie Caruso at mariehv@verizon.net or 845-217-5236

Save The Date & The Goods!

Our annual Tag Sale is tentatively scheduled for **Saturday Sept. 24, 2016**. The Mid-Hudson Group Tag Sale is our major fundraiser. Mark your calendars and visit our website for details and information on how you can participate. sierraclub.org/atlantic/mid-hudson/events



A very interesting program on Organic Farming/Gardening was presented in May by Jay Armour, owner of Four Winds Farm located in Gardiner.

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Public Programs

JoyAnn Savino

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Thursday, June 16th, 7:00 pm **“THE TIMES THEY ARE A’ CHANGIN’ ...** **according to the “State of the Hudson, 2015”.**

Please join the Mid-Hudson Sierra Club to welcome Stephen Stanne, known as the father of the Clearwater education sail and now director of the Hudson River Estuary Program’s education efforts, and learn more about what is happening to the Hudson and how we can be a force to keep the river safe for all life that lives within it and uses it.

Stephen Stanne is the principal author of *The Hudson: An Illustrated Guide to the Living River*. He is a master educator, excellent musician, and superb human being. *An Illustrated Guide to the Living River* is a comprehensive reference to the Hudson River ecology, history, and environmental issues. He will introduce us to some of the physical realities of the Hudson and its tributaries. **Excerpts From “The State of The Hudson 2015” by the DEC...**

With all the research done on the estuary, one might assume that we thoroughly understand the Hudson ecosystem—all its components and the processes and relationships that knit them together, plus clear metrics for measuring change. Our knowledge is growing, but much remains unknown. Will tidal marshes—a critical estuarine habitat—drown under rising sea levels, or will sediment

accumulate to elevate marshes at a pace that matches the rate of sea-level rise? We don’t know.

In addition to examining trends, this report looks at how Hudson Valley residents, scientists, institutions, agencies, community leaders, and others are working together to respond to challenges. Only by means of such shared commitment and partnerships will the next State of the Hudson be able to report progress.

Saturday, June 18th, 10:00 am **Passive House Tour**

Join us at 10:00 am for a tour of the zero energy Passive House on Easton Lane in Woodstock and a discussion with its builder, Daniel Levy, Ph.D. Refreshments will be served.

To learn more about this house, see the article on page 2. Following the meeting, we will take an optional one mile walk to the Saugerties Lighthouse, weather permitting. Bring lunch to eat there.

This tour is free and open to the public, but please RSVP to mhsierraprograms@yahoo.com or Marie at 845-702-4521 for address, directions and carpool information.

Please RSVP for programs: mhsierraprograms@yahoo.com

Location: Boughton Place, 150 Kisor Road, Highland 12528.

Directions: From the NYS Thruway, drive East on Route 299, 2.7 miles. Look for Raizman Auto Sales on your right. Turn right onto Kisor Road. From Route 9W, drive West on Route 299, 2.5 miles. Turn left onto Kisor Road at Raizman Auto Sales.

Visit our website at: <http://www.sierraclub.org/atlantic/mid-hudson> | Join our meetup at: <http://www.meetup.com/Mid-Hudson-Sierra-Club>