



**SIERRA  
CLUB**  
FOUNDED 1892

# TERRA FIRMA

MAY - AUGUST 2019

PUBLISHED BY VOLUNTEERS FROM THE LOWER HUDSON GROUP SIERRA CLUB

## NEW YORK STATE PASSES PLASTIC BAG BAN!

*by Gale Pisha*

Based on evidence about environmental impacts and costs to consumers and taxpayers of single use plastic carryout bags, the New York State Legislature passed a budget on March 31, 2019, that included a ban on these bags, plus a structure for counties to opt in to a five cent fee on paper alternatives. This came less than two weeks after the Rockland County Legislature passed a ban with no fee and while the Westchester Board of Legislators was considering a ban plus fee.

Two years ago, Governor Cuomo appointed a bipartisan Plastic Bag Task Force to study the issue. The comprehensive task force report (see [http://www.dec.ny.gov/docs/materials\\_minerals\\_pdf/dplasticbagreport2017.pdf](http://www.dec.ny.gov/docs/materials_minerals_pdf/dplasticbagreport2017.pdf)), issued in January 2018, detailed the problems with single use plastic bags and the experiences of other nations, states and local municipalities which banned them and sometimes placed fees on alternatives.

### The numbers and costs

Largely made from fossil fuels, 100 billion single use plastic shopping bags were used in the U.S. in 2014, which required 12 million barrels of oil to produce and cost American businesses \$4 billion per year to provide. Fifty million per year end up as litter in our country, with the potential to strangle, smother and poison wildlife. The average family uses 1500 of these bags per year for an average of 12 minutes each, yet they stay in our environment for an average of 500 years. When they break down, the bags form microplastics, which are eaten by fish and move up the food chain to humans.

Carryout bags are not "free" when we look at the costs to consumers and taxpayers in addition to the cost to businesses to provide them at the checkout, which are passed on in higher prices. Bags cause flooding from clogged storm drains, jam recycling and wastewater treatment processing equipment and are expensive to dispose of.

*continued on page 2*

## Membership Meeting Schedule

For up-to-date meeting info, visit  
**SierraLowerHudson.org**  
**RocklandSierraClub.org**

**NON-MEMBERS WELCOME!**  
**MEETING DAYS AND PLACES VARY, PLEASE  
CHECK CAREFULLY BELOW**

*Light refreshments are served.  
Meetings are free and open to the public.*

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**Wednesday, May 8, 2019 at 7:00pm**  
**Greenburgh Nature Center, 99 Dromore Rd, Scarsdale**  
**This is a handicapped-accessible location**

### Zero Waste Summit

The zero waste leadership summit will bring together student sustainability leaders from high schools that have participated in Zero Waste Initiatives with the Greenburgh Nature Center. These students promote awareness in their schools about environmentally conscious behavior. The summit will give students an opportunity to present to their peers on the projects they have worked on to encourage zero waste behaviors at their school. This program is in partnership with Greenburgh Nature Center.

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**Wednesday, June 12, 2019 at 7:00pm**  
**Greenburgh Nature Center, 99 Dromore Rd, Scarsdale**  
**This is a handicapped-accessible location**

### Invasive Species in the Lower Hudson Valley

Across New York State, invasive species are changing our favorite natural spaces. Join Erin Brady of the NYS Department of Environmental Conservation's Division of Lands and Forests to learn about a few of the invasive plants impacting the lower Hudson Valley, what actions DEC is taking to control them, and how you can help. Presented in collaboration with the Greenburgh Nature Center.

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**Saturday, September 21, 2019 at 5:00pm**  
**Faraway Farm Alpacas, 1307 Baptist Church Road,**  
**Yorktown, NY 10598**

### Harvest Square Dance! Save the Date!

Our 6th annual Harvest Square Dance fundraiser, this event is always a hit.

## Join us to work on environmental issues in Rockland County!

Rockland Sierra Club was one of the groups leading the successful effort to defeat plans to desalinate Hudson River water for Rockland's drinking water. We are now helping the County craft a sustainable water management policy. We are also working to limit new fossil fuel infrastructure such as Pilgrim crude oil pipelines, and have partnered with 350.org on efforts to address climate change through divestment and through promoting Climate Smart/Clean Energy Communities programs for towns and villages.

Rockland Sierra Club usually meets during the first week of each month. Check [RocklandSierraClub.org](http://RocklandSierraClub.org) for dates and locations. For more information: [pkurtz9@gmail.com](mailto:pkurtz9@gmail.com) or [deby1012@gmail.com](mailto:deby1012@gmail.com). Or call 845-358-3386.

*Plastic Bag Ban...continued from page 1*

### Expected results

Communities across the country and in other nations have been taking steps to ban these single use bags. Research clearly shows that bans, especially when accompanied by modest fees on paper alternatives, reduce single use plastic bag use up to 94%. Shoppers adjust to bringing back reusable bags and are happy to see the positive effects of bans and fees.

The NY ban does not apply to produce bags, bags used to wrap meat or fish, dry cleaning bags, or newspaper bags. If counties opt in to the five cent fee on paper alternatives, 40% of those fees will be used to buy reusable bags to distribute, especially to low income residents; the other 60% will go into the Environmental Protection Fund. Fees do not apply to customers using the supplemental nutritional assistance program (SNAP) or other similar programs.

### What you can do

Many communities in our area have already passed bans, including Piermont, Hastings, Larchmont and Mamaroneck. **You can help make the NYS ban stronger by contacting your county legislature and asking them to opt in to the fee, as well.** And make sure to bring reusable bags when you shop!

## Directions to Greenburgh Nature Center

99 Dromore Road, Scarsdale, NY 10583

In bad weather, confirm meeting by calling (914) 723-3470

**From Rye & Southeast Westchester** Take I-287 West to Exit 5 (Route 100). Go left at the end of the ramp, go to traffic light and turn left again, and continue 0.5 miles to Central Avenue (Route 100). Turn right onto Central Avenue/Route 100 and go 2.5 miles. Pass a Getty station on the left, go about 100 yards and see on the right Tile Shop, then Scarsdale Plaza (3-story dark green glassed building) on the right, and Dromore Road is directly across the street on the left. (If you pass Burger King on left, you went too far.)

**From Northern Westchester** Take the Bronx River Parkway to Exit 22 (Westchester County Center), where you turn right. Cross Route 119 to Central Avenue (Route 100). Take Central Avenue for 2.5 miles. Pass a Getty station on the left, go about 100 yards and see on the right Tile Shop, then Scarsdale Plaza (3-story dark green glassed building) on the right, and Dromore Road is directly across the street on the left. (If you pass Burger King on left, you went too far.)

**From Southern Westchester** Take Bronx River Parkway north to Exit 15 (Fenimore Road). Turn left onto Fenimore, cross over parkway and go through the town of Hartsdale to Central Avenue (Route 100), turn left there and go 1.2 miles. Pass a Getty station on the left, go about 100 yards and see on the right Tile Shop, then Scarsdale Plaza (3-story dark green glassed building) on the right, and Dromore Road is directly across the street on the left. (If you pass Burger King on left, you went too far.)

**From Rockland County** Take Tappan Zee Bridge, continue on Route I-287 east, get off at Exit 5. You should be on Route 119 east and Route 100 south, which share the pavement. Turn right onto Central Avenue/Route 100, and go 2.7 miles. Pass a Getty station on the left, go about 100 yards and see on the right Tile Shop, then Scarsdale Plaza (3-story dark green glassed building) on the right, and Dromore Road is directly across the street on the left. (If you pass Burger King on left, you went too far.)

THE 6<sup>TH</sup> ANNUAL

**Harvest**

**Square**

**Dance**



**SIERRA CLUB LOWER HUDSON GROUP**

**September 21<sup>ST</sup>**

**2019**

**At 5 PM**

Tour the Alpaca Farm at 5PM

**Delicious Food  
Desserts  
Beer & Wine**

From  
**LOCAL SUPPLIERS**

Enjoy Artisinal ice cream from Blue Pig in Croton

Proceeds go directly to our efforts to protect the health, safety and environment in our communities.

Help us protect gains made and defend against new attacks on our environment at the local, state and national level.

Come at 5 PM to tour the Alpaca Farm and shop for garments and gifts.

**PRICES INCREASE AFTER SEPTEMBER 8  
RAIN OR SHINE – LARGE BARN AND TENTING  
YORKTOWN**

**For more info and tickets visit:**  
[harvestsquaredance.brownpapertickets.com](http://harvestsquaredance.brownpapertickets.com)



**SIERRA  
CLUB**

# THE NEW YORK STATE ELECTRIC GRID – PART 1

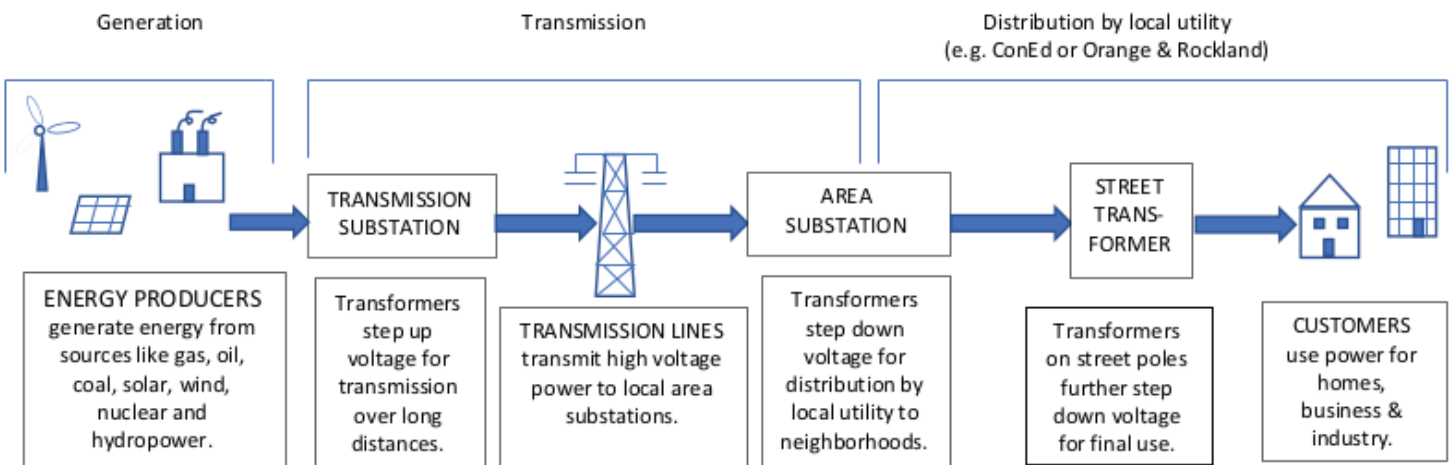
## APRIL 15, 2019

by Laura Burkhardt

New York environmentalists are working very hard these days to achieve the 45% reduction below 2010 emission levels that the 2018 IPCC Global Warming Special Report from the UN tells us is essential in limiting rising temperatures to less than 1.5° C. One of the main findings in this report is that we are currently on track for 3°C rising. Limiting the rise to 1.5°C by 2030 will require “rapid, far-reaching and unprecedented changes in all aspects of society” and will still result in climatic difficulties, but will have markedly better results for the planet.

One focus in this effort is on the electric grid. An important component of Gov. Cuomo’s Green New Deal that was announced in January 2019 was an increase of New York’s successful Clean Energy Standard mandate from 50 percent to 70 percent renewable electricity by 2030. To see how this goal can be achieved, it is necessary to first understand how the grid works – how electricity travels from a fuel source such as fracked gas, sunlight, wind, or hydropower to our homes and businesses. When we hear about this mandate, we tend to think immediately of building more solar and wind farms and shutting down existing fossil fuel plants, but when we understand how the grid works we will see that there are a number of other strategies that are available to achieve this goal.

### Physical Components of the Grid



The physical components of an electric grid and their corresponding functions fall into three main categories: Generation, Transmission, and Distribution.

**Generation.** In a generation facility, electricity is generated from a variety of sources: fossil fuels (gas, oil, coal), nuclear reactions, and renewable sources (solar, wind, hydropower). This electricity then goes to transmission substations. These electricity producers can be for-profit power plants (e.g., CPV, Cricket Valley, Danskammer), local solar farms (e.g., Wawayanda), etc.

**Transmission.** At transmission substations high voltage transformers step up the voltage in order to send the electricity on high-voltage lines, such as those that hang between tall metal towers. This electricity travels over long distances to local area substations; higher voltage is more efficient and less expensive for this long-distance transmission. Historically alternating current (AC) was used for such transmission but the advent of high-power electronics made the use of direct

*continued on next page*

current (DC) possible. High voltage DC has a smaller transmission loss than high voltage AC and is mostly used where AC can't be used (for example, longer lines under water) or where lots of power must be transported over very long distances.

At local area substations transformers then step down the voltage so it can be distributed using alternating current (AC) by local utilities to neighborhoods.

**Distribution.** In this step, distribution lines owned by local utilities carry electricity to consumers. Transformers on street poles step down the voltage further before it enters buildings; lower voltage electricity is safer for use in homes and businesses. Local utilities may purchase the electricity through a wholesale market organized by a regional transmission reliability organization (in our case, the New York Independent System Operator, NYISO) or directly from independent power producers or from other utilities.

See the September issue of Terra Firma for Part 2 of this continuing series on the grid in New York state.

### Sources

- [1] 2018 Intergovernmental Panel on Climate Change Global Warming Special Report
- [2] [https://www.eia.gov/energyexplained/index.php?page=electricity\\_delivery](https://www.eia.gov/energyexplained/index.php?page=electricity_delivery)
- [3] <https://www.quora.com/Why-is-high-voltage-AC-used-in-power-transmission-lines-instead-of-DC-and-or-higher-current>
- [4] <https://www.nyiso.com/>
- [5] <https://www.nyiso.com/what-we-do>
- [6] <https://adirondack.org/sites/default/files/energy/Gillian%20Black%20%2B%20Frank%20McCleneghen-%20solar%20workshop%20presentation.pdf>
- [7] <https://www.ferc.gov/market-oversight/mkt-electric/new-york/2007/04-2007-elec-ny-archive.pdf>
- [8] <https://www.ferc.gov/market-oversight/mkt-electric/new-york/2007/04-2007-elec-ny-archive.pdf>

## VITAL NUMBERS LOWER HUDSON GROUP SIERRA CLUB

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# GIANT STORM BARRIERS IN NY HARBOR MEANT TO HELP, COULD PUT COMMUNITIES AND RIVER AT RISK

*by Ed Berry*

Our Native American predecessors called the Hudson Mahicantuck, “the river that runs two ways.”

Unfortunately the U. S. Army Corps of Engineers doesn't seem to be paying attention to that in some of their plans to build barriers across New York Harbor.

The Army Corps' main concern is to defend against storm surges similar to those seen during Hurricane Sandy. Certainly a worthy goal.

However, most of their plans (there are five alternatives, see at <https://bit.ly/2MVUpYx>) involve huge amounts of fixed concrete barriers with gates for shipping. Plan 2 constructs an in-water barrier from Sandy Hook to Breezy Point (5 miles) and another barrier across Long Island Sound near the Throgs Neck Bridge. Nearby residents are concerned that a storm surge hitting such a barrier may be deflected to eastern Long Island and the New Jersey coast, causing greater damage in those places than the storm surge alone.

Alternative Plan 5 seems to be favored by most environmentalists, at least so far. It calls for only building shoreline measures along the perimeter of coastal locations such as dunes, berms and levees. These would be in addition to shoreline flood control projects already planned.

Another major consideration for any mitigation efforts is to fully integrate an understanding of ocean level rise due to warming climate. So not only are we dealing with storm surges like Hurricane Sandy but the unrelenting rise of the ocean due to temperature rise, which brings melting glaciers and ice packs. Many experts recommend strategic relocation to higher ground for essential structures.

Massive barriers built at enormous public expense (\$40-50 billion or more) are not our best defense in the long or short run. To quote Riverkeeper, “some of these options would have catastrophic consequences for the Hudson and N.Y. Harbor. Specifically storm surge barriers—giant ocean gates—would choke off tidal flow and the migration of fish, damaging the life of the Hudson River Estuary forever.”

What can you do?

First, stay informed. In addition to the Army Corps link above, [Riverkeeper.org/barriers](http://Riverkeeper.org/barriers) is filled with pertinent data. Read the comments from Roger Downs, Sierra Club Atlantic Chapter Conservation Director, posted on the Sierra Club Lower Hudson Group website at <https://www.sierraclub.org/atlantic/lower-hudson/take-action>.

Second, reach out to your local elected officials. As the weather warms you will see them at farmer's markets or other places. Let them know your concerns. Reach out by email, phone, etc. Also, there have been public meetings, and there will be more. Make it a point to go to one near you and raise your voice.

# MULTIPLE PERSONALITIES OF SIERRA CLUB: WHERE DOES YOUR MEMBERSHIP MONEY GO?

by Gale Pisha

Ever wonder how Sierra Club uses your membership dollars to protect the environment? Well, it turns out your support is multiplied three times, as a Sierra Club membership makes you a member at the national, state and local levels!

## **National**

Founded by John Muir in California in 1892, Sierra Club grew from preserving wilderness to include advocating for clean air and water and fighting climate change. The national Club has over 3 million members and supporters (nonmembers who take action with us) who work in Club campaigns to close coal and gas plants and help the country transition to renewable energy, through the work of a staff of organizing, policy, communications and legal experts. The national Club publication is *Sierra* magazine and the website is [sierraclub.org](http://sierraclub.org).

## **State**

There are 64 chapters in the national Club, most of which cover a single state (California has 13 because it began there). The New York chapter is called Sierra Club Atlantic Chapter, and it has over 54,000 volunteer members in NY. We employ two staff members in our Albany office, who meet with state legislators and state agencies to advocate for our goals. The chapter publication is *Sierra Atlantic* and the website is [atlantic2.sierraclub.org](http://atlantic2.sierraclub.org).

## **Local**

Our chapter has 11 groups across the state, and our group is Lower Hudson Group, which covers Rockland, Westchester and Putnam Counties. We have over 5,500 members, all volunteers. We work primarily on local issues like transitioning our communities to renewables, preventing the expansion of Westchester Airport next to the Kensico reservoir, and working as part of coalitions on the closing of Indian Point nuclear power plant and preventing more fossil fuel infrastructure expansion. Lower Hudson Group's publication is *Terra Firma*, and the website is [SierraLowerHudson.org](http://SierraLowerHudson.org). We have monthly public programs at Greenburgh Nature Center, activist meetings at various locations and meetings in Rockland in conjunction with Rockland 350 (see events listed in this issue and on the website).

## **Why am I always getting information about Sierra Club elections?**

### **National**

Though the national Club is run day to day by staff headed by an Executive Director, it is controlled by a volunteer Board of Directors, elected by the membership in the spring of each year. Chapters also elect volunteers to the Council of Club Leaders, a volunteer advisory board which recommends policy to the Board.

### **State chapter**

Each chapter is directed by an Executive Committee of volunteers from the state, 9 of whom are elected as At-Large Delegates in December/January for overlapping two year terms. The remainder of the ExCom are Group Delegates, one from each group.

### **Local group**

Each group has an Executive Committee—our Lower Hudson Group has 9 volunteer members who are elected in October for overlapping 2 year terms.

As you can see, volunteers are the grassroots power of Sierra Club and there are many ways you can get involved, such as coming to local meetings, contacting your state legislators about upcoming bills, going on outings sponsored by the national Club or serving on a committee or ExCom. Check out our websites and publications and get in touch with us.

Your dues support work on all levels, but your involvement in an issue may help us get it over the finish line!



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LOWER HUDSON GROUP

# SIERRA CLUB

WESTCHESTER, PUTNAM & ROCKLAND COUNTIES

*"We all must work together to make a big impact on stopping climate change."  
--Westchester County Executive George Latimer*



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